NATIONAL POLLUTANT INVENTORY

GUIDE

2000

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Table of contents

About the NPI Guide

This Guide forms part of the National Pollutant Inventory (NPI) Industry Handbooks. An Industry Handbook is made of up of this Guide and one or more Emission Estimation Technique (EET) Manuals.

This Guide will help you determine whether or not you are required to report to the NPI. If you do need to report to the NPI, the Guide gives you general help on how to do this.

More information on how to estimate emissions from your facility is contained in the EET Manual/s relevant to your facility. The Manuals have been developed based on common industrial processes.

If you determine that you need to report to the NPI, you may require one or more EET Manuals to help you estimate your facility's emissions. The Manuals are available from your State or Territory environment agency. Contact details for each agency are on the inside of the cover page. The Manuals are also available on the NPI internet site at www.npi.ea.gov.au

The NPI Guide contains the following information:

Section One

About the National Pollutant Inventory

Section Two

How does the NPI affect your facility?

Section Three

Estimating your facility's emissions.

Section Four

What information do you need to provide to the NPI?

Section one

About the National Pollutant Inventory

What is the NPI?

The National Pollutant Inventory (NPI) is a database designed to provide the community, industry and government with information on the types and amounts of certain substances being emitted to the air, land and water.

Larger Australian facilities have been progressively required to estimate and report annually their emissions for the NPI from July 1 1998. Estimates of emissions from smaller industry, households and everyday activities will be made by State and Territory environment authorities and will also be listed on the database.

The first national NPI database has been publicly available on the Internet since January 2000.

The main objectives of the NPI are to:

- provide information to industry and government to assist in environmental planning and management;
- satisfy community demand for accessible information on emissions to the environment; and
- promote waste minimisation, cleaner production, and energy and resource savings.

How was the NPI developed?

The NPI has been developed as a National Environment Protection Measure by the National Environment Protection Council. The Council is a national statutory body which aims to ensure that all people in Australia enjoy equivalent protection from air, water, soil and noise pollution. It also aims to ensure that Australian markets are not distorted by variations in environment protection measures between the States and Territories. The Council is currently made up of the Commonwealth, State and Territory Environment Ministers. It is chaired by the Commonwealth.

In November 1996, the Council decided to prepare a draft Measure for the NPI which was released for the statutory two month public consultation period in June 1997. Further consultation with key stakeholders followed in October 1997.

To assist in the development of the draft Measure, a Non-Government Organisation Advisory Group was established to ensure industry, environment and community concerns were considered by the Council. Membership included environment, industry and union groups.

An independent Technical Advisory Panel was established to determine a methodology for evaluating substances for inclusion on the NPI reporting list and, subsequently, to develop the reporting list. The Panel produced a draft report which was the subject of national consultation in June 1997. The Panel revised their report, and the NPI reporting list, based on comments received during this national consultation process. The National Environment Protection Measure for the NPI was made on 27 February 1998.

In 1998, trials of the process for compiling and presenting the NPI data were carried out in South East Queensland and in Kalgoorlie, Western Australia. Earlier NPI trials were held in Dandenong, Port Pirie, Newcastle, and Launceston.

What is the National Environment Protection Measure?

The National Environment Protection Measure is the first Measure made by the National Environment Protection Council. The Measure provides the framework for the establishment of the NPI. It sets out the requirements for reporting to the NPI, including how a facility triggers a reporting obligation and what substances are on the reporting list. A copy of the Measure can be found on the internet at www.nepc.gov.au and also at the NPI internet site at www.npi.ea.gov.au

How is the NPI being implemented?

The Commonwealth, States and Territories are cooperatively implementing the NPI. An agreement called a Memorandum of Understanding (MOU) relating to the implementation of the NPI Measure has been developed and signed by the Commonwealth, State and Territory Environment Ministers. A copy of this is available with the Measure on the NPI website.

An Implementation Working Group, made up of a representative of each State and Territory and the Commonwealth, was established through the MOU. The purpose of the Working Group is to ensure consistent implementation of the NPI across Australia. The Commonwealth chairs the Working Group. You may contact your State or Territory environment agency for more detailed information about how the NPI is being implemented in your State or Territory.

For more information:

about the NPI
www.npi.ea.gov.au

about the Council
www.nepc.gov.au

Section two

How does the NPI affect your facility?

