

Guideline for the Authorized Disposal of Materials in Laboratory Sinks, Drains and Sewers

Version 2.0 English

Bureau de la gestion du risque
Office of Risk Management
uOttawa.ca



uOttawa

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1.0 Introduction, Scope & Objective

The University of Ottawa is required to abide to the City of Ottawa Sewer Use By-Law No. 2003 – 514. This guideline therefore applies to the sewer infrastructure of all property owned and managed by the University of Ottawa (uOttawa) including Main Campus, Roger-Guindon Campus, Lees Campus, etc.. uOttawa therefore has the overall responsibility for the compliance of all sewer discharges within the limits of the property including any materials put down sinks or drains, equipment discharging directly into the drains, run-off from construction sites and neighboring properties, etc. This guideline includes the requirements for disposal of all materials into to sewers including chemical, biomedical/pathological, radioactive, as well as non-hazardous materials.

The objective of this Guideline is to communicate the requirements of the Sewer Use By-Law to the uOttawa community, and enforce that it is the responsibility of every student, employee, contractor and/or visitor to abide by the By-Law and this Guideline. Requirements outlined in the Sewer Use By-Law No. 2003 – 514 will take precedence over this Guideline for the Authorized Disposal of Materials in Laboratory Sinks, Drains and Sewers.

This Guideline is not to be perceived as an encouragement to dispose of hazardous waste in sinks and drains; rather, this Guideline is established to create awareness and ensure compliance to such regulatory requirements. Penalties for noncompliance to the City of Ottawa By-Law are described in this guideline.

To ensure you have the most up to date parameter requirements you should always refer to the current City of Ottawa Sewer Use By-Law No. 2003 – 514.

2.0 Definitions & Acronyms

- 2.1 *Biochemical Oxygen Demand*: The amount of molecular oxygen that must be present in water over a 5-day incubation period in order for microorganisms to decompose the organic matter in the water. It is commonly used as a measure of the degree of pollution
- 2.2 *Combined Sewer*¹: A sewer intended to function simultaneously as a storm sewer and a sanitary sewer
- 2.3 *Combustible Liquid*¹: A liquid that has a flash point not less than 37.8 degrees Celsius and not greater than 93.3 degrees Celsius;
- 2.4 *Connection or Drain*¹: that part or those parts of any pipe or system of pipes leading directly or indirectly to a sewage works;
- 2.5 *Corrosive Waste*: Corrosive wastes are wastes that could cause corrosive structural damage to the sink/sewer piping. All wastes with a pH lower than 5.5 Standard Units or higher than 11 are considered corrosive wastes.
- 2.6 *Discharge Limit*: Maximum concentration established to ensure that restricted substances do not interfere with the treatment process and end up in the river or biosolids.
- 2.7 *Fuel*¹: Alcohol, gasoline, naphtha, diesel fuel, fuel oil or any other ignitable substance intended for use as a fuel

- 2.8 *Hot or Vapor Waste*: Liquid or vapor wastes with a temperature above 60 °C (140 °F)
- 2.9 *Ignitable Waste*¹: Is a waste that
- A) Is a liquid, other than an aqueous solution containing less than 24 per cent alcohol by volume and has a flash point less than 93 degrees Celsius
 - B) is a solid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a danger
 - C) is an ignitable compressed gas
 - D) is an oxidizing substance
- 2.10 *Nuisance Waste*: Wastes that may cause a discoloration or that may cause interference in the Municipal wastewater treatment plant, including noxious or malodorous.
- 2.11 *PCBs*¹: Any monochlorinated or poly-chlorinated biphenyl or any mixture of these or mixture that contains one or more of them
- 2.12 *Pollution Prevention*¹: The use of processes, practices, materials, products, substances or energy that avoid or minimize the creation of pollutants and wastes
- 2.13 *Raw Chemical Waste*: Unused, pure, or concentrated chemicals.
- 2.14 *Reactive Waste*¹: A substance that
- A) is normally unstable and readily undergoes violent changes without detonating
 - B) reacts violently with water
 - C) forms potentially explosive mixtures with water
 - D) when mixed with water, generates toxic gases, vapours or fumes in a quantity sufficient to present danger to human health or the environment
 - E) is a cyanide or sulphide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapours or fumes in a quantity sufficient to present danger to human health or the environment
 - F) is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement
 - G) is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure; or
 - H) is an explosive (Class 1) as defined in the regulations made under the TDGA
- 2.15 *Rinseate*: The liquid created from rinsing hazardous waste containers.
- 2.16 *Severely Toxic Waste*¹: waste containing any contaminant listed in Schedule 3 of Regulation 347
- 2.17 *Sanitary Sewer*¹: A sewer for the collection and transmission of domestic or industrial sewage or any combination thereof
- 2.18 *Sewer*¹: means a pipe, conduit, drain, open channel, ditch or watercourse for the collection and transmission of sewage, storm water, or uncontaminated water, or any combination thereof

- 2.19 *Spill*¹: A direct or indirect discharge into the sewage works, storm sewer or the natural environment which is abnormal in quantity or quality in light of all the circumstances of the discharge;
- 2.20 *Solid/Viscous Waste*: Solid or viscous wastes that may coat, clog, or otherwise cause obstruction to the flow of sewer pipes
- 2.21 *Storm Sewer*¹: A sewer for the collection and transmission of contaminated water, storm water, draining from land and from a watercourse or any combination thereof.
- 2.22 *Total Kjeldahl Nitrogen*¹: organically bound nitrogen plus ammonia nitrogen, as determined by using a standard procedure;
- 2.23 *Total Suspended Solids*: Suspended solids refers to small solid particles, which remain in suspension in water. Some examples may be soil, biological solids, rocks, etc.
- 2.24 *Uncontaminated Water*: Potable water as supplied by the City or water with a level of quality which is typical of potable water normally supplied by the City, or any other water which complies with Section 6 of the City of Ottawa Sewer Use By-Law
- 2.25 *Untreatable Waste*: Wastes that contain any element or compound that cannot be adequately treated or removed by the Municipal wastewater treatment plant (biological activated sludge treatment) and that is known to be an environmental hazard.

¹ Definition is taken directly from the Sewer Use By-Law No. 2003-514

3.0 Laboratory Sewer Discharge Guidelines

3.1 Monitoring Sewer Discharge Compliance

The University of Ottawa works closely with the city of Ottawa to ensure that discharges from our community are complying with the City requirements. This is performed via sampling at random intervals at various locations on our Main Campus and our Health Science & Medicine Campus. The samples are sent to approved laboratories for analysis to measure for over 200 parameters and chemicals.

3.2 Responding to a Sewer Discharge Exceedance

When an exceedance is identified, the Office of Risk Management reports the exceedance to the City of Ottawa officers. ORM then conducts investigations with the appropriate Faculties and Services to help determine where the exceedance originated from and assist the responsible parties in the development of mitigation strategies. Our focus is on collaborating with Faculties and Services to implement feasible, long-term solutions to maintain sewer discharge compliance.

The City of Ottawa may required the University of Ottawa to develop and implement Corrective Action Programs to remedy the exceedance and may also issue fines to the University and to private persons where negligence was observed.

3.3 Substances Prohibited from being disposed of in Sinks/Sewers

Many substances, as determined by the City of Ottawa, are strictly prohibited from being discharged into the sewer system as they endanger workers, damage the sewer system, upset the treatment process and negatively affect the quality of our rivers. Dilution is illegal and cannot be used, under any circumstance, to meet the discharge limits.

The wastes identified in *Table 1* are strictly prohibited, *at any concentration or quantity*, from being disposed of into the sanitary sewer (i.e. down the sink). These wastes must be collected and disposed of as hazardous waste as described in point 3.5 of this guideline.

Table 1. Substances Strictly Prohibited for sewer disposal		
Description of prohibited substances	Examples	Reference
Acute hazardous waste chemicals	Warfarin, Benzyl chloride, Beryllium, Lead	Appendix 2, 3 & Regulation 347
Biomedical Waste	-	Regulation 347
Cell Culture Broths (Yeast and Bacterial)	Tested: BOD exceeds the City By-Law	By-Law 2003-514
Chlorinated Hydrocarbon Waste	Insecticides, Solvents, Cleaning Agents	Appendix 1
Chlorofluorocarbon Waste	Refrigerants	Regulation 347
Combustible waste	Diesel fuel, paint thinner, cooking oils, motor oils,	By-Law 2003-514
Corrosive Waste	Acids, Bases: pH exceeds City By-Law	By-Law 2003-514
Dyes or coloring materials	-	By-Law 2003-514
Ethidium Bromide	-	
Fuel	Gasoline, alcohol, diesel	By-Law 2003-514
Hazardous Waste Chemicals	Ethyl ether, Formaldehyde, etc.	Appendix 4 & By-Law 2003-514
Hot Liquid or Vapor Wastes	Discharge over 60°C including water	By-Law 2003-514
Ignitable Wastes	Diethyl ether, gasoline, toluene, xylene,	By-Law 2003-514
Nuclear / radioactive waste	-	Nuclear Safety and Control Act
Oil and Grease (Animal/Vegetable/Mineral/Synthetic)	-	By-Law 2003-514
PCBs (may be present in products and materials produced before the 1979 ban)	Oil used in motors and hydraulic systems, oil-based paint, floor finish	By-Law 2003-514
Pesticides	Acephate, Deet, Boric Acid, DDT	By-Law 2003-514
Phosphate Buffered Saline (PBS) Solutions	Tested: Phosphate exceeds City By-Law	By-Law 2003-514
Priority Pollutant Wastes	Benzene, Toluene, Xylenes, Inorganic fluorides, Trichloroethylene, Lead	Environmental Protection Act & Appendix 2
Polycyclic Aromatic Hydrocarbons (PAHs)	Roofing Tar, gasoline, creosote,	Regulation 347
Raw Chemical Waste	Aqueous waste from Extractions,	By-Law 2003-514
Reactive waste	Crystalized picric acid,	By-Law 2003-514
Rinseate (acetone used to wash glassware falls into this category)	Tested: Acetone concentrations in third rinse significantly exceed City By-Law	By-Law 2003-514
Sewage that may have an offensive odor	-	By-Law 2003-514
Solid or Viscous Wastes	Ashes, soil, glass, impact TSS compliance and could damage sewers and plumbing	By-Law 2003-514
Organic Solvents	Acetone, Ethanol, Toluene, Chloroform,	By-Law 2003-514

Radioactive Waste. Contact the radiation compliance specialist to obtain information regarding disposal of radiation waste; radsecurity@uottawa.ca

Biological Materials. Contact the biosafety compliance specialist to obtain information regarding disposal of biological waste; biosafety@uottawa.ca

3.4 Hazardous waste with limited sewer disposal

3.4.1 Wastes with Limited Sink/Sewer Disposal

The parameters outlined in Appendix 3 are an extract from the City of Ottawa Sewer Use [By-Law](#) No. 2003-514. Substances meeting these requirements may be discharged to the sewer if within the identified limits (mg/L). The hazardous material may be subject to a variety of parameters identified in Appendix 3 and therefore it is important to ensure that the material meets all of the limits and is not prohibited for any other reason. (I.e. parameter in the material that is forbidden from sewer disposal). All materials, which do not meet the discharge limits must be collected and disposed of through the hazardous waste program, described at point 3.5 of this guideline. *Dilution is illegal and therefore cannot be used, under any circumstance, to meet the discharge limits outlined in the By-Law.*

Process validation is required to demonstrate that the concentrations do not exceed the City of Ottawa Sewer Use By-Law before the wastewater is disposed of down the sink. See section 3.5.

