Appendix B

Source Parameters and Emission Inventory
(Complete Emission Inventory in Electronic form only)

TABLE B-1 POINT SOURCE PARAMETERS

Point Source ID	Coordinate (km)		Stack Height	Base Elevation	Stack Diameter	Stack Velocity	Stack Temp.	Scenarios
	X-UTM	Y-UTM	(m)	(m)	(m)	(m/s)	(deg. K)	
M Building Scrubber Exhaust	635.668	4835.829	0	75	1	10.18	293	1 to 3
P Building Scrubber Outlet (NEF 58 and 59)	635.655	4835.272	11.58	75	0.91	21.43	283	1 to 3
Dewatering Building EF5 exhaust Fan (basement) (Summer)	635.536	4835.065	6.1	75	1.31	4.71	293	1 to 4
Dewatering Building EF2 exhaust Fan (centrifuge floor) (Summer)	635.566	4835.045	35.97	75	2.27	5.75	293	1 to 4
Dewatering Building EF3 exhaust Fan (normal ventilation)	635.570	4835.043	34.35	75	1.46	8.55	293	1 to 4
Pelletizer Process (Heater Stack)	635.642	4835.059	31.7	75	1.1	4.1	417	3 to 4
P Building Room Air	635.675	4835.323	12.5	75	0.71	17.28	283	1 to 4
P Building Room Air	635.679	4835.300	12.93	75	1.17	3.2	283	1 to 4
P Building Room Air	635.694	4835.306	10.67	75	0.71	8.64	283	1 to 4
P Building Room Air	635.694	4835.275	10.67	75	0.71	8.64	283	1 to 4
P Building Room Air	635.714	4835.289	10.67	75	0.71	8.64	283	1 to 4
Biosolids Truck Loading Exhaust (old)	635.627	4835.006	18.59	75	1.52	1.81	293	1
Biosolids Truck Loading Exhaust (old)	635.634	4835.011	18.59	75	1.52	1.81	293	1
NG Boiler	635.493	4835.157	59.3	75	2.13	1.58	450	1 to 4
Screens 7-12 ventilation system (Carbon Scrubber)	635.724	4835.317	3.61	74	2.38	0.22	293	1 to 3
Grit and Screening Building (7-12) General Ventilation System	635.714	4835.310	10.5	74	0.61	7.88	293	1 to 4
D Building Grit Area Exhuast NEF-2 (grit Removal)	635.511	4835.328	13.11	75	1.4	10.85	293	1 to 4
D Building Grit Area Exhuast NEF-1 (grit Removal)	635.503	4835.322	13.11	75	1.4	10.85	293	1 to 4
Grit Tanks (1-6) Odour Control (Scrubber) West	635.777	4835.146	2.5	74	0.61	3.19	293	1 to 3
Grit Tanks (1-6) Odour Control (Scrubber) Centre	635.818	4835.174	2.5	74	2.44	0.2	293	1 to 3
Grit Tanks (1-6) Odour Control (Scrubber) East	635.857	4835.205	2.5	74	0.75	2.11	293	1 to 3
Quad Scrubber Outlet #10	635.250	4834.941	10.36	74	1.2	14.77	293	1 to 3
Quad Scrubber Outlet #11	635.242	4834.935	10.36	74	1.2	12.03	293	1 to 3
Duct to Annular Space	635.584	4834.991	183	75	9	0.42	293	1 to 4
M Building Roof Exhaust	635.669	4835.841	10.25	75	1	2.49	293	1 to 4

