



# **Rapid Screening of Substances identified from Phase Two of the Domestic Substances List Inventory Update**

## **Results of the Screening Assessment**

**Environment and Climate Change Canada**

Health Canada

August 2016

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## Synopsis

As part of the Government of Canada's Chemicals Management Plan, a section 71 notice for the second phase of the *Domestic Substances List* (DSL) Inventory Update (IU) initiative was published in the *Canada Gazette*, Part I on December 1, 2012 to collect data on approximately 2700 substances. As a result, 869 substances were identified as candidates for rapid screening. The substances included in this report were candidates for rapid screening because they were identified as being in commerce across Canada at a total of less than or equal to 1000 kg/year, according to information submitted pursuant to section 71 of *Canadian Environmental Protection Act, 1999* (CEPA) regarding commercial activity in Canada under Phase Two of the DSL IU.

The majority of the 869 substances met the categorization criteria for persistence or bioaccumulation and inherent toxicity to human or non-human organisms or for greatest potential for exposure to humans under subsection 73(1) of CEPA. Some substances considered in this assessment had been identified as having health effects of concern based on classifications by other national or international agencies for carcinogenicity, genotoxicity, developmental toxicity or reproductive toxicity.

A rapid screening approach was applied that involved using conservative assumptions to identify substances that warrant further evaluation of their potential to cause harm to either human health or the environment, and those that are expected to have a low likelihood of causing harmful ecological or human health effects.

The ecological component consisted of two main steps to identify substances that warrant further evaluation of their potential to cause harm. The first step involved applying different exposure scenarios using assumptions that are protective of the environment. The second step involved a mechanical process to identify whether or not a substance appears on any of a wide range of lists or in sources of information relating to ecological hazard or exposure. This step recognized substances that have been identified by domestic or international initiatives as possibly being of greater concern due to their ecological hazard properties, or elevated potential for environmental release.

The human health component consisted of a process to determine whether the substance warrants further assessment based on the potential for exposure to the general population. Substances reported to be in commerce in Canada at less than or equal to 1000 kg/year are considered to warrant further assessment only if there is evidence of direct exposure (e.g., exposure from products or processed foods) for the general population in Canada. If the potential for exposure is considered to be negligible for a substance, then it is concluded that that substance is unlikely to cause harm to human health at current levels of exposure.

In total, 257 substances were identified as requiring further assessment (40 identified for both ecological and human health considerations, 199 identified for human health considerations only, and 18 identified for ecological considerations only). For the remaining 612 substances, this rapid screening approach indicated that current use patterns and

quantities in commerce are unlikely to result in concerns for organisms or the broader integrity of the environment, or for human health in Canada. Although a risk to the environment or human health has not been identified for 612 substances, 39 of these substances in this assessment are recognized to have properties or effects of concern. There may be a concern for the environment or for human health if exposures to these substances were to increase.

Considering all available lines of evidence presented in this screening assessment, there is low risk of harm to organisms and the broader integrity of the environment from the 612 substances identified in Appendix C and D. It is concluded that the 612 substances do not meet the criteria under paragraphs 64(a) or 64(b) of CEPA as they are not entering the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity or that constitute or may constitute a danger to the environment on which life depends.

From a human health perspective, direct or indirect exposure to the general population from environmental media (air, water, soil) to these 612 substances is expected to be negligible, and therefore the substances are unlikely to cause harm to human health at current levels of exposure. Based on the information presented in this screening assessment, it is concluded that the 612 substances listed in Appendix C and D do not meet the criteria under paragraph 64(c) of CEPA as they are not entering the environment in a quantity or concentration or under conditions that constitute or may constitute a danger in Canada to human life or health.

## **Conclusion**

It is concluded that these 612 substances do not meet any of the criteria set out in section 64 of CEPA.

## Introduction

The *Canadian Environmental Protection Act, 1999* (CEPA) (Canada 1999) requires the Minister of the Environment and the Minister of Health to conduct screening assessments of substances that have met the categorization criteria set out in subsection 73(1) of the Act to determine whether these substances present or may present a risk to the environment or human health<sup>1</sup>.

Under CEPA, screening assessments focus on information critical to determining whether a substance meets the criteria for defining a chemical as toxic as set out in section 64 of the Act, where:

**"64.** [...] a substance is toxic if it is entering or may enter the environment in a quantity or concentration or under conditions that

- (a) have or may have an immediate or long-term harmful effect on the environment or its biological diversity;
- (b) constitute or may constitute a danger to the environment on which life depends;
- or
- (c) constitute or may constitute a danger in Canada to human life or health."

The Government of Canada has identified 869 substances as candidates for a rapid screening approach. Thirty-two substances from the Confidential Domestic Substances List (CDSL) were included as a part of the 869 substances in this rapid screening. A confidential Accession Number is given to a substance whose identity has been identified as confidential pursuant to paragraphs 3 to 7 of the *Masked Name Regulations*. Their identities have been masked according to sections 88 and 113 of CEPA in this report.

The 869 substances were identified as being in commerce at a total quantity across Canada of less than or equal to 1000 kg/year as reported through submission of information provided in response to a notice under section 71 of CEPA 1999 regarding commercial activity in Canada under Phase Two of the Domestic Substances List (DSL) Inventory Update (Canada 2014). The majority of these substances met the categorization criteria for persistence or bioaccumulation and inherent toxicity (PiT or BiT) to human or non-human organisms for Greatest Potential for Exposure (GPE), or under subsection 73(1) of CEPA. Substances may have additionally been identified as having health effects of concern based on classifications by other national or international agencies for carcinogenicity, genotoxicity, developmental toxicity or reproductive toxicity.

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<sup>1</sup> A determination of whether one or more of the criteria in section 64 are met is based upon an assessment of potential risks to the environment and/or to human health associated with exposures in the general environment. For humans, this includes, but is not limited to, exposures from ambient and indoor air, drinking water, foodstuffs, and the use of consumer products. A conclusion under CEPA is not relevant to, nor does it preclude, an assessment against the hazard criteria specified in the *Hazardous Products Regulations* and *Controlled Products Regulations* which are part of the regulatory framework for the Workplace Hazardous Materials Information Systems for products intended for workplace use. Similarly, a conclusion based on the criteria contained in section 64 of CEPA 1999 does not preclude actions being taken under other sections of CEPA 1999 or other Acts.

Substances that meet the above quantity criteria, but that have already been assessed and managed under CEPA, or are currently being addressed under other assessment activities, are not included in this assessment. Furthermore, assessments and conclusions pertaining to some of the substances in this rapid screening may be subsequently updated as part of future assessments if the substance is found to be part of a larger class or moiety. This assessment incorporates input from other programs within Environment Canada and Health Canada. Additionally, the draft of this Screening Assessment was subject to a 60-day public comment period. While external comments were taken into consideration, the final content and outcome of the screening assessment remain the responsibility of Health Canada and Environment Canada.

## Approach

### Ecological component

The ecological component of the rapid screening approach, as illustrated in Figure 1, consists of multiple steps that address different factors relating to the potential for a substance to cause ecological harm. The approach is intended to be pragmatic, protective of the environment, and fairly rapid, largely making use of available or easily obtainable data and evaluation of the data.

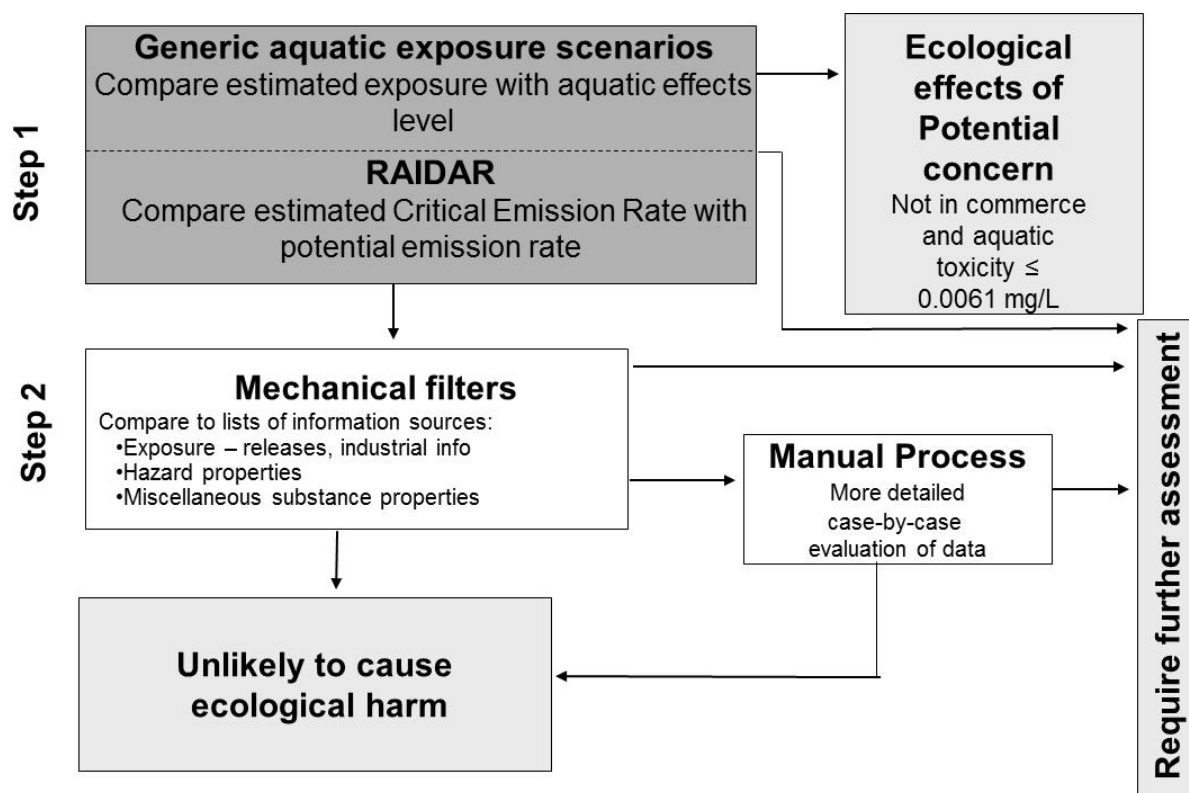


Figure 1: Overview of the ecological rapid screening approach

#### Step 1: Modelled exposure scenarios

The first step in the ecological component involves applying different scenarios or fate models to estimate environmental exposure. Two generic aquatic exposure scenarios were applied (described hereafter as scenarios A and B) to identify potential concerns near the point of discharge of a substance to the environment. These involve comparing conservative (i.e., ecologically protective) estimates of exposure in receiving waters with an effects threshold to evaluate whether a chemical is expected to cause harm to the local aquatic environment. A regional multi-media model named RAIDAR (Risk Assessment, IDentification And Ranking) is also applied. This fugacity-based model (described hereafter as scenario C) takes into account the combined characteristics of the substance in estimating potential harm in different environmental media (water, soil, and air), as well as in food chains. Figure 2 illustrates these exposure estimation approaches.

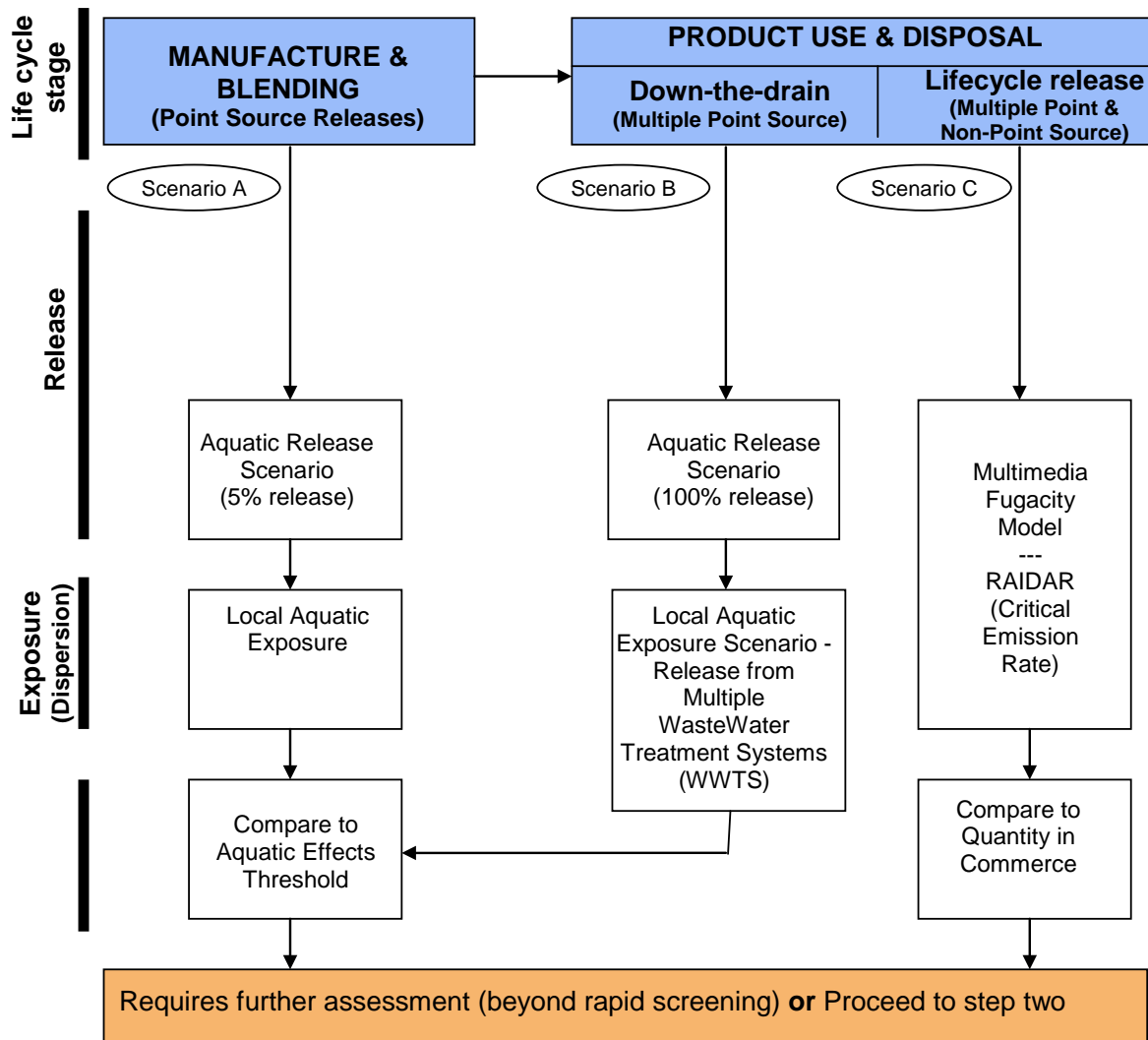
These approaches make use of available data from DSL categorization activities and Phase Two of the DSL Inventory Update. Data from the DSL Inventory Update includes use and quantity information from each reporting company. For those substances for which no data was received or the quantity reported was less than 100 kg, 100 kg was used for the quantity in the environmental exposure models. Data collected or estimated during categorization (Canada 2013) includes pivotal values for acute aquatic toxicity (iT), persistence and bioaccumulation, as well as physical/chemical properties.

While the generic aquatic exposure scenarios (A and B) have been developed to be conservative overall, the level of conservatism applied to individual parameters was selected to be moderate, since it is recognized that:

- a high level of conservatism applied to each parameter can easily compound into an excessively conservative overall exposure scenario;
- it is very unlikely that each parameter would be “worst case” at the same time; and
- interdependency of some parameters exists.

Rather, values in keeping with an overall worst case scenario have been used.





**Figure 2: Overview of ecological exposure scenarios**

***Scenario A: Industrial point source aquatic release***

Scenario A is based on release from an industrial facility that is manufacturing the substance and/or using it in the blending or preparation of products. This scenario assumes the release of 5% of the substance from manufacturing and blending activities, based on conservative estimates for loss from cleaning of container residues (3%), transfer lines (1%) and process equipment (1%) (US EPA 1992). A conservative estimate of exposure (predicted environmental concentration (PEC)) resulting from the release of the substance to the aquatic environment from such an industrial point source is calculated as shown in the following equation. Parameters used in Exposure Scenario A are described in Table 1.

$$\text{PEC (mg/L)} = (\text{Qty (kg)} \times \text{Release (\%)} \times (1 - \text{Wastewater Removal (\%)})) / (\text{Duration (days)} \times (\text{River flow (m}^3/\text{s)} + \text{Wastewater flow (m}^3/\text{s)})) \times (1000 \text{ (L/m}^3\text{)} / 86400 \text{ (s/day)})$$

The aquatic predicted no-effect concentration (PNEC) is derived as shown

$$\text{Aquatic PNEC (mg/L)} = \text{CTV (mg/L)} / \text{AF}$$

The PEC is compared to the PNEC to determine a risk quotient (PEC / PNEC). If the risk quotient is greater than one, this indicates that the conservatively estimated concentration in water exceeds the aquatic estimated no-effect level and that there exists a potential to cause harm in the aquatic ecosystem. A quotient below one indicates that concentrations that may cause an effect to sensitive aquatic organisms are not reached and therefore harm to aquatic organisms is unlikely under this scenario.

**Table 1 - Parameters used in Exposure Scenario A**

Abbrev.	Parameter	Value	Units	Notes
Qty	Maximum quantity of substance used at one facility	Quantity from Inventory Update	kg	Substance-specific
Release	Release of substance during manufacturing or handling	5	%	Based on conservative estimates of release from cleaning of container residues (3%), transfer lines (1%) and reactors (1%)
Wastewater Removal	Wastewater Treatment System (WWTS) removal efficiency	70	%	Conservative value for secondary treatment, recognizing biodegradation and sludge adsorption
Duration	Duration over which substance is released	150	days	Assumes seasonal use of substance
Wastewater flow	WWTS flow rate	0.04	m <sup>3</sup> /s	10th percentile of municipal WWTS flow rates in Canada
River flow	Flow of receiving watercourse	1.84	m <sup>3</sup> /s	15th percentile of the distribution of receiving watercourse flows in the country (based on the distribution of the 50th percentile of flow rates); weighted by number of industries releasing to the receiving watercourse
-	Factor combining conversion from kg to mg and m <sup>3</sup> to L	1000		
-	Conversion factor from days to seconds	86400		

Abbrev.	Parameter	Value	Units	Notes
CTV	Critical Toxicity Value		mg/L	Substance-specific; acute aquatic toxicity (iT pivotal value from categorization)
AF	Application factor	100		To account for acute-to-chronic; lab to field; inter-species variability

### **Scenario B: Down-the-drain aquatic release from consumer products**

The second scenario (residential releases to wastewater) considers the down-the-drain release of 100% of the substance that is contained in a consumer product, from multiple point-sources (*i.e.*, wastewater system). While not all substances inherently have the characteristics that lend themselves to down-the-drain applications, this scenario is used to represent a worst-case. Under this scenario, a value for the PEC from down-the-drain release of a substance contained in products is calculated, as well as a value for the aquatic PNEC, as defined in the equations below. Parameters used in exposure scenario B are described in Table 2 below.

$$\text{PEC (mg/L)} = (\text{Qty (kg)} \times \text{Release (\%)} \times (1 - \text{Wastewater Removal (\%)}) \times \text{Population (persons)}) / (\text{Duration (days)} \times \text{RPE (persons)} (\text{River Flow (m}^3/\text{s)} + \text{Wastewater Flow (m}^3/\text{s)})) \times (1000 \text{ (L/m}^3\text{)} / 86400 \text{ (s/day)})$$

$$\text{PNEC(mg/L)} = \text{CTV (mg/L)} / \text{AF}$$

As was the case for Scenario A, the PEC and the PNEC are combined to determine a risk quotient (PEC / PNEC).

Note that river flow distributions used in the two scenarios are different. Likelihood of harm from industrial releases (scenario A) is dependent on the number of industrial facilities releasing to a water body. In that scenario, a distribution of the dilution capacities of receiving waters (river flow) was generated with a weighting by the number of industrial facilities releasing to the water body. Likelihood of harm from down-the-drain release of consumer products (scenario B) is dependent on the human population that may be releasing a substance to a wastewater treatment system. In this scenario, a distribution of the ratio of population of the community to the dilution capacity of the receiving water body was generated. As a result, the parameters “population”, “wastewater flow rate” and “river flow” are inter-connected. In this scenario, it is this ratio that is important, not the actual values of the population or flow rates.

