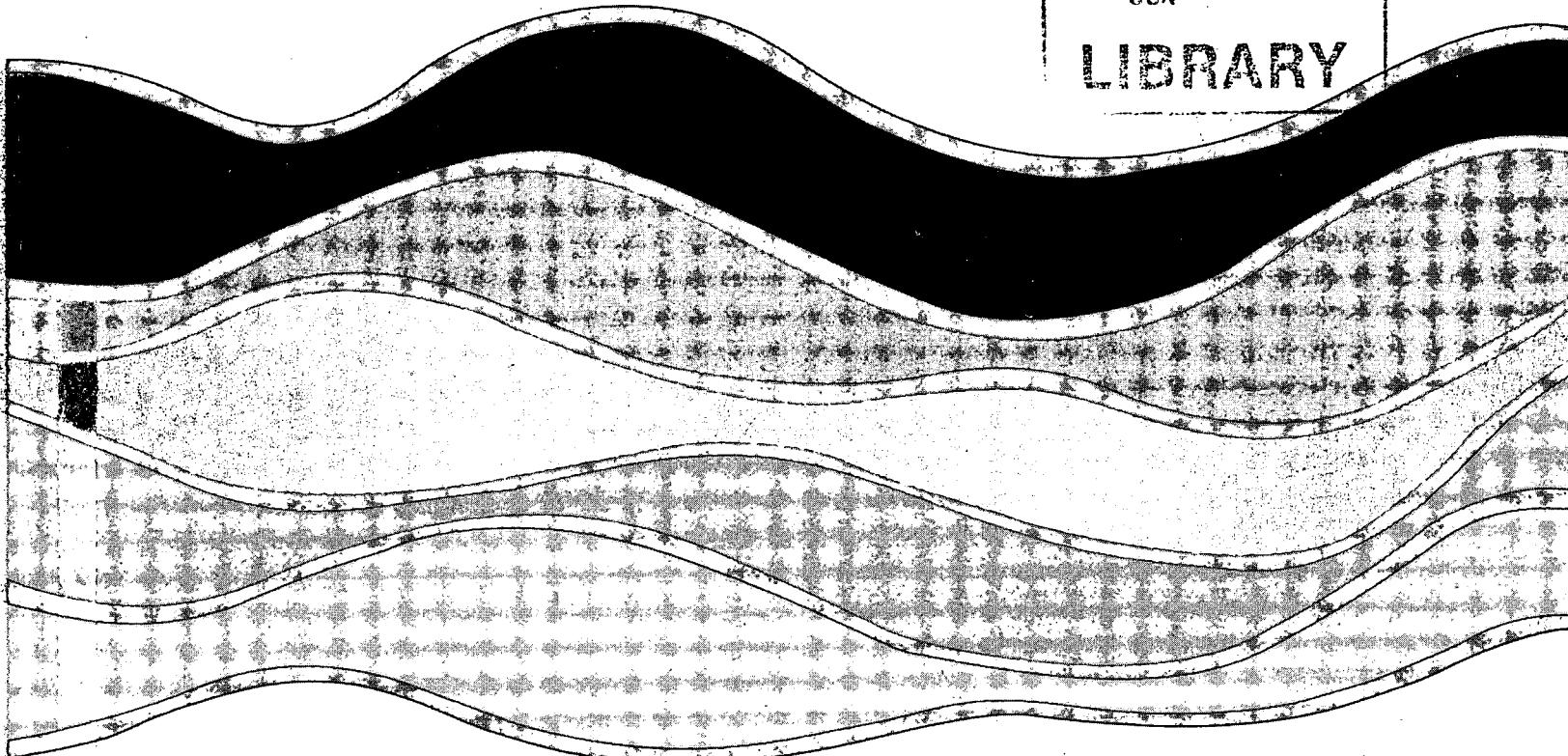
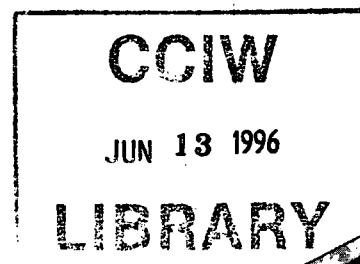
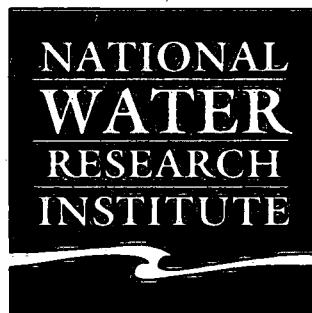