Point Source ID	Coordinate (km)	Stack Height	Base Elevation	Stack Diameter	Stack Velocity	Stack Temp.	Scenarios	Point Source ID
M Building Roof Exhaust	635.669	4835.841	10.25	75	1	2.49	293	1 to 4
New Stack with no scrubber	635.6686	4835.8413	16	75	1	24.92	293	4
Day Tank #1 Scrubber Outlet	635.569	4835.088	2.95	75	0.15	2.74	303	1 to 3
Day Tank #3 Scrubber Outlet	635.574	4835.081	2.95	75	0.15	2.74	303	1 to 3
Dewatering Building EF1 exhaust Fan (normal ventilation)	635.573	4835.059	34.35	75	1.46	8.43	293	1 to 3
Dewatering Building EF16 exhaust Fan (centrifuge floor)	635.564	4835.071	34.35	75	1.46	8.67	293	1 to 3
T Building Scrubber Exhaust	635.636	4835.707	15	74	0.4	1.16	293	1 to 3
Dewatering Building EF4 exhaust Fan (basement)	635.559	4835.048	5.79	75	1.15	6.05	293	1 to 3
Incinerator Building Exhaust	635.594	4835.031	35.91	75	1.97	7.64	293	2 to 4
Incinerator Building Exhaust	635.594	4835.031	35.91	75	1.97	7.64	293	2 to 4
Incinerator Building Exhaust (old)	635.603	4835.026	23.86	75	1.97	7.64	293	1
Incinerator Building Exhaust (old)	635.634	4835.011	23.86	75	1.97	7.64	293	1
T Building Roof Exhaust	635.622	4835.708	15	74	0.5	3.25	293	1 to 3
Control Gate (Monument)	635.636	4835.711	4.1	74	0.15	15.28	293	1 to 4
Main Stack Centre	635.584	4834.991	183	75	1.8	1.42	298	1 to 2
New T Building Biofilter Scrubber	635.6356	4835.7069	16	74	1	6.875	293	4
Grit Room - NEF 6	635.508	4835.310	11.25	74	0.76	11.11	293	1 to 4
Grit Room - NEF 7	635.506	4835.327	11.25	74	0.76	11.11	293	1 to 4
Grit Room - NEF 8	635.491	4835.323	11.25	74	0.76	11.11	293	1 to 4
Grit Room - NEF 9	635.517	4835.335	11.25	74	0.76	11.11	293	1 to 4

TABLE B-2 AREA SOURCE PARAMETERS

Source Name	Base Elevation (m)	Initial Sigma z	X-UTM (km)				Y-UTM (km)			
			Corner #1	*Corner #2*	*Corner #3*	*Corner #4*	*Corner #1*	*Corner #2*	*Corner #3*	*Corner #4*
Primary Clarifier 7	75	23.35	635.679	635.704	635.750	635.725	4835.241	4835.206	4835.239	4835.274
Primary Clarifier 8	75	23.35	635.725	635.750	635.795	635.770	4835.274	4835.239	4835.272	4835.307
Primary Clarifier 9	75	23.35	635.750	635.795	635.820	635.775	4835.239	4835.272	4835.237	4835.205
Aeration Tank A	75	27.16	635.170	635.217	635.268	635.221	4835.066	4835.001	4835.037	4835.102
Aeration Tank B	75	27.16	635.221	635.268	635.319	635.272	4835.102	4835.037	4835.074	4835.139
Aeration Tank C	75	27.16	635.272	635.319	635.370	635.322	4835.139	4835.074	4835.110	4835.176
Aeration Tank D	75	27.16	635.322	635.370	635.420	635.373	4835.176	4835.110	4835.147	4835.213
Aeration Tank E	75	27.16	635.467	635.420	635.370	635.417	4835.081	4835.147	4835.110	4835.045
Aeration Tank F	75	27.16	635.417	635.370	635.319	635.366	4835.045	4835.110	4835.074	4835.008
Aeration Tank G	75	27.16	635.366	635.319	635.268	635.315	4835.008	4835.074	4835.037	4834.972
Aeration Tank H	75	27.16	635.217	635.268	635.315	635.265	4835.001	4835.037	4834.972	4834.936
Biofilter A	75	24.34	635.583	635.605	635.615	635.593	4834.840	4834.850	4834.840	4834.820
Biofilter B	75	24.34	635.612	635.634	635.645	635.623	4834.860	4834.870	4834.860	4834.840
Biofilter C	75	24.34	635.602	635.624	635.634	635.612	4834.820	4834.840	4834.820	4834.810
Biofilter D	75	24.34	635.630	635.653	635.663	635.640	4834.840	4834.860	4834.840	4834.830

