Environment, Energy and Transportation Statistics Division

Survey of Environmental Protection Expenditures, 2014

Confidential when completed.

Si vous préférez ce questionnaire en français, veuillez nous appeler au numéro sans frais suivant: 1-866-445-4323.

Plea	Please provide a company e-mail address.			
0009	Email address			
Please verify the business name, address and contact name, and correct where needed.				
0001	Company name			
0002	Establishment name			
0021	C/O			
0004	Address			
0005	City			
0006	Province/Territory 0007 Postal code			

Introduction

This information is collected under the authority of the *Statistics Act*, Revised Statutes of Canada, 1985, Chapter S-19. COMPLETION OF THIS QUESTIONNAIRE IS A LEGAL REQUIREMENT UNDER THIS ACT.

Purpose of the survey

This survey provides a measure of the expenditures made by industry for environmental protection in Canada in response to Canadian and international environmental regulations, conventions and voluntary agreements. The survey also aims at identifying environmental management practices and technologies used in Canadian industry for the purpose of preventing or abating pollution. These data will be aggregated with information from other sources to produce official estimates of environmental protection expenditures. Your information may also be used by Statistics Canada for other statistical and research purposes.

For more information on this survey, please access www.statcan.gc.ca.

Confidentiality

The *Statistics Act* protects the confidentiality of information collected by Statistics Canada. Statistics Canada is prohibited by law from releasing any information it collects which could identify any person, business, or organization, unless consent has been given by the respondent or as permitted by the *Statistics Act*. Statistics Canada will use the information from this survey for statistical purposes.

Fax or e-mail transmission disclosure

Statistics Canada advises you that there could be a risk of disclosure during the transmission of information by facsimile or e-mail. However, upon receipt, Statistics Canada will provide the guaranteed level of protection afforded all information collected under the authority of the *Statistics Act*.

Inquiries

If you require assistance in completing this questionnaire or if you have any questions or comments regarding this survey, please refer to the Guide to Definitions and Classification Details found at the end of this questionnaire or contact:

Statistics Canada

Telephone (toll-free): **1-866-445-4323** E-mail: **enviro-oid-exp@statcan.gc.ca**

In all correspondence concerning this questionnaire, please quote the identification number that appears on the address label.

Record linkages

To enhance the data from this survey, Statistics Canada may combine it with information from other surveys or from administrative sources.

Coverage

Please include in this questionnaire the data for the establishment identified above.

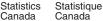
Important:

Please read the Guide to Definitions and Classification Details included at the end of this form before answering. If your response for an item is zero, please write "0" in the corresponding box rather than leaving the cell blank.

Please return the completed questionnaire to Statistics Canada in the enclosed envelope within 30 days of receipt. If you are unable to do so, kindly inform our office of the expected completion date.

4-2300-2.1: 2015-03-24 STC/NAD-475-04244







How to report environmental protection expenditures:
For Questions 2 to 11 of this questionnaire please <u>only</u> report expenditures made in response to or in anticipation of Canadian or international environmental regulations, conventions or voluntary agreements.
Please report your expenditures in Canadian dollars. Your best estimate is acceptable.
If the expenditure is zero Report: \$

1.	Reporting year		4				
	Report must cover your most recent fiscal year that ended		Year Month Day		Year	Month	Day
	any time between April 1, 2014 and March 31, 2015.	From 0011		0012 to		Ш	
	If the reporting period is less than 12 m circumstances in the Comments section						

2. Waste management and sewerage services

Waste management and sewerage services include the collection, treatment, storage, disposal and recycling of all domestic, industrial, hazardous and non-hazardous waste and sewage. Refer to page 14 of this questionnaire for more information.