If the parameter / chemical is not listed in this guideline or in the City of Ottawa Sewer Use By-Law it is required to obtain approval from the Office of Risk Management prior to disposing of materials down the sink.

3.4.2 Rinseate

Empty containers that are being rinsed should be triple rinsed with a minimal amount of liquid and the rinseate collected and managed as hazardous waste, if the container held any of the wastes described in *Appendix 1, Appendix 2 or Appendix 3 (Prohibited and Limited Substances)*.

Following an internal study, all subsequent rinseate should be collected as hazardous waste as the concentrations confirmed in Rinse # 3 exceed the City of Ottawa By-Law.

Sample ID	Comments	Acetone ug/L	DCM ug/L
Wash 01	All rinses (simulating washing directly into sink)	850,000	6,000
Wash 02	All rinses (simulating washing directly into sink)	1,000,000	3,700
Rinse 02	Separate rinses , only rinse 2	910,000	-
Rinse 03	Separate rinses, only rinse 3	400,000	-
Rinse 02	Separate rinses , only rinse 2	1,950,000	77,800
Rinse 03	Separate rinses , only rinse 3	611,000	-

3.5 Process Validation (Pre-Approval for Sewer Discharge)

Process validation is required for all chemical parameters identified under *Appendix 3, 4 & 5*. Items listed under *Table 1, Appendix 1 & Appendix 2* do not require process validation as they are prohibited at any volume or quantity and will therefore not be approved by the Office of Risk Management.

Prior to discharging matter into the municipal sewage, the laboratory manager shall be responsible for performing a process validation. The process validation is used as a tool used to demonstrate compliance

to the municipal sewer By-Law. Until approval is obtained, the materials are to be collected and disposed of as per paragraph 3.5 of this procedure.

In order for a review to be completed by the ORM, the process validation must include at minimum the following:

- ✓ Completed copy of the Process Validation Approval Request Form (Appendix 6)
- Supporting documentation:
- ✓ Complete documented standard operating procedure
- ✓ Calculations demonstrating the final concentrations prior to disposal*
- ✓ Calculations demonstrating the total volume of solutions being disposed of at one given time and as a total over the semester.

**All calculations must be based on the concentrations at the point of discharge (i.e. at the sink) and should not factor in dilution resulting from water. Dilution is not a legal means of disposing of hazardous materials as is not to be used at uOttawa.*

Once the process validation is complete, it must be sent to the Environmental Management team at enviro@uottawa.ca for review and Approval. The Environmental Management team is also available to help at any point along the way.

4.0 Hazardous Waste Management Program

In certain cases, the Office of Risk Management will not be able to approve the discharge of hazardous materials into the sewer/sink. If this is the case, it is the responsibility of the student and/or researcher to collect the hazardous waste in approved Hazardous waste containers. Once the hazardous waste containers are 70-75% full a Hazardous Waste Collection [Request form](#) is to be completed online which will prompt the collection of the hazardous waste directly from the laboratory. Replacement containers will also be given at this time. The regular hazardous waste program is free of charge for research, teaching and maintenance activities.

Refer to Hazardous Materials Technical Services [Directive](#) or the Hazardous Materials Technical Services [website](#) for a detailed description of the services offered. Please contact enviro@uottawa.ca for any questions or concerns relating to the hazardous waste programs.

5.0 Spill to a Sewage Work

In the event of a spill to a sewage works, the person responsible or the person having the charge, management and control of the spill shall immediately notify protection services of the spill. Protection is responsible for contacting the Office of Risk Management (Environmental Compliance division) at 613-562-5892 to ensure that all of the information with regard to the spill is requested and/or available for regulatory reporting including but not limited to:

- ✓ location where the spill occurred;
- ✓ name and telephone number of person who reported the spill and the location and time where they can be contacted;
- ✓ name of the person who discharged or deposited, or who is believed to have discharged or deposited, the material to the sewage works;
- ✓ date and time of spill;
- ✓ material spilled;

- ✓ characteristics of material spilled;
- ✓ volume of material spilled;
- ✓ duration of spill event;
- ✓ work completed or still in progress in the mitigation of the spill; and
- ✓ Preventative actions being taken to ensure a similar spill does not occur again.

The person responsible for the spill or the person having the charge, management and control of the spill shall do everything reasonably possible to contain the spill, protect the health and safety of citizens, minimize damage to property, protect the environment, clean up the spill and associated residue and restore the affected area to its condition prior to the spill.

6.0 Penalties for Noncompliance

Any person discharging matter into the municipal sewage works shall be responsible for ensuring that such matter conforms at all times to the provisions of the City of Ottawa by-law. This includes, when applicable, documented proof of compliance through the process validation program.

Every person who is guilty of an offence and on conviction is liable to a fine of not more than Ten Thousand (\$10,000) Dollars for a first offence and not more than Twenty-Five Thousand (\$25,000) Dollars for any subsequent conviction.

Every corporation which is guilty of an offence and on conviction is liable to a fine of not more than Fifty Thousand (\$50,000) Dollars for a first offence and not more than One Hundred Thousand (\$100,000) Dollars for any subsequent conviction.

7.0 References

1. Guide to Laboratory Sink/Sewer Disposal of Wastes, Vanderbilt University - Environmental Health and Safety
2. City of Ottawa, Sewer Use [By-Law 2003-514](#), By-law of the City of Ottawa to regulate the control of discharges to sewers and sewage works.
3. Prudent Practices for Handling Hazardous Chemicals in Laboratories, National Academy Press, Washington, D.C., 1981.
4. Prudent Practices for Disposal of Chemicals from Laboratories, National Academy Press, Washington, D.C., 1983.
5. [Prudent Practices in the Laboratory: Handling and Disposal of Chemicals](#), National Academy Press, Washington, D.C., 1995.

Appendix 1 Chlorinated Hydrocarbon waste Prohibited for Sewer Disposal

Chloromethanes Specific examples: <ul style="list-style-type: none"> ▪ Methylene chloride ▪ Trichloromethane (chloroform) ▪ Trichlorofluoromethane 	Chloroethanes Specific examples: <ul style="list-style-type: none"> ▪ 1,1-Dichloroethane ▪ 1,1,1-Trichloroethane ▪ 1,1,2-Trichloroethane ▪ Hexachloroethane 														
Chloroethylenes Specific examples: <ul style="list-style-type: none"> ▪ Vinyl chloride ▪ Trichloroethylene ▪ Tetrachloroethylene 	Chloropropanes, chlorobutanes, chlorobutenes Specific examples: <ul style="list-style-type: none"> ▪ Dichlorobutadiene ▪ Hexachlorobutadiene 														
Chlorinated paraffins	Chlorinated pesticides Specific examples: <table style="width: 100%; border: none;"> <tbody> <tr> <td>▪ Aldrin</td> <td>▪ Hexachloride</td> </tr> <tr> <td>▪ Chlordane</td> <td>▪ Hexachlorobenzene</td> </tr> <tr> <td>▪ DDT</td> <td>▪ Lindane</td> </tr> <tr> <td>▪ Dieldrin</td> <td>▪ Methoxychlor</td> </tr> <tr> <td>▪ Endrin</td> <td>▪ Mirex</td> </tr> <tr> <td>▪ Heptachlor</td> <td>▪ Toxaphene</td> </tr> <tr> <td>▪ Heptachlor epoxide</td> <td>▪ 2,4-D</td> </tr> </tbody> </table>	▪ Aldrin	▪ Hexachloride	▪ Chlordane	▪ Hexachlorobenzene	▪ DDT	▪ Lindane	▪ Dieldrin	▪ Methoxychlor	▪ Endrin	▪ Mirex	▪ Heptachlor	▪ Toxaphene	▪ Heptachlor epoxide	▪ 2,4-D
▪ Aldrin	▪ Hexachloride														
▪ Chlordane	▪ Hexachlorobenzene														
▪ DDT	▪ Lindane														
▪ Dieldrin	▪ Methoxychlor														
▪ Endrin	▪ Mirex														
▪ Heptachlor	▪ Toxaphene														
▪ Heptachlor epoxide	▪ 2,4-D														
Nucleus-chlorinated aromatic hydrocarbons Specific examples: <ul style="list-style-type: none"> ▪ Dichlorobenzene ▪ Dichlorotoluene ▪ Chlorobenzene ▪ 1,2-Dichlorobenzene ▪ 1,4-Dichlorobenzene ▪ Chlorinated biphenyls (including PCBs) ▪ Chlorinated naphthalenes ▪ Pentachlorophenol ▪ 2,4,5-Trichlorophenol ▪ 2,4,6-Trichlorophenol 	Side-chain chlorinated aromatic hydrocarbons Specific examples: <ul style="list-style-type: none"> ▪ Chloromethyl benzene (benzyl chloride) ▪ Dichloromethyl benzene (benzal chloride) ▪ Trichloromethyl benzene (benzotrichloride). 														