**Table 2 - Parameters used in Exposure Scenario B**

Abbreviation	Parameter	Value	Units	Notes
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Abbreviation	Parameter	Value	Units	Notes
Qty	Total quantity of substance used in Canada	Quantity from Inventory Update	kg	Substance-specific
Release	Release of substance from product during use	100	%	Complete release for down-the-drain products assumed
Wastewater Removal	WWTS removal efficiency	70	%	Conservative value for secondary treatment, recognizing biodegradation and sludge adsorption
Population	Population of representative community	100,000	persons	The combined ratio of these three parameters corresponds to the 10th percentile of the distribution of dilution capacity of water body receiving WWTS effluent (river flow + WWTS flow) weighted by population served.
Wastewater flow	WWTS flow rate	0.66	m <sup>3</sup> /s	The combined ratio of these three parameters corresponds to the 10th percentile of the distribution of dilution capacity of water body receiving WWTS effluent (river flow + WWTS flow) weighted by population served.
River Flow	Flow of receiving watercourse	3.58	m <sup>3</sup> /s	The combined ratio of these three parameters corresponds to the 10th percentile of the distribution of dilution capacity of water body receiving WWTS effluent (river flow + WWTS flow) weighted by population served.
Duration	Duration over which substance is released	150	days	Assuming seasonal use of substance
RPE	Regional product effect	2,000,000	persons	Value set to represent population of a Canadian region in which total quantity of product could be used
-	Factor combining conversion from kg to mg and m <sup>3</sup> to L	1000		
-	Conversion factor from days to seconds	86400		

Abbreviation	Parameter	Value	Units	Notes
CTV	Critical Toxicity Value	---	mg/L	Substance-specific; acute aquatic toxicity (iT pivotal value from categorization)
AF	Application factor	100		To account for acute-to-chronic; lab to field; inter-species variability

### **Scenario C: Life cycle release**

Scenario C uses a fugacity-based multimedia modelling approach to address possible release of the substance over its full life-cycle. Such models assume substances released to the environment are distributed throughout a unit world – and are thus suitable for a disperse release scenario from all stages of the substance life-cycle (Mackay 2001).

This modelling approach also provides a “safety net” scenario, since it accounts for combined effects of a substance’s physical/chemical and hazard properties as well as considerations of exposure to different environmental media (water, air, soil, sediment) and organisms.

RAIDAR is a peer-reviewed fugacity-based model developed by the Canadian Environmental Modeling Network (CEMN) to assess chemicals for risk by estimating environmental fate and transport, bioaccumulation and exposure to organisms, and determining a critical emission rate (Arnot *et al.* 2006; Arnot and Mackay, 2008). An updated RAIDAR Ver.2.0 was used to run the simulations. The model has been revised to better address the fate and bioaccumulation for ionogenic organic chemicals (Armitage *et al.* 2013, Arnott 2011a,b)

A Level III fugacity model scenario was used to model the partitioning of substances into the environment. In this model, the substance is assumed to be continuously discharged at a constant rate and achieves a steady state condition in which input and output rates are equal. The loss processes are degradation reactions and advection. Unlike the simpler Level II fugacity model, equilibrium between media is not assumed and, in general, each medium is at a different fugacity. The Level III fugacity model scenario was run assuming a 33% release of the substance to each of air, water and soil for interpretation of RAIDAR results in this rapid screening approach. For ionogenic organic chemicals the scenario was run assuming a 100% release of the substance to water, since the substance is expected to partition to water.

Representative food webs are included in RAIDAR to assess routes of exposure of organisms to chemicals in the environment. The food web model takes the output from the fate and transport calculations for the substance (the concentration in the different environmental media) and estimates internal concentrations in some 20 biotic groups including plankton, vegetation, domestic animals, fish and wildlife, using data on the nature and quantity of diets, respiration, and growth rates. Essentially, each organism absorbs the chemical by respiring air (or by exchange at the gill-water interface in the case of fish) or by consuming water and other organisms (plants or animals). The concentration of the

substance in each organism is generally calculated using these rates, absorption efficiencies, and the concentration in the respective media. The steady-state concentration in the organism is calculated from an input-output mass balance. The result is an estimate of fugacity and concentrations in the biota.

Using a multi-level, multi-media foodchain, the most sensitive endpoint is identified (based on toxicity and exposure potential) and a “critical emission rate” is calculated based on that sensitive endpoint. The estimated critical emission rate is then compared with an estimated potential emission rate (based on quantities in commerce) to determine a “risk assessment factor” or RAF.

Substances are ranked according to their critical emission rates and their RAF values. Substances identified as having greater potential for harm are considered as requiring further assessment. The model output also indicates substances that are unlikely to be of concern from releases to the environment through their life-cycle.

As outlined in a report on the application of RAIDAR in rapid screening (Arnot and Mackay 2007), there are some classes of substances (e.g., inorganic substances) for which application of the model was not designed or may not be appropriate. Substances belonging to such classes were identified and the model was not applied to them. A more detailed description of RAIDAR is contained in Environment Canada (2007a).

For the purpose of the rapid screening approach, the critical emission rate, the RAF and the media of concern are the most important outputs of RAIDAR. The use of the critical emission rate and the RAF allows identification of chemicals that are unlikely to be of concern because of their limited potential for exposure. Additionally, the identification of the most sensitive ecological endpoint allows consideration of environmental media and/or types of organisms that may not have been previously addressed in the rapid screening exposure scenarios A and B.

### ***Possible outcomes from Step 1***

There are three possible outcomes from Step 1:

- If the scenarios indicate a potential harmful effect to aquatic or terrestrial organisms and the substance is reported to be in commerce, based on information collected under the DSL Inventory Update, the substance is identified as requiring further assessment;
- If the scenarios indicate a potential harmful effect to aquatic or terrestrial organisms and the substance is believed not to be in commerce (*i.e.*, no response received or stakeholder interest only), based on information collected under the DSL Inventory Update, the substance is considered as having low likelihood of harm, but may be monitored for changes in the use profiles; or
- If the scenarios indicate a low likelihood of harm to organisms, then the substance proceeds to the next step of rapid screening.

Decisions regarding the need for future monitoring of changes in the use profiles are made when a new activity in relation to a substance could result in the substance being released in amounts or under conditions that may result in the substance posing an environmental risk. In the ecological portion of this screening assessment, decisions to recommend monitoring of changes in use profiles may be triggered for substances which are not currently in commerce (based on information collected under the DSL Inventory Update), but which could have a risk quotient value above one, if as little as 100 kg of the substance was brought into commerce. Based on back-calculation using the conservative ecological rapid screening exposure scenarios A (Industrial Point Source Aquatic Release) or B (Down-the-Drain Aquatic Release from Consumer Products), such a situation could occur if a substance has an acute aquatic toxicity value (lethal concentration to 50% of study organism (LC<sub>50</sub>) or equivalent) less than or equal to 0.0061 mg/L.

### ***Step 2: Mechanical filters and manual processes***

The second step of the ecological rapid screening approach involves verifying various information sources to confirm the likelihood that a substance may be of ecological concern. This approach uses “filters” (*i.e.*, various information sources) and involves identifying whether or not a substance appears on different lists or sources of information relating to hazard or exposure. This step identifies substances that may have an elevated potential for environmental release or that have been identified by domestic or international sources as possibly being of greater concern due to their hazard properties.

Depending on the nature of the information sources, substances identified by the filters may be further evaluated manually within rapid screening or be identified as requiring further assessment. This manual process involves case-by-case evaluation to decide, for example, whether the information in the source that identified the substance is relevant to the situation in Canada. It may also involve collection and review of information from other sources that are not as amenable to evaluation using a mechanical approach. The manual process involves evaluation of the weight and relevance of information obtained from the full range of sources identified.

Many sources of information were evaluated. In selecting which lists or information sources to apply in rapid screening, there was an effort to limit the amount of overlap between lists. For example, secondary sources of information were removed if the primary source of information was also included. A list of the sources of information that were retained for the purpose of rapid screening can be found in Appendix A. A number of information sources were judged to be relevant for rapid screening, but were not amenable to being searched mechanically. These sources were included among those verified at the manual stage.

### ***Possible outcomes from Step 2***

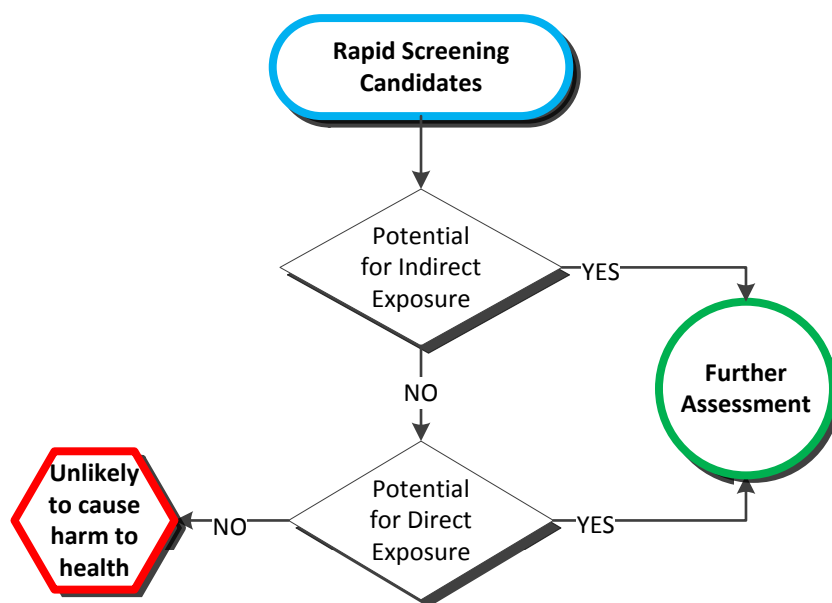
There are two possible outcomes from Step 2:

- If the mechanical filters and/or manual process indicate a potential harmful effect to the environment, the substance is identified as requiring further assessment; or

- If the mechanical filters and manual process indicate a low likelihood of harm to the environment, then the substance is unlikely to cause ecological harm.

### ***Human health component***

The process used to determine whether substances warrant further assessment from a human health perspective within the rapid screening approach is illustrated in Figure 3.



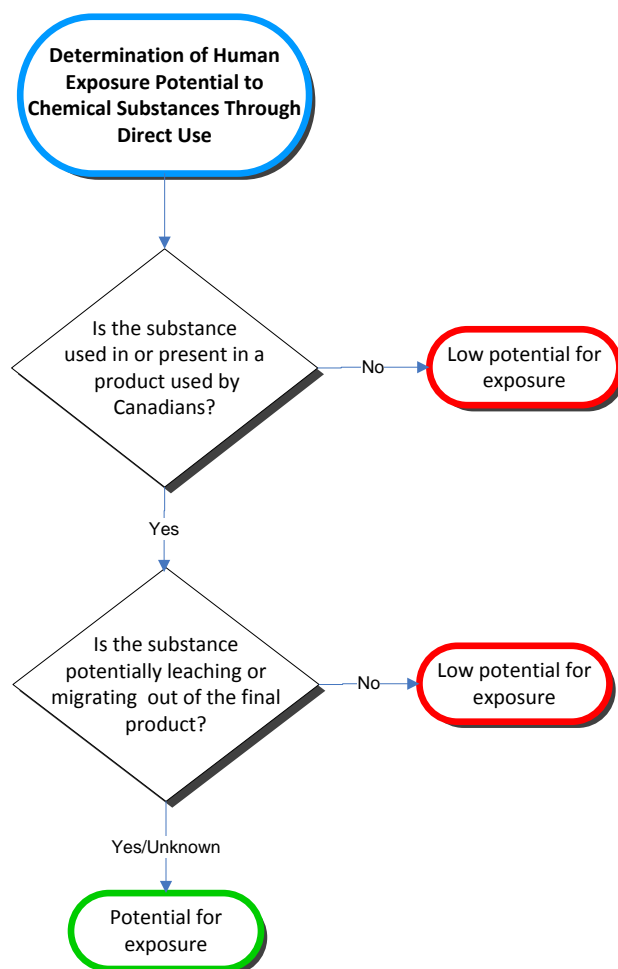
**Figure 3: Overview of rapid screening approach - human health considerations**

A key element of the characterization of potential risk to human health is determination of potential for exposure to the general population. Substances reported to be in commerce in Canada at less than or equal to 1000 kg/year were considered to result in potential exposure to the general population if there was evidence of direct exposure (e.g., exposure from products or processed foods). Otherwise, exposure to the general population was considered to be negligible and it can be concluded that the substance is unlikely to cause harm to health at current levels of exposure.

Given the reported quantities in commerce in Canada (less than or equal to 1000 kg) of these substances, indirect exposure to the general population from environmental media (e.g. air, water, soil) is not expected to be significant. Release of a substance to specific environmental media (i.e., water, air, soil) depends on factors such as where the substance is released and its physical/chemical properties. Conservative modelling estimates using a fugacity based modelling tool for applicable substances (ChemCan 2003), indicate that assuming 100% release of a substance (i.e., the maximum possible release for these substances of 1000 kg) to either air, water or soil, potential exposures would be predicted to be less than  $10^{-6}$  mg/kg bw/day (i.e., less than 1 ng/kg bw/day). This represents a negligible exposure potential from indirect sources for these substances.



Depending on the use of the substance, direct exposure to the general population may be possible. Considerations for determination of direct exposure potential are described below and outlined in Figure 4.



**Figure 4: Considerations for the determination of direct human exposure potential to chemical substances through direct use**

The term “direct use” refers to the use of a chemical substance that is directly, or as part of a mixture, a product, or a manufactured item, sold to or made available to Canadians for their use.

“Direct use” does not include exposures from chemical products used by workers in an industrial setting or other workplace.

A user is considered to be anyone from the general public who has access to a product

that is advertised, imported or sold in Canada<sup>2</sup>.

To determine if a substance is used in or present in a product used by Canadians, numerous sources of both domestic and international use and product information were consulted, including but not limited to:

#### Domestic

- Information from a mandatory CEPA 1999 section 71 survey under - Phase Two of the DSL Inventory Update (Canada 2012);
- Health Canada's Lists of permitted food additives (2013);
- Health Canada's Natural Health Products Ingredients Database (NHPID 2014);
- Health Canada's Licensed Natural Health Products Database (LNHPD 2014);
- Health Canada's Drug Product Database (DPD 2014);
- Pest Management Regulatory Agency Product Information Database (PMRA 2014);
- Pest Management Regulatory Agency List of Formulants (PMRA 2010);
- List of Pharmaceuticals sold in Canada (2011 & 2012) (IMS 2013); and
- Notifications submitted under the *Cosmetic Regulations* to Health Canada
- Notifications submitted under the *Food and Drugs Act* to Health Canada

#### International

- US EPA Chemical and Product Categories Database (CPCat 2014);
- Everything Added to Food in the United States Database (EAFUS 2011);
- US Food and Drug Administration's Food Additive Status List (US FDA 2013);
- US Food and Drug Administration's List of Indirect Additives used in Food Contact Substances (US FDA 2011);
- European Commission's Food Additive database (EU 2014a);
- European Commission's Food Flavours database (EU 2014b);
- European Commission's Cosmetic Ingredient database (COSING 2014);
- Household Products Database (HPD 2014);
- Hazardous Substances Data Bank (HSDB c1993-2008);
- Danish Surveys on Chemicals in Consumer Products- Various (Denmark 2014);
- Material Safety Data Sheets (MSDS)- various internet sources; and
- National and international assessments and databases.

Based on the information identified from these resources, the following considerations were used to determine potential for direct exposure:

1. Substances to which direct exposures to the general population are not expected include, but are not limited to, substances:
  - a. used only as intermediates in the manufacturing process;

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<sup>2</sup> [http://www.hc-sc.gc.ca/cps-spc/pubs/indust/cccr-2001-rpccc/ref\\_man/index-eng.php#a1.1](http://www.hc-sc.gc.ca/cps-spc/pubs/indust/cccr-2001-rpccc/ref_man/index-eng.php#a1.1)

- b. used only for industrial use; or
  - c. used only for research purposes.
2. Substances with potential for direct exposure to the general population include those that are present, either intentionally or unintentionally, in products or manufactured items that are commonly used by Canadians. These include, but are not limited to, substances used in:
- products intended for use by children, and manufactured items such as plastic or wooden toys;
  - personal care products<sup>3</sup>;
  - commercial paints and inks;
  - commercial adhesives;
  - hobby activities or do-it-yourself products;
  - clothing, fabric and other textiles, including bedding and furniture
  - cleaning products;
  - food additives and packaging; or
  - fragrances or flavourants<sup>4</sup>.
3. Information on potential for the substance to migrate from products was also considered, including the type of product that the substance is present in, the substance's functional use in that product, as well as the substance's physical-chemical properties. For example, direct exposure would not be expected to occur for a substance used as a curing agent in a polymer as the substance would be reacted into the stable matrices of the cured polymer and would therefore not typically be available for migration. If this information is not known for a substance, it was assumed that the substance may be migrating out of the final product, which may lead to direct exposure for users.

Through the evaluation, some uses were identified that could result in direct exposure; however, these uses are already being regulated under other Acts:

- a. Fertilizers- The direct use of fertilizers is regulated under the Fertilizers Act. As a consequence, if the only use (with a potential for direct exposure) identified for a substance was as a fertilizer (or component thereof), that use

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<sup>3</sup> For the purpose of this document, a personal care product is defined as a substance or mixture of substances which is generally recognized by the public for use in daily cleansing or grooming. Depending on how the product is represented for sale and its composition, personal care products may fall into one of three regulatory categories in Canada: cosmetics, drugs or natural health products.

<sup>4</sup> The potential for substances to be used as fragrances and/or flavourants was identified as part of the process to determine the potential for direct exposure for the general population. Where evidence was not found substantiating their use as fragrances and/or flavourants in Canada (e.g. via section.71 notifications, Health Canada's Lists of permitted food additives, or the CNS) these substances were not considered to present a potential for direct exposure to the general population from that use. These substances have been flagged in Appendix C.

was considered to be regulated under the *Fertilizers Act*<sup>5</sup>, and as a result, this use was no longer considered in the evaluation. These substances have been flagged in Appendix C;

- b. Pharmaceuticals – The direct use of pharmaceuticals is regulated under the *Food and Drugs Act*. This use was not considered further in the evaluation of potential for direct exposure to the general population in this screening assessment. Substances which were found to be used only in pharmaceutical (veterinary and/or human) applications, with information indicating volume levels less than 1000 kg per year in Canada, have been identified as requiring no further action in this rapid screening approach. These substances have been flagged in Appendix C;
- c. Pesticide formulants –In situations where the only use identified for a substance was as a formulant in a pesticide product registered under the *Pest Control Products Act* (PCPA), this potential for direct exposure to the general public was not considered further in this screening assessment. Substances in pest control products registered under the PCPA have undergone an ecological and human health risk assessment by the Pest Management Regulatory Agency (PMRA) according to the intended use and labelling as part of their registration process. The substances used as formulants were considered separately from those identified as active ingredients in registered pesticide products, as the formulants, while components of pesticide products, do not provide a function(s) that is/are unique to pesticides. However, in the case of the formulants flagged in Appendix C, no uses were identified in Canada for these substances, other than their listing as pesticide formulants (PMRA 2010); and
- d. Historical active pesticide ingredients- these are substances which were registered as active ingredients in pesticide products in Canada historically, but do not have any current registered uses in pesticides in Canada. These substances have been flagged in Appendix C.