If your facility uses more than a certain amount of one or more substances on the NPI reporting list, or consumes more than a specified amount of fuel or electric power, then you are required to estimate and report emissions of those substances each year to your State or Territory environment agency.

Exemptions

The NPI Measure exempts some facilities from reporting to the NPI. These exemptions are listed below. If your facility fits any of these descriptions, you are not required to report to the NPI. If your facility does not fit any of these descriptions, you should continue reading to determine if your facility triggers a threshold.

You are not required to report to the NPI if your facility is:

- a mobile emission source (for example, an aircraft in flight or a ship at sea) operating outside the boundaries of a fixed facility;
- a petroleum facility engaged in the retail sale of fuels;
- a dry cleaning facility employing less than 20 persons;
- a scrap metal handling facility trading in metal, which is not engaged in the reprocessing of batteries or the smelting of metal;
- a facility, or those parts of a facility, solely engaged in agricultural production including the growing of trees, aquaculture, horticulture or livestock raising unless it is engaged in the processing of agricultural produce or in intensive livestock production (for example, a piggery or a cattle feedlot).

Emissions from these exempted facilities will be estimated by your State or Territory environment agency, and will be included on the NPI database.

Reporting list

The NPI reporting list for the first three reporting years (ie. 1998/1999, 1999/2000 and 2000/2001) is Table 1 of Appendix A. This list contains 36 substances. Reporting on the full list of substances, set out in Table 2 of Appendix A, will commence in the fourth reporting year (2001/2002).

Remember!

For the first three years of the NPI (1998/1999, 1999/2000 and 2000/01), you are only required to report on substances in Table 1 of Appendix A.

Reporting thresholds

Each of the substances on the NPI reporting list has at least one threshold against it. If your facility triggers a threshold for a substance on the reporting list, you are required to report emissions of that substance from your facility to the NPI. There are five categories of thresholds. These are Category 1, Category 1a, Category 2a, Category 2b, and Category 3.

For more information on whether your facility triggers one or more of the thresholds, please read below.

Category 1 threshold

Category 1 contains a broad range of substances (most substances on the NPI reporting list fall into Category 1). They are typically present in materials used for production purposes. If your facility handles, manufactures, imports, processes, co-incidentally produces, or otherwise uses 10 tonnes or more per year of a Category 1 substance, you must report your facility's emissions of that substance.

Remember!

If your facility triggers a threshold for one Category 1 substance, you are only required to report your facility's emissions of that substance. If your facility triggers thresholds for two or more Category 1 substances, you are required to report your facility's emission of each of those substances.
Triggering one Category 1 threshold does not mean that you are required to report your facility's emissions of all Category 1 substances.

How do I determine what my facility uses?

A simple way to determine if your facility 'uses' 10 tonnes or more of a NPI substance is described in the following steps.

Step 1

Use existing knowledge and data to determine if a NPI substance has been used by your facility in the reporting year. For example, you may wish to identify all of the substances and materials that have been brought onto your site in the past year, and then determine whether any of these substances or materials contain a substance on the NPI reporting list.

If you are unsure whether a substance - a proprietary mixture, or any other material - contains a NPI substance, the NPI Measure provides some guidance on what to do in the following situations, namely:

- Proprietary mixtures – you are not required to include any amount of a NPI substance that is in a proprietary mixture unless the substance is specified in a Material Safety Data Sheet describing the properties and use of the substance, or the manufacturer's advice. You may need to contact the distributor, supplier or manufacturer of a material for this information.

- Any other material – you are not required to determine or include any amount of a substance that is included in 'any other material', unless you could reasonably be expected to know that the substance is in that material.

- Articles – a substance is taken not to be used if:
  - it is already permanently incorporated in an article in a way that does not lead to emission of the substance to the environment; or
  - it is an article for sale or use that is handled in a way that does not lead to emission of the substance to the environment.

Step 2

Determine how much of each NPI substance your facility has 'used'.

Step 3

Once you have determined how much of each NPI substance your facility has 'used', you need to consider if any of the NPI substances are manufactured or coincidentally produced at your facility. If a substance is manufactured or coincidentally produced at your facility, you need to include this in your 'use' of that substance.