Include:

- All expenditures related to waste collection, treatment, storage and disposal, including recycling done
 by your establishment's employees and services provided by a private contractor or a federal, provincial
 or local government body
- ♦ All expenditures related to the installation of sewage infrastructure and expenditures related to the use, collection, treatment and disposal of sewage
- ♦ All expenditures on sewerage services provided by a federal, provincial or local government body

Exclude:

• Expenditures on on-site recycling (to be included in Question 4)

	Operating expenses		Capital expenditures		TOTAL
220		230		240	
\$		+ \$: \$	

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3. Pollution abatement and control (end-of-pipe) processes

Abatement and control of pollution are performed by using end-of-pipe equipment or installations. These end-of-pipe processes treat pollutants after they are produced and are not an integral part of production; their sole purpose is to abate or to control undesirable substances resulting from normal production. *Refer to page 14 of this questionnaire for more information.*

Do not include waste management or sewerage-related expenditures reported in Question 2.

3.1 Pollution abatement and control expenditures

If the expenditure is zero, please write "0" in the corresponding box.

Include:

◆ Expenditures for equipment or facilities that are separately identifiable and that have been installed exclusively to reduce or eliminate pollutants resulting from production

Exclude:

- Expenditures specific to workers' health and safety
- Expenditures on waste management already reported in Question 2
- Expenditures on sewage treatment or services already reported in Question 2

Operating expenses Capital expenditures **TOTAL** 250 260 270 3.2 Did you report capital expenditures in Question 3.1 (cell 260)? 275 Yes Go to Question 3.3 No What proportion of capital expenditures reported in Question 3.1 (cell 260) was spent on reducing or abating each of the following? Refer to page 14 of this questionnaire for more information. **Substances Substances** On-site Noise, released vibration released to releases to land/ to air surface waters underground or radiation injection 280 290 310 300 100% % % %

3.3 Did you report operating expenses in Question 3.1 (cell 250)?

9315 1 Yes 3 No → Go to Question 4

What proportion of operating expenses reported in Question 3.1 (cell 250) was spent on reducing or abating each of the following?

Refer to page 14 of this questionnaire for more information.

Substances Substances Noise. releases to land/ released released to vibration to air surface waters underground or radiation injection 0320 1 0 0 % % % %

4. Pollution prevention

"Pollution prevention is the use of processes, practices, materials, products or energy that avoid or minimize the creation of pollutants and waste, and reduce overall risk to human health or the environment. Pollution prevention is the elimination or minimization of pollutants and waste before they are created."

Pollution Prevention - A Federal Strategy for Action, Government of Canada (1995)

This question identifies expenditures and methods used for the purpose of preventing or minimizing pollution and waste, or promoting resource conservation. *Refer to page 14 of this questionnaire for more information.*

4.1 Pollution prevention methods

If you prevented or reduced waste, pollutants or conserved resources in your fiscal year 2014, please indicate how it was achieved by checking the appropriate box(es). *Refer to page 15 of this questionnaire for a description of each method.*

		Yes	No
Product design or reformulation			
Reformulating or redesigning end products to be non-toxic or less polluting upon use, release or disposal	810	1	3
Equipment or process modifications (integrated process) Upgrading or replacing production unit equipment or methods	830	1	3
Recirculation, on-site recycling or reuse or recovery of materials or substances	850	1	3
Materials or feedstock substitution, solvent reduction, elimination or substitution			
Changing the raw materials of products to use non-toxic or less polluting raw materials	870	1	3
Improved inventory management or purchasing techniques			
Integrating environmental considerations into existing and new purchasing practices, as well as into inventory management systems	875	1	3
Prevention of leaks and spills	880	1	3
Good operating practices or pollution prevention training			
Modifying existing equipment or methods by such steps as improved housekeeping, system adjustments, or process/product inspections	885	1	3
Other (Please specify)	890	1	3
0891			
0892			
0893			

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4.2 Expenditures on pollution prevention

If the expenditure is zero, please write "0" in the corresponding box.