Appendix 2 - Priority Pollutant Wastes **Prohibited** for Sewer Disposal

This list includes examples of specific chemicals but does NOT include all chemicals that are forbidden from sewer disposal. If you are unsure, contact enviro@uottawa.ca

First priority Substance List (PSL1)		
1,1,1-Trichloroethane	Chlorobenzene	Organotin compounds
1,1,2,2-Tetrachloroethane	Chloromethyl methyl ether	Oxidic, sulphidic and soluble, inorganic nickel compounds
1,2-Dichlorobenzene	Creosote-contaminated sites	Pentachlorobenzene
1,2-Dichloroethane	Dibutyl phthalate	Polychlorinated Dibenzodioxins
1,4-Dichlorobenzene	Dichloromethane	Polychlorinated Dibenzofurans
3,3'-Dichlorobenzidine	Di-n-octyl phthalate	Polycyclic aromatic hydrocarbons
3,5-Dimethylaniline	Effluents from pulp mills using bleaching	Refractory ceramic fibre
		Styrene
Benzene	Hexachlorobenzene	Tetrachlorobenzenes
Benzidine	Hexavalent chromium compounds	Tetrachloroethylene
Bis (2-chloroethyl) ether	Inorganic arsenic compounds	Toluene
Bis (2-ethylhexyl) phthalate	Inorganic cadmium compounds	Trichlorobenzenes
Bis (chloromethyl) ether	Inorganic fluorides	Trichloroethylene
Chlorinated paraffins	Methyl methacrylate	Used crankcase oils
Chlorinated wastewater effluents	Methyl tertiary-butyl ether	Xylenes

Second Priority Substances List (PSL2)		
1,3-Butadiene	Butylbenzylphthalate (BBP)	Inorganic Chloramines
2-Methoxy Ethanol, 2-Ethoxy Ethanol, 2-Butoxy Ethanol	Carbon Disulfide	N,N-Dimethylformamide (DMF)
Acetaldehyde	Chloroform	N-Nitrosodimethylamine (NDMA)
Acrolein	Ethylene Glycol	Nonylphenol and its Ethoxylates (NPE)
Acrylonitrile	Ethylene Oxide	Phenol
Aluminum Chloride, Aluminum Nitrate, Aluminum Sulphate	Formaldehyde	Releases from Primary and Secondary Copper Smelters and Copper Refineries
Ammonia in the Aquatic Environment	Hexachlorobutadiene (HBCD)	Releases from Primary and Secondary Zinc Smelters and Zinc Refineries
Releases of Radionuclides from Nuclear Facilities (Effects on Non-human Species)	Respirable Particulate Matter Less than or Equal to 10 Microns (PM-10)	Road Salts
		Textile Mill Effluents

Appendix 3 – Acute Hazardous Waste Chemicals (Regulation 347)

CAS #	Generic Name	Generic Name or other description
5344-82-1	1-(o-Chlorophenyl)thiourea	1-(o-Chlorophenyl)thiourea
55-63-0	1,2,3-Propanetriol, trinitrate	Nitroglycerin
51-43-4	1,2-Benzenediol,4-[1-hydroxy-2-(methylamino)ethyl]-	Epinephrine
75-55-8	1,2-Propylenimine	2-Methyl-aziridine
26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)-carbonyl]oxime	Tirpate
309-00-2	1,4,5,8-Dimethanonaphthalene,1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha,4alpha,4abeta, 5alpha,8alpha,8abeta)	Aldrin
465-73-6	1,4,5,8-Dimethanonaphthalene,1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha,4alpha,4abeta, 5beta, 8beta, 8abeta)-	Isodrin
591-08-2	1-Acetyl-2-thiourea	1-Acetyl-2-thiourea
51-28-5	2,4-Dinitrophenol	2,4-Dinitrophenol
72-20-8	2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-,(1alpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta, 7alpha)-, & metabolites	Endrin
		Endrin aldehyde
60-57-1	2,7:3,6-Dimethanonaphth[2,3-b]oxirene,3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1alpha,2beta,2alpha,3beta,6beta,6alpha,7beta, 7alpha)-[b]oxirene, 3,4,5,6,9,9-hexachloro-	Dieldrin
39196-18-4	2-Butanone,3,3-dimethyl-1-methylthio)-,O-[methylamino]carbonyl] oxime	Thiofanox
131-89-5	2-Cyclohexyl-4,6-dinitrophenol	2-Cyclohexyl-4,6-dinitrophenol
81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3%	Warfarin
75-86-5	2-Methylactonitrile	2-Methylactonitrile
598-31-2	2-Propanone, 1-bromo-	Bromoacetone
107-18-6	2-Propen-1-ol	Allyl alcohol
107-02-8	2-Propenal	Acrolein
107-19-7	2-Propyn-1-ol	Propargyl alcohol
2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-	5-Aminomethyl 3-isoxazolol
542-76-7	3-Chloropropionitrile	3-Chloropropionitrile
64-00-6	3-Isopropylphenyl N-methylcarbamate	m-Cumenyl methylcarbamate
534-52-1	4,6-Dinitro-o-cresol, & salts	4,6-Dinitro-o-cresol
		4,6-Dinitro-o-cresol salts
76-44-8		Heptachlor

	4,7-Methano-1H-indene, 1,4,5,6,7,8,8- heptachloro-3a,4,7,7a-tetrahydro-	Heptachlor epoxide
504-24-5	4-Aminopyridine	4-Aminopyridine
504-24-5	4-Pyridinamine	4-Aminopyridine
2763-96-4	5-(Aminomethyl)-3-isoxazolol	5-Aminomethyl 3-isoxazolol
115-29-7	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide	Endosulfan I
		Endosulfan II
		Endosulfan sulfate
1563-66-2	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate	Carbofuran
145-73-3	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid	Endothall
107-20-0	Acetaldehyde, chloro-	Chloroacetaldehyde
640-19-7	Acetamide, 2-fluoro-	Fluoroacetamide
591-08-2	Acetamide, N-(aminothioxomethyl)-	1-Acetyl-2-thiourea
62-74-8	Acetic acid, fluoro-, sodium salt	Fluoroacetic acid, sodium salt
107-02-8	Acrolein	Acrolein
116-06-3	Aldicarb	Aldicarb
1646-88-4	Aldicarb sulfone	Aldicarb sulfone
309-00-2	Aldrin	Aldrin
107-18-6	Allyl alcohol	Allyl alcohol
122-09-8	alpha,alpha-Dimethylphenethylamine	alpha, alpha-Dimethylphenethylamine
86-88-4	alpha-Naphthylthiourea	1-Naphthyl-2-thiourea
20859-73-8	Aluminum phosphide	Aluminum phosphide
131-74-8	Ammonium picrate	Ammonium picrate
7803-55-6	Ammonium vanadate	Vanadium (measured in aqueous wastes only)
506-61-6	Argentate(1-), bis(cyano-C)-, potassium	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
		Silver
7778-39-4	Arsenic acid H ₃ AsO ₄	Arsenic
1327-53-3	Arsenic oxide As ₂ O ₃	Arsenic
1303-28-2	Arsenic oxide As ₂ O ₅	Arsenic
1303-28-2	Arsenic pentoxide	Arsenic
1327-53-3	Arsenic trioxide	Arsenic
692-42-2	Arsine, diethyl-	Arsenic
696-28-6	Arsonous dichloride, phenyl-	Arsenic
151-56-4	Aziridine	Aziridine
75-55-8	Aziridine, 2-methyl-	2-Methyl-aziridine
542-62-1	Barium cyanide	Barium
		Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
106-47-8	Benzenamine, 4-chloro-	p-Chloroaniline

100-01-6	Benzenamine, 4-nitro-	p-Nitroaniline
100-44-7	Benzene, (chloromethyl)-	Benzyl chloride
122-09-8	Benzenethanamine, alpha,alpha-dimethyl-	alpha, alpha-Dimethylphenethylamine
108-98-5	Benzenethiol	Thiophenol (Benzene thiol)
57-64-7	Benzoic acid, 2-hydroxy-, compd. With (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl methylcarbamate ester (1:1)	Physostigmine salicylate
100-44-7	Benzyl chloride	Benzyl chloride
7440-41-7	Beryllium powder	Beryllium
598-31-2	Bromoacetone	Bromoacetone
357-57-3	Brucine	Brucine
592-01-8	Calcium cyanide	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
592-01-8	Calcium cyanide Ca(CN) ₂	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
55285-14-8	Carbamic acid, [(dibutylamino)-thio]methyl-, 2,3-dihydro-2,2-dimethyl- 7-benzofuranyl ester	Carbosulfan
644-64-4	Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]- 5-methyl-1H- pyrazol-3-yl este	Dimetilan
1129-41-5	Carbamic acid, methyl-, 3-methylphenyl ester	Metolcarb
119-38-0	Carbamic acid,dimethyl-,3-methyl-1-(1methylethyl)-1H-pyrazol-5-yl ester	Isolan
1563-66-2	Carbofuran	Carbofuran
75-15-0	Carbon disulfide	Carbon disulfide
75-44-5	Carbonic dichloride	Phosgene
55285-14-8	Carbosulfan	Carbosulfan
107-20-0	Chloroacetaldehyde	Chloroacetaldehyde
544-92-3	Copper cyanide	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
544-92-3	Copper cyanide Cu(CN)	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
NA	Cyanides (soluble cyanide salts), not otherwise specified	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
460-19-5	Cyanogen	Cyanogen
506-77-4	Cyanogen chloride	Cyanogen chloride
506-77-4	Cyanogen chloride (CN)Cl	Cyanogen chloride
542-88-1	Dichloromethyl ether	Dichloromethyl ether
696-28-6	Dichlorophenylarsine	Arsenic
60-57-1	Dieldrin	Dieldrin
692-42-2	Diethylarsine	Arsenic
311-45-5	Diethyl-p-nitrophenyl phosphate	Diethyl-p-nitrophenyl phosphate

55-91-4	Diisopropylfluorophosphate (DFP)	Diisopropylfluorophosphate (DFP)
60-51-5	Dimethoate	Dimethoate
644-64-4	Dimetilan	Dimetilan
88-85-7	Dinoseb	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)
152-16-9	Diphosphoramidate, octamethyl-	Octamethylpyrophosphoramidate
107-49-3	Diphosphoric acid, tetraethyl ester	Tetraethylpyrophosphate
298-04-4	Disulfoton	Disulfoton
541-53-7	Dithiobiuret	Dithiobiuret
115-29-7	Endosulfan	Endosulfan I
		Endosulfan II
		Endosulfan sulfate
145-73-3	Endothall	Endothall
72-20-8	Endrin	Endrin
		Endrin aldehyde
72-20-8	Endrin, & metabolites	Endrin
		Endrin aldehyde
51-43-4	Epinephrine	Epinephrine
460-19-5	Ethanedinitrile	Cyanogen
23135-22-0	Ethanimidothioc acid, 2-(dimethylamino)-N- [[[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester	Oxamyl
16752-77-5	Ethanimidothioic acid, N- [[[(methylamino)carbonyl]oxy]-,methyl ester	Methomyl
107-12-0	Ethyl cyanide	Ethyl cyanide (Propanenitrile)
151-56-4	Ethyleneimine	Aziridine
52-85-7	Famphur	Famphur
7782-41-4	Fluorine	Fluoride (measured in aqueous wastes only)
640-19-7	Fluoroacetamide	Fluoroacetamide
62-74-8	Fluoroacetic acid, sodium salt	Fluoroacetic acid, sodium salt
23422-53-9	Formetanate hydrochloride	Formetanate hydrochloride
17702-57-7	Formparanate	Formparante
628-86-4	Fulminic acid, mercury(2+) salt	
		Mercury
76-44-8	Heptachlor	Heptachlor
		Heptachlor epoxide
757-58-4	Hexaethyl tetraphosphate	Hexaethyl tetraphosphate
60-34-4	Hydrazine, methyl-	Methyl hydrazine
79-19-6	Hydrazinecarbothioamide	Thiosemicarbazide
74-90-8	Hydrocyanic acid	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
74-90-8	Hydrogen cyanide	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷

7803-51-2	Hydrogen phosphide	Phosphine
465-73-6	Isodrin	Isodrin
119-38-0	Isolan	Isolan
15339-36-3	Manganese dimethyl dithiocarbamate	Dithiocarbamates (total)
15339-36-3	Manganese,bis(dimethylcarbomodithioato-S,S')-	Dithiocarbamates (total)
64-00-6	M-Cumenyl methylcarbamate	m-Cumenyl methylcarbamate
628-86-4	Mercury fulminate	
62-38-4	Mercury, (acetato-O)phenyl-	Mercury
62-75-9	Methanamine, N-methyl-N-nitroso-	N-Nitrosodimethylamine
624-83-9	Methane, isocyanato-	Isocyanic acid, ethyl ester
542-88-1	Methane, oxybis[chloro-	Dichloromethyl ether
509-14-8	Methane, tetranitro-	Tetranitromethane
75-70-7	Methanethiol, trichloro-	Trichloromethanethiol
17702-57-7	Methanimidamide,N,N-dimethyl-N'-[2-methyl-4- [[[(methylamino)carbonyl]oxy]phenyl]-	Formparante
23422-53-9	Methanimidamide,N,N-dimethyl-N'-[3- [[[(methylamino)-carbonyl]oxy]phenyl]-, monohydrochloride	Formetanate hydrochloride
2032-65-7	Methiocarb	Methiocarb
16752-77-5	Methomyl	Methomyl
60-34-4	Methyl hydrazine	Methyl hydrazine
624-83-9	Methyl isocyanate	Isocyanic acid, ethyl ester
298-00-0	Methyl parathion	Methyl parathion
1129-41-5	Metolcarb	Metolcarb
315-18-4	Mexacarbate	Mexacarbate
13463-39-3	Nickel carbonyl	Nickel
13463-39-3	Nickel carbonyl Ni(CO) ₄ ,(T-4)-	Nickel
557-19-7	Nickel cyanide	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
		Nickel
557-19-7	Nickel cyanide Ni(CN) ₂	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
		Nickel
54-11-5	Nicotine, & salts	Nicotine and salts
10102-43-9	Nitric oxide	Nitric oxide
10102-44-0	Nitrogen dioxide	Nitrogen dioxide
10102-43-9	Nitrogen oxide NO	Nitric oxide
10102-44-0	Nitrogen oxide NO ₂	Nitrogen dioxide
55-63-0	Nitroglycerine	Nitroglycerin
62-75-9	N-Nitrosodimethylamine	N-Nitrosodimethylamine

4549-40-0	N-Nitrosomethylvinylamine	N-Nitrosomethylvinylamine
297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate	O,O-Diethyl O-pyrazinyl phosphorothioate
152-16-9	Octamethylpyrophosphoramidate	Octamethylpyrophosphoramidate
20816-12-0	Osmium oxide OsO ₄ , (T-4)-	Osmium tetroxide
20816-12-0	Osmium tetroxide	Osmium tetroxide
23135-22-0	Oxamyl	Oxamyl
56-38-2	Parathion	Parathion
106-47-8	p-Chloroaniline	p-Chloroaniline
88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)
131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt	Ammonium picrate
51-28-5	Phenol, 2,4-dinitro-	2,4-Dinitrophenol
131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-	2-Cyclohexyl-4,6-dinitrophenol
534-52-1	Phenol, 2-methyl-4,6-dinitro-, & salts	
64-00-6	Phenol, 3-(1-methylethyl)-, methyl carbamate	m-Cumenyl methylcarbamate
2631-37-0	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate	Promecarb
2032-65-7	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate	Methiocarb
315-18-4	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)	Mexacarbate
62-38-4	Phenylmercury acetate	
103-85-5	Phenylthiourea	Phenylthiourea
298-02-2	Phorate	Phorate
75-44-5	Phosgene	Phosgene
7803-51-2	Phosphine	Phosphine
311-45-5	Phosphoric acid, diethyl 4-nitrophenyl ester	Diethyl-p-nitrophenyl phosphate
298-02-2	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester	Phorate
298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester	Disulfoton
60-51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester	Dimethoate
55-91-4	Phosphorofluoridic acid, bis(1-methylethyl) ester	Diisopropylfluorophosphate (DFP)
298-00-0	Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester	Methyl parathion
56-38-2	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester	Parathion
297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	O,O-Diethyl O-pyrazinyl phosphorothioate
52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-r dimethyl ester	Famphur
57-64-7	Physostigmine salicylate.	Physostigmine salicylate
57-47-6	Physostigmine.	Physostigmine

78-00-2	Plumbane, tetraethyl-	Lead
100-01-6	p-Nitroaniline	p-Nitroaniline
151-50-8	Potassium cyanide	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
151-50-8	Potassium cyanide K(CN)	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
506-61-6	Potassium silver cyanide	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
		Silver
2631-37-0	Promecarb	Promecarb
1646-88-4	Propanal,2-methyl-2-(methyl-sulfonyl)-,O- [(methylamino)carbonyl] oxime	Aldicarb sulfone
116-06-3	Propanal,2-methyl-2-(methylthio)-,O- [(methylamino)carbonyl]oxime	Aldicarb
107-12-0	Propanenitrile	Ethyl cyanide (Propanenitrile)
75-86-5	Propanenitrile, 2-hydroxy-2-methyl-	2-Methylactonitrile
542-76-7	Propanenitrile, 3-chloro-	3-Chloropropionitrile
107-19-7	Propargyl alcohol	Propargyl alcohol
54-11-5	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts	Nicotine and salts
57-47-6	Pyrrolo[2,3-b]indol-5-ol,1,2,3,3a,8,8a-hexahydro- 1,3a,8- trimethyl-,methylcarbamate (ester),(3aS- cis)-	Physostigmine
12039-52-0	Selenious acid, dithallium(1+) salt	Selenium
630-10-4	Selenourea	Selenium
506-64-9	Silver cyanide	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
		Silver
506-64-9	Silver cyanide Ag(CN)	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
		Silver
26628-22-8	Sodium azide	Sodium azide
143-33-9	Sodium cyanide	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
143-33-9	Sodium cyanide Na(CN)	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
57-24-9	Strychnidin-10-one, & salts	Strychnine and salts
357-57-3	Strychnidin-10-one, 2,3-dimethoxy-	Brucine
57-24-9	Strychnine, & salts	Strychnine and salts
7446-18-6	Sulfuric acid, dithallium(1+) salt	Thallium (measured in aqueous wastes only)
78-00-2	Tetraethyl lead	Lead
107-49-3	Tetraethyl pyrophosphate	Tetraethylpyrophosphate

3689-24-5	Tetraethyldithiopyrophosphate	Tetraethyldithiopyrophosphate
509-14-8	Tetranitromethane	Tetranitromethane
757-58-4	Tetraphosphoric acid, hexaethyl ester	Hexaethyl tetraphosphate
1314-32-5	Thallic oxide	Thallium (measured in aqueous wastes only)
1314-32-5	Thallium oxide Tl_2O_3	Thallium (measured in aqueous wastes only)
12039-52-0	Thallium(I) selenite	Selenium
7446-18-6	Thallium(I) sulfate	Thallium (measured in aqueous wastes only)
3689-24-5	Thiodiphosphoric acid, tetraethyl ester	Tetraethyldithiopyrophosphate
39196-18-4	Thiofanox	Thiofanox
541-53-7	Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$	Dithiobiuret
108-98-5	Thiophenol	Thiophenol (Benzene thiol)
79-19-6	Thiosemicarbazide	Thiosemicarbazide
5344-82-1	Thiourea, (2-chlorophenyl)-	1-(o-Chlorophenyl)thiourea
86-88-4	Thiourea, 1-naphthalenyl-	1-Naphthyl-2-thiourea
103-85-5	Thiourea, phenyl-	Phenylthiourea
26419-73-8	Tirpate	Tirpate
8001-35-2	Toxaphene	Toxaphene
75-70-7	Trichloromethanethiol	Trichloromethanethiol
7803-55-6	Vanadic acid, ammonium salt	Vanadium (measured in aqueous wastes only)
1314-62-1	Vanadium oxide, V_2O_5	Vanadium (measured in aqueous wastes only)
1314-62-1	Vanadium pentoxide	Vanadium (measured in aqueous wastes only)
4549-40-0	Vinylamine, N-methyl-N-nitroso-	N-Nitrosomethylvinylamine
81-81-2	Warfarin, & salts, when present at concentrations greater than 0.3%	Warfarin
557-21-1	Zinc cyanide	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
557-21-1	Zinc cyanide $Zn(CN)_2$	Cyanides (Total) ⁷
		Cyanides (Amenable) ⁷
1314-84-7	Zinc phosphide Zn_3P_2 , when present at concentrations greater than 10%	Zinc Phosphide
137-30-4	Zinc, bis(dimethylcarbamidithioato-S,S')-	Dithiocarbamates (total)
137-30-4	Ziram	Dithiocarbamates (total)

Appendix 4 – Hazardous Waste Chemical (Regulation 347)

CAS #	Generic Name	Generic Name or other description
92-87-5	[1,1-Biphenyl]-4,4-diamine	Benzidine
91-94-1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-	3,3'-Dichlorobenzidine
119-90-4	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-	3,3'-Dimethoxybenzidine
119-93-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-	3,3'-Dimethylbenzidine
630-20-6	1,1,1,2-Tetrachloroethane	1,1,1,2-Tetrachloroethane
79-34-5	1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane
79-00-5	1,1,2-Trichloroethane	1,1,2-Trichloroethane
75-35-4	1,1-Dichloroethylene	1,1-Dichloroethylene
57-14-7	1,1-Dimethylhydrazine	1,1-Dimethylhydrazine
95-94-3	1,2,4,5-Tetrachlorobenzene	1,2,4,5-Tetrachlorobenzene
1464-53-5	1,2:3,4-Diepoxybutane	1,2:3,4-Diepoxybutane
84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester	Di-n-butyl phthalate
84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester	Diethyl phthalate
131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester	Dimethyl phthalate
117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester	Di-n-octyl phthalate
117-81-7	1,2-Benzenedicarboxylic acid,bis(2-ethylhexyl) ester	bis(2-Ethylhexyl) phthalate
81-07-2	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, & salts	Saccharin
96-12-8	1,2-Dibromo-3-chloropropane	1,2-Dibromo-3-chloropropane
156-60-5	1,2-Dichloroethylene	trans-1,2-Dichloroethylene
540-73-8	1,2-Dimethylhydrazine	1,2-Dimethylhydrazine
122-66-7	1,2-Diphenylhydrazine	1,2-Diphenylhydrazine
91-80-5	1,2-Ethanediamine,N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-	Methapyrilene
1120-71-4	1,2-Oxathiolane, 2,2-dioxide	1,3-Propane sultone
143-50-0	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-	Kepone
99-35-4	1,3,5-Trinitrobenzene	1,3,5-Trinitrobenzene
123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl-	Paraldehyde
108-46-3	1,3-Benzenediol	Resorcinol
22961-82-6	1,3-Benzodioxol-4-ol, 2,2-dimethyl-,	Bendiocarb phenol
22781-23-3	1,3-Benzodioxol-4-ol, 2,2-dimethyl-,methyl carbamate	Bendiocarb
120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-	Isosafrole
94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-	Safrole
94-58-6	1,3-Benzodioxole, 5-propyl-	Dihydrosafrole
87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	Hexachlorobutadiene
77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	Hexachlorocyclopentadiene
542-75-6	1,3-Dichloropropene	cis-1,3-Dichloropropylene
		trans-1,3-Dichloropropylene