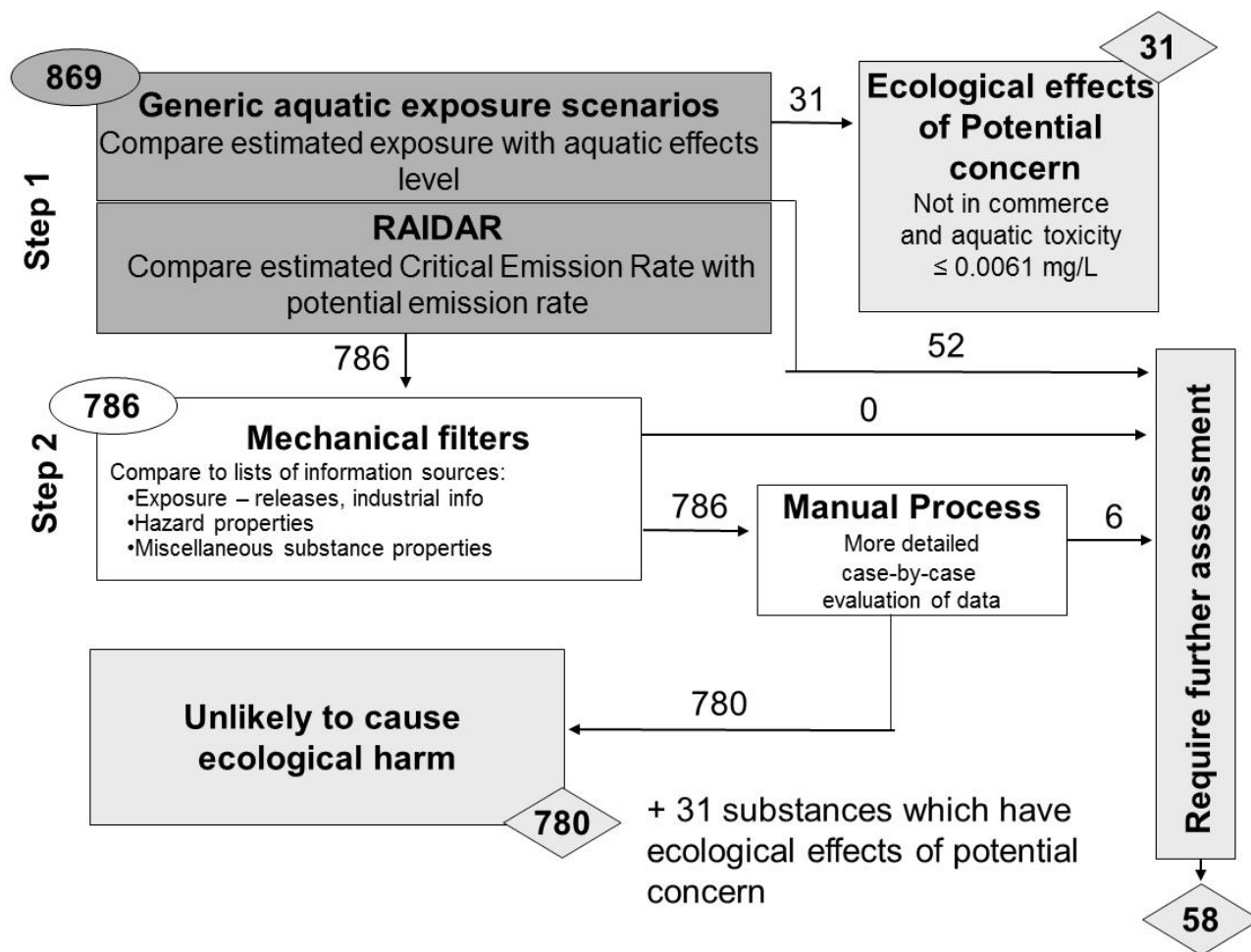
## Screening Assessment Results

### Assessment of potential to cause ecological harm

In this section, an overview of the results obtained at each step of rapid screening of the substances covered under this assessment is provided. These results are summarized in Figure 5.

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<sup>5</sup> The *Fertilizers Act* and *Regulations* requires that all regulated fertilizer and supplement products must be safe for humans, plants, animals, and the environment. All fertilizers and supplements that are imported or sold in Canada are regulated by the CFIA. <http://www.inspection.gc.ca/plants/fertilizers/program-overview/regulatory-oversight/eng/1330893727411/1330893810582>



\* A total of 811 substances are unlikely to cause ecological harm\*

## Figure 5: Summary of screening assessment results - ecological considerations

\* Values in above figure represent ecological decisions only, when human health considerations are taken into account the number of substances that require monitoring for changes in use profiles and that are not expected to cause harm will decrease as some of the substances will require further assessment due to human health considerations.

### Step 1: Modelled exposure scenarios

In this assessment, quantities that were used in the exposure scenarios were obtained through the Phase Two of the DSL Inventory Update (Canada 2012).

#### Generic aquatic scenarios

The industrial releases scenario (scenario A) identified 129 substances as being of potential concern, while the residential releases scenario (scenario B) identified 86

substances, all of which were also identified by the industrial release scenario. These 129 substances (or 15% of the 869 evaluated) were initially identified by these scenarios as requiring further assessment. However, results from the Second Phase of the DSL Inventory Update indicate that 77 of these 126 substances are no longer in commerce in Canada above the reporting threshold (i.e. 100 kg). As indicated in the ecological component portion of the Approach section of this report, activities with as low as 100 kg per year of a substance could pose a risk if that substance has an acute aquatic toxicity value ( $LC_{50}$  or equivalent) less than or equal to 0.0061 mg/L.

Of the above-mentioned 77 substances, 46 substances are not expected to be a significant contributor to the presence of the substance in the environment. For example, there are a number of substances where the pivotal inherent toxicity value identified during categorization of the DSL and applied in this rapid screening evaluation, was based on the ecotoxicity of the free metal ion expected to be liberated during dissolution/transformation of the substance under natural conditions. For example, an organic metal salt will dissolve and liberate a metal cation and an anionic organic moiety when present in water. However, in the case of these substances--all of which are believed to have very little or no commercial presence at this time--becoming a significant contributor to the presence of the total metal moiety in the environment in the future, relative to other sources of release, is unlikely. Therefore, only 31 of these substances are proposed flagged as having ecological effects of potential concern (see Appendix E).

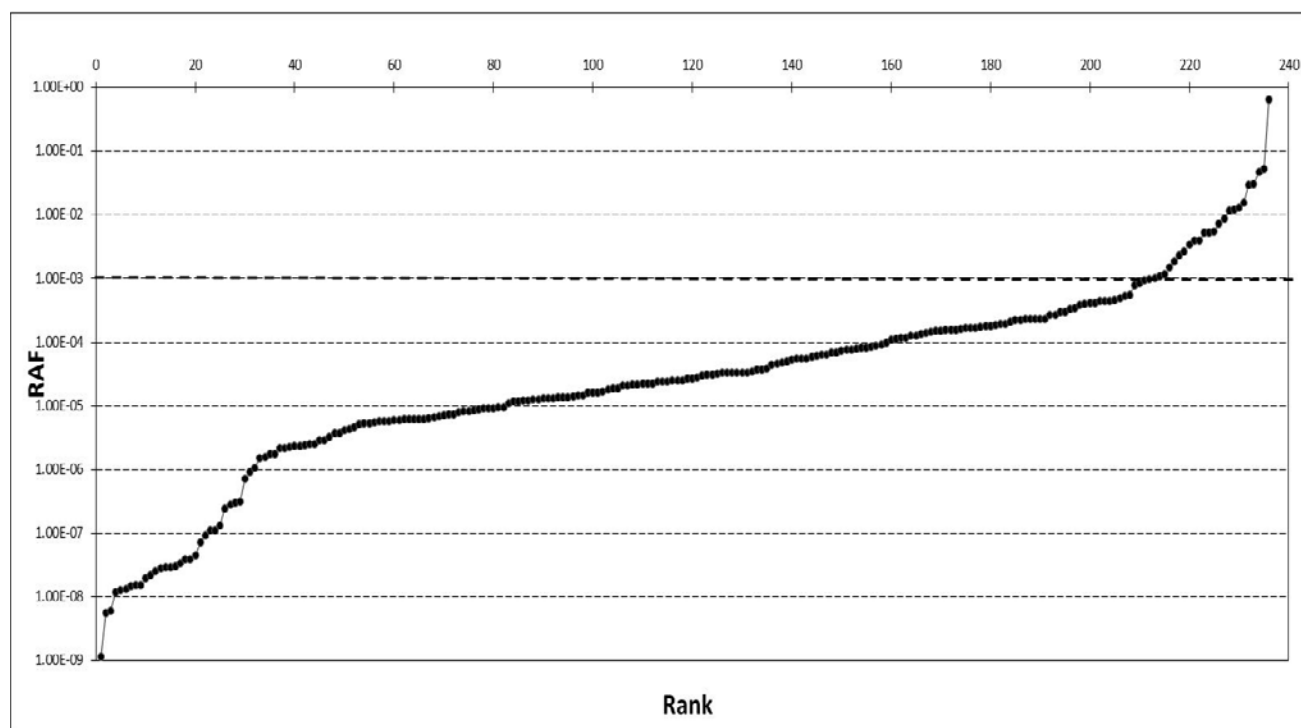
## **RAIDAR**

RAIDAR and similar models are not applicable to all categories of substances encountered on the DSL. RAIDAR was applied to substances described in Arnot and Mackay (2007): conventional organics; dissociating organic acids; and dissociating organic bases. Therefore, of the 869 substances evaluated in Step 1, 236 (or 27%) were modelled using RAIDAR. However, higher confidence was only achieved with the modelling of the organic substances. A spreadsheet includes all input values and results from application of RAIDAR to these substances (ARC 2014). As with other models, results from RAIDAR depend on the quality and quantity of the available substance-specific data.

In order to identify which substances are unlikely to have the potential to cause ecological harm, it is necessary to select a cut-off value for the RAF. A value of 0.001 was selected, which is equivalent to an uncertainty factor of 1000. Selection of this conservative value allows for up to a 1000-fold error in the model results owing to uncertainties in the quantity of the substance in commerce and other model inputs, such as physical-chemical properties. The ability of RAIDAR to discriminate potential for ecological harm based on the characteristics of substances is discussed further in Environment Canada (2007b).

Based on the described model scenario and the selected RAF cut-off value, 23 of the 236 substances that were evaluated using RAIDAR were identified as having potential for harmful effects if released at the reporting thresholds used in the DSL Inventory Update (Figure 6) and thus requiring further assessment. RAIDAR identified three additional

substances for further assessment beyond the substances identified in release scenarios A and B.



**Figure 6: Risk Assessment Factor (RAF) results based on the RAIDAR model. (The dashed line represents the RAF cut-off of value of 0.001)**

### ***Step 2: Mechanical filters and manual process***

Appendix A shows the number of substances that were identified by each of the mechanical filters for the 869 substances that were evaluated in this rapid screening exercise. In contrast to the rapid screening approach outlined in Environment Canada 2007a, the appearance of a substance on one or more of the six international lists of High Production Volume (HPV) chemicals did not automatically result in the substance being identified for further assessment due to the availability of recent Canadian data (Canada 2014) on these substances. Substance-by-substance evaluation at the manual process stage was based on consideration of the available information to evaluate whether the substance has hazard properties or characteristics, or an elevated potential for environmental release, that may not have been adequately addressed using the exposure scenarios in Step 1.

As a result of manual screening, six substances were identified as requiring further screening assessment due to additional toxicity data.

### ***Summary of results from ecological assessment***

In total, 58 of the substances evaluated using the ecological rapid screening approach were identified as warranting further assessment from an ecological perspective. A list of these substances is provided in Appendix B. The other 811 substances were identified as posing a low risk of harm to organisms or the broader integrity of the environment at current levels of exposure. Thirty-one of these substances were identified as having potential ecological effects of concern as a result of their relatively high aquatic toxicity (Appendix E).

## **Assessment of potential to cause harm to human health**

Of the 869 substances examined from a human health perspective, 239 substances were identified as having the potential to result in direct exposure to the general population and therefore warrant further assessment of the exposure and hazard potential of these substances. A list of the substances with potential for direct exposure to the general population, and therefore requiring further assessment, is provided in Appendix B.

Exposure to the general population was considered to be negligible for the remaining 630 substances

However, eight substances not identified for further assessment at this time may be recommended to be monitored for changes in use profiles (identified in Appendix C) based on high hazard concerns. These substances have been identified as having health effects of concern based on classifications by other national or international agencies for carcinogenicity, genotoxicity, developmental toxicity or reproductive toxicity (see Appendix F).

## **Summary of uncertainties**

It is recognized that conclusions resulting from the use of a rapid screening approach have associated uncertainties. However, the use of a wide range of filters (relating to both exposure potential and hazard concerns identified for each substance), as well as the use of conservative exposure scenarios give confidence that substances identified as not requiring further assessment are unlikely to be of concern.

Values for physical/chemical and hazard properties derived during categorization of the DSL were used as input for the modelling work for the ecological assessment. As is recognized in documentation associated with categorization, there are uncertainties in these values, in particular with those that have been estimated using different modelling approaches. Extreme values that were estimated by models were replaced by limiting values of physical/chemical properties or alternatively-derived toxicity values, prior to using them as input for RAIDAR modelling as part of rapid screening (ARC 2014).



## Conclusion

In total, from both ecological and human health assessments, 257 of the 869 substances were identified as requiring further assessment (Appendix B).

Based on the information available, it is concluded that the remaining 612 substances are not entering the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity, that constitute or may constitute a danger to the environment on which life depends, or that constitute or may constitute a danger in Canada to human life or health. It is therefore concluded that these 612 substances (Appendix C and D) do not meet any of the criteria set out in section 64 of CEPA 1999.

As these 612 substances are listed on the DSL, they are not subject to notification under the *New Substance Notification Regulations* (Chemicals and Polymers). Although a risk to the environment or human health has not been identified, 39 substances (31 ecological, 8 human health) in this assessment are recognized to have properties or effects of concern (see Appendix E and F). There may be a concern for the environment or for human health if exposures to these substances were to increase.

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## Appendix A: Number of substances for which data was available, by source.

Mechanical Filters	Number of Substances
OECD HPV	86
EU HPV	47
ICCA HPV	17
US HPV	11
US EXTENDED HPV	0
Japan HPV	8
Australia HPV	2
REACH Dossier Published/disseminated	54
Toxic Substances Control Act – 12(b) Export Notification (US)	4
National Pollutant Release Inventory (CA)	7
Toxics Release Inventory (US)	19
National Pollutant Inventory (AU)	0
Pollutant Release & Transfer Register (JN)	7
(NClassification) R52 (EU)	3
(NClassification) R53 (EU)	0
(NClassification) R52,53 (EU)	3
(NClassification) N; R50 (EU)	48
(NClassification) N: R50,53 (EU)	44
(NClassification) N: R51,53 (EU)	18
Banned or Severely Restricted Pesticides (US )	13
PBT List (US)	0
Priority Substances List (EU )	0
EU PBT List (EUROPE)	2
List of Substances Banned/Severely restricted in EU (EUROPE)	4
Great Lakes Binational Toxics List (CA/US)	0
PIC List (UN)	4
CEPA 1999 Section 200 Environmental Emergencies List (CA)	4
PSL2 Nomination Dossiers (CA)	3
ARET List (CA)	3
Great Lakes 211 Air Toxics (CA/US)	7
NAPS (CA)	0
<i>Pest Control Products Act</i> Registered Active Ingredients (CA)	13
Air Toxics / Hot Spots Chemicals (California)	13
Clean Water Act Priority Pollutants (US)	5
Superfund Site Chemicals (US)	35
Hazardous Constituents Under RCRA (US)	0
Nordic Council List of Chemicals Hazardous to Environment (EU)	68
OSPAR List (EU)	14
UNEP/FAO/WHO Inchem Pesticide Classification (UN)	0
Toxic Chemicals List (China)	9
Camford Product Information Profiles (CA)	0
BUA Reports (DE)	5
UNEP EHC (UN)	12
RAIS Tox Profile (US)	2
TSCATS (US)	59
HSDB Record (US)	132
NTP Reports / Studies (US)	43
ChemFate – Syracuse Research Corporation (US)	5
Datalog – Syracuse Research Corporation (US)	26
CESARS – Ontario Database (CA/US)	27

## Appendix B: Substances identified as requiring further assessment

CAS RN <sup>i</sup>	Domestic Substances List name	Potential Ecological concern	Potential Human Health concern
50-48-6	1-Propanamine, 3-(10,11-dihydro-5H-dibenzo[a,d]cyclohepten-5-ylidene)-N,N-dimethyl-		x
57-09-0	1-Hexadecanaminium, N,N,N-trimethyl-, bromide		x
57-97-6	Benz[a]anthracene, 7,12-dimethyl-	X	
58-20-8	Androst-4-en-3-one, 17-(3-cyclopentyl-1-oxopropoxy)-, (17 $\beta$ )-		x
59-50-7	Phenol, 4-chloro-3-methyl-	X	x
67-97-0	9,10-Secocholesta-5,7,10(19)-trien-3-ol, (3 $\beta$ ,5Z,7E)-	X	x
68-26-8	Retinol		x
77-09-8	1(3H)-Isobenzofuranone, 3,3-bis(4-hydroxyphenyl)-		x
78-21-7	Morpholinium, 4-ethyl-4-hexadecyl-, ethyl sulfate		x
79-74-3	1,4-Benzenediol, 2,5-bis(1,1-dimethylpropyl)-	X	
87-22-9	Benzoic acid, 2-hydroxy-, 2-phenylethyl ester		x
88-84-6	Azulene, 1,2,3,4,5,6,7,8-octahydro-1,4-dimethyl-7-(1-methylethylidene)-, (1S-cis)-		x
91-51-0	Benzoic acid, 2-[[3-[4-(1,1-dimethylethyl)phenyl]-2-methylpropylidene]amino]-, methyl ester	X	x
93-58-3	Benzoic acid, methyl ester		x
93-89-0	Benzoic acid, ethyl ester		x
106-70-7	Hexanoic acid, methyl ester		x
108-93-0	Cyclohexanol		x
109-29-5	Oxacycloheptadecan-2-one	X	x
109-87-5	Methane, dimethoxy-		x
109-94-4	Formic acid, ethyl ester		x
110-00-9	Furan		x
111-96-6	Ethane, 1,1'-oxybis[2-methoxy-		x
112-38-9	10-Undecenoic acid		x
116-31-4	Retinal		x
117-98-6	6-Azulenol, 1,2,3,3a,4,5,6,8a-octahydro-4,8-dimethyl-2-(1-methylethylidene)-, acetate		x
120-11-6	Benzene, 2-methoxy-1-(phenylmethoxy)-4-(1-propenyl)-		x
120-24-1	Benzeneacetic acid, 2-methoxy-4-(1-propenyl)phenyl ester		x
120-50-3	Benzoic acid, 2-methylpropyl ester		x
122-68-9	2-Propenoic acid, 3-phenyl-, 3-phenylpropyl ester		x
122-79-2	Acetic acid, phenyl ester		x
124-13-0	Octanal		x
126-13-6	$\alpha$ -D-Glucopyranoside, 6-O-acetyl-1,3,4-tris-O-(2-methyl-1-oxopropyl)- $\beta$ -D-fructofuranosyl, 6-acetate 2,3,4-tris(2-		x

CAS RN <sup>i</sup>	Domestic Substances List name	Potential Ecological concern	Potential Human Health concern
	methylpropanoate)		
133-14-2	Peroxide, bis(2,4-dichlorobenzoyl)	X	
134-09-8	Cyclohexanol, 5-methyl-2-(1-methylethyl)-, 2-aminobenzoate		x
137-29-1	Copper, bis(dimethylcarbamodithioato-S,S')-, (SP-4-1)-	X	
141-79-7	3-Penten-2-one, 4-methyl-		x
142-71-2	Acetic acid, copper(2++) salt		x
150-60-7	Disulfide, bis(phenylmethyl)		x
315-37-7	Androst-4-en-3-one, 17-[(1-oxoheptyl)oxy]-, (17β)-		x
469-61-4	1H-3a,7-Methanoazulene, 2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-, [3R-(3α,3aβ,7β,8aα)]-		x
470-40-6	Cyclopropa[d]naphthalene, 1,1a,4,4a,5,6,7,8-octahydro-2,4a,8,8-tetramethyl-, [1aS-(1aα,4aβ,8aR)]-	X	x
471-53-4	Olean-12-en-29-oic acid, 3-hydroxy-11-oxo, (3β,20β)		x
489-40-7	1H-Cycloprop[e]azulene, 1a,2,3,4,4a,5,6,7b-octahydro-1,1,4,7-tetramethyl-, [1aR-(1aα,4α,4aβ,7bα)]-	X	x
489-84-9	Azulene, 1,4-dimethyl-7-(1-methylethyl)-		x
489-86-1	5-Azulenemethanol, 1,2,3,4,5,6,7,8-octahydro- α,α,3,8-tetramethyl-, [3S-(3α,5α,8α)]-		x
495-62-5	Cyclohexene, 4-(1,5-dimethyl-4-hexenylidene)-1-methyl-	X	x
502-72-7	Cyclopentadecanone		x
506-61-6	Argentate(1-), bis(cyano-C)-, potassium	X	x
506-87-6	Carbonic acid, diammonium salt		x
513-86-0	2-Butanone, 3-hydroxy-		x
514-51-2	4,7-Methanoazulene, 1,2,3,4,5,6,7,8-octahydro-1,4,9,9-tetramethyl-, [1S-(1α,4α,7α)]-		x
527-09-3	Copper, bis(D-gluconato-O1,O2)-		x
541-91-3	Cyclopentadecanone, 3-methyl-	X	x
542-46-1	9-Cycloheptadecen-1-one, (Z)-		x
546-28-1	1H-3a,7-Methanoazulene, octahydro-3,8,8-trimethyl-6-methylene-, [3R-(3α,3aβ,7β,8aα)]-	X	x
546-89-4	Acetic acid, lithium salt		x
563-68-8	Acetic acid, thallium(1+) salt	X	
596-03-2	Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy-		x
623-42-7	Butanoic acid, methyl ester		x
632-51-9	Benzene, 1,1',1'',1'''-(1,2-ethenediylidene)tetrakis-		x
639-99-6	Cyclohexanemethanol, 4-ethenyl-α,α,4-trimethyl-3-(1-methylethenyl)-, [1R-(1α,3α,4β)]-	x	x
647-42-7	1-Octanol, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-		x
1113-21-9	1,6,10,14-Hexadecatetraen-3-ol, 3,7,11,15-tetramethyl-, (E,E)-	x	x