Include:

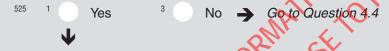
- ♦ Expenditures for equipment or facilities integrated in a production process that avoid or minimize the production of pollutants and waste
- ♦ Expenditures for equipment or facilities related to leak and spill prevention. They may include expenditures on the following: spill containments; dyke extensions; and accessories (valves, pumps)
- ♦ Expenditures for equipment or facilities used for conserving energy or water
- Expenditures for equipment or facilities associated with recirculation, recovery, reuse and on-site recycling of materials or substances
- ◆ Expenditures related to operational or process changes aimed at pollution prevention. Examples include product re-design (e.g., feedstock/raw material substitution), good operating practices (e.g., modification of process, staff training), etc.

Exclude:

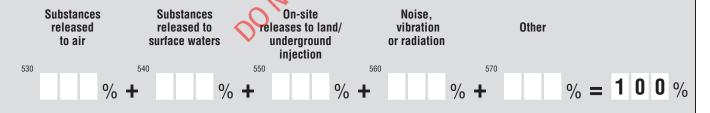
- Expenditures specific to workers' health and safety
- Expenditures already included in Question 2



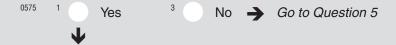
4.3 Did you report capital expenditures in Question 4.2 (cell 510)?



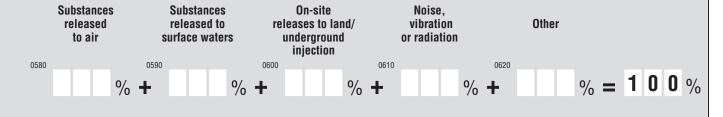
What proportion of capital expenditures reported in Question 4.2 (cell 510) was spent on preventing or minimizing each of the following? Refer to page 15 of this questionnaire for more information.



4.4 Did you report operating expenses in Question 4.2 (cell 500)?



What proportion of operating expenses reported in Question 4.2 (cell 500) was spent on preventing or minimizing each of the following? Refer to page 15 of this questionnaire for more information.



5. Environmental monitoring

If the expenditure is zero, please write "0" in the corresponding box.

Include:

- ♦ Expenditures related to equipment, supplies, labour and purchased services required for monitoring pollutants emitted by this establishment
- ♦ Expenditures associated with participation in the National Pollutant Release Inventory (NPRI) and other similar programs

Operating	expenses Capital ex	rpenditures	TOTAL
100	110	120	
\$	+ \$	= \$	

6. Environmental assessment and audits

If the expenditure is zero, please write "0" in the corresponding box.

Include:

- ♦ Expenditures for reviews of current operations for compliance with regulations (audits)
- Expenditures to evaluate the environmental impact of proposed programs or projects (assessments)
- Expenditures for associated legal and consulting costs



7. Site reclamation and decommissioning

If the expenditure is zero, please write "0" in the corresponding box.

