Environment Accounts and Statistics Division

Survey of Environmental Protection Expenditures, 1998

Confidential when completed

Collected under the authority of the Statistics Act, Revised Statutes of Canada, 1985, Chapter S19.

Si vous préférez ce questionnaire en français, veuillez cocher

(P)

• • • • • • • • • • • • • • • • • • • •	
Establishment name	
Operating name	
C/O	
Address	
City	

Please read before completing

SURVEY OBJECTIVE

This survey provides a measure of the cost imposed on industry by environmental protection in Canada through Canadian and international environmental regulations, conventions and voluntary agreements. The survey also aims at identifying practices and technologies used in Canadian industry for the purpose of preventing or abating pollution.

The results of this survey will be published in the Statistics Canada publication Environmental Protection Expenditures in the Business Sector 1998, Catalogue No. 16F0006X1E. The results will also be combined to government and household expenditures to form a complete account of the costs of environmental protection to Canadians.

CONFIDENTIALITY

Statistics Canada is prohibited by law from publishing any statistics which would divulge information obtained from this survey that relates to any identifiable business, without the previous written consent of that business. The data reported will be treated in strict confidence, used for statistical purposes and published in aggregate form only. The confidentiality provisions of the Statistics Act are not affected by either the Access to Information Act or any other legislation.

AUTHORITY

This survey is conducted under the authority of the Statistics Act, Revised Statutes of Canada, 1985, Chapter S19. COMPLETION OF THIS QUESTIONNAIRE IS A LEGAL REQUIREMENT UNDER THE STATISTICS ACT.

INFORMATION

Province/Territory

Correct as required

If you require assistance in completing this questionnaire or if you have any questions or comments regarding this survey, please contact:

Postal code

Operations and Integration Division Statistics Canada Ottawa, ON, Canada, K1A 0T6

Telephone (toll-free): 1-800-255-7726 (within Canada) 1-800-755-5514 (within Canada) E-mail address: enviro.oid.exp@statcan.ca

The questionnaire is available in an electronic spreadsheet format. Please contact the Operations and Integration Division if you prefer to use this reporting option.

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

Important: Please read the Definitions and concepts on page 14 before answering. If your response for an item is zero, please write "0" in the corresponding box rather than leaving the cell

Please return this questionnaire within 30 days of

If you are unable to do so, kindly inform the Operations and Integration Division of the expected completion date.

FOI	Statistics	Canada	use	oniy

Rec. M Ed. D Kyd. D Bat.

Coll.

FSC



Please report expenditures in thousands of Canadian dollars Reporting year Day Month Year Day Month Year Report must cover your financial 010 020 030 040 050 060 vear ending between April 1, 1998 From to and March 31, 1999. 2. Environmental monitoring If the expenditure is zero, please write "0" in corresponding box.

Include

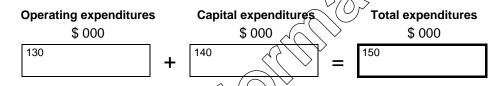
All costs related to equipment, supplies, labour and purchased services required for monitoring pollutants emitted by this establishment. Expenditures associated with participation to the National Pollutant Release Inventory (NPRI) and other similar programs are to be included.

Operating expenditures	Capital expenditures	Total expenditures	
\$ 000	\$ 000	\$ 000	\wedge
100	- 110 :	= 120	
			$7 \sim 1 \sim 1$

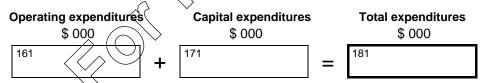
3. Environmental assessment and audits If the expenditure is zero, please write win corresponding box.

Include

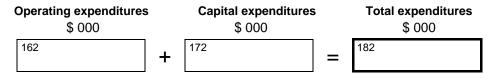
- Expenditures for reviews of current operations for compliance with regulations (audits)
- Expenditures to evaluate the environmental impact of proposed programs or projects (assessments)
- ◆ Associated legal and consulting costs



- 4. Site reclamation and decommissioning If the expenditure is zero, please write "0" in corresponding box.
 - a) Expenditures on site remediation made during the fiscal year 1998 for any active site belonging to your establishment



b) Expenditures on site decommissioning made during the fiscal year 1998 following the closing down of a site (even if closing occurred before 1998)



A list of processes and technologies associated with site reclamation and decommissioning is provided in Question 12e.