96-03



**Description of Sampling Locations for 1993-1994  
National Water Research Institute Survey for Organotin  
Compounds in Water and Sediment in Canada**

Y.K. Chau, R.J. Maguire, M. Brown, F. Yang and S.P. Batchelor  
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National Water Research Institute  
Department of the Environment  
Canada Centre for Inland Waters  
Burlington, Ontario L7R 4A6

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## **Management Perspective**

The national survey for organotin compounds in water and sediment took place in 1993 and 1994. It was designed (1) to determine environmental concentrations of butyltin species five years after the regulation of antifouling uses of tributyltin in 1989 under the Pest Control Products Act, and (2) to determine environmental concentrations of non-pesticidal organotin compounds to verify the 1993 conclusion that they were not toxic under the Canadian Environmental Protection Act. This report provides detailed descriptions of the sites sampled in the national survey.

## Sommaire à l'intention de la direction

L'enquête nationale sur les composés organostanniques dans l'eau et les sédiments s'est déroulée en 1993 et 1994. Elle avait pour but 1) de déterminer les concentrations des espèces de butylétain dans l'environnement cinq ans après l'entrée en vigueur du règlement sur les utilisations du tributylétain comme produit anticalassure en 1989, aux termes de la Loi sur les produits antiparasitaires et 2) de déterminer les concentrations des composés organostanniques autres que des pesticides dans l'environnement pour vérifier les conclusions, tirées en 1993, qu'ils ne sont pas toxiques aux termes de la Loi canadienne sur la protection de l'environnement. Le présent rapport fournit une description détaillée des sites échantillonés au cours de l'enquête nationale.

**Abstract**

This report provides detailed descriptions of the sites sampled in the 1993-1994 national survey for organotin compounds in water and sediment. The results of the national survey will be published elsewhere. The survey was designed (1) to determine environmental concentrations of butyltin species five years after the regulation of antifouling uses of tributyltin in 1989 under the Pest Control Products Act, and (2) to determine environmental concentrations of non-pesticidal organotin compounds to verify the 1993 conclusion that they were not toxic under the Canadian Environmental Protection Act.

## Résumé

Le présent rapport fournit une description détaillée des sites échantillonnés au cours de l'enquête nationale de 1993-1994 sur les composés organostanniques dans l'eau et les sédiments. Les résultats de l'enquête nationale seront publiés ailleurs. L'enquête avait pour but 1) de déterminer les concentrations des espèces de butylétain cinq ans après l'entrée en vigueur du règlement sur les utilisations du tributylétain comme produit antalisssure en 1989, aux termes de la Loi sur les produits antiparasitaires, et 2) de déterminer les concentrations de composés organostanniques autres que les pesticides de façon à vérifier les conclusions, tirées en 1993, qu'ils ne sont pas toxiques aux termes de la Loi canadienne sur la protection de l'environnement.

## Introduction

Water samples were usually collected at a depth of 0.5 m in solvent-washed 4 L glass bottles. The water samples were preserved with 7 mL of pre-extracted concentrated hydrochloric acid. The top 4-5 cm of sediment (typically, 200 g) was collected with an Ekman dredge and placed in solvent-washed glass jars. The water and sediment samples were returned to the laboratory as soon as possible (usually a few days or less), where the water samples were stored at 4 °C, and the sediment samples at -20 °C, before extraction. Details of the extraction and analytical procedures are provided in the report of the national survey.

Table 1 gives sampling sites for water and sediment in 10 Canadian harbours and rivers in 1993. Table 2 gives sampling sites for water and sediment at 131 selected Canadian locations in 1994 (including 2 locations in New York State, two industrial effluents in Ontario, and 4 leachate samples from an Ontario landfill). Table 3 shows the correspondence between sampling locations in 1993 and 1994. Table 4 shows the correspondence between sampling locations in 1994 and those from the first national survey for organotin compounds in the Canadian environment, whose results were published in 1986.