85-44-9	1,3-Isobenzofurandione	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)
504-60-9	1,3-Pentadiene	1,3-Pentadiene
1120-71-4	1,3-Propane sultone	1,3-Propane sultone
764-41-0	1,4-Dichloro-2-butene	cis-1,4-Dichloro-2-butene
		trans-1,4-Dichloro-2-butene
123-91-1	1,4-Diethyleneoxide	1,4-Dioxane
123-91-1	1,4-Dioxane	1,4-Dioxane
130-15-4	1,4-Naphthalenedione	1,4-Naphthoquinone
130-15-4	1,4-Naphthoquinone	1,4-Naphthoquinone
924-16-3	1-Butanamine, N-butyl-N-nitroso-	N-Nitroso-di-n-butylamine
71-36-3	1-Butanol	n-Butyl alcohol
61-82-5	1H-1,2,4-Triazol-3-amine	Amitrole
504-60-9	1-Methylbutadiene	1,3-Pentadiene
134-32-7	1-Naphthalenamine	1-Naphthylamine
63-25-2	1-Naphthalenol, methylcarbamate	Carbaryl
107-10-8	1-Propanamine	n-Propylamine
621-64-7	1-Propanamine, N-nitroso-N-propyl-	Di-n-propylnitrosamine
142-84-7	1-Propanamine, N-propyl-	Dipropylamine
126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)	Tris(2,3-Dibromopropyl) phosphate
78-83-1	1-Propanol, 2-methyl-	Isobutyl alcohol
1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-	Hexachloropropylene
542-75-6	1-Propene, 1,3-dichloro-	cis-1,3-Dichloropropylene
		trans-1,3-Dichloropropylene
1464-53-5	2,2-Bioxirane	1,2:3,4-Diepoxybutane
58-90-2	2,3,4,6-Tetrachlorophenol	
66-75-1	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-	Uracil mustard
93-76-5	2,4,5-T	
95-95-4	2,4,5-Trichlorophenol	
88-06-2	2,4,6-Trichlorophenol	
94-75-7	2,4-D, salts & esters	2,4-D(2,4-Dichlorophenoxyacetic acid)
		2,4-D (2,4-Dichlorophenoxyacetic acid) salts and esters
120-83-2	2,4-Dichlorophenol	2,4-Dichlorophenol
105-67-9	2,4-Dimethylphenol	2,4-Dimethylphenol
121-14-2	2,4-Dinitrotoluene	2,4-Dinitrotoluene
106-51-4	2,5-Cyclohexadiene-1,4-dione	p-Benzoquinone
108-31-6	2,5-Furandione	Maleic anhydride
87-65-0	2,6-Dichlorophenol	2,6-Dichlorophenol

606-20-2	2,6-Dinitrotoluene	2,6-Dinitrotoluene
72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis[5-amino-4-hydroxy]-, tetrasodium salt	Trypan Blue
53-96-3	2-Acetylaminofluorene	2-Acetylaminofluorene
78-93-3	2-Butanone	Methyl ethyl ketone
1338-23-4	2-Butanone, peroxide	Methyl ethyl ketone peroxide
4170-30-3	2-Butenal	Crotonaldehyde
764-41-0	2-Butene, 1,4-dichloro-	cis-1,4-Dichloro-2-butene
		trans-1,4-Dichloro-2-butene
303-34-4	2-Butenoic acid, 2-methyl-, 7-[[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]-	Lasiocarpine
110-75-8	2-Chloroethyl vinyl ether	2-Chloroethyl vinyl ether
98-01-1	2-Furancarboxaldehyde	Furfural
50-18-0	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide	Cyclophosphamide
81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, & salts, when present at concentrations of 0.3% or less	Warfarin
96-45-7	2-Imidazolidinethione	Ethylene thiourea
91-59-8	2-Naphthalenamine	2-Naphthylamine
79-46-9	2-Nitropropane	2-Nitropropane
109-06-8	2-Picoline	2-Picoline
67-64-1	2-Propanone	Acetone
79-06-1	2-Propenamide	Acrylamide
107-13-1	2-Propenenitrile	Acrylonitrile
126-98-7	2-Propenenitrile, 2-methyl-	Methacrylonitrile
79-10-7	2-Propenoic acid	Acrylic acid
97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester	Ethyl methacrylate
80-62-6	2-Propenoic acid, 2-methyl-, methyl ester	Methyl methacrylate
140-88-5	2-Propenoic acid, ethyl ester	Ethyl acrylate
91-94-1	3,3'-Dichlorobenzidine	3,3'-Dichlorobenzidine
119-90-4	3,3'-Dimethoxybenzidine	3,3'-Dimethoxybenzidine
119-93-7	3,3'-Dimethylbenzidine	3,3'-Dimethylbenzidine
123-33-1	3,6-Pyridazinedione, 1,2-dihydro-	Maleic hydrazide
56-49-5	3-Methylcholanthrene	3-Methylcholanthrene
56-04-2	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	Methylthiouracil
101-14-4	4,4'-Methylenebis(2-chloroaniline)	4,4'-Methylene bis(2-chloroaniline)
57-74-9	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-	Chlordane (alpha and gamma isomers)
101-55-3	4-Bromophenyl phenyl ether	4-Bromophenyl phenyl ether
3165-93-3	4-Chloro-o-toluidine, hydrochloride	4-Chloro-o-toluidine hydrochloride

108-10-1	4-Methyl-2-pentanone	Methyl isobutyl ketone
20830-81-3	5,12-Naphthacenedione,8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-	Daunomycin
99-55-8	5-Nitro-o-toluidine	5-Nitro-o-toluidine
57-97-6	7,12-Dimethylbenz[a]anthracene	7,12-Dimethylbenz(a)anthracene
1563-38-8	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-	Carbofuran phenol
30558-43-1	A2213	A2213
75-07-0	Acetaldehyde	Acetaldehyde
75-87-6	Acetaldehyde, trichloro-	Trichloroacetaldehyde (Chloral)
62-44-2	Acetamide, N-(4-ethoxyphenyl)-	Phenacetin
53-96-3	Acetamide, N-9H-fluoren-2-yl-	2-Acetylaminofluorene
141-78-6	Acetic acid ethyl ester	Ethyl acetate
93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-	See F027 in Schedule 1
94-75-7	Acetic acid, (2,4-dichlorophenoxy)-,salts & esters	See 2,4-D, salts & esters
301-04-2	Acetic acid, lead(2+) salt	Lead
563-68-8	Acetic acid, thallium(1+) salt	Thallium (measured in aqueous wastes only)
67-64-1	Acetone	Acetone
75-05-8	Acetonitrile	Acetonitrile
98-86-2	Acetophenone	Acetophenone
75-36-5	Acetyl chloride	Acetyl Chloride
79-06-1	Acrylamide	Acrylamide
79-10-7	Acrylic acid	Acrylic acid
107-13-1	Acrylonitrile	Acrylonitrile
80-15-9	alpha,alpha-Dimethylbenzylhydroperoxide	alpha, alpha-Dimethyl benzyl hydroperoxide
134-32-7	alpha-Naphthylamine	1-Naphthylamine
61-82-5	Amitrole	Amitrole
62-53-3	Aniline	Aniline
75-60-5	Arsinic acid, dimethyl-	Arsenic
492-80-8	Auramine	Auramine
115-02-6	Azaserine	Azaserine
50-07-7	Azirino[2,3_3,4]pyrrolo[1,2-a]indole-4,7-dione,6-amino-8-[[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha,8beta,8aalpha,8balph)]-	Mitomycin C
101-27-9	Barban	Barban
22781-23-3	Bendiocarb	Bendiocarb
22961-82-6	Bendiocarb phenol	Bendiocarb phenol
17804-35-2	Benomyl	Benomyl
56-55-3	Benz[a]anthracene	Benz(a)anthracene
57-97-6	Benz[a]anthracene, 7,12-dimethyl-	7,12-Dimethylbenz(a)anthracene

225-51-4	Benz[c]acridine	Benz(c)acridine
56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	3-Methylcholanthrene
98-87-3	Benzal chloride	Benzal chloride
23950-58-5	Benzamide,3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	Pronamide
62-53-3	Benzenamine	Aniline
95-53-4	Benzenamine, 2-methyl-	o-Toluidine
636-21-5	Benzenamine, 2-methyl-, hydrochloride	o-Toluidine hydrochloride
99-55-8	Benzenamine, 2-methyl-5-nitro-	5-Nitro-o-toluidine
492-80-8	Benzenamine, 4,4-carbonimidoylbis[N,N-dimethyl-	Auramine
101-14-4	Benzenamine, 4,4-methylenebis[2-chloro-	4,4'-Methylene bis(2-chloroaniline)
3165-93-3	Benzenamine, 4-chloro-2-methyl-,hydrochloride	4-Chloro-o-toluidine hydrochloride
106-49-0	Benzenamine, 4-methyl-	p-Toluidine
60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-	p-Dimethylaminoazobenzene
71-43-2	Benzene	Benzene
98-82-8	Benzene, (1-methylethyl)-	Cumene
98-87-3	Benzene, (dichloromethyl)-	Benzal chloride
98-07-7	Benzene, (trichloromethyl)-	Benzotrichloride
72-43-5	Benzene, 1,1-(2,2,2-trichloroethylidene)bis[4-methoxy-	Methoxychlor
95-94-3	Benzene, 1,2,4,5-tetrachloro-	1,2,4,5-Tetrachlorobenzene
95-50-1	Benzene, 1,2-dichloro-	o-Dichlorobenzene
99-35-4	Benzene, 1,3,5-trinitro-	1,3,5-Trinitrobenzene
541-73-1	Benzene, 1,3-dichloro-	m-Dichlorobenzene
26471-62-5	Benzene, 1,3-diisocyanatomethyl-	Toluene diisocyanate
106-46-7	Benzene, 1,4-dichloro-	p-Dichlorobenzene
101-55-3	Benzene, 1-bromo-4-phenoxy-	4-Bromophenyl phenyl ether
121-14-2	Benzene, 1-methyl-2,4-dinitro-	2,4-Dinitrotoluene
606-20-2	Benzene, 2-methyl-1,3-dinitro-	2,6-Dinitrotoluene
108-90-7	Benzene, chloro-	Chlorobenzene
1330-20-7	Benzene, dimethyl-	Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)
118-74-1	Benzene, hexachloro-	Hexachlorobenzene
110-82-7	Benzene, hexahydro-	Cyclohexane
108-88-3	Benzene, methyl-	Toluene
98-95-3	Benzene, nitro-	Nitrobenzene
608-93-5	Benzene, pentachloro-	Pentachlorobenzene
82-68-8	Benzene, pentachloronitro-	Pentachloronitrobenzene
50-29-3	Benzene,1,1-(2,2,2-trichloroethylidene)bis[4-chloro-	o,p'-DDT
		p,p'-DDT
		o,p'-DDD
		p,p'-DDD