Exclude

- ♦ Any fine or compensation for environmental damage (this is to be reported in Question 8)
- ◆ Any provision for future environmental liability

Please report expenditures in thousands of Canadian dollars

5. Protection and restoration of wildlife and habitat If the expenditure is zero, please write "0" in corresponding box.

Include

190

 All expenditures made to protect wildlife and habitat from the effects of this establishment's operations or to restore stocks that have been adversely affected by such operations **Exclude**

- Expenditures for site reclamation and decommissioning which are already reported in Question 4
- ◆ Expenditures for aesthetic purposes

Operating expenditures

\$ 000

Capital expenditures \$ 000

\$ 000 210

Total expenditures

6. Treatment and control of pollution (end-of-pipe processes)

Treatment and control of pollution are performed using end-of-pipe equipment or installation. 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.

a) Pollution treatment and control expenditures If the expenditure is zero, please write "0" in corresponding box.

Include

 Any capital or operating expenditure for equipment or facilities which are separately identifiable and which have been installed exclusively to reduce or eliminate pollutants resulting from production Exclude

Any expenditure specific to workers' health and safety

- Any expenditure for on-site recycling (Question 7)
- Any expenditure related to waste collection, removal and treatment done by your establishment's or company's employees
- Any purchase of waste and sewerage management services or any other purchase of services reported in Question 11.

Operating expenditures



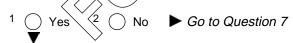
Capital expenditures \$ 000

\$ 000 =

Total expenditures

b) Did you report capital expenditures in Question 6a?

260



What percentage of this amount was spent on reducing or abating each of the following?

A list of environmental processes/technologies is provided in Question 12.

Please report expenditures in thousands of Canadian dollars

7. Pollution prevention

"Pollution prevention is the use of processes, practices, materials, products or energy that avoid or minimise the creation of pollutants and waste, and reduce overall risk to human health or the environment."

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

This question identifies expenditures and methods used for the purpose of preventing or minimising pollution and waste, or promoting resource conservation.

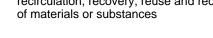
a) Expenditures on pollution prevention If the expenditure is zero, please write "0" in corresponding box.

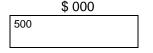
Include

- ◆ All operating and capital expenditures for equipment or facilities integrated to a production process that avoid or minimise the production of pollutants and waste
- All operating and capital expenditures for equipment or facilities related to leak and spill prevention. They may include expenditures on the following: spill containments; dyke extensions; accessories (valves, pumps); and emission detection equipment
- All operating and capital expenditures for equipment or facilities used for conserving energy or water
- All operating and capital expenditures for equipment or facilities associated with recirculation, recovery, reuse and recycling of materials or substances

Exclude

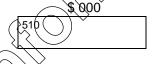
- ♦ Any expenditure already included in Questions 2 to 6
- Any expenditure specific to worker's health and safety





Operating expenditures

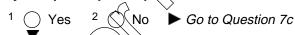
Capital expenditures



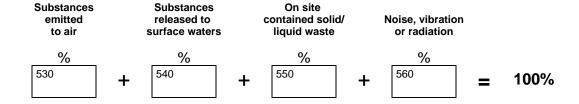
Total expenditures

\$ 000 520

b) Did you report capital expenditures in Question 7a?



What percentage of this amount was spent on preventing or minimising each of the following?



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Please report expenditures in thousands of Canadian dollars 7. Pollution prevention - Continued c) Pollution prevention methods If you have prevented or reduced waste, or pollutants or conserved resources in fiscal year 1998, or if you are planning to do so in the next 2 years, please indicate how it was/will be achieved by checking the appropriate boxes. Please include any project, regardless of whether or not they are required by environmental regulation or convention. 1998 1999-2000 Methods of pollution prevention 810 815 Product design or reformulation 830 835 Substitution or modification of production process (integrated process) Recirculation, recovery, on-site recycling or reuse of materials or 850 855 substances 1 865 860 Energy conservation 870 875 Material substitution, reduction or elimination, or solvent substitution 885 Prevention of leaks and spills 895 Other 1. Recirculation, recovery, reuse or recycling: recirculation, reuse, recovery or recycling of water, materials or substances generated during production, excluding materials transferred or recycled off site. Examples: vapour recovery, recovery of sludge, water recirculation, reuse of water for refrigeration condenser operation. A list of environmental processes/technologies is included in Question 12. Environmental charges If the expenditure is zero, we ase write "0" in corresponding box. Include Permits, fees, levies, special assessment and related fees Other charges paid to regulating bodies in order to allow operations to take place at this establishment Any fines, penalties, or damage awards paid to government agencies or to individuals \$ 000 760 Other environmental protection expenditures If the expenditure is zero, please write "0" in corresponding box. Include **Exclude** The costs of administration for an environmental Research and development expenditures affairs division Training and information programs Any other additional expenditures that are required to comply with environmental regulations or conventions \$ 000 770