## Acknowledgements

We thank the following Environment Canada regional personnel for their help in collecting water and sediment samples: C. Garrett, B. Tassone, B. McNaughton, A. Ryan, L. Mottle, R. Crosley, S. Proulx, J. Tisdale, R. Woychuk, J. Pomeroy, T. Pollock and D. Legault. We thank J.A.J. Thompson (Institute of Ocean Sciences, Department of Fisheries and Oceans, Sidney, British Columbia) for the surface microlayer samples. We thank the following persons for collection of sewage treatment plant samples: S. Bertold (Greater Vancouver Regional District, Burnaby, British Columbia), J. Drums (Hamilton Wentworth Treatment Plant, Hamilton, Ontario), J. Lopez-Gastey and J. Boulay (Montréal Urban Community, Montréal, Québec), A. Dobson (Toronto Main Treatment Plant, Toronto, Ontario), T. Allen (Water Pollution Control Centre, Sarnia, Ontario), G. Brown (Gold Bar Waste Water Treatment Plant, Edmonton, Alberta), J. Main (North End Treatment Plant, Winnipeg, Manitoba), B. Miller and A. Fries (City of Regina Public Works Department, Regina, Saskatchewan), R. Brophy (Wastewater Treatment Plant and Plumbing, Saint John, New Brunswick), H. Van Omme (Charlottetown Area Pollution Control, Charlottetown, Prince Edward Island), S. Muir (Millcove Sewage Treatment Plant, Bedford, Nova Scotia), and B. Birrell (Public Works and Government Services Canada, Gloucester, Ontario). Finally, we thank E.H. Walker, R.J. Hess and S.B. Smith of the Technical Operations staff of the National Water Research Institute for assistance in sampling in some harbours and rivers over

the years. This work was partially supported by PESTMYOP of Environment Canada.

**Table 1. Sampling locations for water and sediment in Canadian harbours and rivers in 1993.\***

No.	Location	Details	Lat./Long.	Depth, m	Date
<b>Ontario</b>					
1	Hamilton Harbour	unspecified			1993/09/20
2	Toronto Harbour	middle of inner harbour		10	1993/09/20
3	St. Clair River	Sarnia, offshore from Esso plant		2	1993/09/20
4	Welland River	Niagara Falls, downstream from B.F. Goodrich PVC plant		10	1993/09/20
<b>Québec</b>					
5	St. Lawrence R. at Québec	Québec Marina at Quai de la Reine		10-15	1993/10/04
<b>New Brunswick</b>					
6	Saint John Harbour	off potash wharf in Courtenay Bay	73°31'80" 50°17'00"	14	1993/10/14
<b>Prince Edward Island</b>					
7	Charlottetown Harbour	off end of old Esso wharf	49°06'50" 51°19'40"	17	1993/10/14

cont'd next page

Table 1 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
<b>Nova Scotia</b>					
8	Halifax Harbour	at container terminal docking area	45°55'00" 49°41'50"	17	1993/09/10
9	Sydney Harbour	off pier at Irving Oil dock	71°53'00" 51°10'80"	9	1993/08/28
<b>Newfoundland</b>					
10	St. John's Harbour	center of harbour	52°69'00" 37°20'00"	20	1993/08/27

\*Samples from Ontario and Québec were from freshwater, and samples from the other locations were from seawater. Water samples were usually collected at a depth of 0.5 m.

**Table 2. Sampling locations for water and sediment in Canadian harbours and rivers in 1994 (includes two locations in New York State, U.S.A., two industrial effluents and four leachate samples from an Ontario landfill).\***

No.	Location	Details	Lat./Long.	Depth, m	Date
<b>British Columbia</b>					
1	Nanaimo Harbour	near Beacon Rock, slack tide (high), 10:21h		8	1994/10/09
2	Esquimalt Harbour	northwest of Inskip Island, slack tide (low), 08:50 h		5	1994/10/04
3	Victoria Harbour	between Shoal and Songhees Points, slack tide (low), 08:50		5	1994/10/04
4	False Creek (1)	east of Coast Guard pier - in first bay of boats	49°16'36" 123°08'26"	8	1994/12/09
5	False Creek (2)	between fisherman's docks & yacht club at end (by Vancouver city building)	49°16'26" 123°08'19"	8	1994/12/09
6	False Creek (3)	off Lafarge Ocean Cement terminal	49°16'17" 123°07'55"	8	1994/12/02
7	False Creek (4)	at end by last "bay" of boats, west of Caballeros Restaurant	49°16'03" 123°07'12"	5	1994/12/09
8	False Creek (5)	south side of Creek, off small dock with metal gangway just west of Cambie St. bridge	49°16'17" 123°06'56"	8-11	1994/12/02