CAS RN <sup>i</sup>	Domestic Substances List name	Potential Ecological concern	Potential Human Health concern
1139-30-6	5-Oxatricyclo[8.2.0.0 <sup>4,6</sup> ]dodecane, 4,12,12-trimethyl-9-methylene-, [1R-(1R,4R,6R,10S)]-		x
1304-85-4	Bismuth hydroxide nitrate oxide (Bi5(OH)9(NO3)4O)		x
1317-25-5	Aluminum, chloro[(2,5-dioxo-4-imidazolidinyl)ureato]tetrahydroxydi-		x
1328-04-7	C.I. Pigment Violet 5:1		x
1328-51-4	C.I. Solvent Blue 38		x
1334-78-7	Benzaldehyde, methyl-		x
1335-94-0	Irone		x
1345-24-0	C.I. Pigment Red 109		x
1533-45-5	Benzoxazole, 2,2'-(1,2-ethenediyl)di-4,1-phenylene)bis-	x	x
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4a,9,10,10a-octahydro-1,4a-dimethyl-7-(1-methylethyl)-, [1R-(1 $\alpha$ ,4 $\alpha$ ,10 $\alpha$ )]-	x	x
2379-79-5	Anthra[2,3-d]oxazole-5,10-dione, 2-(1-amino-9,10-dihydro-9,10-dioxo-2-anthracenyl)-		x
2387-03-3	1-Naphthalenecarboxaldehyde, 2-hydroxy-, [(2-hydroxy-1-naphthalenyl)methylene]hydrazone		x
2398-96-1	Carbamothioic acid, methyl(3-methylphenyl)-, O-2-naphthalenyl ester		x
2422-91-5	Benzene, 1,1',1''-methylidynetris[4-isocyanato-		x
2478-20-8	1H-Benz[de]isoquinoline-1,3(2H)-dione, 6-amino-2-(2,4-dimethylphenyl)-		x
3407-42-9	Cyclohexanol, 3-(5,5,6-trimethylbicyclo[2.2.1]hept-2-yl)-		x
3426-43-5	Benzenesulfonic acid, 2,2'-(1,2-ethenediyl)bis[5-[[4-methoxy-6-(phenylamino)-1,3,5-triazin-2-yl]amino]-, disodium salt		x
3738-00-9	Naphtho[2,1-b]furan, dodecahydro-3a,6,6,9a-tetramethyl-		x
4051-63-2	[1,1'-Bianthracene]-9,9',10,10'-tetrone, 4,4'-diamino-	x	x
4378-61-4	Dibenzo[def,mno]chrysene-6,12-dione, 4,10-dibromo-	x	x
4572-09-2	Olean-12-en-29-oic acid, 3-hydroxy-11-oxo-, (3 $\beta$ ,20 $\beta$ )-, compd. with (2,5-dioxo-4-imidazolidinyl)urea (1:1)		x
4630-07-3	Naphthalene, 1,2,3,5,6,7,8,8a-octahydro- 1,8a-dimethyl-7-(1-methylethenyl)-, [1R-(1 $\alpha$ ,7 $\beta$ ,8 $\alpha$ )]-	x	x
4979-32-2	2-Benzothiazolesulfenamide, N,N-dicyclohexyl-	x	
5089-22-5	Benzoxazole, 2,2'-(1,4-naphthalenediyl)bis	x	x
5579-81-7	Aluminum, [(2,5-dioxo-4-imidazolidinyl)ureato]dihydroxy-		x
6858-49-7	Propanedinitrile, [[4-[ethyl[2-[[[(phenylamino)carbonyl]oxy]ethyl]amino]-2-methylphenyl]methylene]-	x	
7425-14-1	Hexanoic acid, 2-ethyl-, 2-ethylhexyl ester		x
7447-39-4	Copper chloride (CuCl <sub>2</sub> )		x



CAS RN <sup>i</sup>	Domestic Substances List name	Potential Ecological concern	Potential Human Health concern
7758-89-6	Copper chloride (CuCl)		x
7773-06-0	Sulfamic acid, monoammonium salt		x
7779-30-8	1-Penten-3-one, 1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-		x
7779-50-2	Oxacycloheptadec-7-en-2-one		x
7783-90-6	Silver chloride (AgCl)	x	x
7784-25-0	Sulfuric acid, aluminum ammonium salt (2:1:1)		x
7785-23-1	Silver bromide (AgBr)		x
7791-12-0	Thallium chloride (TlCl)	x	
7798-23-4	Phosphoric acid, copper(2++) salt (2:3)		x
8000-27-9	Oils, cedarwood		x
8000-46-2	Oils, geranium		x
8000-73-5	Carbonic acid, monoammonium salt, mixt. with carbamic acid monoammonium salt		x
8001-04-5	Musks		x
8001-61-4	Balsams, copaiba		x
8002-65-1	Margosa oil		x
8006-78-8	Oils, bay		x
8006-87-9	Oils, sandalwood		x
8007-01-0	Oils, rose		x
8007-02-1	Oils, lemongrass		x
8007-08-7	Oils, Ginger		x
8008-31-9	Oils, mandarin		x
8008-52-4	Oils, coriander		x
8008-93-3	Oils, wormwood		x
8011-96-9	Calamine (pharmaceutical preparation)		x
8013-10-3	Oils, cade		x
8014-19-5	Oils, palmarosa		x
8015-77-8	Oils, bois de rose		x
8016-37-3	Oils, myrrh		x
8016-85-1	Oils, tangerine		x
8016-88-4	Oils, tarragon		x
8021-28-1	Oils, fir		x
8021-39-4	Creosote, wood		x
8022-56-8	Oils, sage		x
8022-96-6	Oils, Jasmine		x
8023-75-4	Oils, jonquil		x
8024-05-3	Oils, tuberose		x
8024-06-4	Oils, vanilla		x
8024-08-6	Oils, violet		x

CAS RN <sup>i</sup>	Domestic Substances List name	Potential Ecological concern	Potential Human Health concern
8024-43-9	Perfumes and Essences, jasmin		x
8031-03-6	Oils, mimosa		x
8046-19-3	Storax (balsam)		x
10043-67-1	Sulfuric acid, aluminum potassium salt (2:1:1)		x
10099-58-8	Lanthanum chloride (LaCl <sub>3</sub> )		x
10294-26-5	Sulfuric acid, disilver(1+)	x	x
10361-44-1	Nitric acid, bismuth(3+) salt	x	
11006-34-1	Cuprate(3-), [18-carboxy-20-(carboxymethyl)-8-ethenyl-13-ethyl-2,3-dihydro-3,7,12,17-tetramethyl-21H,23H-porphine-2-propanoato(5-)-N21,N22,N23,N24]-, trisodium, [SP-4-2-(2S-trans)]-		x
11103-57-4	Vitamin A		x
11103-86-9	Chromate(1-), hydroxyoctaoxodizincatedi-, potassium	x	
12004-11-4	Aluminate(8-), hexaoxo[sulfato(2-)]di-, calcium (1:4)		x
12005-57-1	Aluminate (Al <sub>14</sub> O <sub>33</sub> <sup>24-</sup> ), calcium (1:12)		x
12008-21-8	Lanthanum boride (LaB <sub>6</sub> ), (OC-6-11)	x	
12036-32-7	Praseodymium oxide (Pr <sub>2</sub> O <sub>3</sub> )	x	x
12042-78-3	Aluminate (AlO <sub>3</sub> <sup>3-</sup> ), calcium (2:3)		x
12060-59-2	Titanate (TiO <sub>3</sub> <sup>2-</sup> ), strontium (1:1)		x
12068-03-0	Benzenesulfonic acid, methyl-, sodium salt		x
12135-76-1	Ammonium sulfide ((NH <sub>4</sub> ) <sub>2</sub> S)		x
12224-98-5	Xanthylum, 9-[2-(ethoxycarbonyl)phenyl]-3,6-bis(ethylamino)-2,7-dimethyl-, molybdatetungstatephosphate		x
12442-27-2	Cadmium zinc sulfide ((Cd,Zn)S)		x
13082-47-8	Xanthylum, 9-(2-carboxyphenyl)-3,6-bis(diethylamino)-, hydroxide	x	
13680-35-8	Benzenamine, 4,4'-methylenebis[2,6-diethyl-		x
13746-66-2	Ferrate(3-), hexakis(cyano-c)-, tripotassium, (oc-6-11)-	x	x
13826-83-0	Borate(1-), tetrafluoro-, ammonium		x
13943-58-3	Ferrate(4-), hexakis(cyano-C)-, tetrapotassium, (OC-6-11)-		x
13967-50-5	Aurate(1-), bis(cyano-C)-, potassium		x
14221-47-7	Ferrate(3-), tris[ethanedioato(2-)-O,O']-, triammonium, (OC-6-11)-		x
14233-37-5	9,10-Anthracenedione, 1,4-bis[(1-methylethyl)amino]-		x
14476-25-6	Smithsonite (ZnCO <sub>3</sub> )		x
15647-08-2	Phosphorous acid, 2-ethylhexyl diphenyl ester	x	x
15791-78-3	9,10-Anthracenedione, 1,8-dihydroxy-4-[[4-(2-hydroxyethyl)phenyl]amino]-5-nitro-		x
16283-36-6	Zinc, bis(2-hydroxybenzoato-O1,O2)-, (T-4)-		x
16919-27-0	Titanate(2-), hexafluoro-, dipotassium, (OC-6-11)-		x
17418-58-5	9,10-Anthracenedione, 1-amino-4-hydroxy-2-phenoxy-		x
17627-44-0	Cyclohexene, 4-(1,5-dimethyl-1,4-hexadienyl)-1-methyl-	x	x

CAS RN <sup>i</sup>	Domestic Substances List name	Potential Ecological concern	Potential Human Health concern
18917-89-0	Magnesium, bis(2-hydroxybenzoato-O <sup>1</sup> ,O <sup>2</sup> )-, (T-4)-		x
19210-06-1	Phosphorodithioic acid, zinc salt		x
19286-75-0	9,10-Anthracenedione, 1-hydroxy-4-(phenylamino)-		x
19720-45-7	9,10-Anthracenedione, 1,4-bis[(2-methylpropyl)amino]-	x	
20338-08-3	Titanium hydroxide (Ti(OH) <sub>4</sub> ), (T-4)-		x
20461-54-5	Iodine		x
20667-12-3	Silver oxide (Ag <sub>2</sub> O)	x	x
21260-46-8	Bismuth, tris(dimethylcarbamodithioato-S,S')-, (OC-6-11)-	x	
21564-17-0	Thiocyanic acid, (2-benzothiazolylthio)methyl ester		x
22221-10-9	Hexanoic acid, 2-ethyl-, copper salt		x
22451-73-6	5-Azulenemethanol, 1,2,3,3a,4,5,6,7-octahydro- $\alpha,\alpha,3,8$ -tetramethyl-, [3S-(3 $\alpha$ ,3a $\beta$ ,5 $\alpha$ )]-		x
25428-43-7	3-Cyclohexene-1-methanol, $\alpha,4$ -dimethyl- $\alpha$ -(4-methyl-3-pentenyl)-, (R,R)-(±)-		x
25869-98-1	Ferrate(4-), hexakis(cyano-C)-, iron(3++) potassium (1:1:1), (OC-6-11)-		x
26266-77-3	1-Phenanthrenemethanol, dodecahydro-1,4a-dimethyl-7-(1-methylethyl)-		x
26694-69-9	Xanthylum, 9-[2-(ethoxycarbonyl)phenyl]-3,6-bis(ethylamino)-2,7-dimethyl-, ethyl sulfate		x
28173-59-3	Carbonic acid, 2-[(1-amino-9,10-dihydro-4-hydroxy-9,10-dioxo-2-anthracenyl)oxy]ethyl phenyl ester <sup>4</sup>	x	
28645-51-4	Oxacycloheptadec-10-en-2-one	x	x
28768-32-3	Oxiranemethanamine, N,N' -(methylenedi-4,1-phenylene)bis[N-(oxiranylmethyl)-	x	
28984-69-2	4,4(5H)-Oxazolidimethanol, 2-(heptadecenyl)-	x	x
29350-73-0	Naphthalene, decahydro-1,6-dimethyl-4-(1-methylethyl)-, [1S-(1 $\alpha$ ,4 $\alpha$ ,4a $\alpha$ ,6 $\alpha$ ,8a $\beta$ )]-, didehydro deriv.		x
30745-55-2	Aluminum, bis(2-ethylhexanoato-O)hydroxyl-	x	x
31135-57-6	1H-Benzimidazolesulfonic acid, 2-heptadecyl-1-[(sulfophenyl)methyl]-, disodium salt	x	
31142-56-0	1,2,3-Propanetricarboxylic acid, 2-hydroxy-, aluminum salt		x
34364-26-6	Neodecanoic acid, bismuth(3+) salt	x	x
37310-83-1	9-Octadecen-1-ol, (Z)-, phosphate		x
37609-25-9	5-Cyclohexadecen-1-one	x	x
37677-14-8	3-Cyclohexene-1-carboxaldehyde, 4-(4-methyl-3-pentenyl)-	x	x
42373-04-6	Thiazolium, 3-methyl-2-[(1-methyl-2-phenyl-1H-indol-3-yl)azo]-, chloride		x
43048-08-4	2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5,7-diyl)bis(methylene) ester		x

CAS RN <sup>i</sup>	Domestic Substances List name	Potential Ecological concern	Potential Human Health concern
49663-84-5	Zinc chromate hydroxide (Zn <sub>5</sub> (CrO <sub>4</sub> )(OH) <sub>8</sub> )		x
50922-29-7	Chromium zinc oxide	x	x
52474-60-9	3-Cyclohexene-1-carboxaldehyde, 1-methyl-3-(4-methyl-3-pentenyl)-	x	x
52475-86-2	3-Cyclohexene-1-carboxaldehyde, 1-methyl-4-(4-methyl-3-pentenyl)-		x
56797-01-4	Hexanoic acid, 2-ethyl-, cerium(3++) salt		x
58713-21-6	1,3,5,7-Tetraazatricyclo[3.3.1.1 <sup>3,7</sup> ]decane, hydrochloride		x
59056-62-1	2,3b-Methano-3bH-cyclopenta[1,3]cyclopropa[1,2]benzene-4-methanol, octahydro-7,7,8,8-tetramethyl-, acetate		x
61788-72-5	Fatty acids, tall-oil, epoxidized, octyl esters		x
61789-85-3	Sulfonic acids, petroleum		x
61791-34-2	Onium compounds, morpholinium, 4-ethyl-4-soya alkyl, Et sulfates		x
62973-79-9	Xanthylum, 9-(2-carboxyphenyl)-3,6-bis(diethylamino)-, molybdatesilicate	x	x
63449-68-3	2-Naphthalenol, 2-aminobenzoyl ester		x
65113-99-7	3-Cyclopentene-1-butanol, α,β,2,2,3-pentamethyl--		x
65405-84-7	Cyclohexenebutanal, α,2,2,6-tetramethyl-		x
66068-84-6	Cyclohexanol, 4-(5,5,6-trimethylbicyclo[2.2.1]hept-2-yl)-		x
66072-38-6	Oxirane, 2,2',2''-[methylidynetris(phenyleneoxymethylene)]tris-		x
66327-54-6	3-Cyclohexene-1-carboxaldehyde, 1-methyl-4-(4-methylpentyl)-		x
67633-57-2	1H-Imidazolium, 1-ethyl-4,5-dihydro-1-(2-hydroxyethyl)-2-isoheptadecyl-, ethyl sulfate (salt)		x
68082-35-9	Fatty acids, soya, epoxidized, Me esters		x
68084-48-0	Neodecanoic acid, copper(2+) salt	x	x
68186-14-1	Resin acids and Rosin acids, Me esters		x
68187-12-2	C.I. Pigment Red 233		x
68475-76-3	Flue dust, portland cement		x
68476-03-9	Fatty acids, montan-wax		x
68551-42-8	Fatty acids, C6-19-branched, manganese salts		x
68603-15-6	Alcohols, C6-12		x
68604-99-9	Fatty acids, C18-unsatd., phosphates		x
68608-32-2	Terpenes and Terpenoids, cedarwood-oil		x
68647-58-5	Aluminum, benzoate hydrogenated tallow fatty acid iso-Pr alc. Complexes		x
68784-17-8	Isooctadecanoic acid, reaction products with tetraethylenepentamine		x
68877-29-2	Cyclohexanol, (1,7,7-trimethylbicyclo[2.2.1]hept-2-yl)-	x	x
68890-99-3	Benzene, mono-C10-16-alkyl derivs.		x
68916-97-2	Oils, horehound		x
68917-29-3	Terpenes and Terpenoids, clove-oil	x	x

CAS RN <sup>i</sup>	Domestic Substances List name	Potential Ecological concern	Potential Human Health concern
68917-65-7	Terpenes and Terpenoids, vetiver-oil		x
68917-75-9	Oils, wintergreen	x	x
68952-35-2	Tar acids, cresylic, Ph phosphates		x
68966-38-1	1H-Imidazole-1-ethanol, 4,5-dihydro-2-isoheptadecyl-		x
68990-83-0	Oils, cedarwood, Texan	x	x
70225-05-7	1,2,4-Benzenetricarboxylic acid, mixed branched tridecyl and isodecyl esters		x
70288-86-7	Ivermectin	x	
70788-30-6	Cyclohexanepropanol, 2,2,6-trimethyl- $\alpha$ -propyl-	x	x
70833-37-3	Nickel, bis(3-amino-4,5,6,7-tetrachloro-1H-isoindol-1-one oximato-N2,O1)-		x
70955-71-4	Phenol, 2-methoxy-, reaction products with 2,2-dimethyl-3-methylenebicyclo[2.2.1]heptane, hydrogenated		x
71159-90-5	3-Cyclohexene-1-methanethiol, $\alpha,\alpha,4$ -trimethyl-		x
72102-40-0	1-Propanaminium, 3-amino-N-ethyl-N,N-dimethyl-, N-lanolin acyl derivs., Et sulfates		x
72391-24-3	Benzenesulfonic acid, [[[chloroacetyl]amino]methyl][4-[[4-(cyclohexylamino)-9,10-dihydro-9,10-dioxo-1-anthracenyl]amino]phenoxy]methyl-, monosodium salt		x
73138-82-6	Resin acids and Rosin acids		x
73984-93-7	1,3,4-Thiadiazole-2(3H)-thione, 5-(tert-dodecylthio)-		x
84012-15-7	Birch, Betula alba, ext.		x
84082-54-2	Ivy, Hedera helix, ext.		x
84696-24-2	Lotus corniculatus, ext.		x
84961-67-1	Verbena officinalis, ext.		x
90028-66-3	Evening primrose, Oenothera biennis, ext.		x
90045-36-6	Ginkgo biloba, ext.		x
90045-38-8	Ginseng, Panax quinquefolium, ext.		x
90367-27-4	Ethanol, 2,2'-[[3-[(2-hydroxyethyl)amino]propyl]imino]bis-, N-tallow alkyl derivs.		x
90459-62-4	Octadecanoic acid, reaction products with diethylenetriamine, di-Me sulfate-quaternized		x
107898-54-4	4-Penten-2-ol, 3,3-dimethyl-5-(2,2,3-trimethyl-3-cyclopenten-1-yl)-		x
111174-63-1	Protein hydrolyzates, leather, reaction products with isostearoyl chloride		x
115340-80-2	1-Propanaminium, 3-amino-N-ethyl-N,N-dimethyl-, N-wheat-oil acyl derivs., Et sulfates		x
120547-52-6	Oxirane, mono[(C12-13alkyloxy)methyl] derivs.		x
129828-23-5	Fatty acids, tall-oil, reaction products with Bu phenylmethyl phthalate, 2-(dimethylamino)ethanol, morpholine and overbased		x