Step 4

For each substance, add all figures together to come up with the total amount that has been 'used' at your facility (in tonnes per year). If it is greater than 10 tonnes for one or more substances, you are required to report your facility's emissions of those substances only.

You will need to record your usage quantities for each substance that trips a Category 1 threshold in the ***National Pollutant Inventory Reporting Form***, Section B, Part 2, under the "Usage" column.

Remember!

Category 1 thresholds are based on use, not on how much your facility emits of a substance.

Category 1a threshold

Category 1a contains Total Volatile Organic Compounds (Total VOCs). You should report your facility's emissions of Total VOCs if your facility:

- uses more than 25 tonnes in a year; or
- has a bulk storage facility design capacity greater than 25 kilotonnes.

Category 2a threshold

Category 2a contains a group of substances which are usually common products of combustion or other thermal processes. This category contains substances such as oxides of nitrogen and carbon monoxide.

- You should report your facility's emissions of category 2a substances if your facility:
  - burns 400 tonnes or more of fuel or waste in a year; or
  - burns 1 tonne or more of fuel or waste in an hour at any time during the reporting year.

Section B, Part 1 of the ***National Pollutant Inventory Reporting Form*** will help you determine if your facility triggers a 2a threshold.

Category 2b threshold

As with Category 2a, Category 2b contains substances that are common products of combustion or other thermal processes. It contains a range of trace metals which are emitted when large quantities of fuel are consumed, especially coal and oil.

- Your facility should report its emissions of category 2b substances if it:
  - burns 2,000 tonnes or more of fuel or waste in a year; or
  - consumes 60,000 megawatt hours or more of energy in a year; or if
  - the maximum potential power consumption of the facility at any time in the year is rated at 20 megawatts or more.

Section B, Part 1 of the ***National Pollutant Inventory Reporting Form*** will help you determine if your facility triggers a 2b threshold.

Remember!

If your facility triggers the Category 2b threshold, it will also trigger the lesser Category 2a threshold.

You should then report your facility's emissions of all Category 2a and 2b substances.

Category 3 threshold

Category 3 contains Total Nitrogen and Total Phosphorus. The threshold for Category 3 is based on the actual amount emitted from your facility. The thresholds for the other categories are based on inputs.

- Your facility should report its emissions of a Category 3 substance if its annual emissions to water are at, or above:
  - 15 tonnes per year for Total Nitrogen (excluding emissions to groundwater and sewer); and
  - 3 tonnes per year for Total Phosphorus (excluding emissions to groundwater and sewer).

Remember!

If you trigger a threshold for a substance:

- you are required to report all emissions of that substance from all sources at your facility regardless of which threshold your facility triggered (this may mean adding emissions from different points or sources at your facility);
- you are required to submit a report even if you estimate that your facility's emissions are 'nil'.

If you do not trigger a threshold, you are not required to report to the NPI.

Which substances has your facility triggered a threshold for?

Now that you have determined which substances your facility triggers a threshold for, Section B, Part 2 of the ***National Pollutant Inventory Reporting Form*** will help you to compile a list of these substances. This list represents the list of substances for which you are required to report your facility's emissions to the NPI.

The next step is to estimate your facility's emissions of these substances.

The next section, Section three, will help you to do this.

Section three
Estimating your facility's emissions

Section two helped you determine if you are required to report to the NPI. You should now have a list of substances for which your facility has triggered thresholds. You need to estimate your facility's emissions of these substances and report them to your State or Territory environment agency.

This section gives you general help on how to estimate your facility's emissions. More specific information on estimating your facility's emissions from your industrial process/es is provided in the EET Manual/s relevant to your facility.

Two easy steps to estimating your facility's emissions

(1) Identifying emission points at your facility

Before estimating your facility's emissions, it may be helpful to draw a process flow diagram of your facility's operations. Drawing a process diagram that details inputs and emission streams is an effective way of identifying emission points for NPI substances.

Air emissions, wastewaters, and solid wastes containing NPI substances are likely to be emission points in your process diagram. If water is treated on-site, sludges or other wastes containing NPI substances may be created and emitted. Other emissions may come from discarded containers or samples, vessel washings, or (for some substances) volatilisation to the air.