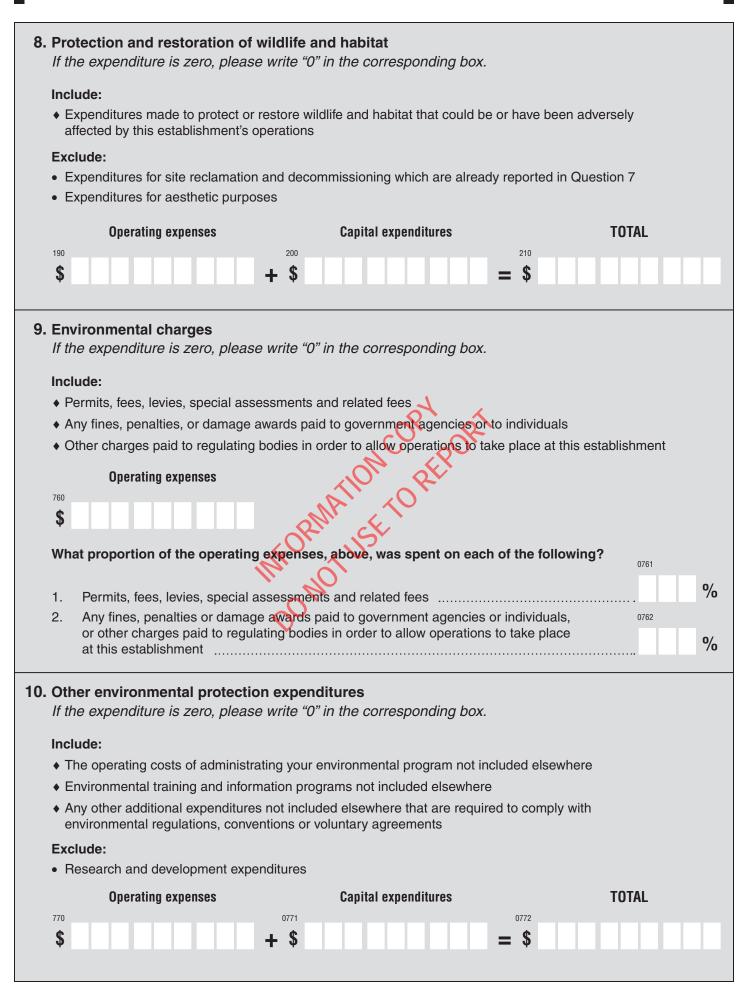
Expenditures on site reclamation and decommissioning made during your fiscal year 2014 for any active or inactive site belonging to your establishment. Please include expenditures on site decommissioning even if site closed before 2014.

Exclude:

- Fines or compensation for environmental damage (this is to be reported in Question 9)
- Provisions for future environmental liability

	Operating expenses	Capital	expenditures	TOTAL
160		170	180	
\$		+ \$	= \$	

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11. Total expenditures on environmental protection If the expenditure is zero, please write "0" in the corresponding box. **Cell 801:** includes total from operating expenses reported in questions 2 to 10. Cell 802: includes total from capital expenditures reported in guestions 2 to 8 and guestion 10. Please include expenditures for which breakdowns were not available. **TOTAL Operating expenses Capital expenditures** 801 802 803 \$ \$ \$ 11.1 In order to help us reduce the need for follow-up inquiries, please provide a brief explanation to account for: ♦ Significant changes in environmental protection expenditures made by your establishment (either increased or decreased compared to previous reporting periods) ♦ The level of expenditures in the current reporting period if this is the first time your establishment INFORMATION COPERORI has reported expenditures For example, "We installed low-NO_x burners in 2014 – Question 4" 0804 0805 0806 0807

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4230002081

enewable energy technologies the expenditure is zero, please write "0" in the corresponding box.			
	year 20)14?	
or 1 Yes 3 No → Go to question 13			
ease indicate your capital expenditures in your fiscal year 20°	14 for e	each of the f	ollowing:
		Capital exp	enditures
enewable energy source:	1002		
Small, mini- and micro-hydroelectric facility	. \$		
,	1003		
2. Solar energy systems or equipment	. \$		
	1004		
3. Wind energy systems or equipment	. \$		
A X	1005		TTT
4. Biomass energy (e.g., energy crops and waste-to-energy)			
70° 80°			
5. Geothermal	. Ф		
6. Other renewable energy systems or equipment			
Renewable energy is energy obtained from natural resources that can be naturally replenished or renewed within a human lifespan, that is, the resource is a sustainable source of energy.			
Please specify	1007		
011	•		
012	\$		
	1009		
013	\$		
013	\$		
013			
	1010		
	efer to page 15 of this questionnaire for more information. Yes No Go to question 13 ease indicate your capital expenditures in your fiscal year 20 enewable energy source: 1. Small, mini- and micro-hydroelectric facility 2. Solar energy systems or equipment 3. Wind energy systems or equipment 4. Biomass energy (e.g., energy crops and waste-to-energy) 5. Geothermal 6. Other renewable energy systems or equipment Renewable energy is energy obtained from natural resources that can be naturally replenished or renewed within a human lifespan,	eler to page 15 of this questionnaire for more information. Yes No Go to question 13 Lease indicate your capital expenditures in your fiscal year 2014 for elemewable energy source: 1. Small, mini- and micro-hydroelectric facility 2. Solar energy systems or equipment 3. Wind energy systems or equipment 4. Biomass energy (e.g., energy crops and waste-to-energy) 5. Geothermal 6. Other renewable energy systems or equipment Renewable energy is energy obtained from natural resources that can be naturally replenished or renewed within a human lifespan, that is, the resource is a sustainable source of energy. Please specify	ease indicate your capital expenditures in your fiscal year 2014 for each of the financial energy source: 1. Small, mini- and micro-hydroelectric facility 2. Solar energy systems or equipment 3. Wind energy systems or equipment 4. Biomass energy (e.g., energy crops and waste-to-energy) 5. Geothermal 6. Other renewable energy systems or equipment Renewable energy is energy obtained from natural resources that can be naturally replenished or renewed within a human lifespan, that is, the resource is a sustainable source of energy. Please specify 1007