Ple	ease report expenditures in thousands	of Canadian dollars
	Total expenditures on environmental protection If a box.	the expenditure is zero, please write "0" in corresponding
(Cell 801: includes total from operating expenditures reported in que Cell 802: includes total from capital expenditures reported in questi They should also include all data for which breakdowns were not a	ons 2 to 7.
	Operating expenditures Capital expenditures	Total expenditures
	\$ 000 \$ 000	\$ 000
	** ** ** ** ** ** ** **	803
ı	Purchase of environmental services If the expenditure	res reported in Question 10, what was the
_	amount of environmental services purchased from	a private contractor or a government?
á	a) Waste management services or sewerage services	\$ 000
	Include	⇒ Éxclude Éxclude
	 All expenditures related to the use of a waste collection, disposal or treatment service, or an off-site recycling service provided by a private contractor or a federal, provincial or local government body 	Any expenditures for waste management activities done by your establishment's or company's employees (Question 6) Any expenditure for recycling on site (Question 7)
_	All expenditures related to the use of a sewerage service provided by a federal, provincial or local government body	
	$(\mathcal{L}(\mathbb{O}))^{\vee}$	\$ 000
! _	b) Environment-related construction and engineering services	805
		\$ 000
C	c) Other environmental services	804
	purchase of environmental assessment and au purchase of services for site reclamation or de purchase of services associated with wildlife au	commissioning
	•	·

d) Total purchase of environmental services

\$ 000 806

Include

♦ sum of cells 240, 805 and 804

Exclude

 any expenditure for environmental services provided by the employees of your establishment or your company

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the appropriate boxes. If you use a process not already specified, please appropriate boxes.	ease report it i			
	Do you u	20	If yes, please ch	neck the purpos
Processes and Technologies	this technolog		Is the purpose pollution abatement?	Is the purpose pollution prevention?
a) Gas treatment process Please indicate, by checking the appropriate box(es), if you use pollution abatement (end-of-pipe) processes or pollution prevention processes as defined in questions 6 and 7.				
Physical treatment				
Gravity deposition				
Precipitation chamber	1000 Y	′es ➤	1001	1002
Dust collector system	1003 Y	′es ➤	1,004	1005
Inertial separator		\langle		
Cyclone	1006 Y	es 🔪	1007	1008
Vortex	1009 Y	'és 🏲	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1011
Centrifugal precipitator	1012 Y	(६३) 🔊	1013	1014
Impingement eliminator	1015 Y	es ➤	1016	1017
Electrostatic precipitator	1018 Y	′es ➤	1019	1020
Filtration				
Bag house)1021 Y	′es ➤	1022	1023
Activated carbon filter	1024 Y	′es ➤	1025	1026
Membrane filter	1027 Y	′es ➤	1028	1029
Adsorption				
Activated carbon adsorption	1030 Y	′es ➤	1031	1032
Other media	1033 Y	′es ➤	1034	1035
Other (please specify)	1036 Y	′es ➤	1037	1038
Biological treatment				
Biological filtration	1039 Y	′es ➤	1040	1041
Activated sludge	1042 Y	′es ➤	1043	1044
Phytoremediation	1045 Y	′es ➤	1046	1047
Other (please specify)	1048 Y	′es ➤	1049	1050
Chemical treatment				
Scrubbing				
	1051 Y	′es ➤	1052	1053
Wet scrubbing system		′es ➤	1055	1056
Air scrubbing		es ➤	1058	1059
Desulfurisation			1061	1062
Catalytic reduction		′es ➤		
Chemical oxidation		′es ➤	1064	1065
Ozonation		′es ➤	1067	1068
Other (please specify)	1069 Y	′es ➤	1070	1071
Thermal treatment				
Flare system	1072 Y	′es ➤	1073	1074
Vapour condenser	1075 Υ	′es ➤	1076	1077
Dryer	1078 Y	′es ➤	1079	1080