<b>CAS RN<sup>i</sup></b>	<b>Domestic Substances List name</b>	<b>Potential Ecological concern</b>	<b>Potential Human Health concern</b>
	calcium petroleum sulfonates		
164288-52-2	Cork tree, Phellodendron amurense, ext.		x

<sup>i</sup> Chemical Abstracts Service Registry Number

**Appendix C: Substances identified as not meeting the criteria under section 64 of CEPA 1999**

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAc candidate (and basis for concern)	Additional information on use *
50-41-9	Ethanamine, 2-[4-(2-chloro-1,2-diphenylethenyl)phenoxy]-N,N-diethyl-, 2-hydroxy-1,2,3-propanetricarboxylate (1:1)		Pharmaceutical
50-50-0	Estra-1,3,5(10)-triene-3,17-diol (17 $\beta$ )-, 3-benzoate		
50-52-2	10 <i>H</i> -Phenothiazine, 10-[2-(1-methyl-2-piperidinyl)ethyl]-2-(methylthio)-		Pharmaceutical
50-53-3	10 <i>H</i> -Phenothiazine-10-propanamine, 2-chloro- <i>N,N</i> -dimethyl-		Pharmaceutical
51-28-5	Phenol, 2,4-dinitro-		Historical Pesticide Active
51-48-9	L-Tyrosine, <i>O</i> -(4-hydroxy-3,5-diiodophenyl)-3,5-diiodo-	Yes (Ecological)	Pharmaceutical
52-86-8	1-Butanone, 4-[4-(4-chlorophenyl)-4-hydroxy-1-piperidinyl]-1-(4-fluorophenyl)-		Pharmaceutical
57-12-5	Cyanide		
60-87-7	10 <i>H</i> -Phenothiazine-10-ethanamine, <i>N,N</i> , $\alpha$ -trimethyl-		Pharmaceutical
60-99-1	10 <i>H</i> -Phenothiazine-10-propanamine, 2-methoxy- <i>N,N</i> , $\beta$ -trimethyl-, ( $\beta$ R)-		Pharmaceutical
70-30-4	Phenol, 2,2'-methylenebis[3,4,6-trichloro-		Pharmaceutical
72-33-3	19-Norpregna-1,3,5(10)-trien-20-yn-17-ol, 3-methoxy-, (17 $\alpha$ )-		
72-69-5	1-Propanamine, 3-(10,11-dihydro-5 <i>H</i> -dibenzo[a,d]cyclohepten-5-ylidene)- <i>N</i> -methyl-		Pharmaceutical
79-54-9	1-Phenanthrenecarboxylic acid, 1,2,3,4,4a,4b,5,9,10,10a-decahydro-1,4a-dimethyl-7-(1-methylethyl)-, [1 <i>R</i> -(1 $\alpha$ ,4 $\alpha$ $\beta$ ,4 $\beta$ $\alpha$ ,10 $\alpha$ )]-		
80-10-4	Silane, dichlorodiphenyl-		
83-66-9	Benzene, 1-(1,1-dimethylethyl)-2-methoxy-4-methyl-3,5-dinitro-		Fragrance/ Flavourant
84-96-8	10 <i>H</i> -Phenothiazine-10-propanamine, <i>N,N</i> , $\beta$ -trimethyl-		Pharmaceutical
85-00-7	Dipyrido[1,2- <i>a</i> :2',1'- <i>c</i> ]pyrazinediium, 6,7-dihydro-, dibromide		
88-58-4	1,4-Benzenediol, 2,5-bis(1,1-dimethylethyl)-		
89-47-4	Butanoic acid, 3-methyl-, 5-methyl-2-(1-methylethyl)cyclohexyl ester, (1 $\alpha$ ,2 $\beta$ ,5 $\alpha$ )-		
91-50-9	Benzoic acid, 2-[[2-methyl-3-[4-(1-methylethyl)phenyl]propylidene]amino]-, methyl ester		Fragrance/ Flavourant
95-19-2	1 <i>H</i> -Imidazole-1-ethanol, 2-heptadecyl-4,5-dihydro-		
95-73-8	Benzene, 2,4-dichloro-1-methyl-		
97-23-4	Phenol, 2,2'-methylenebis[4-chloro-		Historical Pesticide Active
98-95-3	Benzene, nitro-	Yes (Human	

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAc candidate (and basis for concern)	Additional information on use *
		Health)	
99-82-1	Cyclohexane, 1-methyl-4-(1-methylethyl)-		
100-46-9	Benzenemethanamine		
100-99-2	Aluminum, tris(2-methylpropyl)-		
101-65-5	Carbamic acid, (methylenedi-4,1-phenylene)bis-, diphenyl ester	Yes (Ecological)	
105-58-8	Carbonic acid, diethyl ester		Fragrance/ Flavourant
109-72-8	Lithium, butyl-		
111-83-1	Octane, 1-bromo-		
112-29-8	Decane, 1-bromo-		
112-52-7	Dodecane, 1-chloro-		
115-71-9	2-Penten-1-ol, 5-(2,3-dimethyltricyclo[2.2.1.0 <sup>2,6</sup> ]hept-3-yl)-2-methyl-, stereoisomer		Fragrance/ Flavourant
118-65-0	Bicyclo[7.2.0]undec-4-ene, 4,11,11-trimethyl-8-methylene-, [1 <i>R</i> -(1 <i>R</i> ,4 <i>Z</i> ,9 <i>S</i> )]-		Fragrance/ Flavourant
120-83-2	Phenol, 2,4-dichloro-		
121-21-1	Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propenyl)-, 2-methyl-4-oxo-3-(2,4-pentadienyl)-2-cyclopenten-1-yl ester, [1 <i>R</i> -[1 <i>α</i> [ <i>S</i> ( <i>Z</i> )],3 <i>β</i> ]]-		
123-69-3	Oxacycloheptadec-8-en-2-one, ( <i>Z</i> )-	Yes (Ecological)	Formulant
128-66-5	Dibenzo[ <i>b,def</i> ]chrysene-7,14-dione		
129-09-9	Anthra[2,1- <i>d:6,5-d'</i> ]bisthiazole-6,12-dione, 2,8-diphenyl-		
129-73-7	Benzenamine, 4,4'-(phenylmethylene)bis[ <i>N,N</i> -dimethyl-		
133-66-4	Benzenesulfonic acid, 2,2'-(1,2-ethenediyl)bis[5-[[4,6-bis(phenylamino)-1,3,5-triazin-2-yl]amino]-, disodium salt		
135-88-6	2-Naphthalenamine, <i>N</i> -phenyl-	Yes (Human Health)	
140-29-4	Benzeneacetonitrile		
140-41-0	Acetic acid, trichloro-, compd. with <i>N'</i> -(4-chlorophenyl)- <i>N,N</i> -dimethylurea (1:1)		
140-73-8	1,6-Hexanediamine, <i>N,N'</i> -bis(3-phenyl-2-propenylidene)-	Yes (Human Health)	
141-38-8	Oxiraneoctanoic acid, 3-octyl-, 2-ethylhexyl ester		
149-11-1	Hexanoic acid, 2-ethyl-, copper(2+) salt		
151-50-8	Potassium cyanide (K(CN))		Pharmaceutical
297-76-7	19-Norpregn-4-en-20-yne-3,17-diol, diacetate, (3 <i>β</i> ,17 <i>α</i> )-	Yes (Ecological)	Pharmaceutical
302-79-4	Retinoic acid		Pharmaceutical
357-57-3	Strychnidin-10-one, 2,3-dimethoxy-		
360-70-3	Estr-4-en-3-one, 17-[(1-oxodecyl)oxy]-, (17 <i>β</i> )-		
420-04-2	Cyanamide		Historical



CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAC candidate (and basis for concern)	Additional information on use *
			Pesticide Active
485-19-8	7-Isoquinolinol, 1,2,3,4-tetrahydro-1-[(3-hydroxy-4-methoxyphenyl)methyl]-6-methoxy-2-methyl-, (1S)-		
506-64-9	Silver cyanide (Ag(CN))		
506-68-3	Cyanogen bromide ((CN)Br)		
514-10-3	1-Phenanthrenecarboxylic acid, 1,2,3,4,4a,4b,5,6,10,10a-decahydro-1,4a-dimethyl-7-(1-methylethyl)-, [1R-(1 $\alpha$ ,4 $\alpha$ $\beta$ ,4b $\alpha$ ,10 $\alpha$ )]-		
519-73-3	Benzene, 1,1',1''-methylidynetris-		
522-00-9	10H-Phenothiazine-10-ethanamine, N,N-diethyl- $\alpha$ -methyl-		Pharmaceutical
537-00-8	Acetic acid, cerium(3+) salt		
537-01-9	Carbonic acid, cerium(3+) salt (3:2)		
541-09-3	Uranium, bis(acetato-O)dioxo-		
542-76-7	Propanenitrile, 3-chloro-		
542-83-6	Cadmium cyanide (Cd(CN) <sub>2</sub> )		
544-19-4	Formic acid, copper(2+) salt		
544-92-3	Copper cyanide (Cu(CN))		
556-61-6	Methane, isothiocyanato-		Historical Pesticide Active
560-88-3	Benzoic acid, 2-hydroxy-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, endo-		
563-63-3	Acetic acid, silver(1+) salt		
587-26-8	Carbonic acid, lanthanum(3+) salt (3:2)		Pharmaceutical
590-28-3	Cyanic acid, potassium salt		
592-01-8	Calcium cyanide (Ca(CN) <sub>2</sub> )		Historical Pesticide Active
592-82-5	Butane, 1-isothiocyanato-		Fragrance/ Flavourant
592-85-8	Thiocyanic acid, mercury(2+) salt		
605-01-6	Benzene, pentaethyl-		
622-20-8	Benzene, 1,1'-[1,2-ethanedylbis(thio)]bis-		
739-71-9	5H-Dibenz[b,f]azepine-5-propanamine, 10,11-dihydro-N,N, $\beta$ -trimethyl-		
751-94-0	29-Nordammara-17(20),24-dien-21-oic acid, 16-(acetyloxy)-3,11-dihydroxy-, monosodium salt, (3 $\alpha$ ,4 $\alpha$ ,8 $\alpha$ ,9 $\beta$ ,11 $\alpha$ ,13 $\alpha$ ,14 $\beta$ ,16 $\beta$ ,17Z)-	Yes (Ecological)	Pharmaceutical
814-91-5	Ethanedioic acid, copper(2+) salt (1:1)		
917-70-4	Acetic acid, lanthanum(3+) salt		
950-33-4	Cyclododecane, 1,1-dimethoxy-		Fragrance/ Flavourant
969-33-5	Piperidine, 4-(5H-dibenzo[a,d]cyclohepten-5-ylidene)-1-		

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAC candidate (and basis for concern)	Additional information on use *
	methyl-, hydrochloride		
979-32-8	Estra-1,3,5(10)-triene-3,17-diol (17β)-, 17-pentanoate		Pharmaceutical
1025-15-6	1,3,5-Triazine-2,4,6(1 <i>H</i> ,3 <i>H</i> ,5 <i>H</i> )-trione, 1,3,5-tri-2-propenyl-		
1096-48-6	9,10-Anthracenedione, 1-(cyclohexylamino)-		
1120-44-1	9-Octadecenoic acid (Z)-, copper(2+) salt		
1135-66-6	2 <i>H</i> -2,4a-Methanonaphthalene, 1,3,4,5,6,7-hexahydro-1,1,5,5-tetramethyl-, (2 <i>S</i> )-		Fragrance/Flavourant
1172-18-5	2 <i>H</i> -1,4-Benzodiazepin-2-one, 7-chloro-1-[2-(diethylamino)ethyl]-5-(2-fluorophenyl)-1,3-dihydro-, dihydrochloride		Pharmaceutical
1209-61-6	5-Oxatricyclo[8.2.0.0 <sup>4,6</sup> ]dodecane, 4,9,12,12-tetramethyl-		Fragrance/Flavourant
1299-86-1	Aluminum carbide (Al <sub>4</sub> C <sub>3</sub> )		
1313-97-9	Neodymium oxide (Nd <sub>2</sub> O <sub>3</sub> )		
1314-20-1	Thorium oxide (ThO <sub>2</sub> )	Yes (Human Health)	
1314-61-0	Tantalum oxide (Ta <sub>2</sub> O <sub>5</sub> )		
1324-58-9	Diindolo[3,2-b:3',2'-m]triphenodioxazinetrissulfonic acid, 8,18-dichloro-5,15-diethyl-5,15-dihydro-, trisodium salt		
1329-99-3	Cyclohexane, 1-methyl-4-(1-methylethyl)-, tetrahydro deriv.		Formulant
1331-61-9	Benzenesulfonic acid, dodecyl-, ammonium salt		
1332-14-5	Sulfuric acid, copper(2+) salt, basic		
1332-65-6	Copper chloride hydroxide (Cu <sub>2</sub> Cl(OH) <sub>3</sub> )		
1344-67-8	Copper chloride		
1405-92-1	1 <i>H</i> -3a,7-Methanoazulene-6-methanol, 2,3,4,7,8,8a-hexahydro-3,8,8-trimethyl-, acetate, [3 <i>R</i> -(3α,3aβ,7β,8α)]-		Formulant
1446-61-3	1-Phenanthrenemethanamine, 1,2,3,4,4a,9,10,10a-octahydro-1,4a-dimethyl-7-(1-methylethyl)-, [1 <i>R</i> -(1α,4aβ,10α)]-		
1470-61-7	Silver, (diethylcarbamodithioato- <i>S,S'</i> )-		
1478-61-1	Phenol, 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-		
1622-61-3	1-Pyrrolidinepropanol, α-cyclohexyl-α-phenyl-, hydrochloride		Pharmaceutical
1746-23-2	Benzene, 1-(1,1-dimethylethyl)-4-ethenyl-		
1796-92-5	Benzoic acid, 5-[(3-carboxy-5-methyl-4-oxo-2,5-cyclohexadien-1-ylidene)(2,6-dichlorophenyl)methyl]-2-hydroxy-3-methyl-, disodium salt	Yes (Ecological)	
1799-84-4	2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester		
1817-68-1	Phenol, 4-methyl-2,6-bis(1-phenylethyl)-		
1922-67-4	1 <i>H</i> -Naphtho[2,3- <i>c</i> ]pyran, 3,4,6,7,8,9-hexahydro-4,6,6,9,9-pentamethyl-		
2026-24-6	1-Phenanthrenemethanamine, 1,2,3,4,4a,9,10,10a-octahydro-		Historical

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAc candidate (and basis for concern)	Additional information on use *
	1,4a-dimethyl-7-(1-methylethyl)-, acetate, [1 <i>R</i> -(1 $\alpha$ ,4 $\alpha$ $\beta$ ,10 $\alpha$ )]-		Pesticide Active
2144-53-8	2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl ester		
2162-73-4	Benzene, 2,4-diisocyanate-1,3,5-tris(1-methylethyl)-		
2386-52-9	Methanesulfonic acid, silver(1+) salt		
2451-84-5	Hexanedioic acid, bis(phenylmethyl) ester		
2611-00-9	3-Cyclohexene-1-carboxylic acid, 3-cyclohexen-1-ylmethyl ester		
2944-30-1	9,10-Anthracenedione, 1,4-bis[(4-methoxyphenyl)amino]-	Yes (Ecological)	
2966-50-9	Acetic acid, trifluoro-, silver(1+) salt		
3042-75-9	Benzeneacetic acid, $\alpha$ -chloro- $\alpha$ -phenyl-, 2-(dimethylamino)ethyl ester, hydrochloride		
3089-55-2	Hexanedioic acid, octyl phenylmethyl ester		
3251-84-1	Methanaminium, <i>N</i> -[4-[[4-(cyclohexylamino)-1-naphthalenyl][4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]- <i>N</i> -methyl-, chloride		
3253-39-2	2-Propenoic acid, 2-methyl-, (1-methylethylidene)di-4,1-phenylene ester		
3315-16-0	Cyanoic acid, silver(1+) salt		
3333-62-8	2 <i>H</i> -1-Benzopyran-2-one, 7-(2 <i>H</i> -naphtho[1,2- <i>d</i> ]triazol-2-yl)-3-phenyl-		
3444-14-2	Carbonic acid, copper(1+) salt		
3526-75-8	5-Azulenemethanol, decahydro- $\alpha,\alpha,3,8$ -tetramethyl-, [3 <i>S</i> -(3 $\alpha$ ,3 $\alpha$ $\beta$ ,5 $\alpha$ ,8 $\alpha$ ,8 $\alpha$ $\beta$ )]-		Fragrance/ Flavourant
3564-75-8	5 <i>H</i> -Dibenz[ <i>b,f</i> ]azepine-5-propanamine, 10,11-dihydro- <i>N,N</i> , $\beta$ -trimethyl-, (-)-		
3572-52-9	1,1'-Biphenyl -3-carboxylic acid, 2-hydroxy-, 2-(diethylamino)ethyl ester		
3688-79-7	7 <i>H</i> -Benz[ <i>de</i> ]anthracen-7-one, 3-methoxy-		
3860-63-7	9,10-Anthracenedione, 1,5-dihydroxy-4,8-bis(methylamino)-		
3910-35-8	1 <i>H</i> -Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-	Yes (Ecological)	Formulant
4091-99-0	Benzoic acid, 2-[3,6-bis(acetyloxy)-2,7-dichloro-9 <i>H</i> -xanthen-9-yl]-	Yes (Ecological)	
4105-12-8	Cyclohexanol, 3-(5,5,6-trimethylbicyclo[2.2.1]hept-2-yl)-, [1 $\alpha$ ,2 $\alpha$ (1 <i>S</i> ,3 <i>S</i> ),4 $\alpha$ ,6 $\alpha$ ]-		Fragrance/ Flavourant
4111-54-0	2-Propanamine, <i>N</i> -(1-methylethyl)-, lithium salt		
4196-86-5	1,3-Propanediol, 2,2-bis[(benzoyloxy)methyl]-, dibenzoate		
4203-77-4	[3,3'-Bianthra[1,9- <i>cd</i> ]pyrazole]-6,6'-(1 <i>H</i> ,1' <i>H</i> )-dione, 1,1'-diethyl-		
4216-01-7	7 <i>H</i> -Benzo[ <i>e</i> ]perimidine-4-carboxamide, <i>N</i> -(9,10-dihydro-9,10-dioxo-1-anthracenyl)-7-oxo-		