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13. Environmental management practices

Please indicate the environmental management practices adopted or utilized by this establishment in your fiscal year 2014 to avoid or minimize pollution or to conserve resources. Refer to page 16 of this questionnaire for a description of each practice.

				Yes		No
1.	Did this establishment use an environmental management system?	951	1		3	
2.	Did this establishment use Life Cycle Management, Life Cycle Assessment or Design for Environment for decision making?	965	1		3	
3.	Is this establishment certified under the ISO 14000 family of environmental management standards?	953	1		3	
4.	Did this establishment develop and implement a pollution prevention plan?	970	1		3	
5.	Did this establishment implement any environmental voluntary agreement, or did it participate in any voluntary environmental program?	955	1		3	
	Examples include Environmental Performance Agreements (EPAs), Canadian GHG Reductions Registry© or Canadian Industry Program for Energy Conservation. <i>If yes, please list programs, accords or agreements.</i>					
	0976 0977 0978					
	0978 CORW 15F					
6.	Did this establishment have a "green" procurement policy?	957	1		3	
7.	Were any of the goods produced by this establishment certified by an environmental program, such as the "Environmental Choice Program" or Ecologo	959 ?	1		3	
8.	a) Did this establishment have an environmental supply chain management policy?	0972	1		3	
	b) Was this establishment impacted by the environmental supply chain management policy in place at a supplier or client business?	0973	1		3	
9.	Did this establishment use an energy management or monitoring system(s) to improve efficiency?	2032	1		3	
10.	Did this establishment perform an energy audit in the last three years (2012-2014)?	2033	1		3	

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11. Did this establishment take advantage of any Canadi	Yes No
government environmental incentive programs, grant the 2014 fiscal year?	s, loans, or tax credits during
Examples include ecoENERGY Initiatives, or Acce Cost Allowance for energy efficiency and renewable If yes, please specify the incentive programs, grant	e energy sources.
0979	
0980 0981	
12. Did this establishment perform a greenhouse gas em	issions inventory in 2014? 1015 1 3
13. Did this establishment participate in any form of cal carbon-offset credits in 2014?	
14. Other environmental management practices (Pleas	se specify)
0982	7
0983	COPTORI
0984	A CEP
	OK
Certification	
I certify that to the best of my knowledge, the information	provided in this questionnaire is correct and complete.
Name of person completing this questionnaire	Signature
⁰⁰²⁶ ¹ Mr. ² Mrs. ³ Miss Ms	
Last name	First name
0054	0013
Title	Telephone number Ext. number
0014	0017 0027
E-mail address	Fax number
0018	0016
Website address	Date Year Month Day
0020	0015
Approximately how long did it take to collect the data and complete this survey?	9910 9909 hour(s) minutes
In the future, would you prefer to receive this survey in electronic format?	⁸⁶² ¹ Yes ³ No

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Comments

We invite your comments or suggestions on the following or any other topics related to the Survey of Environmental Protection Expenditures. We appreciate your assistance.