		If you places oh	ack the nurness		
	Do you use	If yes, please check the purpose			
Processes and Technologies	this technology?	Is the purpose pollution abatement?	Is the purpose pollution prevention?		
Thermal treatment - Concluded					
Incineration					
Thermal recuperative incineration	1081 Yes ➤	1082	1083		
Catalytic incineration	1084 Yes ➤	1085	1086		
Thermal regenerative incineration	1087 Yes ➤	1088	1089		
Fluidised bed	1090 Yes ➤	1091	1092		
Oxidation	_				
Thermal oxidation	1093 Yes ➤	1094	1095		
Catalytic oxidation	1096 Yes 🗡	1007	1098		
Cooling tower	1099 Yes	7108	1101		
Other (please specify)	1102 Yes	1103	1104		
Canon (produce openin)	$\overline{(})$				
b) Liquid treatment					
Physical treatment	$\langle \langle \rangle \rangle$				
Screening	1108 Yes ➤	1106	1107		
Degritting	1108 Yes ➤	1109	1110		
Primary clarification (sedimentation, gravity settling chamber)	1111 Yes ➤	1112	1113		
Precipitator	1114 Yes ➤	1115	1116		
Centrifugal precipitator	1117 Yes ➤	1118	1119		
Oil/water separation					
Gravity	1120	1121	1122		
Oilphylic pads	1123	1124	1125		
Coalescing separators	1126 Yes ➤	1127	1128		
Adsorption system					
Activated carbon adsorption	1129	1130	1131		
Polymer	1132	1133	1134		
Other media	1135	1136	1137		
Contact system >					
Air stripping.	1138	1139	1140		
Steam stripping	1141 Yes ➤	1142	1143		
Flotation	1144 Yes ➤	1145	1146		
Filtration					
Bed filtration system (e.g. sand filter)	1147 Yes ➤	1148	1149		
Pressure (press filter, filter leaf)	1150	1151	1152		
Vacuum (rotary, drum, centrifugal)	1153	1154	1155		
Membrane (dialysis, reverse osmosis, ultrafiltration, electrodialysis, piezodialysis, pervaporation)	1156 Yes ➤	1157	1158		
Gravity (belt)	1159	1160	1161		
Equalisation pond	1162 Yes ➤	1163	1164		
UV disinfection	1165 Yes ➤	1166	1167		
O V GIOIII O GO G					

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	Do you use	If yes, please check the purpose		
Processes and Technologies	this technology?	Is the purpose pollution abatement?	Is the purpose pollution prevention?	
b) Liquid treatment - Continued				
Chemical treatment				
Oxidation				
Wet oxidation system	1171 Yes ➤	1172	1173	
Chemical oxidation	1174 Yes ➤	1175	1176	
Electrochemical oxidation	1177 Yes ➤	1178	1179	
Disinfection				
Chlorination	1180	1981	1182	
Ozonation	1183 Yes 🗡	7184	1185	
Reduction system				
Dephosphating	1186 Yes	1187	1188	
Denitrification	1189 (Yes) 🗡	1190	1191	
Dechlorination	1192	1193	1194	
Neutralisation	(195 ∑ Yes ➤	1196	1197	
lon exchange	11,999 ∐ Yes ➤	1199	1200	
Flocculation	1201 Yes ➤	1202	1203	
Coagulation	1204 Yes ➤	1205	1206	
Demineralisation	1207 <u>Yes</u> ➤	1208	1209	
Nitrification	1210 Yes ➤	1211	1212	
Other (please specify)	1213 Yes ➤	1214	1215	
Thermal treatment				
Incineration	1216 Yes ➤	1217	1218	
Drying	1219	1220	1221	
Evaporation	1222 Yes ➤	1223	1224	
Distillation	1225 Yes ➤	1226	1227	
Fluidised bed	1228	1229	1230	
Thermal oxidation \(\lambda \	1231 Yes ➤	1232	1233	
Other (please specify)	1234 Yes ➤	1235	1236	
Biological treatment				
Aerobic treatment				
Activated sludge dewatering	1237	1238	1239	
Biological polishing or biofiltration	1240 Yes ➤	1241	1242	
Aeration pond	1243 Yes ➤	1244	1245	
Aerobic lagoon	1246 Yes ➤	1247	1248	
	1249 Yes ➤	1250	1251	
Aeration system				
Aeration system		_		
-	1255 Yes ➤	1256	1257	