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAc candidate (and basis for concern)	Additional information on use *
4270-70-6	Sulfonium, triphenyl-, chloride		
4330-99-8	10 <i>H</i> -Phenothiazine-10-propanamine, <i>N,N</i> , $\beta$ -trimethyl-, (2 <i>R</i> ,3 <i>R</i> )-2,3-dihydroxybutanedioate (2:1)		Pharmaceutical
4424-87-7	Benzo[1,2- <i>c</i> :4,5- <i>c'</i> ]diacridine-6,9,15,18(5 <i>H</i> ,14 <i>H</i> )-tetrone		
4499-91-6	Docosanoic acid, lithium salt		
4702-65-2	9,10-Anthracenedione, 4,8-diamino-1,5-dihydroxy-2-(4-hydroxy-3-methylphenyl)-		
4759-48-2	Retinoic acid, 13- <i>cis</i> -		Pharmaceutical
4802-20-4	Cyclohexaneethanethiol, 3-mercapto- $\beta$ ,4-dimethyl-		Fragrance/ Flavourant
5284-79-7	Cyclohexanone, 2,6-bis[(4-azidophenyl)methylene]-4-methyl-	Yes (Ecological)	
5875-45-6	Phenol, 2,5-bis(1,1-dimethylethyl)-		
6028-47-3	2-Pentanol, 4-methyl-, hydrogen phosphorodithioate		
6070-16-2	Hexanoic acid, 5-methyl-2-(1-methylethyl)cyclohexyl ester, (1 $\alpha$ ,2 $\beta$ ,5 $\alpha$ )-		Fragrance/ Flavourant
6130-43-4	Heptanoic acid, tridecafluoro-, ammonium salt		
6144-04-3	Benzene, (1-methylethenyl)-, dimer		
6196-94-7	Benzene, 1-ethyl-4-(1-phenylethyl)-		
6196-95-8	Benzene, 1,2-dimethyl-4-(1-phenylethyl)-		
6221-92-7	Cyclododecanol, acetate		Fragrance/ Flavourant
6252-76-2	Xanthylum, 9-(2-carboxyphenyl)-3-[(2-methylphenyl)amino]-6-[(2-methyl-4-sulfophenyl)amino]-, hydroxide, inner salt, monosodium salt		
6291-95-8	1,3,5-Triazine-2,4,6(1 <i>H</i> ,3 <i>H</i> ,5 <i>H</i> )-trione, 1,3,5-tris(2-methyl-2-propenyl)-		
6408-57-7	Benzenesulfonic acid, 2,2'-[(9,10-dihydro-9,10-dioxo-1,4-anthracenediyl)diimino]bis[5-butyl-, disodium salt		
6661-40-1	Benzenesulfonic acid, 2-ethoxy-5-[[4-[[4-[(4-ethoxy-3-sulfophenyl)amino]phenyl](1-methyl-2-phenyl-1 <i>H</i> -indol-3-yl)methylene]-2,5-cyclohexadien-1-ylidene]amino]-, monosodium salt		
6804-07-5	Hydrazinecarboxylic acid, [(1,4-dioxido-2-quinoxaliny)methylene]-, methyl ester	Yes (Human Health)	
6990-06-3	29-Nordammara-17(20),24-dien-21-oic acid, 16-(acetyloxy)-3,11-dihydroxy-, (3 $\alpha$ ,4 $\alpha$ ,8 $\alpha$ ,9 $\beta$ ,11 $\alpha$ ,13 $\alpha$ ,14 $\beta$ ,16 $\beta$ ,17 <i>Z</i> )-		Pharmaceutical
7098-08-0	9,10-Anthracenedione, 4,8-diamino-1,5-dihydroxy-2-(4-hydroxyphenyl)-		
7158-25-0	4,9:5,8-Dimethano-1 <i>H</i> -benz[ <i>f</i> ]indene, 3 <i>a</i> ,4,4 <i>a</i> ,5,8,8 <i>a</i> ,9,9 <i>a</i> -octahydro-		Fragrance/ Flavourant
7360-44-3	Aluminum, (acetato- <i>O</i> )dihydroxy-		

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAC candidate (and basis for concern)	Additional information on use *
7435-02-1	Octanoic acid, cerium salt		
7439-15-8	Benzene, 1-ethyl-4-(2-phenylethyl)-		
7439-91-0	Lanthanum		Pharmaceutical
7439-94-3	Lutetium		
7440-45-1	Cerium		
7440-65-5	Yttrium		
7488-49-5	2,6-Methano-3-benzazocin-8-ol, 1,2,3,4,5,6-hexahydro-6,11-dimethyl-3-(3-methyl-2-butenyl)-, (2 <i>R</i> ,6 <i>R</i> ,11 <i>R</i> )-		
7647-10-1	Palladium chloride (PdCl <sub>2</sub> )		
7717-62-6	Benzeneacetic acid, 1-phenyl-1,2-ethanediyl ester	Yes (Ecological)	
7758-88-5	Cerium fluoride (CeF <sub>3</sub> )		
7774-29-0	Mercury iodide (HgI <sub>2</sub> )	Yes (Ecological)	
7782-39-0	Deuterium		
7783-33-7	Mercurate(2-), tetraiodo-, dipotassium, (7-4)-		
7783-49-5	Zinc fluoride (ZnF <sub>2</sub> )		
7783-70-2	Antimony fluoride (SbF <sub>5</sub> )		
7783-86-0	Iron iodide (FeI <sub>2</sub> )		
7783-96-2	Silver iodide (AgI)		
7784-09-0	Phosphoric acid, trisilver(1+) salt		
7789-45-9	Copper bromide (CuBr <sub>2</sub> )		
7790-80-9	Cadmium iodide (CdI <sub>2</sub> )		
7790-86-5	Cerium chloride (CeCl <sub>3</sub> )		
7790-98-9	Perchloric acid, ammonium salt		
7803-58-9	Sulfamide		
7803-63-6	Sulfuric acid, monoammonium salt		
8023-64-1	Balsams, Peru, white		Fragrance/ Flavourant
8038-93-5	Sodium aluminum chlorhydroxy lactate		
9008-34-8	Resin acids and Rosin acids, manganese salts		
10024-42-7	Aluminum sodium sulfate		
10024-93-8	Neodymium chloride (NdCl <sub>3</sub> )		
10025-67-9	Sulfur chloride (S <sub>2</sub> Cl <sub>2</sub> )		
10025-74-8	Dysprosium chloride (DyCl <sub>3</sub> )		
10028-17-8	Tritium		
10042-88-3	Terbium chloride (TbCl <sub>3</sub> )		
10045-89-3	Sulfuric acid, ammonium iron(2+) salt (2:2:1)		
10049-07-7	Rhodium chloride (RhCl <sub>3</sub> )		
10049-23-7	Telluric acid (H <sub>2</sub> TeO <sub>3</sub> )		
10099-59-9	Nitric acid, lanthanum(3+) salt		
10102-05-3	Nitric acid, palladium(2+) salt		

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAc candidate (and basis for concern)	Additional information on use *
10108-73-3	Nitric acid, cerium(3+) salt		
10138-04-2	Sulfuric acid, ammonium iron(3+) salt (2:1:1)		
10138-41-7	Erbium chloride (ErCl <sub>3</sub> )		
10138-52-0	Gadolinium chloride (GdCl <sub>3</sub> )		
10168-81-7	Nitric acid, gadolinium(3+) salt		
10361-65-6	Phosphoric acid, triammonium salt		Fertilizer
10361-79-2	Praseodymium chloride (PrCl <sub>3</sub> )		
10361-82-7	Samarium chloride (SmCl <sub>3</sub> )		
10361-92-9	Yttrium chloride (YCl <sub>3</sub> )		
10361-93-0	Nitric acid, yttrium(3+) salt		
10402-16-1	9-Octadecenoic acid (Z)-, copper salt		
10402-33-2	Benzeneacetic acid, 2-methoxy-4-(2-propenyl)phenyl ester		Formulant
10484-56-7	Naphthalene, 2-butoxy-		Fragrance/ Flavourant
10579-93-8	Bicyclo[7.2.0]undec-4-ene, 4,11,11-trimethyl-8-methylene-, [1S-(1R,4E,9S)]-		
10580-02-6	Titanate(2-), bis[ethanedioato(2-)-O,O']oxo-, diammonium, (SP-5-21)-		
11028-42-5	Cedrene		Formulant
12003-63-3	Aluminate (AlO <sub>2</sub> <sup>1-</sup> ), potassium		
12004-40-9	Aluminate (AlO <sub>3</sub> <sup>3-</sup> ), strontium (2:3)		
12013-15-9	Copper hydroxide sulfate (Cu <sub>3</sub> (OH) <sub>4</sub> (SO <sub>4</sub> ))		
12014-14-1	Cadmium titanium oxide (CdTiO <sub>3</sub> )		
12027-06-4	Ammonium iodide ((NH <sub>4</sub> )I)		
12027-67-7	Molybdate (Mo <sub>7</sub> O <sub>24</sub> <sup>6-</sup> ), hexaammonium		
12030-97-6	Titanate (TiO <sub>3</sub> <sup>2-</sup> ), dipotassium		
12034-34-3	Titanate (TiO <sub>3</sub> <sup>2-</sup> ), disodium		
12049-50-2	Titanate (TiO <sub>3</sub> <sup>2-</sup> ), calcium (1:1)		
12057-24-8	Lithium oxide (Li <sub>2</sub> O)		
12061-16-4	Erbium oxide (Er <sub>2</sub> O <sub>3</sub> )		
12075-68-2	Aluminum, trichlorotriethyl-di-		
12124-99-1	Ammonium sulfide ((NH <sub>4</sub> )(SH))		Fragrance/ Flavourant
12135-77-2	Ammonium sulfide ((NH <sub>4</sub> ) <sub>2</sub> (S <sub>5</sub> ))		
12138-09-9	Tungsten sulfide (WS <sub>2</sub> )		
12192-57-3	Gold, [1-(thio-.kappa.S)-D-glucopyranosato-.kappa.O <sub>2</sub>		
12196-21-3	Hemimorphite (Zn <sub>4</sub> (OH) <sub>2</sub> O(SiO <sub>3</sub> ) <sub>2</sub> .H <sub>2</sub> O)		
12227-77-9	Xanthylum, 9-(2-carboxyphenyl)-3,6-bis(diethylamino)-, chloride, aluminum salt		
12254-24-9	Aluminate (Al <sub>12</sub> O <sub>19</sub> <sup>2-</sup> ), strontium (1:1)		

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAC candidate (and basis for concern)	Additional information on use *
12307-90-3	Rhodium, chloro[(1,2,5,6-η)-1,3,5,7-cyclooctatetraene](pyridine)-		
12542-85-7	Aluminum, trichlorotrimethyldi-		
12593-60-1	Ammonium phosphate sulfate ((NH <sub>4</sub> ) <sub>2</sub> H <sub>3</sub> (PO <sub>4</sub> )(SO <sub>4</sub> ))		Fertilizer
12794-95-5	Silicic acid, ammonium salt		
13005-35-1	D-Gluconic acid, copper salt		
13011-54-6	Phosphoric acid, monoammonium monosodium salt		
13019-04-0	Cyclohexanone, 2,4-bis(1,1-dimethylethyl)-		Fragrance/ Flavourant
13106-76-8	Molybdate (MoO <sub>4</sub> <sup>2-</sup> ), diammonium, (T-4)-		Fertilizer
13393-93-6	1-Phenanthrenemethanol, tetradecahydro-1,4a-dimethyl-7-(1-methylethyl)-		Fragrance/ Flavourant
13444-93-4	Osmium chloride (OsCl <sub>3</sub> )		
13446-48-5	Nitrous acid, ammonium salt		
13453-07-1	Gold chloride (AuCl <sub>3</sub> )		
13453-87-7	Sulfurous acid, dilithium salt		
13454-72-3	Metaphosphoric acid (HPO <sub>3</sub> ), cerium(3+) salt		
13465-98-0	Sulfurous acid, disilver(1+) salt		
13573-16-5	Chromate(1-), diamminetetakis(thiocyanato-N)-, ammonium, (OC-6-11)-		
13596-12-8	Aluminum fluoride oxide (AlFO)		
13598-65-7	Rhenate (ReO <sub>4</sub> <sup>1-</sup> ), ammonium, (T-4)-		
13693-11-3	Sulfuric acid, titanium(4+) salt (2:1)		
13709-38-1	Lanthanum fluoride (LaF <sub>3</sub> )		
13709-49-4	Yttrium fluoride (YF <sub>3</sub> )		
13786-79-3	13-Oxabicyclo[10.1.0]trideca-4,8-diene, 1,5,9-trimethyl-		Fragrance/ Flavourant
13820-53-6	Palladate(2-), tetrachloro-, disodium, (SP-4-1)-		
13821-15-3	Aluminate(1-), tetrafluoro-, sodium, (T-4)-		
13823-29-5	Nitric acid, thorium(4+) salt		
14049-51-5	Aluminum, hydroxybis(octanoato-O)-		
14220-17-8	Nickelate(2-), tetrakis(cyano-C)-, dipotassium, (SP-4-1)-		
14263-73-1	Cuprate(3-), tetrakis(cyano-C)-, tripotassium, (T-4)-		
14284-93-6	Ruthenium, tris(2,4-pentanedionato-O,O')-, (OC-6-11)-		
14307-35-8	Chromic acid (H <sub>2</sub> CrO <sub>4</sub> ), dilithium salt		
14475-17-3	Carbonic acid, praseodymium salt		
14816-18-3	3,5-Dioxa-6-aza-4-phosphaoct-6-ene-8-nitrile, 4-ethoxy-7-phenyl-, 4-sulfide	Yes (Human Health)	
15007-61-1	Aluminum potassium sulfate		
15114-15-5	9,10-Anthracenedione, 4,8-diamino-2-(4-ethoxyphenyl)-1,5-dihydroxy-		

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAC candidate (and basis for concern)	Additional information on use *
15281-91-1	Cuprate(3-), tetrakis(cyano-C)-, trisodium, (T-4)-		
15336-18-2	Rhodate(3-), hexachloro-, triammonium, (OC-6-11)-		
15467-06-8	9-Octadecenoic acid, 12-hydroxy-, monolithium salt, [R-(Z)]-		
15680-42-9	Copper, [1-[(2-hydroxyphenyl)imino]methyl]-2-naphthalenolato(2-)-N,O,O']-		
15710-63-1	Aluminum ammonium sulfate		
15752-05-3	Iridate(3-), hexachloro-, triammonium, (OC-6-11)-		
16774-21-3	Cerate(2-), hexakis(nitrato-O)-, diammonium, (OC-6-11)-		
16871-54-8	Platinate(2-), hexachloro-, (OC-6-11)-		
16903-35-8	Aurate(1-), tetrachloro-, hydrogen, (SP-4-1)-		
16919-19-0	Silicate(2-), hexafluoro-, diammonium		
16919-31-6	Zirconate(2-), hexafluoro-, diammonium, (OC-6-11)-		
16919-58-7	Platinate(2-), hexachloro-, diammonium, (OC-6-11)-		
16921-30-5	Platinate(2-), hexachloro-, dipotassium, (OC-6-11)-		
16923-58-3	Platinate(2-), hexachloro-, disodium, (OC-6-11)-		
16940-92-4	Iridate(2-), hexachloro-, diammonium, (OC-6-11)-		
16941-12-1	Platinate(2-), hexachloro-, dihydrogen, (OC-6-11)-		
17202-41-4	1-Nonanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-nonadecafluoro-, ammonium salt		
17439-11-1	Titanate(2-), hexafluoro-, dihydrogen, (OC-6-11)-		
17527-29-6	2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl ester		
17831-71-9	2-Propenoic acid, oxybis(2,1-ethanediyl-oxy-2,1-ethanediyl) ester		
17836-88-3	Aluminate(1-), diethyldihydro-, sodium, (T-4)-		
18263-25-7	Hexadecanoic acid, 2-bromo-		
18400-34-5	Bismuth carbonate		
18908-70-8	Benzene, 1-ethyl-2-(1-phenylethyl)-		
18908-71-9	Benzene, 1-ethyl-3-(1-phenylethyl)-		
19014-53-0	9,10-Anthracenedione, 1-amino-2-[4-[(hexahydro-2-oxo-1H-azepin-1-yl)methyl]phenoxy]-4-hydroxy-	Yes (Ecological)	
19125-99-6	1H-Benz[de]isoquinoline-1,3(2H)-dione, 2-butyl-6-(butylamino)-		
19398-61-9	Benzene, 1,4-dichloro-2-methyl-		
19941-28-7	1-Phenanthrenecarboxylic acid, tetradecahydro-1,4a-dimethyl-7-(1-methylethyl)-, methyl ester, [1R-(1α,4aβ,4bα,7β,8aβ,10aα)]-		
21064-19-7	1,5,9-Cyclododecatriene, 1,5,9-trimethyl-		
21656-02-0	Rhodium hydroxide (Rh(OH) <sub>3</sub> )		
22722-98-1	Aluminate(1-), dihydrobis(2-methoxyethanolato-O,O')-, sodium		



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23149-52-2	Thiosulfuric acid (H <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ), disilver(1+) salt		
24304-00-5	Aluminum nitride (AlN)		
24447-78-7	2-Propenoic acid, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) ester		
24484-01-3	Copper, chloro[tris(2-chloroethyl) phosphite-P]-		
24593-34-8	Hexanoic acid, 2-ethyl-, cerium salt		
24772-51-8	Aluminum, bis(2-butanolato)(ethyl 3-oxobutanoato- <i>O</i> <sup>1'</sup> , <i>O</i> <sup>3</sup> )-, ( <i>T</i> -4)-		
25155-18-4	Benzenemethanaminium, <i>N,N</i> -dimethyl- <i>N</i> -[2-[2-[methyl-4-(1,1,3,3-tetramethylbutyl)phenoxy]ethoxy]ethyl]-, chloride		
25339-17-7	Isodecanol		Fragrance/ Flavourant
25567-55-9	Phenol, tetrachloro-, sodium salt		
25614-03-3	Ergotaman-3',6',18-trione, 2-bromo-12'-hydroxy-2'-(1-methylethyl)-5'-(2-methylpropyl)-, (5' $\alpha$ )-		Pharmaceutical
26401-27-4	Phosphorous acid, isooctyl diphenyl ester		
26545-58-4	Naphthalenesulfonic acid, methylenebis-, disodium salt		
26603-40-7	1,3,5-Triazine-2,4,6(1 <i>H</i> ,3 <i>H</i> ,5 <i>H</i> )-trione, 1,3,5-tris(3-isocyanatomethylphenyl)-		
26628-22-8	Sodium azide (Na(N <sub>3</sub> ))		
26747-90-0	1,3-Diazetidene-2,4-dione, 1,3-bis(3-isocyanatomethylphenyl)-		
27080-90-6	Disulfide, bis(dimethylphenyl)		
27157-94-4	Phosphorodithioic acid, <i>O,O</i> -bis(methylphenyl) ester		
27441-86-7	Imidodisulfuric acid, ammonium salt		
28984-89-6	1,1'-Biphenyl, phenoxy-		
29935-35-1	Arsenate(1-), hexafluoro-, lithium		
31113-23-2	Aurate(1-), tetrachloro-, ammonium, ( <i>SP</i> -4-1)-		
31288-44-5	9,10-Anthracenedione, 1,5-diamino-4,8-dihydroxy(4-methoxyphenyl)-		
31529-83-6	9,10-Anthracenedione, 1,5-diamino-4,8-dihydroxy(4-hydroxyphenyl)-		
31884-77-2	Piperazine, 1-[(4-chlorophenyl)phenylmethyl]-4-[(3-methylphenyl)methyl]-, hydrochloride, hydrate (1:2:1)		
32222-06-3	9,10-Secocholesta-5,7,10(19)-triene-1,3,25-triol, (1 $\alpha$ ,3 $\beta$ ,5 <i>Z</i> ,7 <i>E</i> )-		Pharmaceutical
32510-27-3	2(3 <i>H</i> )-Benzothiazolethione, copper salt		
33703-04-7	Acetic acid, 2,2',2''-[(1,1,3-tributyl-1-distannathianyl-3-ylidene)tris(thio)]tris-, triisooctyl ester		
33704-59-5	1 <i>H</i> -Indene, 2,3,4,5,6,7-hexahydro-1,1,2,3,3-pentamethyl-		
33704-60-8	1 <i>H</i> -Indene, octahydro-1,1,2,3,3-pentamethyl-		Fragrance/