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Table 2 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
9	False Creek (6)	by Symphony of Fire barge - 780 ft. off orange barge	49°16'26" 123°06'24"	8	1994/12/02
10	False Creek (7)	east end of Creek - off north end of dock	49°16'25" 123°06'16"		1994/12/09
11	Burrard Inlet (1)	off Lion's Gate Sewage Treatment Plant	49°19'02" 123°08'15"	11	1994/11/30
12	Burrard Inlet (2)	Vancouver Wharves	49°18'40" 123°07'12"	9	1994/11/30
13	Burrard Inlet (3)	old L&K Lumber site	49°18'47" 123°06'52"	12	1994/11/30
14	Burrard Inlet (4)	Vancouver Shipyards	49°18'49" 123°06'18"	9-10	1994/11/30
15	Burrard Inlet (5)	old site of Versatile Pacific Shipyards	49°18'30" 123°04'30"	9-13	1994/11/30
16	Burrard Inlet (6)	Saskatchewan Wheat Pool - off mid-point of stationary barge	49°18'18" 123°03'30"	21	1994/11/30
17	Burrard Inlet (7)	end of rectangular bay - between Neptune Bulk Terminals and Seaboard International	49°18'15" 123°02'47"	17	1994/11/30
18	Burrard Inlet (8)	by Delta Catalytic	49°18'06" 123°02'23"	10	1994/11/30

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Table 2 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
19	Burrard Inlet (9)	off Allied Shipyards	49°18'06" 123°01'23"	7	1994/11/30
20	Burrard Inlet (10)	west of Ocean Fisheries	49°17'15" 123°03'33"	12-18	1994/11/30
21	Burrard Inlet (11)	at old site of BC Marine Shipbuilders	49°17'15" 123°04'01"	7-9	1994/11/30
22	Burrard Inlet (12)	west end of rectangular bay bounded by Centennial and Ballantyne Piers	49°17'09" 123°05'24"	18	1994/11/30
23	Burrard Inlet (13)	at old site of Menchion's Shipyard	123°07'38" 49°17'33"	6	1994/11/30
24	Burrard Inlet (14)	off Westin Bayshore Hotel	49°17'38" 123°07'45"	9	1994/11/30
25	Burrard Inlet (15)	at Harbour Ferries	49°17'42" 123°07'58"	9	1994/11/30
26	Burrard Inlet (16)	30 m from shore, west of Royal Vancouver Yacht Club	49°17'45" 123°07'45"	9	1994/11/30

**Alberta**

27	North Saskatchewan R. (1)	4 km downstream from Fort Saskatchewan, close to intersection of Township Rd. 554 and Range Rd. 221 (sandy sediment)	<0.3	1994/10/19
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Table 2 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
28	North Saskatchewan R. (2)	downstream from Hwy. 60 bridge at Devon		<0.3	1994/10/19
29	North Saskatchewan R. (3)	upstream from B.F. Goodrich PVC plant at Fort Saskatchewan		1	1994/09/11
30	Bow R. (1) downstream from Calgary	approx. 500 m downstream from Hwy. 22 bridge		<0.3	1994/10/20
31	Bow R. (2) upstream from Calgary	immediately upstream from Bowness Park		<0.3	1994/10/20

**Saskatchewan**

32	South Saskatchewan R. (1)	30 km downstream from Saskatoon, at Hwy. 784 ferry crossing		1.5	1994/10/19
33	South Saskatchewan R. (2)	Saskatoon, upstream from 42nd Street bridge (sandy sediment)		1.5	1994/10/19

**Manitoba**

34	Red R. (1) upstream from Winnipeg	at Hwy. 101, South Perimeter bridge		6.3	1994/11/08
35	Red R. (2) downstream from Winnipeg	at Hwy. 101, North Perimeter bridge		8.2	1994/11/08

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Table 2 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
<b>Ontario</b>					
36	Thunder Bay (1)	Abitibi-Price Mill	48°52'47" 89°52'05"	5	1994/06/08
37	Thunder Bay (2)	5 m offshore from United Grain Growers elevator	48°27'36" 89°10'33"	11	1994/06/08
38	Thunder Bay (3)	Mission Bay, 500 m north of shipping lane	48°21'18" 89°12'24"	3	1994/06/08
39	Nipigon Bay	Red Rock, by Red Rock Pulp Mill, 1 km offshore, between Five Mile Point and Cook Point	48°56'24" 88°13'33"	3	1994/06/08
40	Terrace Bay	in discharge trough of Kimberly-Clark Pulp and Paper Mill			1994/06/08
41	Marathon	200 m offshore from pulp mill, close to Jellicoe Cove	48°43'21" 86°23'40"	5	1994/06/09
42	St. Marys R. at Sault Ste. Marie (1)	Algoma Steel Corp. ship entrance	46°31'05" 84°22'40"	7	1994/06/09
43	St. Marys R. at Sault Ste. Marie (2)	in the Canadian Lock, 100 m below lower lock gate (sandy sediment)	46°30'43" 84°20'40"	5	1994/06/09
44	St. Marys R. at Sault Ste. Marie (3)	by Ontario Ministry of Natural Resources building (50 m offshore) (sandy sediment)	46°30'10" 84°19'30"	6	1994/06/09