Biological treatment - Concluded Biological treatment - Concluded Biological reactor		Is the purp pollution 1265	n pollution
Biological treatment - Concluded Biosystem Biological reactor	1267 Yes 1270 Yes 1273 Yes 1276 Yes 1279 Yes	1268 1271 1271 1280	1269
Biological reactor	1267 Yes 1270 Yes 1273 Yes 1276 Yes 1279 Yes	1268 1271 1271 1280	1269
Biological reactor	1267 Yes 1270 Yes 1273 Yes 1276 Yes 1279 Yes	1268 1271 1271 1280	1269
Multiplate reactor	1267 Yes 1270 Yes 1273 Yes 1276 Yes 1279 Yes	1268 1271 1271 1280	1269
Other (please specify) C) Treatment of noise, vibration or radiation Acoustic barriers	1270 Yes 1273 Yes 1276 Yes 1279 Yes 1279 Yes	1271	1272
c) Treatment of noise, vibration or radiation Acoustic barriers	1273 Yes 1276 Yes 1279 Yes	1280	1275
Acoustic barriers 127 Mufflers 127 Other (please specify) 127 d) Energy conservation Do you use one or more of the following energy conservation processes plox(es). Cogeneration	1276 Yes 1279 Yes	1280	1278
Mufflers	1276 Yes 1279 Yes	1280	1278
Other (please specify) d) Energy conservation Do you use one or more of the following energy conservation processes? box(es). Cogeneration Energy efficiency Fuel substitution	1279 Yes	1280	
d) Energy conservation Do you use one or more of the following energy conservation processes? box(es). Cogeneration Energy efficiency Fuel substitution	ses? If yes, pleas)	1281
Do you use one or more of the following energy conservation processes? Cogeneration Energy efficiency Fuel substitution		se check the ap	
box(es). Cogeneration Energy efficiency Fuel substitution		se check the ap	
Energy efficiency			propriate
Energy efficiency			1282
Fuel substitution			1283
			1284
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1			1285
Clean fuel system			1286
Renewable energy source			1287
Solar			1288
Wind power			1289
• \(\)			1290
Biomass energy			1291
Other (please specify)			1292

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Biological treatment		
Biological degradation by aeration or bioventilation	1302	
Bioslurping	Г	
Bioremediation	1204	
Renaturalisation	4005 [
Phytoremediation	Г	
Thermal treatment	^	
Thermal desorption technology	1308	
Thermal oxidation system	1309	
Incineration	1310	
	1311	
Other (please specify)	1311	
f) Waste management		
Do you use one or more of the following waste management processes? If yes, please box(es).	check the appropriate	
Physical		
Container	Γ	
2011am 01 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1312	
\sim (Or		
Dehydration	1313	
Dehydration	1313 [
Dehydration	1313 [
Dehydration	1313 [
Dehydration	1313 [
Dehydration Packaging Modification or preparation of landfill or waste treatment sites Pozzolanic treatment method Compacting Shredding	1313 [
Dehydration Packaging Modification or preparation of landfill or waste treatment sites Pozzolanic treatment method Compacting Shredding Grinding	1313 [
Dehydration Packaging Modification or preparation of landfill or waste treatment sites Pozzolanic treatment method Compacting Shredding Grinding Crushing	1313 [
Dehydration Packaging Modification or preparation of landfill or waste treatment sites Pozzolanic treatment method Compacting Shredding Grinding Crushing Screening	1313 [
Dehydration Packaging Modification or preparation of landfill or waste treatment sites Pozzolanic treatment method Compacting Shredding Crushing Screening Degritting	1313 [
Dehydration Packaging Modification or preparation of landfill or waste treatment sites Pozzolanic treatment method Compacting Shredding Crushing Crushing Degritting Thermal treatment		
Dehydration Packaging Modification or preparation of landfill or waste treatment sites Pozzolanic treatment method Compacting Shredding Grinding Crushing Screening Degritting Thermal treatment Fluidised bed incineration	1313 [
Dehydration Packaging Modification or preparation of landfill or waste treatment sites Pozzolanic treatment method Compacting Shredding Crushing Crushing Degritting Thermal treatment Fluidised bed incineration Pyrolysis	1313 [
Dehydration Packaging Modification or preparation of landfill or waste treatment sites Pozzolanic treatment method Compacting Shredding Grinding Crushing Screening Degritting Thermal treatment Fluidised bed incineration Pyrolysis Incineration	1313 [
Dehydration Packaging Modification or preparation of landfill or waste treatment sites Pozzolanic treatment method Compacting Shredding Grinding Crushing Screening Degritting Thermal treatment Fluidised bed incineration Pyrolysis Incineration Biological treatment	1313 [
Dehydration Packaging Modification or preparation of landfill or waste treatment sites Pozzolanic treatment method Compacting Shredding Grinding Crushing Screening Degritting Thermal treatment Fluidised bed incineration Pyrolysis Incineration Biological treatment Biopiles	1313 [
Dehydration Packaging Modification or preparation of landfill or waste treatment sites Pozzolanic treatment method Compacting Shredding Grinding Crushing Screening Degritting Thermal treatment Fluidised bed incineration Pyrolysis Incineration Biological treatment	1313 [