TABLE B-3 FREQUENCY OF EMISSION ESTIMATION TECHNIQUES APPLIED AT ABTP PER CHEMICAL

Contaminant	CAS #	MB	Zorix	EE	EF	SM
All VOC's						
1,1 - Dichloroethene	75-35-4	57%	43%	0%	0%	0%
1,1,2 - Trichloroethane	79-00-5	8%	92%	0%	0%	0%
1,2 - Dichloroethane	107-06-2	8%	92%	0%	0%	0%
1,1,2,2 - Tetrachloroethane	79-34-5	11%	89%	0%	0%	0%
1,1 Dichloroethane	75-34-3	9%	91%	0%	0%	0%
1,2 - Dibromoethane	106-93-4	11%	89%	0%	0%	0%
1,1,1 - Trichloroethane	71-55-6	12%	88%	0%	0%	0%
1,2 - Dichlorotetrafluoroethane	76-14-2	0%	100%	0%	0%	0%
1,2 - Dichloropropane	78-87-5	11%	89%	0%	0%	0%
1,2,4 - Trimethylbenzene	95-63-6	0%	100%	0%	0%	0%
1,3,5 - Trimethylbenzene	108-67-8	0%	100%	0%	0%	0%
2,4 - Dichlorophenol	120-83-2	80%	0%	0%	0%	20%
Acetic acid	64-19-7	0%	100%	0%	0%	0%
Ammonia	7664-41-7	0%	100%	0%	0%	0%
Benzene	71-43-2	8%	92%	0%	0%	0%
Bis(2-ethylhexyl)phthalate	117-81-7	100%	0%	0%	0%	0%
Bromoethane	74-96-4	8%	92%	0%	0%	0%
butylbenzyl phthalate	85-68-7	100%	0%	0%	0%	0%
Butyric acid	107-92-6	0%	100%	0%	0%	0%
Carbon disulphide	75-15-0	0%	100%	0%	0%	0%
Carbon Tetrachloride	56-23-5	8%	92%	0%	0%	0%
Chlorobenzenes	108-90-7	8%	92%	0%	0%	0%
Chloroform	67-66-3	8%	92%	0%	0%	0%
Chloromethane	74-87-3	8%	92%	0%	0%	0%
cis-1,2-Dichloroethene	156-59-2	8%	92%	0%	0%	0%
cis-1,3-dichloropropylene	10061-01-5	8%	92%	0%	0%	0%
Dichlorodifluoromethane	75-71-8	8%	92%	0%	0%	0%
Dichloromethane	75-09-2	0%	100%	0%	0%	0%
Diethylphthalate	84-66-2	100%	0%	0%	0%	0%
Dimethyl disulphide	624-92-0	0%	100%	0%	0%	0%
Di-n-butyl phthalate	84-74-2	100%	0%	0%	0%	0%
Di-n-octyl phthalate	117-84-0	100%	0%	0%	0%	0%
Diphenyl ether	101-84-8	100%	0%	0%	0%	0%
Ethyl Benzene	100-41-4	11%	89%	0%	0%	0%
Formic acid	64-18-6	0%	100%	0%	0%	0%
Hexachlorobutadiene	87-68-3	8%	92%	0%	0%	0%
indole	10075-50-0	100%	0%	0%	0%	0%
Lactic acid	50-21-5	0%	100%	0%	0%	0%
Methyl phenol	1319-77-3	100%	0%	0%	0%	0%
Nitrobenzene	98-95-3	100%	0%	0%	0%	0%
Nonmethane hydrocarbon	N/A-Non-methane HC	0%	100%	0%	0%	0%
Nonmethane Volatile Hydrocarbons	N/A-Non-methane Vol HC	0%	100%	0%	0%	0%
p-cresol & m-cresol	106-44-5					
Pentachlorophenol	87-86-5	80%	0%	0%	0%	20%