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Table 2 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
45	Midland Bay	Wye Heritage Marina	44°44'56" 79°50'52"	2	1994/05/30
46	Penetang Harbour	south basin	44°46'14" 79°57'06"	1	1994/05/30
47	Collingwood Harbour (1)	No. 1 Dry Dock (disused)	44°30'30" 80°13'03"	4	1994/05/30
48	Collingwood Harbour (2)	by Collingwood Yacht Club	44°30'33" 80°13'16"	2	1994/05/30
49	Collingwood Harbour (3)	middle of turning basin at end of breakwater	44°30'40" 80°13'34"	6	1994/05/30
50	Owen Sound Harbour	mouth of Sydenham River (sandy sediment)	44°35'06" 80°56'05"	5	1994/05/31
51	St. Clair R. (1)	head of river, close to Pt. Edward (sandy sediment)	43°00'15" 82°25'00"	11	1994/05/31
52	St. Clair R. (2)	downstream from Sunoco (sandy sediment)	42°55'19" 82°27'30"	9	1994/05/31
53	St. Clair R. (3)	upstream from Corunna, in effluent from Ethyl Corp.			1994/05/31
54	St. Clair R. (4)	at Corunna, 50 m downstream from Ethyl Corp. discharge, 30 m offshore (sandy sediment)	42°53'40" 82°27'19"	8	1994/05/31

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Table 2 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
55	St. Clair R. (5)	at Walpole Island ferry (sandy sediment)	42°37'00" 82°31'11"	8	1994/05/31
56	St. Clair R. (6)	at delta, south channel from Seaway Island (sandy sediment)	42°30'47" 82°41'41"	4	1994/05/31
57	Lake St. Clair	marina in Mitchell Bay (St. Clair Parkway Conservation Authority) (sandy sediment)	42°28'00" 82°24'56"	1.2	1994/06/01
58	Thames R.	mouth of river	42°19'21" 82°27'17"	2	1994/06/01
59	Detroit R. (1)	100 m offshore from Ford Motor Co. (sandy sediment)	42°19'40" 83°00'49"	11	1994/06/01
60	Detroit R. (2)	200 m south of Peche Island	42°20'40" 82°56'07"	8	1994/06/01
61	Detroit R. (3)	50 m southeast of Fighting Island	42°11'40" 83°06'27"	1	1994/06/01
62	Detroit R. (4)	Amherstburg, 100 m offshore and east of Bois Blanc Island	42°05'37" 83°07'00"	8	1994/06/01
63	Detroit R. (5)	20 m offshore from west side of Grosse Ile, 1.5 km south of West River Yacht Club	42°06'48" 83°10'36"	4	1994/06/01
64	Port Stanley	inside breakwater, main channel	42°39'18" 81°12' 48"	6	1994/06/02

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Table 2 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
65	Port Dover (1)	mouth of Lynn River	42°46'57" 80°12'02"	2	1994/06/02/
66	Port Dover (2)	downstream from Black Creek, 30 m offshore in Lynn River	42°47'17" 80°11'56"	2	1994/06/02
67	Nanticoke	off the pier		2	1994/06/02
68	Port Colborne	50 m offshore from Maple Leaf Milling	43°52'19" 79°15'05"	8	1994/07/06
69	Welland Canal (1)	at Port Colborne by grain elevators		5	1994/06/02
70	Welland Canal (2)	200 m downstream from Ontario Paper	43°06'47" 79°11'54"		1994/07/08
71	Welland R.	downstream from B.F. Goodrich PVC plant		1.5	1994/07/08
72	Port Weller	at entrance to Welland Canal	43°13'42" 79°13'00"	7	1994/07/06
73	Buffalo Harbor (1) (New York State, U.S.A.)	at Buffalo River entrance channel	42°52'47" 78°52'05"	8	1994/06/03
74	Buffalo Harbor (2) (New York State, U.S.A.)	outer harbor southern channel	42°50'18" 78°52'05"	6	1994/06/03
75	Niagara R. (1) at Niagara-on-the-Lake	outside marina in center of river	43°15'25" 79°03'36"		1994/07/06