•••	inimise pollution or to conserve resources.	Yes	N
a)	Does this establishment use an environmental management system? If yes, could you briefly describe?	951	
b)	Is this establishment ISO 14000 certified or does it have an equivalent certification? If yes, please describe.	953	
c)	Is this establishment implementing any environmental voluntary agreement, or is participating in any voluntary environmental program such as ARET (Accelerated Reduction/Elimination of Toxics)? If yes, please list programs, accords or agreements.	955	
d)	Does this establishment have a "green" procurement policy?	957	Ε
e)	Are any of the goods produced by this establishment certified by an environmental Program, for example "Eco-Logo" operated by Terractroice Inc.? If yes, please describe.	959	
f)	Does this establishment report information to the National Pollutant Release Inventory (NPRI)?	961	
g)	Does this establishment publish an annual report on its environmental performance or sustainable development?	963	
h)	Does this establishment use life-cycle analysis for decision-making?	965	
i)	Other	967	

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Co	Comments (Add a page if needed)						
-							
-							
	$\Diamond_{\Lambda}(\bigcirc)^{\vee}$						
	Thank you for your cooperation						
	Thank you for your cooperation						
	a. ((
	\Diamond						
Ce	rtification						
		nformation provid	ded ir	n this questionnaire is correct and complete.			
900	Signature	Date (D / M / Y)	910	Title			
	X						

915

Telephone No.

920

Fax No.

Name of person completing this questionnaire (Type or print)

925

E-mail address

Definitions and concepts

Environmental protection expenditures are defined in this survey 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 abatement and control and expenditures for restoring wildlife and habitat, expenditures for environmental monitoring, environmental assessments and audits, and expenditures for reclamation and decommissioning of sites. Expenditures to improve employee health, workplace safety and site beautification are excluded.

Expenditures to produce pollution 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 reported in Statistics Canada's Survey on Research and Development in Canadian Industry.

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 National Packaging Protocol (reduction of packaging by 50 percent by the year 2000); the Montreal Protocol (elimination of CFCs by 1998); the Canada-U.S. Air Quality Agreement; the "Responsible Care" program from the Canadian Chemical Producers Association; the Accelerated Reduction/Elimination of Toxics (ARET) Program; the Voluntary Challenge and Registry (VCR) Program on climate change; etc.

Environmental regulations refer to any current Canadian federal, provincial, 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 thousands of Canadian dollars. If, for certain categories, no expenditures have been incurred, please write "0" in the corresponding hor

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

Report expenditures made during the 1998 fiscal year.

Include all relevant outlays for machinery and equipment and their installation and repair, 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 construction fees), any materials supplied to construction contractors for installation and any costs associated with the purchase of land that are neither amortised nor depreciated.

Exclude any provisions for future environmental liability.

TO REPORT OPERATING EXPENSES

Include all cash expenses, rather than accruals, incurred during your 1998 fiscal year for labour, fuel and electricity, materials and supplies, and purchased services.

FOR LOGGING ACTIVITIES

Use Question 5 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 6 or 11a 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 9 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, chemical products, pipeline transportation.

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