It is important to remember that the Measure for the NPI defines an emission as the release of a substance to the environment whether in pure form or contained in other matter and whether in solid, liquid or gaseous form. It includes emission of a substance to the environment from landfill, sewage treatment plants and tailings dams but does not include:

(a) deposit of a substance into landfill; or

(b) discharge of a substance to a sewer or tailings dam; or

(c) removal of a substance from a facility for destruction, treatment, recycling, reprocessing, recovery or purification.

(2) Estimate emissions of substances

After you have identified all of the emission sources for the NPI substances that your facility has triggered a threshold for, you can then estimate the amount that is emitted in a year.

EET Manuals are designed to assist you to estimate your facility's emissions. Each substance emitted to air, water, or land from both point and fugitive sources requires reporting where thresholds for the facility have been met.

In general, there are four types of emission estimation techniques available:

- Sampling or direct measurement: This method covers both periodic sampling and continuous monitoring and is based on measured concentrations of the substance in a waste stream, and the volume/flow rate of that stream.

- Mass balance: This identifies the quantity of a substance going in and out of an entire facility, process, or piece of equipment. Releases can be calculated as the difference between input and output of each listed substance.

- Fuel analysis or other engineering calculations: This method utilises the physical/chemical properties (eg. vapour pressure) of the substance and mathematical relationships (eg. ideal gas law).

- Emission factors: These are based on average measured emissions from similar processes and facilities to your own. Emission factors usually express emissions as a ratio of quantity released relative to process or equipment throughput.

State and Territory licensing and other environmental regulations require monitoring of certain emission streams. If available, data gathered for these purposes may be used to estimate emissions for the NPI. If you do not have this information for your facility, the relevant EET Manual/s for your facility contain techniques that you should use. You may use other techniques not specified in the EET Manuals with the approval of your State or Territory environment agency.

Section four

What information do you need to provide to the NPI?

Once you have estimated your facility's emissions, you are required to report certain information to your State or Territory environment agency. The ***National Pollutant Inventory Reporting Form*** sets out all of the information, as specified in the NPI Measure and Memorandum of Understanding, that you are required to report for the NPI.

The standard reporting period is 1 July to 30 June. You are required to provide your facility's NPI report to your State or Territory environment agency by 30 September.

Section C of the ***National Pollutant Inventory Reporting Form***, 'Emission Reduction Activities', seeks information on source reduction activities and other causes of emission reductions. Completion of this section of the reporting form is voluntary, although it should be noted that any information provided will be useful to the Commonwealth, State and Territory governments in measuring trends in pollution reduction.

The ***National Pollutant Inventory Reporting Form*** has been developed to assist some States and Territories in meeting their NPI reporting requirements and to facilitate national reporting consistency. Your State or Territory environment agency, however, may provide you with an alternative format for reporting, with the same data reporting fields, in order to avoid duplication with existing reporting infrastructures.

Glossary

Emission
Means release of a substance to the environment, whether in pure form or contained in other matter, and whether in solid, liquid or gaseous form. It includes emission of a substance to the environment from landfill, sewage treatment plants and tailings dams but does not include:

(a) deposit of a substance into landfill; or

(b) discharge of a substance to a sewer or tailings dam; or

(c) removal of a substance from a facility for destruction, treatment, recycling, reprocessing, recovery or purification.

CASR
Chemical Abstract Series Registry number

MSDS
Material Safety Data Sheet

Use
The National Environment Protection Measure defines use as meaning the handling, manufacture, import, processing, coincidental production or other use of the substances.

Appendix A

Alphabetically-ordered reporting list of substances for the National Pollutant Inventory
(determined by consideration of health and environmental risks in Australia)

1. In this Schedule:

(a) the threshold for category 1 acids refers to the amount of the acid compound used (for example, in the case of "Hydrochloric acid", the threshold refers to the amount of hydrogen chloride used). This amount can be calculated as a factor of volume and concentration;

(b) the thresholds for "Total Nitrogen" and "Total Phosphorus" refer only to the amounts of those Nitrogen and Phosphorus compounds that give rise to nitrate/nitrite and phosphate ions respectively;

(c) the threshold for "Ammonia (total)" refers to the total amount of both ammonia (NH_3 CASR number 7664-41-7) and the ammonium ion (NH_4^+) in solution;

(d) the threshold for "Chlorine" includes the amount of hypochlorite and like substances used;

(e) the threshold for category 1 substances that are listed as "(a metal) & compounds" refers to the total amount of the metal and its compounds used (for example, "Lead & compounds" refers to Lead and all compounds which incorporate Lead);

(f) the threshold for "Phenol" (CASR number 108-95-2) refers, at the discretion of the reporting facility, to either the total amount of phenolic compounds used or the total amount of phenol used.