- > Questionnaire content
- ➤ New questions of interest to your industry
- Clarity of questions and provision of sufficient examples
- > Order and flow of questions

- > Timing of receipt of questionnaire and the period given for response
- ➤ Alternative sources of information to further reduce response burden
- > Potential for electronic data reporting

9920	
9913	
	INFORMATION COPY INFORMATION COPY INFORM
	INFORM'ISE.
9914	

If you have any questions, please contact us.
Telephone (toll free) 1-866-445-4323
Fax: 1-888-883-7999 (within Canada)
E-mail: enviro-oid-exp@statcan.gc.ca

Please return this questionnaire in the envelope provided

Thank you for your cooperation!

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Guide to Definitions and Classification Details

Establishment

An establishment is defined as the most homogeneous unit of production for which a business maintains accounting records. From these accounting records, it is possible to assemble all the data elements required to compile the total sales or shipments, inventories, cost of materials and services, labour and capital used in production.

Environmental protection expenditures

Environmental protection expenditures are defined as all operating expenses and capital and repair expenditures that are incurred in order to anticipate or to comply with Canadian or international environmental regulations, conventions or voluntary agreements. They consist of expenditures for pollution prevention, abatement and control, expenditures for protecting and restoring wildlife and habitat, expenditures for environmental monitoring, environmental assessments and audits, and expenditures for reclamation and decommissioning of sites. Environmental protection expenditures incurred that are not in response to current or anticipated Canadian or international regulations, conventions or voluntary agreements should be excluded. In addition, expenditures to improve employee health, workplace safety and site beautification should also be excluded.

Expenditures to produce pollution prevention, abatement and control equipment for sale are also excluded as they would appear twice in the expenditure data produced by Statistics Canada. Expenditures for environment-related research and development are also excluded since they are collected elsewhere in Statistics Canada.

Environmental conventions or voluntary agreements refer to any formal, multi-party commitment by an industry or an industry association for instance, to meet specific targets in terms of habitat protection, waste reduction, or the elimination or reduction of specific materials that are considered to be harmful or toxic to the natural environment in Canada. Examples include the following: the Canada-U.S. Air Quality Agreement; the "Responsible Care" program from the Canadian Chemical Producers Association; the Canadian GHG Reductions Registry ©; etc.

Environmental regulations refer to any current Canadian federal, provincial or municipal law or international legislation that is intended to protect or to restore the environment in Canada. Expenditures related to anticipated legislation may be included as long as its provisions are known.

How to report

Please report expenditures in **Canadian dollars for your 2014 fiscal year**. If, for certain categories, no expenditures have been incurred, **please write** "0" in the corresponding box. Do not leave the box blank. Where precise data are not available, your best estimate is acceptable. If additional information is available in an annual report or an environmental performance report, **please include a copy** when you return the questionnaire.

To report capital expenditures

Include all relevant outlays for machinery and equipment and their installation and repair that have been capitalized, as well as for the construction of non-residential facilities (contractors or own employees). For construction, include all costs associated with demolition, planning and design (such as engineering and consulting fees), any materials supplied to construction contractors for installation and any costs associated with the purchase of land that are neither amortized nor depreciated.

Exclude any provisions for future environmental liability.

To report operating expenses

Include all expenses related to environmental protection incurred for labour, materials and supplies, maintenance and repair, and purchased services (include fuel and electricity expenses for machinery and equipment whose sole purpose is to protect the environment).

Exclude depreciation on machinery and equipment.

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For logging activities

Use Question 8 to report additional expenditures for logging caused by environmental regulation or convention. **Include** the extra cost of any practice that would not otherwise be followed in the absence of environmental regulation or convention. **Exclude** the foregone revenues resulting from regulations or conventions that reduce the allowable harvest.

For mining activities

Use Question 3 to report any expenditures that are related to the handling and treatment of mine tailings and that are required by environmental regulation. Even if some of these activities are now considered to be "standard practice", include related expenditures if they are required by regulation or convention. Use Question 10 to report imputed interest on funds held in trust against future environmental liabilities. Report only actual expenditures.