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Table 2 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
76	Niagara R. (2) at Fort Erie	400 m upstream from Peace Bridge, in center of river	42°54'09" 78°54'19"		1994/07/06
77	Lake Erie (1)	middle of lake	41°57'05" 81°39'20"		1994/10/04
78	Lake Erie (2)	western end of lake	41°49'40" 82°58'13"		1994/10/05
79	Lake Erie (3)	eastern end of lake	42°30'28" 79°53'55"		1994/10/04
80	Lake Ontario (1)	middle	43°43'00" 78°01'18"		1994/10/06
81	Lake Ontario (2)	eastern end	44°01'00" 76°40'18"		1994/10/05
82	Port Dalhousie	100 m downstream from sluice gate	43°12'00" 79°15'51"	2.5	1994/06/30
83	Belleville	mouth of Moira R. (sandy sediment)	44°09'09" 77°22'39"	3	1994/06/28
84	Port Hope (1)	in mooring area	43°56'41" 78°17'35"	2.5	1994/06/28

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Table 2 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
85	Port Hope (2)	mouth of Ganaraska R.	43°56'35" 78°17'29"	2	1994/06/28
86	Whitby Harbour (1)	half-way between end of breakwater and buoy "MXB"	43°51'10" 78°56'02"	2	1994/06/28
87	Whitby Harbour (2)	at Whitby Yacht Club, southwest corner of floating docks	43°51'07" 78°56'09"	1.9	1994/06/28
88	Port Credit	mouth of Credit R.	43°32'57" 79°34'59"	2	1994/06/28
89	Humber R.	mouth (sandy sediment)	43°37'52" 79°28'16"	1.5	1994/06/23
90	Toronto Harbour (1)	1 km south of Centre Island close to Toronto Islands filtration plant inlet pipe 2 (sandy sediment)	43°36'23" 79°22'47"	12	1994/06/23
91	Toronto Harbour (2)	middle of turning basin	43°39'09" 79°20'00"	8.5	1994/06/23
92	Toronto Harbour (3)	150 m directly offshore from Continental Can - Cherry Street	43°38'52" 79°21'19"	10	1994/06/23
93	Toronto Harbour (4)	in Keating Channel	43°38'52" 79°21'19"	7	1994/06/23

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Table 2 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
94	Toronto Harbour (5)	at Harbour Castle	43°38'00" 79°22'06"	7.5	1994/06/23
95	Toronto Harbour (6)	middle of inner harbour	43°38'00" 79°22'30"	8.5	1994/06/23
96	Toronto Harbour (7)	east end of Western Gap	(sed.)43°38'07" 79°23'43" (water)43°38'04" 79°23'41"	7	1994/06/23
97	Hamilton Harbour (1)	Hamilton Yacht Club	43°16'36" 79°51'53"	7	1994/06/22
98	Hamilton Harbour (2)	middle of harbour	43°17'17" 79°50'12"	26	1994/06/22
99	Hamilton Harbour (3)	middle of Ottawa Street Slip	43°16'41" 79°48'21"	4	1994/06/22
100	Hamilton Harbour (4)	near bridge over Redhill Creek	43°16'08" 79°46'54"	11	1994/06/22
101	Hamilton Harbour (5)	at STP outfall buoy	43°18'28" 79°48'27"	7	1994/06/22
102	Kingston Harbour (1)	mouth of Cataraqui R.	44°13'52" 76°28'38"	7	1994/06/17

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Table 2 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
103	Kingston Harbour (2)	mouth of dry dock	44°14'11" 76°28'38"	4	1994/06/17
104	St. Lawrence R. at Maitland	middle of Blue Church Bay	(sed.)44°40'39" 75°33'33" (water)44°40'42" 75°33'27"	2	1994/06/16
105	St. Lawrence R. at Cornwall (1)	125 m directly offshore from Courtaulds	45°01'04" 74°41'03"	4.2	1994/06/15
106	St. Lawrence R. at Cornwall (2)	at opening of Marina Co-operative de Cornwall	45°00'52" 74°43'08"		1994/06/15
107	St. Lawrence R. at Cornwall (3)	10 m offshore from Domtar parking lot	45°00'45" 74°44'24"		1994/06/15
108	Gloucester Landfill (1)	Shallow well #12 - leachate			1994/11/09
109	Gloucester Landfill (2)	Shallow well #13 - leachate			1994/11/09
110	Gloucester Landfill (3)	Shallow well #1 - leachate			1994/11/09
111	Gloucester Landfill (4)	Shallow well #2 - leachate			1994/11/09

