

Attachment 1-I.

EFFLUENT CHARACTERIZATION FOR PERMIT APPLICATION

This attachment is used in conjunction with Section V, Parts A, B, and C of EPA Application Form 2C, *Wastewater Discharge Information*. This attachment specifies effluent characterization requirements of the Department of Ecology. The data should be compiled from last year's data if it is a parameter routinely measured. This attachment also specifies analytical procedure and detection or quantitation levels for some parameters for effluent characterization. If you are a primary industry category with effluent guidelines you may have some mandatory testing requirements (see Table 2C-2 of Form 2C).

¹ An "X" in this space means to complete an analysis for all the following individual pollutants in the group.

X	Pollutant & CAS No. (if available)	Analytical Protocol as EPA Part 136 methods or Standard. Methods	Detection or Quantitation Level
¹	Conventional (Part A)		DL
	a. Biochemical Oxygen Demand	405.1	2 mg/l
	b. Chemical Oxygen Demand	410.1	5 mg/l
	c. Total Organic Carbon	415.1	1 mg/l
	d. Total Suspended Solids	160.2	1 mg/l
	e. Ammonia (as N)	350.2	20 µg/l
	f. Flow	Calibrated device	
	g. Temperature (winter)	170.1	
	h. Temperature (summer)	170.1	
	i. pH	150.1	
¹	Nonconventional (Part B)		DL
	a. Bromide (24959-67-9)	320.1	0.1 mg/l
	b. Chlorine, Total Residual	330.5?	1 mg/l
	c. Color	110.1, 110.2 or 110.3	
	d. Fecal Coliform	9221C or 9222D	
	e. Fluoride (16984-48-8)	340.3	0.1 mg/l
	f. Nitrate-Nitrite (as N)	353.2	0.5 mg/l
	g. Nitrogen, Total Organic (as N)	351.1 or 351.3	20 mg/l
	h. Oil and Grease	1664	0.2 mg/l
	i. Phosphorus (as P), Total (7723-14-0)	365.1	1 µg/l
	j. Radioactivity		
	(1) Alpha, Total		
	(2) Beta, Total		
	(3) Radium Total		
	k. Sulfate (as SO ₄) (14808-79-8)	375.1	1 mg/l
	l. Sulfide (as S)	376.1	1 mg/l
	m. Sulfite (as SO ₃) (14265-45-3)	377.1	2 mg/l
	n. Surfactants	425.1	0.1 mg/l

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	o. Aluminum, Total (7429-90-5)	202.2	3 µg/l
	p. Barium Total (7440-39-3)	208.2	30 µg/l
	q. Boron Total (7440-42-8)	212.3	2 µg/l
	r. Cobalt, Total (7440-48-4)	219.2	1 µg/l
	s. Iron, Total (7439-89-6)	236.2	20 µg/l
	t. Magnesium, Total (7439-95-4)	242.1	0.5 µg/l
	u. Molybdenum, Total (7439-98-7)	246.2	1 µg/l
	v. Manganese, Total (7439-96-5)	243.2	10 µg/l
	w. Tin, Total (7440-31-5)	282.2	5 µg/l
	x. Titanium, Total (7440-32-6)	283.2	0.3 µg/l
¹	Metals, Cyanide & Total Phenols (Part C)		DL µg/l
	1M. Antimony, Total (7440-36-0)	EPA approved method	3
	2M. Arsenic, Total (7440-38-2)	EPA approved method	1
	3M. Beryllium, Total (7440-43-9)	EPA approved method	1
	4M. Cadmium, Total (7440-43-9)	EPA approved method	0.1
	5M. Chromium, Total (7440-47-3)	EPA approved method	1
	6M. Copper, Total (7440-50-8)	EPA approved method	1
	7M. Lead, Total (7439-92-1)	EPA approved method	1
	8M. Mercury, Total (7439-97-6)	EPA approved method	0.2
	9M. Nickel, Total (7440-02-0)	EPA approved method	1
	10M. Selenium, Total (7782-49-2)	EPA approved method	2
	11M. Silver, Total (7440-22-4)	EPA approved method	0.2
	12M. Thallium, Total (7440-28-0)	EPA approved method	1
	13M. Zinc, Total (7440-66-6)	EPA approved method	5.0
	14M. Cyanide, Total (7440-66-6)	335.2	20
	15M. Phenols, Total		
	Dioxin		QL µg/l
	2,3,7,8-Tetra-Chlorodibenzo-P-Dioxin (1764-01-6)	1613	0.00001
¹	Volatile Compounds		QL µg/l
	1V. Acrolein (107-02-8)	624	50
	2V. Acrylonitrile (107-13-1)	624	50
	3V. Benzene (71-43-2)	624	10
	4V. Bis (chloromethyl) Ether (542-88-1)	624	10
	5V. Bromoform (75-25-2)	624	10
	6V. Carbon Tetrachloride (108-90-7)	624	10
	7V. Chlorobenzene (108-90-7)	624	50
	8V. Chlorodibromomethane (124-48-1)	624	10
	9V. