

APPENDIX C

Trans-Boundary Notification

The Canada/U.S. Air Quality Agreement Transboundary Notification Under Article V

Date Submitted:

Name and full address of proponent including a contact for technical information:

Name : Covanta Durham/York, Inc

Address :

Contact phone:

Fax:

Brief description of the proposed project. (major products, process, capacity, etc):

The proposed EFW Facility will process about 140,000 tonnes of municipal solid waste annually. There will be two completely independent waste processing trains at the Facility. Each train will consist of a feed chute, stoker, integrated furnace/boiler, acid gas scrubber, a fabric filter baghouse and associated ash and residue collection systems. Steam produced in the boilers will drive a turbine-generator to produce electricity for delivery to the grid, and internal use.

Latitude and Longitude of proposed facility:

43 Degrees 52'29" **N**
78 Degrees 45'11" **W**

Distance to the Canada/U.S. border (to the nearest kilometre):

27 **km**

For combustion processes, list capacity (tonnes/year), fuel type and grade.

Capacity: 400,000 tonnes/year

Fuel Type: Municipal solid waste

Fuel Grade: N/A

What are the estimated annual quantities of the following pollutants released to the atmosphere (tonnes per year)?

SO₂ 124 tonnes/year

PM 31.8 tonnes/year

VOC 173 tonnes/year

CO 159 tonnes/year

NO_x (equivalent to NO₂) 428 tonnes/year

List hazardous air pollutants with emissions estimate (tonnes/year) for any hazardous pollutants with expected annual emission rates of greater than 1 tonne per year:

Ammonia: 19.1 tonnes/year

Hydrochloric Acid: 31.8 tonnes/year

Hydrogen Fluoride: 3.2 tonnes/year

Forward completed forms to:

Transboundary Air Issues Branch
Environmental Protection Service
Environment Canada
Ottawa, Ontario
K1A 0H3

Substances Listed on the National Pollutant Release Inventory for 2000

The substance numbers (#1-268) correspond to the numbers used in the Canada Gazette notice, published December 25, 1999.

Name **CAS Registry Number**

PART 1

1. Acetaldehyde	75-07-0
2. Acetonitrile	75-05-8
3. Acetophenone	98-86-2
4. Acrolein ²	107-02-8
5. Acrylamide	79-06-1
6. Acrylic acid ³	79-10-7
7. Acrylonitrile	107-13-1
8. Alkanes, C6-18, chloro	68920-70-7
9. Alkanes, C10-13, chloro	85535-84-8
10. Allyl alcohol	107-18-6
11. Allyl chloride	107-05-1
12. Aluminum ⁴	7429-90-5
13. Aluminum oxide ⁵	1344-28-1
14. Ammonia (total) ⁶	*
15. Aniline ³	62-53-3
16. Anthracene	120-12-7
17. Antimony ⁷	*
18. Arsenic ⁷	*
19. Asbestos ⁸	1332-21-4
20. Benzene	71-43-2
21. Benzoyl chloride	98-88-4
22. Benzoyl peroxide	94-36-0
23. Benzyl chloride	100-44-7
24. Biphenyl	92-52-4
25. Bis(2-ethylhexyl) adipate	103-23-1
26. Bis(2-ethylhexyl) phthalate	117-81-7
27. Boron trifluoride	7637-07-2
28. Bromine	7726-95-6
29. 1-Bromo-2-chloroethane	107-04-0
30. Bromomethane	74-83-9
31. 1,3-Butadiene	106-99-0
32. 2-Butoxyethanol	111-76-2
33. Butyl acrylate	141-32-2
34. i-Butyl alcohol	78-83-1
35. n-Butyl alcohol	71-36-3
36. sec-Butyl alcohol	78-92-2
37. tert-Butyl alcohol	75-65-0
38. Butyl benzyl phthalate	85-68-7
39. 1,2-Butylene oxide	106-88-7
40. Butyraldehyde	123-72-8
41. C.I. Acid Green 3	4680-78-8
42. C.I. Basic Green 4	569-64-2
43. C.I. Basic Red 1	989-38-8
44. C.I. Direct Blue 218	28407-37-6
45. C.I. Disperse Yellow 3	2832-40-8
46. C.I. Food Red 15	81-88-9
47. C.I. Solvent Orange 7	3118-97-6
48. C.I. Solvent Yellow 14	842-07-9
49. Cadmium ⁷	*
50. Calcium cyanamide	156-62-7
51. Calcium fluoride	7789-75-5
52. Carbon disulphide	75-15-0
53. Carbon tetrachloride	56-23-5
54. Catechol	120-80-9