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Table 2 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
<b>Québec</b>					
112	Richelieu R. at Sorel (1)	just outside slip at Marine Industries Ltd. (sandy sediment)	46°02'10" 73°07'03"	8	1994/06/14
113	Richelieu R. at Sorel (2)	near Pont Turcotte directly across from Acier Sorel in middle of river (sandy sediment)	46°02'26" 73°07'03"	8	1994/06/14
114	Montréal Harbour (1)	in Bassin de la Pointe du Moulin à Vent	45°29'45" 73°32'57"	8	1994/06/14
115	Montréal Harbour (2)	between Pointe du Moulin à Vent and Jetée Alexandra	45°30'02" 73°33'02"	8	1994/06/14
116	Montréal Harbour (3)	between Jetée King Edward and Quai Jacques-Cartier	45°30'39" 73°32'59"	9	1994/06/14
117	Montréal Harbour (4)	in Bassin Market	45°30'39" 73°32'56"	8	1994/06/14
118	Montréal Harbour (5)	in Canal de la Rive Sud	45°30'13" 73°31'15"	13	1994/06/14
119	Montréal Harbour (6)	at end of sinking basin/dry dock (near Canadian Steel Foundries)	45°33'39" 73°31'12"	14	1994/06/14
120	Bassin Louise at Québec	middle of Basin		9.3	1994/10/03

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Table 2 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
121	Québec Harbour	middle of marina between Wharves 30 and 31		13.3	1994/10/03
122	Québec Harbour - Quai de la Reine	near St. Charles River mouth at buoy "Québec", 30 m offshore		10	1994/10/03
<b>New Brunswick</b>					
123	Saint John Harbour	off potash wharf in Courtenay Bay		14	1994/08/31
<b>Prince Edward Island</b>					
124	Charlottetown Harbour (1)	off end of old Esso wharf		17	1994/08/03
125	Charlottetown Harbour (2)	off end of old Esso wharf		17	1994/10/03
<b>Nova Scotia</b>					
126	Halifax Harbour (1)	Department of National Defence submarine dock		10	1994/08/19
127	Halifax Harbour (2)	Halifax Dartmouth Industries Ltd. Dry Dock		8	1994/08/19
128	Halifax Harbour (3)	ocean end of Halterm container terminal		10	1994/08/19
129	Sydney Harbour	off pier at Irving Oil dock		9	1994/08/19

cont'd next page

Table 2 cont'd

No.	Location	Details	Lat./Long.	Depth, m	Date
<b>Newfoundland</b>					
130	St. John's Harbour (1)	30 m north of mouth of river, 30 m offshore (close to Coast Guard dock)		20	1994/08/02
131	St. John's Harbour (2)	middle of harbour		20	1994/08/02

\*Water samples from British Columbia, New Brunswick, Prince Edward Island, Nova Scotia and Newfoundland were from seawater, and water samples from Alberta, Saskatchewan, Manitoba, Ontario and Québec were from freshwater. Water samples were usually collected at a depth of 0.5 m. There were 2 industrial effluent samples [40,53], 4 landfill leachate samples [108-111], 35 marine sampling locations and 90 freshwater sampling locations, including 2 in New York State, U.S.A. [73,74].

**Table 3. Correspondence between sampling locations in 1993 and 1994.**

1993 Site No.	1994 Site No.
2	95
4	71
5	122
6	123
7	124
9	129
10	131

Table 4. Correspondence between sampling locations in this survey and those in the survey published in 1986.\*