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAc candidate (and basis for concern)	Additional information on use *
			Flavourant
34455-03-3	1-Hexanesulfonamide, <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro- <i>N</i> -(2-hydroxyethyl)-		
35164-39-7	Propanoic acid, 2-methyl-, ester with 2,2,4-trimethyl-1,3-pentanediol monobenzoate		
35171-52-9	Arsenic triiodide		
38303-23-0	Cyclododecoxazole, 4,5,6,7,8,9,10,11,12,13-decahydro-		Fragrance/ Flavourant
38462-23-6	Pyridine, 4-(4,8-dimethyl-3,7-nonadienyl)-		Formulant
38970-76-2	Benzoic acid, 2-hydroxy-, dilithium salt		
40785-62-4	Cyclododeca[c]furan, 1,3,3a,4,5,6,7,8,9,10,11,13a-dodecahydro-		Fragrance/ Flavourant
41284-31-5	1,4-Benzenedicarboxylic acid, 2-[[4-(2,2-dicyanoethenyl)-3-methylphenyl]ethylamino]ethyl methyl ester	Yes (Ecological)	
42757-85-7	1 <i>H</i> -Benz[ <i>f</i> ]indene-1,3(2 <i>H</i> )-dione, 2-(3-hydroxy-2-quinolinyl)-		
47107-74-4	Copper, iodo(triphenylphosphine)-		
47742-71-2	Xanthylum, 3,6-bis(diethylamino)-9-[2-(methoxycarbonyl)phenyl]-	Yes (Ecological)	
50288-23-8	Arsenic triiodide		
50471-44-8	2,4-Oxazolidinedione, 3-(3,5-dichlorophenyl)-5-ethenyl-5-methyl-	Yes (Human Health)	Historical Pesticide Active
50542-90-0	2 <i>H</i> -1-Benzopyran-2-one, 7-[(3,7-dimethyl-2,6-octadienyl)oxy]-4-methyl-		Formulant
52236-80-3	Acetic acid, [4-[(1-amino-9,10-dihydro-4-hydroxy-9,10-dioxo-2-anthracenyl)oxy]phenoxy]-, ethyl ester	Yes (Ecological)	
52475-89-5	3-Cyclohexene-1-carboxaldehyde, 3-(4-methyl-3-pentenyl)-		Formulant
52591-27-2	2-Propenoic acid, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester		
53004-93-6	Butanoic acid, 2-methyl-, 5-methyl-2-(1-methylethyl)cyclohexyl ester		Fragrance/ Flavourant
53422-16-5	Octadecanoic acid, 12-hydroxy-, methyl ester, lithium salt		
54464-54-9	Ethanone, 1-[1,6-dimethyl-3-(4-methyl-3-pentenyl)-3-cyclohexen-1-yl]-		
55200-89-0	Copper hydroxide sulfate		
56208-99-2	Aluminum, bis(2-ethylhexanoato- <i>O</i> )(2-propanolato)-		
56211-60-0	Potassium titanium fluoride		
57499-57-7	Ethanone, 1-[1,6-dimethyl-4-(4-methyl-3-pentenyl)-3-cyclohexen-1-yl]-		
58102-02-6	3-Butenal, 2-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-		Fragrance/ Flavourant
58394-64-2	Hexanedioic acid, 2-ethylhexyl phenylmethyl ester		
58478-76-5	Octadecanoic acid, 12-hydroxy-, calcium lithium salt		

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAc candidate (and basis for concern)	Additional information on use *
60270-55-5	1-Heptanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, potassium salt		
60304-36-1	Aluminum potassium fluoride		
60364-28-5	Pentanoic acid, 2-propyl-, bismuth salt		
61617-09-2	9H-Dibenzo[b,d]pyran-9-one, 3-(1,1-dimethylheptyl)-6,6a,7,8,10,10a-hexahydro-1-hydroxy-6,6-dimethyl-, (6aR,10aR)-		
61788-56-5	Naphthenic acids, lithium salts		
61788-80-5	Resin acids and Rosin acids, iron salts		
61788-83-8	Oils, herring, sulfated, sodium salts		
61789-75-1	Quaternary ammonium compounds, benzyldimethyltallow alkyl, chlorides		
61790-11-2	Fatty acids, tall-oil, zinc salts	Yes (Ecological)	Formulant
61790-20-3	Naphthenic acids, rare earth salts		
61790-54-3	Naphthenic acids, compds. with N-tallow alkyltrimethylenediamines	Yes (Ecological)	
62563-80-8	Vetiverol, acetate		Fragrance/ Flavourant
62625-30-3	Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2-bromo-6-methyl-, S,S-dioxide, monosodium salt		
62638-04-4	Cyclohexanebutanoic acid, silver(1+) salt		
63148-76-5	Benzoxazolium, 3-ethyl-5-phenyl-2-[2-[[3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-, hydroxide, inner salt	Yes (Ecological)	
63568-35-4	Naphthalenedisulfonic acid, diisononyl-, compd. with 1,1'-iminobis[2-propanol] (1:2)	Yes (Ecological)	
64129-94-8	Pentanoic acid, 5-methyl-2-(1-methylethyl)cyclohexyl ester, [1R-(1 $\alpha$ ,2 $\beta$ ,5 $\alpha$ )]-		Fragrance/ Flavourant
64754-89-8	Naphthenic acids (petroleum), crude		
64755-02-8	Fatty acids, tallow, lithium salts		
65816-20-8	Benzoic acid, 4-[[[(ethylphenylamino)methylene]amino]-, ethyl ester		
66071-82-7	Fatty acids, tallow, hydrogenated, lithium salts		
67567-23-1	Butanoic acid, 3,3-bis[(1,1-dimethylpropyl)dioxy]-, ethyl ester		
67584-53-6	Glycine, N-ethyl-N-[(tridecafluorohexyl)sulfonyl]-, potassium salt		Formulant
67584-58-1	1-Propanaminium, N,N,N-trimethyl-3-[[[(pentadecafluoroheptyl)sulfonyl]amino]-, iodide		
67584-62-7	Glycine, N-ethyl-N-[(pentadecafluoroheptyl)sulfonyl]-, potassium salt		Formulant
67634-12-2	Benzoic acid, 2-[[[4-(4-hydroxy-4-methylpentyl)-3-		Formulant

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	cyclohexenyl)methylene]amino]-, methyl ester		
67801-30-3	4-Penten-3-one, 5-(2,4,6-trimethyl-3-cyclohexen-1-yl)-		Fragrance/ Flavourant
67801-31-4	3-Buten-2-one, 3-methyl-4-(3,5,6-trimethyl-3-cyclohexen-1-yl)-		Fragrance/ Flavourant
67801-32-5	4-Penten-3-one, 5-(3,5,6-trimethyl-3-cyclohexen-1-yl)-		Fragrance/ Flavourant
67801-36-9	1 <i>H</i> -Indole-1-heptanol, $\eta$ -1 <i>H</i> -indol-1-yl- $\alpha,\alpha,\epsilon$ -trimethyl		Fragrance/ Flavourant
67801-37-0	1 <i>H</i> -Indole, 1,1'-(2-phenylethylidene)bis-		Fragrance/ Flavourant
67801-47-2	Benzoic acid, 2-[(3,7-dimethyl-2,6-octadienylidene)amino]-, methyl ester		Fragrance/ Flavourant
67845-42-5	Benzoic acid, 2-[(3,7-dimethyl-6-octenylidene)amino]-, methyl ester		Fragrance/ Flavourant
67893-02-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4a,4b,5,6,7,8,10,10a-dodecahydro-1,4a-dimethyl-7-(1-methylethyl)-, methyl ester		
67905-40-2	Oxiranecarboxylic acid, 3-methyl-3-[2-(2,6,6-trimethyl-2-cyclohexen-1-yl)ethenyl]-, methyl ester		Fragrance/ Flavourant
67924-13-4	Benzoic acid, 2-[[2-(phenylmethylene)octylidene]amino]-, methyl ester		Fragrance/ Flavourant
67939-98-4	1-Heptanesulfonamide, <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro- <i>N</i> -[2-(phosphonooxy)ethyl]-, diammonium salt		
67940-02-7	1-Heptanesulfonamide, <i>N</i> -[3-(dimethylamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, monohydrochloride		
68039-12-3	1 <i>H</i> -Imidazolium, 1-ethyl-4,5-dihydro-3-(2-hydroxyethyl)-2-(8-heptadecenyl)-, ethyl sulfate		
68083-40-9	Methanone, [2-hydroxy-4-[2-hydroxy-3-(octyloxy)propoxy]phenyl]phenyl-	Yes (Ecological)	
68092-49-9	Methanone, [4-[3-(decyloxy)-2-hydroxypropoxy]-2-hydroxyphenyl]phenyl-		
68131-32-8	Sulfite liquors and Cooking liquors, spent, fermented		Fertilizer
68139-87-7	Fatty acids, tall-oil, compds. with diethylenetriamine-naphthenic acid reaction products		
68155-64-6	1-Propanone, 1-[6-methyl-3-(4-methyl-3-pentenyl)-3-cyclohexen-1-yl]-		
68155-65-7	1-Propanone, 1-[6-methyl-4-(4-methyl-3-pentenyl)-3-cyclohexen-1-yl]-		
68186-32-3	1,2,4-Benzenetricarboxylic acid, isooctyl ester		

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAC candidate (and basis for concern)	Additional information on use *
68186-99-2	C.I. Pigment Red 231		
68187-06-4	Naphthalenesulfonic acid, di-C5-6-alkyl derivs., compds. with butylamine		
68187-41-7	Phosphorodithioic acid, <i>O,O</i> -di-C <sub>1-14</sub> -alkyl esters		
68187-59-7	Coal, anthracite, calcined		
68201-19-4	Barium, acetate tallow fatty acids complexes	Yes (Ecological)	
68228-09-1	Benzoic acid, 2-[[[2,4(or 3,5)-dimethyl-3-cyclohexen-1-yl]methyl]amino]-, ethyl ester	Yes (Ecological)	Fragrance/Flavourant
68259-07-4	1-Heptanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, ammonium salt		
68259-14-3	1-Heptanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro- <i>N</i> -methyl-		
68259-15-4	1-Hexanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro- <i>N</i> -methyl-		
68298-13-5	1-Pentanesulfonamide, 1,1,2,2,3,3,4,4,5,5,5-undecafluoro- <i>N</i> -methyl-		
68307-87-9	Calcium, acetate hydrogenated tallow fatty acids complexes		
68308-19-0	Fatty acids, C <sub>6-19</sub> -branched, copper(2+) salts		
68309-34-2	Imidazolium compounds, 1-benzyl-4,5-dihydro-1-(hydroxyethyl)-2-nortall-oil alkyl, chlorides		
68333-32-4	Phenol, mixed di-Me and mono-Me derivs., isobutenylated, distn. residues		
68334-11-2	Fatty acids, tall oil, compds. with 2-[(2-hydroxyphenyl)methylene]hydrazinecarboximidamide	Yes (Ecological)	
68400-01-1	Formic acid, compd. with 2-[2-[[4-[3-(4-chlorophenyl)-4,5-dihydro-1 <i>H</i> -pyrazol-1-yl]phenyl]sulfonyl]ethoxy]- <i>N,N</i> -dimethyl-1-propanamine (1:1)		
68412-02-2	2,5-Furandione, dihydro-, mono-C <sub>11-13</sub> -alkenyl derivs.		
68412-83-9	Sulfuric acid, mono-C <sub>8-30</sub> -alkyl esters, compds. with triethanolamine		
68442-12-6	9-Octadecenoic acid (Z)-, 2-mercaptoethyl ester, reaction products with dichlorodimethylstannane, sodium sulfide(Na <sub>2</sub> S) and trichloromethylstannane		
68478-78-4	9-Octadecenoic acid (Z)-, reaction products with 2-amino-2-methyl-1-propanol		
68478-92-2	Platinum, 1,3-diethenyl-1,1,3,3-tetramethyldisiloxane complexes		
68514-63-6	Naphthenic acids, cerium(4+) salts		
68515-67-3	Copper, 2-ethylhexanoate naphthenate 3,5,5-trimethylhexanoate complexes		
68515-89-9	Barium, carbonate nonylphenol complexes		

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAc candidate (and basis for concern)	Additional information on use *
68515-93-5	Phenol, nonyl derivs., sulfides		
68527-78-6	Benzoic acid, 2-[[2-(phenylmethylene)heptylidene]amino]-, methyl ester		Fragrance/ Flavourant
68527-79-7	7-Octen-2-ol, 8-(1 <i>H</i> -indol-1-yl)-2,6-dimethyl		Fragrance/ Flavourant
68551-38-2	Balsams, copaiba, sulfurized, silver salts		
68551-39-3	Balsams, Douglas-fir, mixed with turpentine oil, titanium salts		
68555-62-4	2-Butenal, 2-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-		Fragrance/ Flavourant
68555-72-6	1-Pentanesulfonamide, <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,5-undecafluoro- <i>N</i> -(2-hydroxyethyl)-		
68555-73-7	1-Heptanesulfonamide, <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro- <i>N</i> -(2-hydroxyethyl)-		
68555-75-9	1-Hexanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro- <i>N</i> -(2-hydroxyethyl)- <i>N</i> -methyl-		
68555-76-0	1-Heptanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro- <i>N</i> -(2-hydroxyethyl)- <i>N</i> -methyl-		
68555-81-7	1-Propanaminium, <i>N,N,N</i> -trimethyl-3-[[[(pentadecafluoroheptyl)sulfonyl]amino]-, chloride		
68585-32-0	Platinate(2-), hexachloro-, (OC-6-11)-, dihydrogen, reaction products with 2,4,6,8-tetraethenyl-2,4,6,8-tetramethylcyclotetrasiloxane		
68603-64-5	Amines, <i>N</i> -(hydrogenated tallow alkyl)trimethylenedi-		
68608-33-3	Terpenes and Terpenoids, cedarwood-oil, hydroxy, acetates	Yes (Ecological)	
68609-03-0	Copper, C <sub>6-19</sub> -branched carboxylate naphthenate complexes		
68610-24-2	C.I. Pigment Yellow 157	Yes (Human Health)	
68611-23-4	3-Pentanone, 1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-, reaction products with 2-propyn-1-ol		Formulant
68647-36-9	Xanthylum, 9-(2-carboxyphenyl)-3,6-bis(diethylamino)-, tungstatesilicate		
68647-67-6	Sesquiterpenes and Sesquiterpenoids, guaiac wood-oil		Formulant
68648-44-2	Pyrethrins and Pyrethroids, manufg.-residues	Yes (Ecological)	Formulant
68683-18-1	Neodecanoic acid, silver(1+) salt		
68738-99-8	Benzoic acid, 2-[[[2,4(or 3,5)-dimethyl-3-cyclohexen-1-yl]methylene]amino]-, methyl ester		Formulant
68784-83-8	Yttrium oxide sulfide (Y <sub>2</sub> O <sub>2</sub> S), europium-doped		
68845-33-0	Cyclohexane, 1-ethenyl-1-methyl-2-(1-methylethenyl)-4-(1-methylethyl)-, didehydro deriv.		Fragrance/ Flavourant
68859-25-6	C.I. Pigment Yellow 37		
68901-22-4	Cyclohexanone, 4-[(3,3-dimethylbicyclo[2.2.1]hept-2-		Formulant

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAc candidate (and basis for concern)	Additional information on use *
	yl)methyl]-2-methyl-		
68908-88-3	Benzene, ethyl-, benzylated		
68909-13-7	Bastnaesite, calcined conc.		
68916-14-3	Oils, amyrin, acetylated		Fragrance/ Flavourant
68916-31-4	Balsams, Douglas-fir, sulfurized, ruthenium salts		
68916-32-5	Balsams, mixed copaiba and Douglas-fir, sulfurized, silver salts		
68918-07-0	Sulfonic acids, petrolatum, sodium salts		
68920-10-5	Fats, animal, mixed with vegetable oils, deodorizer distillates		
68922-09-8	Cyclohexanol, 2-methoxy-4-(1,7,7-trimethylbicyclo[2.2.1]hept-2-yl)-		Fragrance/ Flavourant
68928-29-0	1-Octadecanaminium, <i>N,N</i> -diethyl- <i>N</i> -methyl-, (OC-6-11)-hexakis(cyano-C)ferrate(4-) (4:1)		
68938-42-1	Paraffin waxes and Hydrocarbon waxes, chloro, reaction products with naphthalene		
68952-33-0	Tar acids, cresylic, C <sub>8</sub> -rich, phosphates		
68952-90-9	1-Propanaminium, <i>N,N</i> -bis(2-aminoethyl)-2-hydroxy- <i>N</i> -methyl-, <i>N,N'</i> -ditallow acyl derivs., Me sulfates (salts)		
68954-59-6	9-Octadecenoic acid (Z)-, reaction products with 2-[(2-aminoethyl)amino]ethanol, compds. with di-Et sulfate		
68955-54-4	Amines, C <sub>16-22</sub> -tert-alkyl		
68956-12-7	Fatty acids, C <sub>18</sub> -unsatd., dimers, distn. lights		
68957-60-8	1-Pentanesulfonamide, <i>N</i> -[3-(dimethylamino)propyl]-1,1,2,2,3,3,4,4,5,5,5-undecafluoro-, monohydrochloride		
68957-61-9	1-Hexanesulfonamide, <i>N</i> -[3-(dimethylamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, monohydrochloride		
68957-62-0	1-Heptanesulfonamide, <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-		
68990-00-1	Resin acids and Rosin acids, decarboxylated, potassium salts		
68990-27-2	Balsams, copaiba, sulfurized, mixed with turpentine, gold salts		
68990-92-1	Tallow, reaction products with 2-[(2-aminoethyl)amino]ethanol, compds. with di-Et sulfate		
69011-12-7	1,2-Benzenedicarboxylic acid, 3,4,5,6-tetrachloro-, butyl ester		
69012-57-3	Flue dust, cadmium-refining		
69012-60-8	Flue dust, lead-tin alloy-manufg.		
69012-63-1	Flue dust, zinc-refining		
69012-86-8	Ashes (residues), zinc-refining		
69029-45-4	Lead, dross, antimony-rich		
69029-51-2	Lead, antimonial, dross		
69029-60-3	Zinc, desilverizing skims		
69029-61-4	Bismuth, refinery lead chloride residues		



CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAC candidate (and basis for concern)	Additional information on use *
69029-63-6	Calcines, cadmium residue		
69029-74-9	Calcines, lead ore conc.		
69029-79-4	Residues, lead smelting		
69029-83-0	Residues, zinc smelting		
69029-91-0	Slimes and Sludges, cadmium sump tank		
70024-67-8	Benzenesulfonic acid, C <sub>16-24</sub> -alkyl derivs.		
70225-15-9	1-Heptanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, compd. with 2,2'-iminobis[ethanol] (1:1)		
70225-16-0	1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd. with 2,2'-iminobis[ethanol] (1:1)		
70892-62-5	1-Naphthalenepropanol, $\alpha$ -ethenyldecahydro-2-hydroxy- $\alpha$ ,2,5,5,8a-pentamethyl-, [1R-[1 $\alpha$ (R),2 $\beta$ ,4 $\alpha$ ,8 $\alpha$ ]]-, oxidized		Fragrance/ Flavourant
70914-18-0	Tallow, hydrogenated, reaction products with 2-[(2-aminoethyl)amino]ethanol, compds. with di-Et sulfates		
71205-27-1	9,10-Anthracenedione, 1,8-diamino-4,5-dihydroxy-, brominated		
71487-01-9	Quaternary ammonium compounds, dicoco alkyl dimethyl, nitrites	Yes (Ecological)	
71827-03-7	Avermectin A1a, 5-O-demethyl-22,23-dihydro-		
71889-01-5	Silane, chlorotrimethyl-, hydrolysis products with silica		Formulant
72230-85-4	Terpenes and Terpenoids, copaiba-oil, hydroxy, acetates		Fragrance/ Flavourant
72403-67-9	3-Cyclohexene-1-methanol, 3(or 4)-(4-methyl-3-pentenyl)-, acetate		Fragrance/ Flavourant
72749-59-8	Quaternary ammonium compounds, tri-C <sub>6-12</sub> -alkylmethyl, chlorides		
72927-96-9	2-Anthracenesulfonic acid, 1-amino-9,10-dihydro-9,10-dioxo-4-[(2,4,6-trimethylphenyl)amino]-, monolithium salt		
73018-55-0	Platinum, dicarbonyldichloro-, reaction products with 2,4,6-triethenyl-2,4,6-trimethylcyclotrisiloxane		
73049-75-9	Quaternary ammonium compounds, benzyldi-C <sub>12-18</sub> -alkylmethyl, chlorides		
73240-13-8	Benzoic acid, 2-hydroxy-, 1-methyl-1,3-propanediyl ester		
73309-46-3	Ethanaminium, N-[4-[[4-(diethylamino)phenyl][4-[(4-ethoxyphenyl)amino]-1-naphthalenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-ethyl-, chloride		
73570-52-2	Phenoxazin-5-ium, 3,7-bis(diethylamino)-, nitrate		Formulant
75701-31-4	Xanthylum, 9-(2,5-dicarboxyphenyl)-3,6-bis(diethylamino)-, hydroxide, inner salt		
79665-42-2	Xanthylum, 9-(2-carboxyphenyl)-3,6-bis(diethylamino)-, copper(1+) (OC-6-11)-hexakis(cyano-C)ferrate(4-) (2:2:1)		



CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAc candidate (and basis for concern)	Additional information on use *
79864-11-2	Benzenamine, <i>N,N'</i> -methanetetraylbis[4-[(4-isocyanatophenyl)methyl]-		
80301-64-0	1 <i>H</i> -Benzotriazole-1-methanamine, <i>N,N</i> -bis(2-ethylhexyl)-		
82537-67-5	1,3,8-Triazaspiro[4.5]decane-2,4-dione, 8-acetyl-3-dodecyl-7,7,9,9-tetramethyl-		
83950-19-0	Benzenamine, 4-[(2-chlorophenyl)[4-(ethylimino)-3-methyl-2,5-cyclohexadien-1-ylidene]methyl]- <i>N</i> -ethyl-2-methyl-, sulfate (2:1)		
83968-92-7	Ethanaminium, <i>N</i> -[4-[(2-chlorophenyl)(1-methyl-2-phenyl-1 <i>H</i> -indol-3-yl)methylene]-2,5-cyclohexadien-1-ylidene]- <i>N</i> -ethyl-, acetate		
84434-47-9	Methanaminium, <i>N</i> -[4-[[4-(dimethylamino)phenyl][4-(methylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]- <i>N</i> -methyl-, acetate		
84776-83-0	Resin acids and Rosin acids, esters with trimethylolpropane		
85005-73-8	Phenoxazin-5-ium, 3-(ethylamino)-2-methyl-7-[(2-methylphenyl)amino]-, chloride		
85187-74-2	Benzenesulfonic acid, 2,2'-(1,2-ethenediyl)bis[5-[[4-(methylamino)-6-(phenylamino)-1,3,5-triazin-2-yl]amino]-, sodium salt		
85338-07-4	Aluminum, chloro hydroxy sulfo-1,2-benzenedicarboxylate complexes		
85585-93-9	Carbonic acid, aluminum magnesium salt, basic		
85586-48-7	Urea, <i>N,N''</i> -(methylenedi-4,1-phenylene)bis[ <i>N'</i> -(3-(triethoxysilyl)propyl)-		
85736-59-0	Naphthenic acids, bismuth salts		
87396-22-3	Phosphonic acid, [[[phosphonomethyl]imino]bis[6,1-hexanediynitrilobis(methylene)]]tetrakis-, reaction products with ammonia-diethylene glycol reaction product morpholine derivs. residues		
90066-13-0	Xanthylum, 9-(2,4-dicarboxyphenyl)-3,6-bis(diethylamino)-, hydroxide, inner salt		
90623-14-6	Amides, from C <sub>18-24</sub> fatty acids, <i>N,N</i> -dimethyl-1,3-propanediamine and hydrogenated tallow fatty acids, compds. with di-Me sulfate		
90989-74-5	Blood, meal		Fertilizer
91053-53-1	Limestone, reaction product with bauxite and gypsum		
91744-55-7	Glycerides, lard mono-, hydrogenated		
93334-05-5	Fatty acids, montan-wax, sodium salts		
93892-03-6	Butanoic acid, 2-methyl-5-(1-methylethenyl)cyclohexyl ester, (1 $\alpha$ ,2 $\beta$ ,5 $\alpha$ )-		Fragrance/ Flavourant

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAc candidate (and basis for concern)	Additional information on use *
93892-05-8	Butanoic acid, 3-methyl-, 2-methyl-5-(1-methylethenyl)cyclohexyl ester, (1 $\alpha$ ,2 $\beta$ ,5 $\alpha$ )-		Fragrance/ Flavourant
93919-04-1	Butanoic acid, 2-methyl-5-(1-methylethenyl)-2-cyclohexen-1-yl ester		Fragrance/ Flavourant
93940-59-1	Octanoic acid, 5-methyl-2-(1-methylethyl)cyclohexyl ester, (1 $\alpha$ ,2 $\beta$ ,5 $\alpha$ )-		Fragrance/ Flavourant
94094-93-6	Benzene, mono-C <sub>10</sub> -C <sub>13</sub> -alkyl derivs., fractionation bottoms, heavy ends		
94248-34-7	Benzoic acid, 2-[[trimethyl-3-cyclohexen-1-yl)methylene]amino]-, methyl ester		
94279-42-2	Ferrate(4-), hexakis(cyano-C)-, oxidized <i>N,N</i> -dimethylbenzenamine- <i>N</i> -ethyl-2-methylbenzenamine-formaldehyde reaction products copper(1+) salts		
94386-39-7	Butanoic acid, 3-methyl-, 2-methyl-5-(1-methylethenyl)-2-cyclohexen-1-yl ester		
94386-40-0	Butanoic acid, 3-methyl-, [4-(1-methylethenyl)-1-cyclohexen-1-yl]methyl ester		
97375-25-2	Platinum, carbonyl chloro 2,4,6,8-tetraethenyl-2,4,6,8-tetramethylcyclotetrasiloxane complexes		
97862-60-7	Fatty acids, C <sub>20-28</sub> , compds. with 2-(methylamino)ethanol		
100085-57-2	Oils, fish, hydrogenated, reaction products with <i>N,N</i> -dimethyl-1,3-propanediamine, di-Me sulfate-quaternized		
103443-41-0	Xanthylum, 3,6-bis(diethylamino)-9-[2-(methoxycarbonyl)phenyl]-, molybdate tungstate phosphate		
104037-85-6	Benzoic acid, 2-[[3-(1,3-benzodioxol-5-yl)-2-methyl-1-propenyl]amino]-, methyl ester		Fragrance/ Flavourant
106068-87-5	Benzothiazolium, 5-chloro-2-[[5-[(5-chloro-1,3-diethyl-1,3-dihydro-2 <i>H</i> -benzimidazol-2-ylidene)ethylidene]-3-ethyl-4-oxo-2-thiazolidinylidene]methyl]-3-ethyl-, iodide	Yes (Ecological)	
106276-79-3	Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with 2-methyl-1,3-benzenediamine and sodium methoxide		
106726-11-8	Neodecanoic acid, neodymium(3+) salt		
107630-41-1	Nitric acid, ammonium calcium salt (11:1:5)		
107667-02-7	Phosphinodithioic acid, bis(2,4,4-trimethylpentyl)-	Yes (Ecological)	
109037-75-4	Benzene, reaction products with chlorine and sulfur chloride (S <sub>2</sub> Cl <sub>2</sub> ), hexafluoroantimonates(1-)		
114488-10-	10 <i>H</i> -Phenothiazine, 10-[2-[(2 <i>S</i> )-1-methyl-2-piperidinyl]ethyl]-		

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAC candidate (and basis for concern)	Additional information on use *
7	2-(methylthio)-		
114862-93-0	Methylum, [4-(dimethylamino)phenyl]bis[4-(ethylamino)-3-methylphenyl]-, molybdatephosphate		
114887-05-7	Methylum, bis[4-(dimethylamino)phenyl][4-(ethylamino)-3-methylphenyl]-, molybdatephosphate		
115017-00-0	10 <i>H</i> -Phenothiazine-10-ethanamine, <i>N,N</i> -diethyl- $\alpha$ -methyl-, (-)-		
117920-00-0	Amines, C <sub>16-22</sub> - <i>tert</i> -alkyl, compds. with 2(3 <i>H</i> )-benzothiazolethione (1:1)		
119040-04-9	Cyclohexanol, 2-methyl(trimethylbicyclo[2.2.1]hept-2-yl)-		
119299-02-4	Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, hydroxides		
121028-72-6	Aluminum, hydroxybis(1-oxodecyl)-		
121028-73-7	Aluminum, dihydroxy(1-oxooctyl)-		
121053-36-9	Slimes and Sludges, nickel refining		
121053-43-8	Aluminum, dihydroxy(1-oxodecyl)-		
121754-48-1	Benzenediazonium, 2-methoxy-4-(phenylamino)-, salt with 3,5-dimethylbenzenemethanesulfonic acid (1:1), reaction products with 1-(methoxymethyl)-4-(4-methylphenoxy)benzene and 1,1'-oxybis[4-(methoxymethyl)benzene]		
121754-49-2	2,4-Pentanedione, reaction products with 2-methyl-2-propanol, nonylphenol and tungsten chloride (WCl <sub>6</sub> )		
123774-64-1	Aluminum, (2-ethylhexanoato- <i>O</i> )dihydroxy-		
125328-39-4	Amines, <i>N</i> -canola-oil alkyltrimethylenedi-		
125328-45-2	Amines, hydrogenated tallow alkyl, distn., residues		
125328-62-3	Nitriles, canola-oil		
125328-63-4	Nitriles, canola-oil, hydrogenated		
125328-86-1	2-Anthracenesulfonic acid, 1-amino-4-[[4-(1,1-dimethylethyl)phenyl]amino]-9,10-dihydro-9,10-dioxo-, monolithium salt		

CAS RN <sup>ii</sup>	Domestic Substances List name	Potential SNAC candidate (and basis for concern)	Additional information on use *
125328-87-2	Benzene, 1-ethyl-2-(2-phenylethyl)-		
125328-94-1	Benzene, 1-ethyl-3-(2-phenylethyl)-		
125494-53-3	Slags, aluminum refining		
125494-54-4	Slimes and Sludges, zinc refining		
126820-94-8	Bicyclo[3.1.1]heptanethiol, 2,6,6-trimethyl-, gold(1+) salt, reaction products with palladium isooctyl 3-mercaptopropanoate complexes, sulfur and 2,6,6-trimethylbicyclo[3.1.1]heptanethiol silver(1+) salt		
126820-96-0	Bicyclo[3.1.1]heptanethiol, 2,6,6-trimethyl-, gold(1+) salt, reaction products with sulfur and 2,6,6-trimethylbicyclo[3.1.1]heptanethiol silver(1+) salt		
127032-53-5	Protein hydrolyzates, poultry-feather		
129618-38-8	Solutions, nickel hydrometallurgical		
132373-76-3	2-Naphthalenesulfonic acid, 1,5-bis(1-methylethyl)-, compd. with cyclohexanamine (1:1)	Yes (Ecological)	
134098-61-6	Benzoic acid, 4-[[[(E)-[(1,3-dimethyl-5-phenoxy-1 <i>H</i> -pyrazol-4-yl)methylene]amino]oxy]methyl]-, 1,1-dimethylethyl ester		
143106-84-7	2-Butanone, 4-[[[1,2,3,4,4a,9,10,10a- octahydro-1,4a-dimethyl-7-(1-methylethyl)-1-phenanthrenyl ]methyl](3-oxo-3-phenylpropyl)amino]-, hydrochloride, [1 <i>R</i> -(1 $\alpha$ ,4 $\alpha$ )]-	Yes (Ecological)	
152923-48-3	Amylase, $\alpha$ -, Bacillus amyloliquefaciens		

<sup>ii</sup> Chemical Abstracts Service Registry Number

\* Additional details on use type flagged are provided in the Human Health Component.

## Appendix D: Masked substances identified as not meeting the criteria under section 64 of CEPA 1999

CDSL <sup>6</sup> number	Masked Name
10003-4	Sulfurized alkyl phenols
10004-5	Maleic acid reaction product with alkyl amine
10034-8	Alkylsalicylic acid, zinc salt
10035-0	Alkylsalicylic acid, zinc salt
10688-5	Alkylsalicylic acid, sodium salt
10701-0	Adipic acid, product with C <sub>16</sub> C <sub>18</sub> alcohols and alkenylsuccinic anhydride
11005-7	Dialkyl(alkyldimethylsiloxy)aluminum
11035-1	DiethaNolamine salts of mono- and bis(1 <i>H</i> ,1 <i>H</i> ,2 <i>H</i> ,2 <i>H</i> -perfluoroalkyl)phosphates
11043-0	Diethylene triamine distearamide diglycidyl ether
11099-2	2,4-Alkyldione metal salt
11140-7	Substituted phosphindithioate, zinc salt
11163-3	<i>N,N,N'</i> -(Tris-(2-hydroxyethyl)- <i>N</i> -(alkyl-1,3-diaminopropane)), molybdate
11166-6	Soybean oil product with sulfur and alkene and organic acid
11192-5	Bisalkoxylated aluminum acetoacetic ester chelate
11193-6	Fatty acids, C <sub>18</sub> -unsaturated, dimers, distillation, lights, esters with a monohydric alcohol
11194-7	Bis alkoxylated aluminum acetoacetic ester chelate
11199-3	Modified tri-oxyaluminum alkanoate
11204-8	Ethoxylated alkyl alcohol phosphate salts of alkyl octahydrophenanthridine
11444-5	Substituted aromatic diisocyanate - hydroxypropyl methacrylate resin
11500-7	1-Methyl, <i>N</i> -methoxycarbonyl, <i>N</i> -[2-(perfluoroalkyl)ethoxy]carbonyl-2,4-diamiNobenzene
11517-6	Monodithiocarbamate of amines, <i>N</i> -(3-aminopropyl)- <i>N</i> -alkyl-, trimethylenedi-
11519-8	Reaction product of dicyclopentadiene, naphtha, (petroleum), steam cracked middle aromatics, maleic anhydride and terpene
11522-2	Fatty acids, reaction products with maleic anhydride and oleylamine
11523-3	Fatty acids, reaction products with maleic anhydride and oleylamine, ethoxylated
11524-4	Fatty acids, reaction products with maleic anhydride and triethanolamine
11525-5	Fatty acids, maleated
11554-7	Fatty acids, reaction products with maleic anhydride and oleylamine, ethoxylated
11560-4	Diethylene glycol bis(phenyl mercury alkenyl)succinate
11561-5	Diethylene glycol bis(phenyl mercury alkenyl)succinate
11562-6	Diethylene glycol bis(phenyl mercury alkenyl)succinate
11013-6	Polymeric monobutyltin(alkylmercaptoacetate ester), substituted
11060-8	2-Propanol, titanium (4+) salt, polymer with triethoxyvinylsilane;

<sup>6</sup> CDSL= Confidential Domestic Substance List

Appendix E: Substances identified as not meeting the criteria under Section 64 of CEPA 1999 but that were identified as having ecological effects of potential concern.

*CAS RN <sup>iii</sup>	Domestic Substances List Name
51-48-9	L-Tyrosine, O-(4-hydroxy-3,5-diiodophenyl)-3,5-diiodo-
101-65-5	Carbamic acid, (methylenedi-4,1-phenylene)bis-, diphenyl ester
123-69-3	Oxacycloheptadec-8-en-2-one, (Z)-
302-79-4	Retinoic acid
751-94-0	29-Nordammara-17(20),24-dien-21-oic acid, 16-(acetyloxy)-3,11-dihydroxy-, monosodium salt, (3 $\alpha$ ,4 $\alpha$ ,8 $\alpha$ ,9 $\beta$ ,11 $\alpha$ ,13 $\alpha$ , 14 $\beta$ ,16 $\beta$ ,17Z)-
1796-92-5	Benzoic acid, 5-[(3-carboxy-5-methyl-4-oxo-2,5-cyclohexadien-1-ylidene)(2,6-dichlorophenyl)methyl]-2-hydroxy-3-methyl-, disodium salt
2944-30-1	9,10-Anthracenedione, 1,4-bis[(4-methoxyphenyl)amino]-
3910-35-8	1 <i>H</i> -Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-
4091-99-0	Benzoic acid, 2-[3,6-bis(acetyloxy)-2,7-dichloro-9 <i>H</i> -xanthen-9-yl]-
5284-79-7	Cyclohexanone, 2,6-bis[(4-azidophenyl)methylene]-4-methyl-
7717-62-6	Benzeneacetic acid, 1-phenyl-1,2-ethanediyl ester
7774-29-0	Mercury iodide (Hg <sub>12</sub> )
19014-53-0	9,10-Anthracenedione, 1-amino-2-[4-[(hexahydro-2-oxo-1 <i>H</i> -azepin-1-yl)methyl]phenoxy]-4-hydroxy-
41284-31-5	1,4-Benzenedicarboxylic acid, 2-[[4-(2,2-dicyanoethenyl)-3-methylphenyl]ethylamino]ethyl methyl ester
47742-71-2	Xanthylium, 3,6-bis(diethylamino)-9-[2-(methoxycarbonyl)phenyl]-
52236-80-3	Acetic acid, [4-[(1-amino-9,10-dihydro-4-hydroxy-9,10-dioxo-2-anthracenyl)oxy]phenoxy]-, ethyl ester
61790-11-2	Fatty acids, tall-oil, zinc salts
61790-54-3	Naphthenic acids, compds. with <i>N</i> -tallow alkyltrimethylenediamines
63148-76-5	Benzoxazolium, 3-ethyl-5-phenyl-2-[2-[[3-(3-sulfopropyl)-2(3 <i>H</i> )-benzoxazolylidene]methyl]-1-butenyl]-, hydroxide, inner salt
63568-35-4	Naphthalenedisulfonic acid, diisononyl-, compd. with 1,1'-iminobis[2-propanol] (1:2)
68083-40-9	Methanone, [2-hydroxy-4-[2-hydroxy-3-(octyloxy)propoxy]phenyl]phenyl-
68201-19-4	Barium, acetate tallow fatty acids complexes
68228-09-1	Benzoic acid, 2-[[[2,4(or 3,5)-dimethyl-3-cyclohexen-1-yl]methyl]amino]-, ethyl ester
68334-11-2	Fatty acids, tall oil, compds. with 2-[(2-hydroxyphenyl)methylene]hydrazinecarboximidamide
68603-64-5	Amines, <i>N</i> -(hydrogenated tallow alkyl)trimethylenedi-
68648-44-2	Pyrethrins and Pyrethroids, manufg.-residues
71487-01-9	Quaternary ammonium compounds, dicoco alkyl dimethyl, nitrites
106068-87-5	Benzothiazolium, 5-chloro-2-[[5-[(5-chloro-1,3-diethyl-1,3-dihydro-2 <i>H</i> -benzimidazol-2-ylidene)ethylidene]-3-ethyl-4-oxo-2-thiazolidinylidene]methyl]-3-ethyl-, iodide
107667-02-7	Phosphinodithioic acid, bis(2,4,4-trimethylpentyl)-
132373-76-3	2-Naphthalenesulfonic acid, 1,5-bis(1-methylethyl)-, compd. with cyclohexanamine (1:1)

<sup>iii</sup> Chemical Abstracts Service Registry Number

<b>*CAS RN<sup>iii</sup></b>	<b>Domestic Substances List Name</b>
143106-84-7	2-Butanone, 4-[[[1,2,3,4,4a,9,10,10a- octahydro-1,4a-dimethyl-7-(1-methylethyl)-1-phenanthrenyl ]methyl](3-oxo-3-phenylpropyl)amino]-, hydrochloride, [1 <i>R</i> -(1α,4α)]-

\*Substances with iT values from Categorization below 0.0061 mg/L.

**Appendix F: Substances identified as not meeting the criteria under Section 64 of CEPA 1999 but that were identified as having classifications for health effects of concern by other national or international agencies**

<b>CAS RN<sup>iv</sup></b>	<b>Domestic Substances List Name</b>	<b>Classification for human health</b>	<b>Reference for classification</b>
98-95-3	Benzene, nitro-	Possibly carcinogenic to humans; Reasonably Anticipated To Be Human Carcinogen; Likely to be carcinogenic to human; Causes concern for humans owing to possible carcinogenic effects; Causes concern for human fertility	IARC 1996, NTP 2014; U.S. EPA 2005; ESIS 1995-2010; ESIS 1995-2010
135-88-6	2-Naphthalenamine, N-phenyl-	Causes concern for humans owing to possible carcinogenic effects	ESIS 1995-2010
140-41-0	Acetic acid, trichloro-, compd. with N'-(4-chlorophenyl)-N,N-dimethylurea (1:1)	Causes concern for humans owing to possible carcinogenic effects	ESIS 1995-2010
1314-20-1	Thorium oxide	Known To Be Human Carcinogen	NTP 2014
6804-07-5	Hydrazinecarboxylic acid, [(1,4-dioxido-2-quinoxaliny)methylene]-, methyl ester	Regarded as if carcinogenic to humans	ESIS 1995-2010
14816-18-3	3,5-Dioxa-6-aza-4-phosphaoct-6-ene-8-nitrile, 4-ethoxy-7-phenyl-, 4-sulfide	Causes concern for human fertility	ESIS 1995-2010
50471-44-8	2,4-Oxazolidinedione, 3-(3,5-dichlorophenyl)-5-ethenyl-5-methyl-	Causes concern for humans owing to possible carcinogenic effects; Regarded as if they cause developmental toxicity in humans; Regarded as if they impair fertility in humans	ESIS 1995-2010
68610-24-2	C.I. Pigment Yellow 157	Known to be carcinogenic to humans	ESIS 1995-2010

<sup>iv</sup> Chemical Abstracts Service Registry Number