		o,p'-DDE
		p,p'-DDE
72-54-8	Benzene,1,1-(2,2-dichloroethylidene)bis[4-chloro-	o,p'-DDD
		p,p'-DDD
510-15-6	Benzeneacetic acid,4-chloro-alpha- (4-chlorophenyl)-alpha-hydroxy-, ethyl ester	Chlorobenzilate
305-03-3	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-	Chlorambucil
25376-45-8	Benzenediamine, ar-methyl-	Toluenediamine
98-09-9	Benzenesulfonic acid chloride	Benzenesulfonyl chloride
98-09-9	Benzenesulfonyl chloride	Benzenesulfonyl chloride
92-87-5	Benzidine	Benzidine
50-32-8	Benzo[a]pyrene	Benzo(a)pyrene
189-55-9	Benzo[rs]pentaphene	Dibenz(a,i)pyrene
98-07-7	Benzotrichloride	Benzotrichloride
91-58-7	beta-Chloronaphthalene	2-Chloronaphthalene
91-59-8	beta-Naphthylamine	2-Naphthylamine
75-25-2	Bromoform	Bromoform (Tribromomethane)
75-60-5	Cacodylic acid	Arsenic
13765-19-0	Calcium chromate	Chromium (Total)
101-27-9	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester	Barban
23564-05-8	Carbamic acid, [1,2-phenylenebis(iminocarbonothioyl)]bis-, dimethyl ester	Thiophanate-methyl
17804-35-2	Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol-2-yl]-, methyl ester	Benomyl
10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl,methyl ester	Carbendazim
51-79-6	Carbamic acid, ethyl ester	Urethane (Ethyl carbamate)
615-53-2	Carbamic acid, methylnitroso-, ethyl ester	N-Nitroso-N-methylurethane
122-42-9	Carbamic acid, phenyl-, 1-methylethyl ester	Propham
79-44-7	Carbamic chloride, dimethyl-	Dimethylcarbamoil chloride
111-54-6	Carbamodithioic acid, 1,2-ethanediylbis-,salts & esters	Ethylenebisdithiocarbamic acid
2303-17-5	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl)ester	Triallate
2303-16-4	Carbamothioic acid, bis(1-methylethyl)-S-(2,3-dichloro-2-propenyl) ester	Diallate
52888-80-9	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester	Prosulfocarb
63-25-2	Carbaryl.	Carbaryl
10605-21-7	Carbendazim	Carbendazim
1563-38-8	Carbofuran phenol	Carbofuran phenol
353-50-4	Carbon oxyfluoride	Carbon oxyfluoride
56-23-5	Carbon tetrachloride	Carbon tetrachloride

6533-73-9	Carbonic acid, dithallium(1+) salt	Thallium (measured in aqueous wastes only)
353-50-4	Carbonic difluoride	Carbon oxyfluoride
79-22-1	Carbonochloridic acid, methyl ester	Methyl chlorocarbonate
75-87-6	Chloral	Trichloroacetaldehyde (Chloral)
305-03-3	Chlorambucil	Chlorambucil
57-74-9	Chlordane, alpha & gamma isomers	Chlordane (alpha and gamma isomers)
494-03-1	Chlornaphazin	Chlornaphazine
108-90-7	Chlorobenzene	Chlorobenzene
510-15-6	Chlorobenzilate	Chlorobenzilate
67-66-3	Chloroform	Chloroform
107-30-2	Chloromethyl methyl ether	Chloromethyl methyl ether
13765-19-0	Chromic acid H ₂ CrO ₄ , calcium salt	Chromium (Total)
218-01-9	Chrysene	Chrysene
NA	Creosote	Naphthalene
		Pentachlorophenol
		Phenanthrene
		Pyrene
		Toluene
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)
		Lead
1319-77-3	Cresol (Cresylic acid)	o-Cresol
		m-Cresol (difficult to distinguish from p-cresol)
		p-Cresol (difficult to distinguish from m-cresol)
		Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations)
4170-30-3	Crotonaldehyde	Crotonaldehyde
98-82-8	Cumene	Cumene
506-68-3	Cyanogen bromide (CN)Br	Cyanogen bromide
110-82-7	Cyclohexane	Cyclohexane
58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6 beta)-	alpha-BHC
		beta-BHC
		delta-BHC
		gamma-BHC (Lindane)
108-94-1	Cyclohexanone	Cyclohexanone
50-18-0	Cyclophosphamide	Cyclophosphamide
20830-81-3	Daunomycin	Daunomycin
72-54-8	DDD	o,p'-DDD
		p,p'-DDD
50-29-3	DDT	o,p'-DDT
		p,p'-DDT

		o,p'-DDD
		p,p'-DDD
		o,p'-DDE
		p,p'-DDE
18883-66-4	D-Glucose,2-deoxy-2-[[[(methylnitrosoamino)-carbonyl]amino]-	Streptozotocin
2303-16-4	Diallate	Diallate
53-70-3	Dibenz[a,h]anthracene	Dibenz(a,h)anthracene
189-55-9	Dibenzo[a,i]pyrene	Dibenz(a,i)pyrene
84-74-2	Dibutyl phthalate	Di-n-butyl phthalate
75-71-8	Dichlorodifluoromethane	Dichlorodifluoromethane
111-44-4	Dichloroethyl ether	bis(2-Chloroethyl)ether
108-60-1	Dichloroisopropyl ether	bis(2-Chloroisopropyl)ether
111-91-1	Dichloromethoxy ethane	bis(2-Chloroethoxy)methane
84-66-2	Diethyl phthalate	Diethyl phthalate
5952-26-1	Diethylene glycol, dicarbamate	Diethylene glycol, dicarbamate
117-81-7	Diethylhexyl phthalate	bis(2-Ethylhexyl) phthalate
56-53-1	Diethyl stilbesterol	Diethyl stilbestrol
94-58-6	Dihydrosafrole	Dihydrosafrole
131-11-3	Dimethyl phthalate	Dimethyl phthalate
77-78-1	Dimethyl sulfate	Dimethyl sulfate
124-40-3	Dimethylamine	Dimethylamine
79-44-7	Dimethylcarbamoyl chloride	Dimethylcarbamoyl chloride
117-84-0	Di-n-octyl phthalate	Di-n-octyl phthalate
621-64-7	Di-n-propylnitrosamine	Di-n-propylnitrosamine
142-84-7	Dipropylamine	Dipropylamine
106-89-8	Epichlorohydrin	Epichlorohydrin (1-Chloro-2,3-epoxypropane)
75-07-0	Ethanal	Acetaldehyde
121-44-8	Ethanamine, N,N-diethyl-	Triethylamine
55-18-5	Ethanamine, N-ethyl-N-nitroso-	N-Nitrosodiethylamine
630-20-6	Ethane, 1,1,1,2-tetrachloro-	1,1,1,2-Tetrachloroethane
71-55-6	Ethane, 1,1,1-trichloro-	1,1,1-Trichloroethane
79-34-5	Ethane, 1,1,2,2-tetrachloro-	1,1,2,2-Tetrachloroethane
79-00-5	Ethane, 1,1,2-trichloro-	1,1,2-Trichloroethane
111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-	bis(2-Chloroethoxy)methane
75-34-3	Ethane, 1,1-dichloro-	1,1-Dichloroethane
60-29-7	Ethane, 1,1'-oxybis-	Ethyl ether
111-44-4	Ethane, 1,1'-oxybis[2-chloro-	bis(2-Chloroethyl)ether
106-93-4	Ethane, 1,2-dibromo-	Ethylene dibromide (1,2-Dibromoethane)
107-06-2	Ethane, 1,2-dichloro-	1,2-Dichloroethane
67-72-1	Ethane, hexachloro-	Hexachloroethane
76-01-7	Ethane, pentachloro-	Pentachloroethane

62-55-5	Ethanethioamide	Thioacetamide
30558-43-1	Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-,methyl ester	A2213
59669-26-0	Ethanimidothioic acid, N,N'-[thiobis[(methylimino)carbonyloxy]]bis-, dimethyl ester	Thiodicarb
1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-	N-Nitrosodiethanolamine
5952-26-1	Ethanol, 2,2'-oxybis-, dicarbamate	Diethylene glycol, dicarbamate
110-80-5	Ethanol, 2-ethoxy-	2-Ethoxyethanol
98-86-2	Ethanone, 1-phenyl-	Acetophenone
110-75-8	Ethene, (2-chloroethoxy)-	2-Chloroethyl vinyl ether
75-35-4	Ethene, 1,1-dichloro-	1,1-Dichloroethylene
156-60-5	Ethene, 1,2-dichloro-, (E)-	trans-1,2-Dichloroethylene
75-01-4	Ethene, chloro-	Vinyl chloride
127-18-4	Ethene, tetrachloro-	Tetrachloroethylene
79-01-6	Ethene, trichloro-	Trichloroethylene
141-78-6	Ethyl acetate	Ethyl acetate
140-88-5	Ethyl acrylate	Ethyl acrylate
51-79-6	Ethyl carbamate (urethane)	Urethane (Ethyl carbamate)
60-29-7	Ethyl ether	Ethyl ether
97-63-2	Ethyl methacrylate	Ethyl methacrylate
62-50-0	Ethyl methanesulfonate	Ethyl methane sulfonate
106-93-4	Ethylene dibromide	Ethylene dibromide (1,2-Dibromoethane)
107-06-2	Ethylene dichloride	1,2-Dichloroethane
110-80-5	Ethylene glycol monoethyl ether	2-Ethoxyethanol
75-21-8	Ethylene oxide	Ethylene oxide
111-54-6	Ethylenebisdithiocarbamic acid, salts & esters	Ethylenebisdithiocarbamic acid
96-45-7	Ethylenethiourea	Ethylene thiourea
75-34-3	Ethylidene dichloride	1,1-Dichloroethane
206-44-0	Fluoranthene	Fluoranthene
50-00-0	Formaldehyde	Formaldehyde
64-18-6	Formic acid	Formic acid
110-00-9	Furan	Furan
109-99-9	Furan, tetrahydro-	Tetrahydrofuran
98-01-1	Furfural	Furfural
110-00-9	Furfuran	Furan
18883-66-4	Glucopyranose,2-deoxy-2-(3-methyl-3-nitrosoureido)-, D-	Streptozotocin
765-34-4	Glycidylaldehyde	Glycidyaldehyde
70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso-	N-Methyl N'-nitro N-nitrosoguanidine
118-74-1	Hexachlorobenzene	Hexachlorobenzene
87-68-3	Hexachlorobutadiene	Hexachlorobutadiene
77-47-4	Hexachlorocyclopentadiene	Hexachlorocyclopentadiene