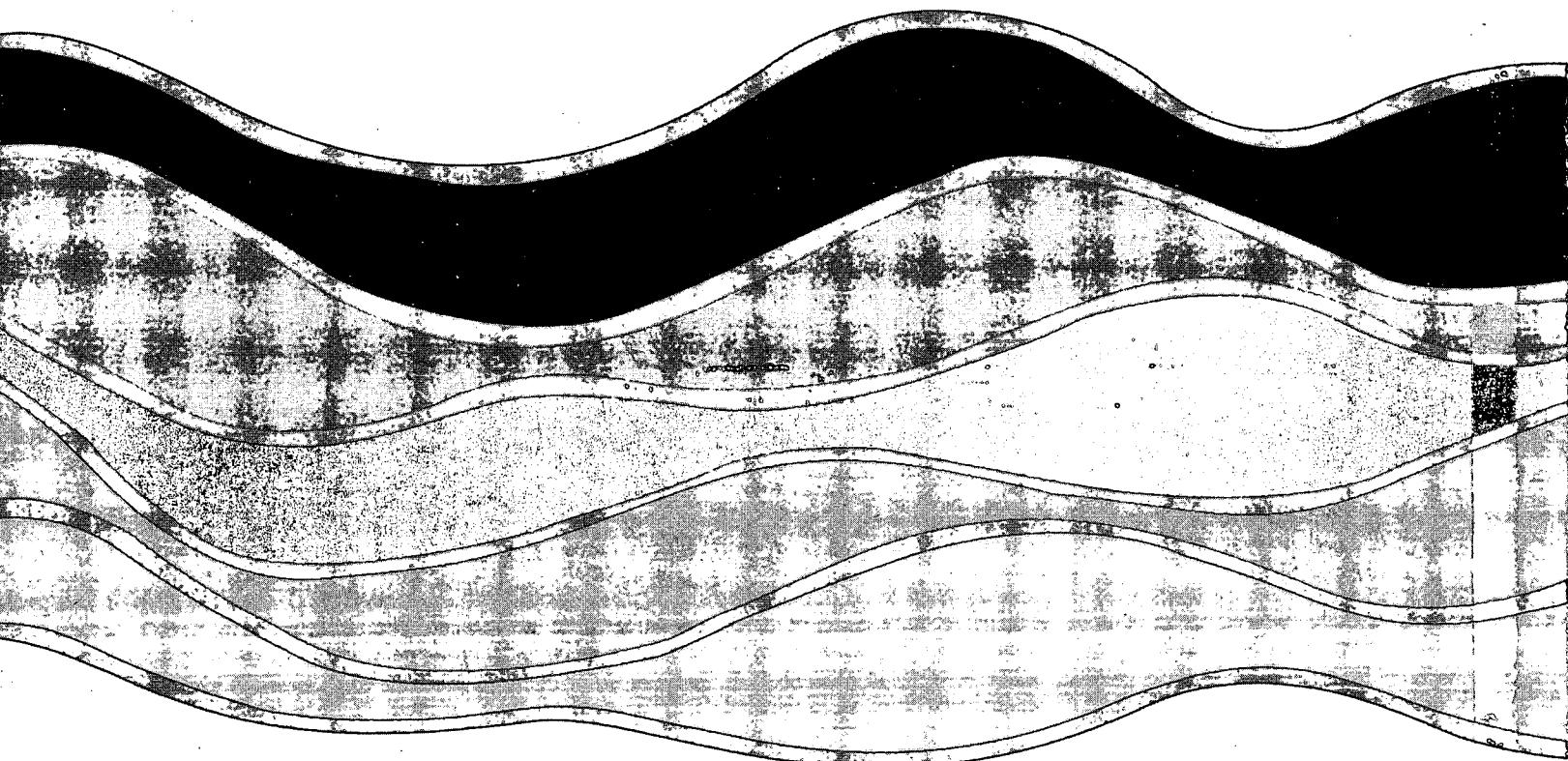
1994 Site No.	1986 Site No.	1994 Site No.	1986 Site No.
1	1	67	169
2	5	69	178
3	7	75	176
11	9	83	196
12	12	85	192
13	14	87	190
23	41	88	184
27	86	89	185
28	80	95	187
30	92	96	186
31	90	102	197
32	101	104	199
33	100	106	203
34	109	112	242
35	110	114	235
36	120	115	236
39	123	116	237
40	124	117	238
42	134	120	246
44	135		
49	150		
50	151		
53	155		
57	161		
58	162		
61	164		
64	167		

\*Reference for the survey published in 1986: Maguire, R.J., Tkacz, R.J., Chau, Y.K., Bengert, G.A. and Wong, P.T.S. (1986). Occurrence of organotin compounds in water and sediment in Canada. *Chemosphere* 15, 253-274.

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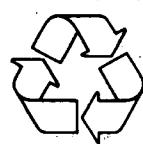


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