For petroleum operations

Please report separately, if possible, environmental protection expenditures associated with different petroleum operations: exploration, refining and chemical products.

Question 2) Waste management and sewerage services

What is waste?

Waste is a material that is unwanted by its producer. The unwanted materials may be by-products of a production process - fly ash from a furnace, for example. Alternatively they might be products, the inherent value of which has been consumed from the perspective of the current holder - for example, a newspaper that has been read, a package that has been opened and emptied of its contents or an apple eaten to the core are all similar insofar as they have lost their original inherent value from the consumer's perspective.

Hazardous waste

Includes all materials that may be hazardous to human health or the environment, due to their nature or quantity, and which require special handling techniques as specified by the *Transportation of Dangerous Goods Regulations* (2001), the *Canadian Environmental Protection Act* (1999), The Basel Convention (1989), or the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* (2005).

Question 3) Pollution abatement and control (end-of-pipe) processes

- Pollution abatement and control (end-of-pipe processes) can be described as equipment and processes that treat pollution and wastes *after* they have been created. Examples of these types of equipment or processes include scrubbers at the end of emission stacks, biological and chemical systems for treating water (such as a water treatment plant), filtration systems, cyclones or other barrier systems. These end-of-pipe processes are not an integral part of production; their sole purpose is to abate or to control undesirable substances resulting from normal production.
- 3.2/3 Substances released to air emissions of pollutants (including greenhouse gases) to the atmosphere.

Substances released to surface waters - releases of pollutants to water bodies.

On-site releases to land/underground injection - releases of pollutants to land and/or injected into the ground within the boundaries of your establishment.

Noise, **vibration** or **radiation** - control of noise, vibration or radiation.

Question 4) Pollution prevention

Pollution prevention is the use of technologies, equipment, or processes that reduce or eliminate pollution and/or waste at the source - i.e., before the pollution or waste is created - as opposed to an end-of-pipe process. Examples include the installation of more efficient processes that consume less energy or inputs, the redesign or reformulation of the production process to reduce pollution or emissions, reuse, recirculation or recycling of materials on-site (does not include materials sent off-site for recycling).

4.1 Pollution prevention methods

Examples are listed for each category of pollution prevention. Note: lists are not exhaustive.

Product design or reformulation - changing product specifications to reduce or eliminate the use of toxic substances; modifying product design or composition to make them more environmentally friendly; modifying packaging.

Equipment or process modifications (integrated process) - instituting recycling within a process; switching from the use of solvents to mechanical paint-stripping devices; modified or installed rinse systems; improved rinse equipment design; improved rinse equipment operation; modifying equipment, layout or piping; use of a different process catalyst; institute better controls on operating bulk containers or changing from small volume containers to bulk containers to minimize discarding of empty containers.

Recirculation, on-site recycling or reuse or recovery of materials or substances - such as using a small distillation unit to reclaim solvents on-site; vapour recovery; recovery of sludge; water recirculation; reuse of water for refrigeration condenser operation. *Excludes materials transferred or recycled off-site.*

Materials or feedstock substitution, solvent reduction, elimination or substitution - the use of aqueous-based rather than solvent-based cleaners; increased purity of raw materials; substituted raw materials; other raw material modifications.

Improved inventory management or purchasing techniques - avoiding the unnecessary generation of waste by ensuring that materials do not stay in inventory beyond shelf life; eliminating shelf-life requirements for stable materials; instituting better labelling procedures; instituting a clearinghouse to exchange materials that would otherwise be discarded.

Prevention of leaks and spills - taking measures to prevent releases such as installing splash guards and drip trays around equipment; modified containment procedures for cleaning units; improved draining procedures; improved storage or stacking procedures; improved procedures for loading, unloading and transfer operations; installed overflow alarms or automatic shut-off valves; installed vapour recovery systems; implemented inspection or monitoring program of potential spill or leak sources.