2. For the purposes of estimating emission data to be reported under clause 9 of the Measure:

(a)the amount of a category 1 acid emitted refers to the amount of the actual acid compound emitted (for example, in the case of "Hydrochloric acid", the amount emitted refers to the amount of hydrogen chloride emitted). It does not include any amounts of the acid that have been neutralised before release as the acid no longer exists;

(b) the amounts of "total Nitrogen" and "total Phosphorus" emitted refer to the amounts of those Nitrogen and Phosphorus compounds emitted that give rise to nitrate/nitrite and phosphate ions respectively;

(c) the amount of "Ammonia (total)" emitted refers to the total amount of both Ammonia (NH_3 CASR number 7664-41-7) and the ammonium ion (NH_4^+) emitted in solution;

(d) the amount of "Chlorine" emitted refers only to the amount chlorine (Cl CASR number 7782- 50-5) emitted;

(e) the amount emitted in relation to a substance listed as "(a metal) & compounds" refers only to the amount of the metal emitted (for example, the amount of "Lead & compounds" emitted refers only to the amount of Lead emitted);

(f) the amount of "Phenol" (CASR number 108-95-2) emitted refers, at the discretion of the reporting facility, to either the total amount of phenolic compounds emitted or the total amount of Phenol emitted.

Table 1

prefix	COLUMN 1 SUBSTANCE	COLUMN 2 CASR No.	COLUMN 3 THRESHOLD CATEGORY	COLUMN 4 THRESHOLD
	Acetone	67-64-1	1	10 tonnes per year
	Arsenic & compounds	7440-38-2	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Benzene	71-43-2	1	10 tonnes per year
1,3-	Butadiene (vinyl ethylene)	106-99-0	1	10 tonnes per year
	Cadmium & compounds	7440-43-9	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Carbon monoxide	630-08-0	1	10 tonnes per year
			2a	400 tonnes per year, or 1 tonne per hour
	Chromium (VI) compounds	7440-47-3	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Cobalt & compounds	7440-48-4	1	10 tonnes per year
	Cyanide (inorganic) compounds	N/A	1	10 tonnes per year
1,2-	Dibromoethane	106-93-4	1	10 tonnes per year
	Dichloromethane	75-09-2	1	10 tonnes per year
2-	Ethoxyethanol	110-80-5	1	10 tonnes per year
2-	Ethoxyethanol acetate	111-15-9	1	10 tonnes per year
	Ethylene glycol (1,2-ethanediol)	107-21-1	1	10 tonnes per year
	Fluoride compounds	N/A	1	10 tonnes per year
			2a	400 tonnes per year, or 1 tonne per hour
	Glutaraldehyde	111-30-8	1	10 tonnes per year
	Lead & compounds	7439-92-1	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Mercury & compounds	7439-97-6	1	10 tonnes per year

prefix	COLUMN 1 SUBSTANCE	COLUMN 2 CASR No.	COLUMN 3 THRESHOLD CATEGORY	COLUMN 4 THRESHOLD
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Methanol	67-56-1	1	10 tonnes per year
	Methyl ethyl ketone	78-93-3	1	10 tonnes per year
	Methyl isobutyl ketone	108-10-1	1	10 tonnes per year
	Methyl methacrylate	80-62-6	1	10 tonnes per year
	Nickel carbonyl	13463-39-3	1	10 tonnes per year
			2b	2,000 tonnes per year, or 60,000 megawatt hours, or rated at 20 megawatts
	Nickel subsulphide	12035-72-2	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Oxides of Nitrogen	N/A	2a	400 tonnes per year, or 1 tonne per hour
	Particulate Matter ≤10.0 um (PM_{10})	N/A		
			2a	400 tonnes per year, or 1 tonne per hour
	Polycyclic aromatic hydrocarbons	N/A	2a	400 tonnes per year, or 1 tonne per hour
	Sulphur dioxide	7446-09-5	1	10 tonnes per year
			2a	400 tonnes per year, or 1 tonne per hour
	Sulphuric acid	7664-93-9	1	10 tonnes per year
	Tetrachloroethylene	127-18-4	1	10 tonnes per year
	Toluene (methylbenzene)	108-88-3	1	10 tonnes per year
	Toluene-2,4-diisocyanate	584-84-9	1	10 tonnes per year
	Total Nitrogen	N/A	3	15 tonnes per year
	Total Phosphorus	N/A	3	3 tonnes per year
	Trichloroethylene	79-01-6	1	10 tonnes per year
	Xylenes (individual or mixed isomers)	1330-20-7	1	10 tonnes per year