67-72-1	Hexachloroethane	Hexachloroethane
70-30-4	Hexachlorophene	Hexachlorophene
1888-71-7	Hexachloropropene	Hexachloropropylene
302-01-2	Hydrazine	Hydrazine
57-14-7	Hydrazine, 1,1-dimethyl-	1,1-Dimethylhydrazine
1615-80-1	Hydrazine, 1,2-diethyl-	N,N'-Diethylhydrazine
540-73-8	Hydrazine, 1,2-dimethyl-	1,2-Dimethylhydrazine
122-66-7	Hydrazine, 1,2-diphenyl-	1,2-Diphenylhydrazine
7664-39-3	Hydrofluoric acid	Fluoride (measured in aqueous wastes only)
7664-39-3	Hydrogen fluoride	Fluoride (measured in aqueous wastes only)
7783-06-4	Hydrogen sulfide	Hydrogen Sulfide
7783-06-4	Hydrogen sulfide H ₂ S	Hydrogen Sulfide
80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl-	alpha, alpha-Dimethyl benzyl hydroperoxide
193-39-5	Indeno(1,2,3-cd)pyrene	Indeno(1,2,3-cd)pyrene
78-83-1	Isobutyl alcohol	Isobutyl alcohol
120-58-1	Isosafrole	Isosafrole
143-50-0	Kepone	Kepone
303-34-4	Lasiocarpine	Lasiocarpine
301-04-2	Lead acetate	Lead
7446-27-7	Lead phosphate	Lead
1335-32-6	Lead subacetate	Lead
1335-32-6	Lead, bis(acetato-O)tetrahydroxytri-	Lead
58-89-9	Lindane	alpha-BHC
		beta-BHC
		delta-BHC
		gamma-BHC (Lindane)
148-82-3	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-	Melphalan
115-02-6	L-Serine, diazoacetate (ester)	Azaserine
108-31-6	Maleic anhydride	Maleic anhydride
123-33-1	Maleic hydrazide	Maleic hydrazide
109-77-3	Malononitrile	Malononitrile
541-73-1	m-Dichlorobenzene	m-Dichlorobenzene
148-82-3	Melphalan	Melphalan
7439-97-6	Mercury	RMERC
		0.20 mg/L TCLP
		0.025 mg/L TCLP

		NA
		AMLGM
126-98-7	Methacrylonitrile	84
124-40-3	Methanamine, N-methyl-	CMBST
74-83-9	Methane, bromo-	15
74-87-3	Methane, chloro-	30
107-30-2	Methane, chloromethoxy-	CMBST
74-95-3	Methane, dibromo-	15
75-09-2	Methane, dichloro-	30
75-71-8	Methane, dichlorodifluoro-	7.2
74-88-4	Methane, iodo-	65
56-23-5	Methane, tetrachloro-	6.0
75-25-2	Methane, tribromo-	15
67-66-3	Methane, trichloro-	6.0
75-69-4	Methane, trichlorofluoro-	30
62-50-0	Methanesulfonic acid, ethyl ester	CMBST
74-93-1	Methanethiol	CMBST
67-56-1	Methanol	CMBST or 0.75 mg/L TCLP
91-80-5	Methapyrilene	1.5
72-43-5	Methoxychlor	0.18
67-56-1	Methyl alcohol	CMBST or 0.75 mg/L TCLP
74-83-9	Methyl bromide	15
74-87-3	Methyl chloride	30
79-22-1	Methyl chlorocarbonate	CMBST
71-55-6	Methyl chloroform	6.0
78-93-3	Methyl ethyl ketone (MEK)	36
1338-23-4	Methyl ethyl ketone peroxide	CHOXD; CHRED; or CMBST
74-88-4	Methyl iodide	65
108-10-1	Methyl isobutyl ketone	33
80-62-6	Methyl methacrylate	160
74-95-3	Methylene bromide	15
75-09-2	Methylene chloride	30
56-04-2	Methylthiouracil	CMBST
50-07-7	Mitomycin C	CMBST
70-25-7	MNNG	CMBST
1615-80-1	N,N'-Diethylhydrazine	CHOXD; CHRED; or CMBST
494-03-1	Naphthalenamine, N,N'-bis(2-chloroethyl)-	CMBST
91-20-3	Naphthalene	5.6
91-58-7	Naphthalene, 2-chloro-	5.6

71-36-3	n-Butyl alcohol	2.6
10102-45-1	Nitric acid, thallium(1+) salt	RTHRM; or STABL
98-95-3	Nitrobenzene	14
1116-54-7	N-Nitrosodiethanolamine	CMBST
55-18-5	N-Nitrosodiethylamine	28
924-16-3	N-Nitrosodi-n-butylamine	17
759-73-9	N-Nitroso-N-ethylurea	CMBST
684-93-5	N-Nitroso-N-methylurea	CMBST
615-53-2	N-Nitroso-N-methylurethane	CMBST
100-75-4	N-Nitrosopiperidine	35
930-55-2	N-Nitrosopyrrolidine	35
107-10-8	n-Propylamine	CMBST
3288-58-2	O,O-Diethyl S-methyl dithiophosphate	CMBST
95-57-8	o-Chlorophenol	5.7
95-50-1	o-Dichlorobenzene	6.0
95-53-4	o-Toluidine	CMBST
636-21-5	o-Toluidine hydrochloride	CMBST
75-21-8	Oxirane	CHOXD; or CMBST
106-89-8	Oxirane, (chloromethyl)-	CMBST
765-34-4	Oxiranecarboxyaldehyde	CMBST
123-63-7	Paraldehyde	CMBST
106-51-4	p-Benzoquinone	CMBST
59-50-7	p-Chloro-m-cresol	14
106-46-7	p-Dichlorobenzene	6.0
60-11-7	p-Dimethylaminoazobenzene	CMBST
608-93-5	Pentachlorobenzene	10
76-01-7	Pentachloroethane	CMBST or 6.0
82-68-8	Pentachloronitrobenzene (PCNB)	4.8
87-86-5	Pentachlorophenol	
108-10-1	Pentanol, 4-methyl-	33
62-44-2	Phenacetin	16
108-95-2	Phenol	6.2
114-26-1	Phenol, 2-(1-methylethoxy)-,methylcarbamate	1.4
58-90-2	Phenol, 2,3,4,6-tetrachloro-	
95-95-4	Phenol, 2,4,5-trichloro-	
88-06-2	Phenol, 2,4,6-trichloro-	
120-83-2	Phenol, 2,4-dichloro-	14
105-67-9	Phenol, 2,4-dimethyl-	14
87-65-0	Phenol, 2,6-dichloro-	14
95-57-8	Phenol, 2-chloro-	5.7
56-53-1	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-	CMBST
59-50-7	Phenol, 4-chloro-3-methyl-	14
100-02-7	Phenol, 4-nitro-	29

1319-77-3	Phenol, methyl-	5.6
		5.6
		5.6
		11.2
87-86-5	Phenol, pentachloro-	
70-30-4	Phenol,2,2'-methylenebis[3,4,6-trichloro-	CMBST
7446-27-7	Phosphoric acid, lead(2+) salt (2:3)	0.75 mg/L TCLP
3288-58-2	Phosphorodithioic acid, O,O-diethyl S-methyl ester	CMBST
1314-80-3	Phosphorus sulfide	CHOXD; CHRED; or CMBST
85-44-9	Phthalic anhydride	28
100-75-4	Piperidine, 1-nitroso-	35
100-02-7	p-Nitrophenol	29
23950-58-5	Pronamide	1.5
96-12-8	Propane, 1,2-dibromo-3-chloro-	15
78-87-5	Propane, 1,2-dichloro-	18
108-60-1	Propane, 2,2'-oxybis[2-chloro-	7.2
79-46-9	Propane, 2-nitro-	CMBST
109-77-3	Propanedinitrile	CMBST
93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-	
122-42-9	Propham	1.4
114-26-1	Propoxur	1.4
78-87-5	Propylene dichloride	18
52888-80-9	Prosulfocarb	1.4
106-49-0	p-Toluidine	CMBST
110-86-1	Pyridine	16
109-06-8	Pyridine, 2-methyl-	CMBST
930-55-2	Pyrrolidine, 1-nitroso-	35
50-55-5	Reserpine	CMBST
108-46-3	Resorcinol	CMBST
81-07-2	Saccharin, & salts	CMBST
94-59-7	Safrole	22
7783-00-8	Selenious acid	5.7 mg/L TCLP
7783-00-8	Selenium dioxide	5.7 mg/L TCLP
7488-56-4	Selenium sulfide	5.7 mg/L TCLP
7488-56-4	Selenium sulfide SeS ₂	5.7 mg/L TCLP
93-72-1	Silvex (2,4,5-TP)	
18883-66-4	Streptozotocin	CMBST
1314-80-3	Sulfur phosphide	CHOXD; CHRED; or CMBST
77-78-1	Sulfuric acid, dimethyl ester	CHOXD; CHRED; or CMBST
127-18-4	Tetrachloroethylene	6.0
109-99-9	Tetrahydrofuran	CMBST
7791-12-0	Thallium chloride TlCl	RTHRM; or STABL
563-68-8	Thallium(I) acetate	RTHRM; or STABL

6533-73-9	Thallium(I) carbonate	RTHRM; or STABL
7791-12-0	Thallium(I) chloride	RTHRM; or STABL
10102-45-1	Thallium(I) nitrate	RTHRM; or STABL
62-55-5	Thioacetamide	CMBST
59669-26-0	Thiodicarb	1.4
74-93-1	Thiomethanol	CMBST
137-26-8	Thioperoxydicarbonic diamide[(H ₂ N)C(S)] ₂ S ₂ , tetramethyl-	CMBST
23564-05-8	Thiophanate-methyl	1.4
62-56-6	Thiourea	CMBST
137-26-8	Thiram	CMBST
108-88-3	Toluene	10
26471-62-5	Toluene diisocyanate	CMBST
25376-45-8	Toluenediamine	CMBST
2303-17-5	Triallate	1.4
79-01-6	Trichloroethylene	6.0
75-69-4	Trichloromonofluoromethane	30
121-44-8	Triethylamine	1.5
126-72-7	Tris(2,3-Dibromopropyl) phosphate	0.10
72-57-1	Trypan blue	CMBST
66-75-1	Uracil mustard	CMBST
759-73-9	Urea, N-ethyl-N-nitroso-	CMBST
684-93-5	Urea, N-methyl-N-nitroso-	CMBST
75-01-4	Vinyl chloride	6.0
81-81-2	Warfarin, & salts, when present at concentrations of 0.3% or less	CMBST
1330-20-7	Xylene	30
50-55-5	Yohimban-16-carboxylic acid,11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-methyl ester,(3beta,16beta,17alpha, 18beta,20alpha)-	CMBST
1314-84-7	Zinc phosphide Zn ₃ P ₂ , when present at concentrations of 10% or less	CHOXD; C

Appendix 5 Limits for Sanitary and Combined Sewers

IMPORTANT: These limits apply for the TOTAL discharge of the University. There are many Laboratories on campus and therefore other laboratories must be taken into consideration.