Contaminant	CAS #	MB	Zorix	EE	EF	SM
Phenol	108-95-2	100%	0%	0%	0%	0%
Propionic acid	79-09-04	0%	100%	0%	0%	0%
Styrene	100-42-5	8%	92%	0%	0%	0%
Tellurium	13494-80-9	0%	0%	0%	0%	100%
Tetrachloroethene	127-18-4	8%	92%	0%	0%	0%
Toluene	108-88-3	11%	89%	0%	0%	0%
Total Nitrogen	N/A-Nitrogen	0%	100%	0%	0%	0%
Total Sulphur	N/A-Sulphur	0%	100%	0%	0%	0%
trans-1,2-Dichloropropene	unknown-dichloropropene	0%	100%	0%	0%	0%
Trichloroethene	79-01-6	8%	92%	0%	0%	0%
Trichlorofluoromethane	75-69-4	8%	92%	0%	0%	0%
Trichlorotrifluoroethane	26523-64-8	0%	100%	0%	0%	0%
Vinyl chloride	75-01-4	11%	89%	0%	0%	0%
Xylene	1330-20-7	11%	89%	0%	0%	0%
Sulphur Bearing Compounds						
Hydrogen Sulphide	7783-06-4	0%	97%	3%	0%	0%
Hydrogen Sulphide/carbonyl sulfide	463-58-1	0%	100%	0%	0%	0%
Methyl Mercaptan	74-93-1	0%	100%	0%	0%	0%
Propyl mercaptan/Methyl Ethyl Sulfide	107-03-9	0%	100%	0%	0%	0%
Ethyl Mercaptan/Dimethyl Sulfide	75-08-1	0%	100%	0%	0%	0%
All CAC's						
Particulate Matter	N/A-PM	0%	0%	0%	67%	33%
Nitrogen Oxides	10102-44-0	0%	0%	0%	100%	0%
Sulphur Dioxide	7446-09-5	0%	97%	0%	3%	0%
Carbon Monoxide	630-08-0	0%	0%	0%	100%	0%
Dioxins and Furans						
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	0%	0%	0%	0%	100%
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	0%	0%	0%	0%	100%
1,2,3,7,8-Pentachlorodibenzofuran	--	0%	0%	0%	0%	100%
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	0%	0%	0%	0%	100%
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	--	0%	0%	0%	0%	100%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	--	0%	0%	0%	0%	100%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	--	0%	0%	0%	0%	100%
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	--	0%	0%	0%	0%	100%
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	--	0%	0%	0%	0%	100%
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	0%	0%	0%	0%	100%
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	--	0%	0%	0%	0%	100%
1,2,3,6,7,8-Hexachlorodibenzofuran	--	0%	0%	0%	0%	100%
2,3,4,6,7,8-Hexachlorodibenzofuran	--	0%	0%	0%	0%	100%
1,2,3,7,8,9-Hexachlorod-ibenzofuran	--	0%	0%	0%	0%	100%
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	--	0%	0%	0%	0%	100%
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	--	0%	0%	0%	0%	100%