Table 2

prefix	COLUMN 1 SUBSTANCE	COLUMN 2 CASR No.	COLUMN 3 THRESHOLD CATEGORY	COLUMN 4 THRESHOLD
	Acetaldehyde	75-07-0	1	10 tonnes per year
	Acetic acid (ethanoic acid)	64-19-7	1	10 tonnes per year
	Acetone	67-64-1	1	10 tonnes per year
	Acetonitrile	75-05-8	1	10 tonnes per year
	Acrylamide	79-06-1	1	10 tonnes per year
	Acrylic acid	79-10-7	1	10 tonnes per year
	Acrylonitrile (2-propenenitrile)	107-13-1	1	10 tonnes per year
	Ammonia (total)	N/A	1	10 tonnes per year
	Aniline (benzenamine)	62-53-3	1	10 tonnes per year
	Antimony & compounds	7440-36-0	1	10 tonnes per year
	Arsenic & compounds	7440-38-2	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Benzene	71-43-2	1	10 tonnes per year
	Benzene hexachloro- (HCB)	118-74-1	1	10 tonnes per year
	Beryllium & compounds	7440-41-7	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Biphenyl (1,1-biphenyl)	92-52-4	1	10 tonnes per year
	Boron & compounds	7440-42-8	1	10 tonnes per year
1,3-	Butadiene (vinyl ethylene)	106-99-0	1	10 tonnes per year
	Cadmium & compounds	7440-43-9	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Carbon disulphide	75-15-0	1	10 tonnes per year
	Carbon monoxide	630-08-0	1	10 tonnes per year
			2a	400 tonnes per year, or 1 tonne per hour
	Chlorine	7782-50-5	1	10 tonnes per year
	Chlorine dioxide	10049-04-4	1	10 tonnes per year
	Chloroethane (ethyl chloride)	75-00-3	1	10 tonnes per year
	Chloroform (trichloromethane)	67-66-3	1	10 tonnes per year
	Chlorophenols (di, tri, tetra)	N/A	1	10 tonnes per year
	Chromium (III) compounds	7440-47-3	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts

prefix	COLUMN 1 SUBSTANCE	COLUMN 2 CASR No.	COLUMN 3 THRESHOLD CATEGORY	COLUMN 4 THRESHOLD
	Chromium (VI) compounds	7440-47-3	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Cobalt & compounds	7440-48-4	1	10 tonnes per year
	Copper & compounds	7440-50-8	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Cumene (1-methylethylbenzene)	98-82-8	1	10 tonnes per year
	Cyanide (inorganic) compounds	N/A	1	10 tonnes per year
	Cyclohexane	110-82-7	1	10 tonnes per year
1,2-	Dibromoethane	106-93-4	1	10 tonnes per year
	Dibutyl phthalate	84-74-2	1	10 tonnes per year
1,2-	Dichloroethane	107-06-2	1	10 tonnes per year
	Dichloromethane	75-09-2	1	10 tonnes per year
	Ethanol	64-17-5	1	10 tonnes per year
2-	Ethoxyethanol	110-80-5	1	10 tonnes per year
2-	Ethoxyethanol acetate	111-15-9	1	10 tonnes per year
	Ethyl acetate	141-78-6	1	10 tonnes per year
	Ethyl butyl ketone	106-35-4	1	10 tonnes per year
	Ethylbenzene	100-41-4	1	10 tonnes per year
	Ethylene glycol (1,2-ethanediol)	107-21-1	1	10 tonnes per year
	Ethylene oxide	75-21-8	1	10 tonnes per year
	Di-(2-Ethylhexyl) phthalate (DEHP)	117-81-7	1	10 tonnes per year
	Fluoride compounds	N/A	1	10 tonnes per year
			2a	400 tonnes per year, or 1 tonne per hour
	Formaldehyde (methyl aldehyde)	50-00-0	1	10 tonnes per year
	Glutaraldehyde	111-30-8	1	10 tonnes per year
n-	Hexane	110-54-3	1	10 tonnes per year
	Hydrochloric acid	7647-01-0	1	10 tonnes per year
			2a	400 tonnes per year, or 1 tonne per hour
	Hydrogen sulphide	7783-06-4	1	10 tonnes per year
	Lead & compounds	7439-92-1	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Magnesium oxide fume	1309-48-4	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Manganese & compounds	7439-96-5	1	10 tonnes per year