55. CFC-11	75-69-4	
56. CFC-12	75-71-8	
57. CFC-13	75-72-9	
58. CFC-114	76-14-2	
59. CFC-115	76-15-3	
60. Chlorendic acid	115-28-6	
61. Chlorine	7782-50-5	
62. Chlorine dioxide	10049-04-4	
63. Chloroacetic acid ³	79-11-8	
64. Chlorobenzene	108-90-7	
65. Chloroethane	75-00-3	
66. Chloroform	67-66-3	
67. Chloromethane	74-87-3	
68. 3-Chloro-2-methyl-1-propene		563-47-3
69. 3-Chloropropionitrile	542-76-7	
70. Chromium ⁷	*	
71. Cobalt ⁷	*	
72. Copper ⁷	*	
73. Cresol ^{3, 9}	1319-77-3	
74. m-Cresol ³	108-39-4	
75. o-Cresol ³	95-48-7	
76. p-Cresol ³	106-44-5	
77. Crotonaldehyde	4170-30-3	
78. Cumene	98-82-8	
79. Cumene hydroperoxide	80-15-9	
80. Cyanides ¹⁰	*	
81. Cyclohexane	110-82-7	
82. Cyclohexanol	108-93-0	
83. Decabromodiphenyl oxide	1163-19-5	
84. 2,4-Diaminotoluene ³	95-80-7	
85. 2,6-Di-t-butyl-4-methylphenol		128-37-0
86. Dibutyl phthalate	84-74-2	
87. o-Dichlorobenzene	95-50-1	
88. p-Dichlorobenzene	106-46-7	
89. 3,3¢ -Dichlorobenzidine dihydrochloride		612-83-9
90. 1,2-Dichloroethane	107-06-2	
91. Dichloromethane	75-09-2	
92. 2,4-Dichlorophenol ³	120-83-2	
93. 1,2-Dichloropropane	78-87-5	
94. Dicyclopentadiene	77-73-6	
95. Diethanolamine ³	111-42-2	
96. Diethyl phthalate	84-66-2	
97. Diethyl sulphate	64-67-5	
98. Dimethylamine	124-40-3	
99. N,N-Dimethylaniline ³	121-69-7	
100. Dimethyl phenol	1300-71-6	
101. Dimethyl phthalate	131-11-3	
102. Dimethyl sulphate	77-78-1	
103. 4,6-Dinitro-o-cresol ³	534-52-1	
104. 2,4-Dinitrotoluene	121-14-2	
105. 2,6-Dinitrotoluene	606-20-2	
106. Dinitrotoluene ⁹	25321-14-6	
107. Di-n-octyl phthalate	117-84-0	
108. 1,4-Dioxane	123-91-1	
109. Diphenylamine	122-39-4	
100. Epichlorohydrin	106-89-8	
111. 2-Ethoxyethanol	110-80-5	

112.	2-Ethoxyethyl acetate		111-15-9
113.	Ethoxynonyl benzene		28679-13-2
114.	Ethyl acrylate	140-88-5	
115.	Ethylbenzene	100-41-4	
116.	Ethyl chloroformate		541-41-3
117.	Ethylene	74-85-1	
118.	Ethylene glycol	107-21-1	
119.	Ethylene oxide	75-21-8	
120.	Ethylene thiourea		96-45-7
121.	Fluorine	7782-41-4	
122.	Formaldehyde	50-00-0	
123.	Formic acid	64-18-6	
124.	Halon 1211	353-59-3	
125.	Halon	1301 75-63-8	
126.	HCFC-22	75-45-6	
127.	HCFC-122 and all isomers	11	41834-16-6
128.	HCFC-123 and all isomers	12	34077-87-7
129.	HCFC 124 and all isomers	13	63938-10-3
130.	HCFC-141b	1717-00-6	
131.	HCFC-142b	75-68-3	
132.	Hexachlorocyclopentadiene		77-47-4
133.	Hexachloroethane	67-72-1	
134.	Hexachlorophene	70-30-4	
135.	n-Hexane	110-54-3	
136.	Hydrazine	302-01-2	
137.	Hydrochloric acid		7647-01-0
138.	Hydrogen cyanide	74-90-8	
139.	Hydrogen fluoride		7664-39-3
140.	Hydrogen sulphide		7783-06-4
141.	Hydroquinone	123-31-9	
142.	Iron pentacarbonyl		13463-40-6
143.	Isobutyraldehyde	78-84-2	
144.	Isophorone diisocyanate		4098-71-9
145.	Isoprene	78-79-5	
146.	Isopropyl alcohol	67-63-0	
147.	p,p'-Isopropylidenediphenol		80-05-7
148.	Isosafrole	120-58-1	
149.	Lead	*	
150.	Lithium carbonate	554-13-2	
151.	Maleic anhydride	108-31-6	
152.	Manganese	*	
153.	2-Mercaptobenzothiazole		149-30-4
154.	Methanol	67-56-1	
155.	2-Methoxyethanol	109-86-4	
156.	2-Methoxyethyl acetate		110-49-6
157.	Methyl acrylate	96-33-3	
158.	Methyl tert-butyl ether		1634-04-4
159.	p,p'-Methylenebis(2-chloroaniline)		101-14-4
160.	1,1-Methylenebis(4-isocyanatocyclohexane)		5124-30-1
161.	Methylenebis(phenylisocyanate)		101-68-8
162.	p,p'-Methylenedianiline	101-77-9	
163.	Methyl ethyl ketone	78-93-3	
164.	Methyl iodide	74-88-4	
165.	Methyl isobutyl ketone		108-10-1
166.	Methyl methacrylate		80-62-6
167.	N-Methylolacrylamide		924-42-5
168.	2-Methylpyridine	109-06-8	

169.	N-Methyl-2-pyrrolidone	872-50-4	
170.	Michler's ketone ³	90-94-8	
171.	Molybdenum trioxide	1313-27-5	
172.	Naphthalene	91-20-3	
173.	Nickel ⁷	*	
174.	Nitrate ion ¹⁴	*	
175.	Nitric acid	7697-37-2	
176.	Nitrilotriacetic acid ³	139-13-9	
177.	p-Nitroaniline	100-01-6	
178.	Nitrobenzene	98-95-3	
179.	Nitroglycerin	55-63-0	
180.	p-Nitrophenol ³	100-02-7	
181.	2-Nitropropane	79-46-9	
182.	N-Nitrosodiphenylamine	86-30-6	
183.	Nonylphenol	104-40-5	
184.	Nonylphenol hepta(oxyethylene) ethanol		27177-05-5
185.	Nonylphenol, industrial	84852-15-3	
186.	Nonylphenol nona(oxyethylene) ethanol		27177-08-8
187.	n-Nonylphenol ⁹	25154-52-3	
188.	Nonylphenol polyethylene glycol ether		9016-45-9
189.	p-Nonylphenol polyethylene glycol ether		26027-38-3
190.	Nonylphenoxy ethanol	27986-36-3	
191.	2-(p-Nonylphenoxy) ethanol	104-35-8	
192.	2-(2-(p-Nonylphenoxy)ethoxy) ethanol		20427-84-3
193.	2-(2-(2-(2-(p-Nonylphenoxy) ethoxy)ethoxy)ethoxy) ethanol		7311-27-5
194.	4-tert-Octylphenol ²	140-66-9	
195.	Oxirane, methyl-, polymer with oxirane, mono(nonylphenyl)ether ²		37251-69-7
196.	Paraldehyde	123-63-7	
197.	Pentachloroethane	76-01-7	
198.	Peracetic acid ³	79-21-0	
199.	Phenol ³	108-95-2	
200.	p-Phenylenediamine ³	106-50-3	
201.	o-Phenylphenol ³	90-43-7	
202.	Phosgene	75-44-5	
203.	Phosphoric acid	7664-38-2	
204.	Phosphorus ¹⁵	7723-14-0	
205.	Phthalic anhydride	85-44-9	
206.	Polymeric diphenylmethane diisocyanate ²		9016-87-9
207.	Potassium bromate	7758-01-2	
208.	Propargyl alcohol	107-19-7	
209.	Propionaldehyde	123-38-6	
210.	Propylene	115-07-1	
211.	Propylene oxide	75-56-9	
212.	Pyridine ³	110-86-1	
213.	Quinoline ³	91-22-5	
214.	p-Quinone	106-51-4	
215.	Safrole	94-59-7	
216.	Selenium ⁷	*	
217.	Silver ⁷	*	
218.	Sodium fluoride	7681-49-4	
219.	Sodium nitrite	7632-00-0	
220.	Styrene	100-42-5	
221.	Styrene oxide	96-09-3	
222.	Sulphur hexafluoride	2551-62-4	
223.	Sulphuric acid	7664-93-9	