Contaminant	CAS #	MB	Zorix	EE	EF	SM
1,2,3,4,7,8,9-Heptachlorodibenzofuran	--	0%	0%	0%	0%	100%
PAH's		**68%**	**0%**	**0%**	**0%**	**32%**
1-methylnaphthalene	90-12-0	80%	0%	0%	0%	20%
1-Methylphenanthrene	832-69-9	0%	0%	0%	0%	100%
2-Chloronaphthalene	91-58-7	80%	0%	0%	0%	20%
2-Methylanthracene	613-12-7	0%	0%	0%	0%	100%
2-methylnaphthalene	91-57-6	80%	0%	0%	0%	20%
3-Methylcholanthrene	56-49-5	0%	0%	0%	0%	100%
7,12 - Dimethylbenz[a]anthracene	57-97-6	0%	0%	0%	0%	100%
9,10 - Dimethylanthracene	781-43-1	0%	0%	0%	0%	100%
9-Methylphenanthrene	883-20-5	0%	0%	0%	0%	100%
Acenaphthene	83-32-9	80%	0%	0%	0%	20%
Acenaphthylene	208-96-8	80%	0%	0%	0%	20%
Anthracene	120-12-7	80%	0%	0%	0%	20%
Benzo[a]anthracene	56-55-3	80%	0%	0%	0%	20%
Benzo[a]fluorene	238-84-6	0%	0%	0%	0%	100%
Benzo[a]pyrene	50-32-8	80%	0%	0%	0%	20%
Benzo[b]fluoranthene	205-99-2	80%	0%	0%	0%	20%
Benzo[b]fluorene	243-17-4	0%	0%	0%	0%	100%
Benzo[e]pyrene	192-97-2	0%	0%	0%	0%	100%
Benzo[g,h,i]perylene	191-24-2	80%	0%	0%	0%	20%
Benzo[k]fluoranthene	207-08-9	80%	0%	0%	0%	20%
Biphenyl	92-52-4	75%	0%	0%	0%	25%
Chrysene	218-01-9	80%	0%	0%	0%	20%
Coronene	191-07-1	0%	0%	0%	0%	100%
Dibenzo[a,l]pyrene	129-00-0	0%	0%	0%	0%	100%
Dibenzo[a,h]anthracene	53-70-3	80%	0%	0%	0%	20%
Fluoranthene	206-44-0	80%	0%	0%	0%	20%
Fluorene	7782-41-4	80%	0%	0%	0%	20%
Indeno[1,2,3-c,d]pyrene	193-39-5	80%	0%	0%	0%	20%
m-Terphenyl	92-06-8	0%	0%	0%	0%	100%
Naphthalene	91-20-3	80%	0%	0%	0%	20%
o-Terphenyl	84-15-1	0%	0%	0%	0%	100%
perylene	198-55-0	80%	0%	0%	0%	20%
Phenanthrene	85-01-8	80%	0%	0%	0%	20%
Picene	213-46-7	0%	0%	0%	0%	100%
p-Terphenyl	92-94-4	0%	0%	0%	0%	100%
Pyrene	129-00-0	80%	0%	0%	0%	20%
Quinoline	91-22-5	0%	0%	0%	0%	100%
Tetralin	119-64-2	0%	0%	0%	0%	100%
Triphenylene	217-59-4	0%	0%	0%	0%	100%
Chlorobenzenes	108-90-7	8%	92%	0%	0%	0%
1,2 - Dichlorobenzene	95-50-1	8%	89%	0%	0%	3%