prefix	COLUMN 1 SUBSTANCE	COLUMN 2 CASR No.	COLUMN 3 THRESHOLD CATEGORY	COLUMN 4 THRESHOLD
	Mercury & compounds	7439-97-6	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Methanol	67-56-1	1	10 tonnes per year
2-	Methoxyethanol	109-86-4	1	10 tonnes per year
2-	Methoxyethanol acetate	110-49-6	1	10 tonnes per year
	Methyl ethyl ketone	78-93-3	1	10 tonnes per year
	Methyl isobutyl ketone	108-10-1	1	10 tonnes per year
	Methyl methacrylate	80-62-6	1	10 tonnes per year
4,4-	Methylene bis (2-chloroaniline) (MOCA)	101-14-4	1	10 tonnes per year
	Methylenebis (phenylisocyanate)	101-68-8	1	10 tonnes per year
	Nickel & compounds	7440-02-0	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Nickel carbonyl	13463-39-3	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Nickel subsulphide	12035-72-2	1	10 tonnes per year
			2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Nitric acid	7697-37-2	1	10 tonnes per year
	Organo-tin compounds	N/A	1	10 tonnes per year
	Oxides of Nitrogen	N/A	2a	400 tonnes per year, or 1 tonne per hour
	Particulate Matter ≤10.0 um (PM_{10})	N/A		
			2a	400 tonnes per year, or 1 tonne per hour
	Phenol	108-95-2	1	10 tonnes per year
	Phosphoric acid	7664-38-2	1	10 tonnes per year
	Polychlorinated dioxins and furans	N/A	2b	2,000 tonnes per year, or or 60,000 megawatt hours, or rated at 20 megawatts
	Polycyclic aromatic hydrocarbons	N/A	2a	400 tonnes per year, or 1 tonne per hour
	Selenium & compounds	7782-49-2	1	10 tonnes per year
	Styrene (ethenylbenzene)	100-42-5	1	10 tonnes per year
	Sulphur dioxide	7446-09-5	1	10 tonnes per year
			2a	400 tonnes per year, or 1 tonne per hour
	Sulphuric acid	7664-93-9	1	10 tonnes per year
1,1,2,2-	Tetrachloroethane	79-34-5	1	10 tonnes per year
	Tetrachloroethylene	127-18-4	1	10 tonnes per year

prefix	COLUMN 1 SUBSTANCE	COLUMN 2 CASR No.	COLUMN 3 THRESHOLD CATEGORY	COLUMN 4 THRESHOLD
	Toluene (methylbenzene)	108-88-3	1	10 tonnes per year
	Toluene-2,4-diisocyanate	584-84-9	1	10 tonnes per year
	Total Nitrogen	N/A	3	15 tonnes per year
	Total Phosphorus	N/A	3	3 tonnes per year
	Total Volatile Organic Compounds	N/A	1a	25 tonnes per year, or a design capacity of 25 kilotonnes for bulk storage facilities
			2a	400 tonnes per year, or 1 tonne per hour
1,1,2-	Trichloroethane	79-00-5	1	10 tonnes per year
	Trichloroethylene	79-01-6	1	10 tonnes per year
	Vinyl Chloride Monomer	75-01-4	1	10 tonnes per year
	Xylenes (individual or mixed isomers)	1330-20-7	1	10 tonnes per year
	Zinc and compounds	7440-66-6	1	10 tonnes per year