224.	1,1,1,2-Tetrachloroethane	630-20-6	
225.	1,1,2,2-Tetrachloroethane	79-34-5	
226.	Tetrachloroethylene	127-18-4	
227.	Tetracycline hydrochloride	64-75-5	
228.	Tetraethyl lead	78-00-2	
229.	Thiourea	62-56-6	
230.	Thorium dioxide	1314-20-1	
231.	Titanium tetrachloride	7550-45-0	
232.	Toluene	108-88-3	
233.	Toluene-2,4-diisocyanate	584-84-9	
234.	Toluene-2,6-diisocyanate	91-08-7	
235.	Toluenediisocyanate ⁹	26471-62-5	
236.	1,2,4-Trichlorobenzene	120-82-1	
237.	1,1,2-Trichloroethane	79-00-5	
238.	Trichloroethylene	79-01-6	
239.	Triethylamine	121-44-8	
240.	1,2,4-Trimethylbenzene	95-63-6	
241.	2,2,4-Trimethylhexamethylene diisocyanate		16938-22-0
242.	2,4,4-Trimethylhexamethylene diisocyanate		15646-96-5
243.	Vanadium ⁴	7440-62-2	
244.	Vinyl acetate	108-05-4	
245.	Vinyl chloride	75-01-4	
246.	Vinylidene chloride	75-35-4	
247.	Xylene ⁹	1330-20-7	
248.	Zinc ^{7, 16}	*	

PART 2

249. Mercury^{7, 17} *

PART 3

250.	Benzo(a)anthracene ²	56-55-3	
251.	Benzo(a)phenanthrene ²	218-01-9	
252.	Benzo(a)pyrene ²	50-32-8	
253.	Benzo(b)fluoranthene ²	205-99-2	
254.	Benzo(e)pyrene ²	192-97-2	
255.	Benzo(g,h,i)perylene ²	191-24-2	
256.	Benzo(j)fluoranthene ²	205-82-3	
257.	Benzo(k)fluoranthene ²	207-08-9	
258.	Dibenz(a,j)acridine ²	224-42-0	
259.	Dibenzo(a,h)anthracene ²	53-70-3	
260.	Dibenzo(a,i)pyrene ²	189-55-9	
261.	7H-Dibenzo(c,g)carbazole ²	194-59-2	
262.	Fluoranthene ²	206-44-0	
263.	Indeno(1,2,3-c,d)pyrene ²	193-39-5	
264.	Perylene ²	198-55-0	
265.	Phenanthrene ²	85-01-8	
266.	Pyrene ²	129-00-0	

PART 4

267. Hexachlorobenzene² 118-74-1
 268. Polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans^{2,18} *

English

1 CAS Registry Number denotes the Chemical Abstracts Service Registry Number, as appropriate.

2 new substance for 2000 reporting year

- 3 "and its salts" - The CAS number corresponds to the weak acid or base. However, the NPRI listing includes the salts of these weak acids and bases. When calculating the weight of these substances and their salts, use the molecular weight of the acid or base, not the total weight of the salt.
- 4 "fume or dust"
- 5 "fibrous forms"
- 6 "Ammonia (total)" means the total of both of ammonia (NH₃ - CAS No. 7664-41-7) and the ammonium ion (NH₄⁺) in solution.
- 7 "and its compounds"
- 8 "friable form"
- 9 "mixed isomers"
- 10 "ionic"
- 11 The isomers include, but are not necessarily limited to, HCFC-122 (CAS No. 354-21-2).
- 12 The isomers include, but are not necessarily limited to, HCFC-123 (CAS No. 306-83-2) and HCFC 123a (CAS No. 90454-18-5).
- 13 The isomers include, but are not necessarily limited to, HCFC-124 (CAS No. 2837-89-0) and HCFC 124a (CAS No. 354-25-6).
- 14 "in solution at a pH of 6.0 or greater"
- 15 "yellow or white"
- 16 "This listing includes the pure isomers of xylene: m-xylene, CAS No. 108-38-3, o-xylene, CAS No. 95-47-6 and p-xylene, CAS No. 106-42-3"
- 17 The reporting requirements for mercury have changed for the 2000 reporting year.
- 18 This class of substances is restricted to the following congeners:
- 2,3,7,8-Tetrachlorodibenzo-p-dioxin (1746-01-6);
 - 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (40321-76-4);
 - 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (39227-28-6); 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (19408-74-3);
 - 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (57653-85-7); 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (35822-46-9);
 - Octachlorodibenzo-p-dioxin (3268-87-9); 2,3,7,8-Tetrachlorodibenzofuran (51207-31-9);
 - 2,3,4,7,8-Pentachlorodibenzofuran (57117-31-4); 1,2,3,7,8-Pentachlorodibenzofuran (57117-41-6);
 - 1,2,3,4,7,8-Hexachlorodibenzofuran (70648-26-9); 1,2,3,7,8,9-Hexachlorodibenzofuran (72918-21-9);
 - 1,2,3,6,7,8-Hexachlorodibenzofuran (57117-44-9); 2,3,4,6,7,8-Hexachlorodibenzofuran (60851-34-5);
 - 1,2,3,4,6,7,8-Heptachlorodibenzofuran (67562-39-4); 1,2,3,4,7,8,9-Heptachlorodibenzofuran (55673-89-7); and
 - Octachlorodibenzofuran (39001-02-0).

* No single CAS number applies to their NPRI listing.