Contaminant	CAS #	MB	Zorix	EE	EF	SM
1,2,3 - Trichlorobenzene	87-61-6	0%	0%	0%	0%	100%
1,2,3,4 - Tetrachlorobenzene	634-66-2	0%	0%	0%	0%	100%
1,2,4 - Trichlorobenzene	120-82-1	8%	89%	0%	0%	3%
1,3 - Dichlorobenzene	541-73-1	8%	89%	0%	0%	3%
1,3,5 - Trichlorobenzene	108-70-3	0%	0%	0%	0%	100%
1,4 - Dichlorobenzene	106-46-7	11%	87%	0%	0%	3%
Hexachlorobenzene	118-74-1	80%	0%	0%	0%	20%
Pentachlorobenzene	608-93-5	0%	0%	0%	0%	100%
PCB's						
Chlorobiphenyl	37324-23-5	0%	0%	0%	0%	100%
Decachlorobiphenyl	2051-24-3	0%	0%	0%	0%	100%
Dichlorobiphenyl	2050-68-2	0%	0%	0%	0%	100%
Heptachlorobiphenyl	28655-71-2	0%	0%	0%	0%	100%
Hexachlorobiphenyl	26601-64-9	0%	0%	0%	0%	100%
Nonachlorobiphenyl	53742-07-7	0%	0%	0%	0%	100%
Octachlorobiphenyl	55722-26-4	0%	0%	0%	0%	100%
Pentachlorobiphenyl	25429-29-2	0%	0%	0%	0%	100%
Tetrachlorobiphenyl	26914-33-0	0%	0%	0%	0%	100%
Trichlorobiphenyl	unknown-Trichlorobiphenyl	0%	0%	0%	0%	100%
Total PCB's	N/A-PCBs	0%	0%	0%	0%	100%
Chlorophenols						
2,3 - Dichlorophenol	576-24-9	0%	0%	0%	0%	100%
2,3,4 - Trichlorophenol	15950-66-0	100%	0%	0%	0%	0%
2,3,4,5 - Tetrachlorophenol	4901-51-3	100%	0%	0%	0%	0%
2,3,4,6 - Tetrachlorophenol	58-90-2	80%	0%	0%	0%	20%
2,3,5 - Trichlorophenol	933-78-8	0%	0%	0%	0%	100%
2,3,5,6 - Tetrachlorophenol	935-95-5	80%	0%	0%	0%	20%
2,3,6 - Trichlorophenol	933-75-5	80%	0%	0%	0%	20%
2,4,5 - Trichlorophenol	95-95-4	80%	0%	0%	0%	20%
2,4,6 - Trichlorophenol	88-06-2	80%	0%	0%	0%	20%
2,6 - Dichlorophenol	87-65-0	80%	0%	0%	0%	20%
3,4 - Dichlorophenol	95-77-2	0%	0%	0%	0%	100%
3,4,5 - Trichlorophenol	609-19-8	0%	0%	0%	0%	100%
3,5 - Dichlorophenol	591-35-5	0%	0%	0%	0%	100%
Metals						
Aluminum	7429-90-5	0%	0%	0%	0%	100%
Antimony	7440-36-0	0%	0%	0%	0%	100%
Arsenic	7440-38-2	0%	0%	0%	0%	100%
Barium	7440-39-3	0%	0%	0%	0%	100%
Beryllium	7440-41-7	0%	0%	0%	0%	100%
Bismuth	7440-69-9	0%	0%	0%	0%	100%
Boron	7440-42-8	0%	0%	0%	0%	100%
Cadmium	7440-43-9	0%	0%	0%	0%	100%
Calcium	7440-70-2	0%	0%	0%	0%	100%
Chromium	7440-47-3	0%	0%	0%	0%	100%
Cobalt	7440-48-4	0%	0%	0%	0%	100%

Contaminant	CAS #	MB	Zorix	EE	EF	SM
Copper	7440-50-8	0%	0%	0%	0%	100%
Iron	15438-31-0	0%	0%	0%	0%	100%
Lead	7439-92-1	0%	0%	0%	0%	100%
Lithium	7580-67-8	0%	0%	0%	0%	100%
Magnesium	7429-95-4	0%	0%	0%	0%	100%
Manganese	7439-96-5	0%	0%	0%	0%	100%
Mercury	7439-97-6	80%	0%	0%	0%	20%
Molybdenum	7439-98-7	0%	0%	0%	0%	100%
Nickel	7440-02-0	0%	0%	0%	0%	100%
Phosphorus	7723-14-0	0%	0%	0%	0%	100%
Potassium	7440-09-7	0%	0%	0%	0%	100%
Selenium	7782-49-2	0%	0%	0%	0%	100%
Silicon	7440-21-3	0%	0%	0%	0%	100%
Silver	7440-22-4	0%	0%	0%	0%	100%
Sodium	7440-23-5	0%	0%	0%	0%	100%
Strontium	7440-24-6	0%	0%	0%	0%	100%
Thallium	7440-28-0	0%	0%	0%	0%	100%
Tin	7440-31-5	0%	0%	0%	0%	100%
Titanium	7440-32-6	0%	0%	0%	0%	100%
Vanadium	7440-62-2	0%	0%	0%	0%	100%
Zinc	7440-66-6	0%	0%	0%	0%	100%