Parameter	Limit (mg/L)	Parameter	Limit (mg/L)
Biochemical Oxygen Demand	300	1,4-Dichlorobenzene / p	0.017
Cyanide (total)	2	1,1-Dichloroethane	0.2
Fluoride	10	1,2-Dichloroethane	0.21
Total Kjeldahl Nitrogen	100	1,1-Dichloroethylene	0.04
Oil & Grease . Animal & Vegetable	150	cis-1,2-dichloroethylene	0.2
Oil & Grease . Mineral & Synthetic	15	trans-1,2-dichloroethylene	0.2
Phenolics (4AAP)	1	1, 2-Dichloropropane	0.85
Phosphorous (total)	10	cis-1,3-Dichloropropylene	0.07
Sulphates	1500	trans-1,3-Dichloropropylene	0.07
Sulphides	2	Ethylbenzene	0.057
Suspended Solids (total)	350	Methylene Chloride	0.211
Aluminum (total)	50	Styrene	0.04
Antimony (total)	5	1,1,2,2-Tetrachloroethane	0.04
Arsenic (total)	1	Tetrachloroethylene	0.05
Bismuth (total)	5	Toluene	0.08
Boron (total)	25	1,1,1-Trichloroethane	0.054
Cadmium (total)	0.02	1,1,2-Trichloroethane	0.8
Chromium (total)	5	Trichloroethylene	0.054
Cobalt (total)	5	Trichlorofluoromethane	0.02
Copper (total)	3	1,3,5-Trimethylbenzene	0.003
Lead (total)	5	Vinyl Chloride	0.4
Manganese (total)	5	Xylene (total)	0.32

Appendix 5 Limits for Sanitary and Combined Sewers Continued..

IMPORTANT: These limits apply for the TOTAL discharge of the University. There are many laboratories on campus and therefore other laboratories must be taken into consideration.

Parameter	Limit (mg/L)	Parameter	Limit (mg/L)
Mercury (total)	0.001	Bis(2-chloroethoxy)methane	0.036
Molybdenum (total)	5	Bis(2-ethylehexyl)phthalate	0.28
Nickel (total)	3	Benzylbutylphthalate	0.017
Selenium (total)	5	Diethylphthalate	0.2
Silver (total)	5	Di-n-butylphthalate	0.057
Tin (total)	5	Di-n-octylphthalate	0.03
Titanium (total)	5	Fluorene	0.059
Vanadium	5	Indole	0.05
Zinc (total)	3	1-Methylnaphthalene	0.032
Benzene	0.01	2-Methylnaphthalene	0.022
Bromodichloromethane	0.35	Naphthalene	0.059
Bromoform	0.63	Total PAHs	0.015
Bromomethane	0.11	2,4-Dichlorophenol	0.044
Carbon Tetrachloride	0.057	Dioxins and Furans (total)	0.00072
Chlorobenzene	0.057	Formaldehyde	0.3
Chloroethane	0.27	Hexachlorobenzene	0.0001
Chloroform	0.08	N-Nitrosodimethylamine	0.4
Chloromethane	0.19	Nonylphenols	0.0025
Dibromochloromethane	0.057	Nonylphenol ethoxylates	0.025
1,2 Dibromoethane	0.028	Temperature	60 °C
1,2.Dichlorobenzene / o	0.088	pH	5.5 - 11
1,3.Dichlorobenzene / m	0.036		

Appendix 5 Limits for Sanitary and Combined Sewers Continued..

IMPORTANT: These limits apply for the TOTAL discharge of the University. There are many laboratories on campus and therefore other laboratories must be taken into consideration.

Metals	UNITS	Criteria
Total Aluminum (Al)	ug/L	50000
Total Antimony (Sb)	ug/L	5000
Total Arsenic (As)	ug/L	1000
Total Barium (Ba)	ug/L	-
Total Beryllium (Be)	ug/L	-
Total Bismuth (Bi)	ug/L	5000
Total Boron (B)	ug/L	25000
Total Cadmium (Cd)	ug/L	20
Total Calcium (Ca)	ug/L	-
Total Chromium (Cr)	ug/L	5000
Total Cobalt (Co)	ug/L	5000
Total Copper (Cu)	ug/L	3000
Total Iron (Fe)	ug/L	-
Total Lead (Pb)	ug/L	5000
Total Lithium (Li)	ug/L	-
Total Magnesium (Mg)	ug/L	-
Total Manganese (Mn)	ug/L	5000
Total Molybdenum (Mo)	ug/L	5000
Total Nickel (Ni)	ug/L	3000
Total Potassium (K)	ug/L	-
Total Selenium (Se)	ug/L	5000
Total Silicon (Si)	ug/L	-
Total Silver (Ag)	ug/L	5000
Total Sodium (Na)	ug/L	-
Total Strontium (Sr)	ug/L	-
Total Tellurium (Te)	ug/L	-
Total Thallium (Tl)	ug/L	-
Total Tin (Sn)	ug/L	5000
Total Titanium (Ti)	ug/L	5000
Total Tungsten (W)	ug/L	-
Total Uranium (U)	ug/L	-
Total Vanadium (V)	ug/L	5000
Total Zinc (Zn)	ug/L	3000
Total Zirconium (Zr)	ug/L	-

Appendix 5 Limits for Sanitary and Combined Sewers Continued..

IMPORTANT: These limits apply for the TOTAL discharge of the University. There are many laboratories on campus and therefore other laboratories must be taken into consideration.

Semivolatile Organics	UNITS	Criteria
1,2,4-Trichlorobenzene	ug/L	-
1-Methylnaphthalene	ug/L	32
2,4,5-Trichlorophenol	ug/L	-
2,4,6-Trichlorophenol	ug/L	-
2,4-Dichlorophenol	ug/L	44
2,4-Dimethylphenol	ug/L	-
2,4-Dinitrophenol	ug/L	-
2,4-Dinitrotoluene	ug/L	-
2,6-Dinitrotoluene	ug/L	-
2-Chlorophenol	ug/L	-
2-Methylnaphthalene	ug/L	22
3,3'-Dichlorobenzidine	ug/L	-
Acenaphthene	ug/L	-
Acenaphthylene	ug/L	-
Anthracene	ug/L	-
Benzo(a)anthracene	ug/L	-
Benzo(a)pyrene	ug/L	-
Benzo(b/j)fluoranthene	ug/L	-
Benzo(g,h,i)perylene	ug/L	-
Benzo(k)fluoranthene	ug/L	-
Biphenyl	ug/L	-
Bis(2-chloroethyl)ether	ug/L	-
Bis(2-chloroisopropyl)ether	ug/L	-
Bis(2-ethylhexyl)phthalate	ug/L	280
Chrysene	ug/L	-
Dibenz(a,h)anthracene	ug/L	-
Diethyl phthalate	ug/L	200
Dimethyl phthalate	ug/L	-
Fluoranthene	ug/L	-
Fluorene	ug/L	59
Indeno(1,2,3-cd)pyrene	ug/L	-
Naphthalene	ug/L	59
p-Chloroaniline	ug/L	-
Pentachlorophenol	ug/L	-
Phenanthrene	ug/L	-
Phenol	ug/L	-
Pyrene	ug/L	-

Appendix 6 Limits for Storm Sewer Discharge

Parameter	Limit (mg/l)	Parameter	Limit (mg/l)
Biochemical Oxygen Demand	25	1,4-dichlorobenzene	0.0068
Cyanide (total)	0.02	Cis-1,2-dichloroethylene	0.0056
Phenolics (4AAP)	0.008	Trans-1,3-dichloropropylene	0.0056
Phosphorous (total)	0.4	Ethylbenzene	0.002
Suspended Solids (total)	15	Methylene chloride	0.0052
Arsenic (total)	0.02	1,1,2,2-tetrachloroethane	0.017
Cadmium (total)	0.008	Tetrachloroethylene	0.0044
Chromium (total)	0.08	Toluene	0.002
Copper (total)	0.04	Trichloroethylene	0.0076
Lead (total)	0.12	Xylene (total)	0.0044
Manganese (total)	0.05	Naphthalene	0.0064
Mercury (total)	0.0004	Hexachlorobenzene	0.00004
Nickel (total)	0.08	Nonylphenols	0.001
Selenium (total)	0.02	Nonylphenol ethoxylates	0.01
Silver (total)	0.12	PCBs	0.0004
Zinc (total)	0.04	Total PAHs	0.006
Benzene	0.002	Temperature	40 °C
Chloroform	0.002	pH	6 - 9
1,2-dichlorobenzene	0.0056		

Appendix 7- Process Validation Request Form

Date:	
Name of contact Person:	
Email and phone number for Contact Person:	
Name of Principal Investigator:	
Email for Principal Investigator:	
Building and Room Number:	

<p>Description of the Process and parameter requested for pre-approval</p> <p><i>Kindly describe the exact nature of the discharge including concentrations and volumes.</i></p>

<p>Declaration</p> <p>I declare that the information provided by me on the above form is true, complete and accurate to the best of my knowledge and belief.</p> <p>Name (Please print): _____ Signature: _____ Date: _____</p>
--

Please submit all supporting documentation required to accompany this request.

Supporting documentation:

- ✓ Complete documented standard operating procedure
- ✓ Calculations demonstrating the final concentrations prior to disposal*
- ✓ Calculations demonstrating the total volume of solutions being disposed of at one given time and as a total over the semester.

*All calculations must be based on the concentrations at the point of discharge (i.e. at the sink) and should not factor in dilution resulting from water. Dilution is not a legal means of disposing of hazardous materials as is not to be used at uOttawa.

Email this completed Request and supporting documentation to enviro@uottawa.ca titled "Process Validation Request".