Good operating practices or pollution prevention training - changing production schedules to minimize equipment and feedstock changeovers; improved maintenance scheduling, record keeping or procedures; training staff to recognize and implement pollution prevention opportunities.

Other, please specify - please specify your pollution prevention activities if they are not listed in the preceding categories.

4.3/4 Pollution prevention - refer to instructions for 3.2/3 on page 14.

Question 12) Renewable energy technologies

Examples are listed for each of the technologies and processes found in Question 12.

Description of the systems and equipment listed in Question 12:

- 1. Small, mini- or micro-hydroelectric facility Micro-hydro = less than 100 kW; Mini-hydro = 100 kW to less than 1 000 kW (1MW); Small hydro = 1 MW to 25 MW (50 MW in British Columbia).
- 2. Solar energy systems or equipment active and passive solar systems; photovoltaics; solar thermal generators; solar water and space heating systems.
- 3. Wind energy systems or equipment horizontal and vertical axis turbines; towers and other types of equipment used to generate energy and electricity.
- 4. Biomass energy systems and equipment (turbines, boilers, process equipment) that use organic matter such as forest and agricultural residues to produce electricity, steam, or heat.
- 5. Geothermal hot water or steam extracted from the Earth's interior and used for geothermal heat pumps, water heating or electricity generation.
- **6. Other renewable energy systems or equipment** please specify your renewable energy systems and equipment if they are not listed in the preceding categories (e.g., systems and equipment for energy production from wave, tidal, and ocean thermal energy conversion systems).

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Question 13) Environmental management practices

- 1. An **environmental management system** is a management structure that allows an establishment to assess and control the environmental impact of its activities.
- 2. Life Cycle Management, Life Cycle Assessment refer to tools that identify and measure direct and indirect environmental, energy and resource impacts associated with a product, process or service through its design, production, usage and final disposal. Design for Environment is the integration of environmental considerations into the design, production, distribution, use and end-of-life of products.
- **3.** The ISO 14000 family (ISO14001...ISO14064 inclusive) of environmental management standards are an internationally recognized set of standards and guidelines primarily concerned with environmental management systems developed by the International Organization for Standardization.
- **4.** A **pollution prevention plan** establishes a plan to meet or exceed compliance and improve the efficiency and environmental performance of an establishment, a specific operation or a particular product.
- **5. Voluntary actions** include codes of environmental practice, guidelines, emission and waste reduction targets, as well as agreements with governments.
- **6. Green procurement** describes the procurement of goods and services that minimize environmental impacts compared with goods and services with similar performance requirements. The costs and environmental impacts of a product at various stages of its life cycle are taken into consideration, such as the process used to manufacture the product (including raw materials), transport, store, handle, operate or dispose of the product.
- 7. Eco-labelling programs such as Environmental Choice (operated by TerraChoice Environmental Services Inc. for Environment Canada) are designed to encourage manufacturers and suppliers to develop environmentally preferable products and services. These eco-labelling programs are meant to help consumers identify products and services that are less harmful to the environment.
- 8. Environmental supply chain management refers to the inclusion of environmental standards in the planning and management of activities involved in sourcing and procurement, conversion, and all logistics management activities. It also includes the coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. Environmental supply chain management integrates supply and demand environmental management within and across companies.
- 9. Use of energy management or monitoring system(s) to improve efficiency an energy conservation feature that uses computers, instrumentation, control equipment and software to manage a building's energy use for heating, ventilation, air-conditioning, lighting and for business-related processes.
- 10. Performed energy audit in the last three years (2012-2014) an analysis of the energy consuming systems within an establishment and the identification of potential areas for reducing energy consumption.
- **12. Greenhouse gas emissions inventory** an estimate of the amount of greenhouse gas produced by the establishment over a given unit of time, measured in tonnes.
- 13. Carbon-trading and/or sale of carbon-offset credits a market-based system in which an establishment that produces less than their allowable carbon emissions can trade or sell the unused portion of their allowance to another establishment.

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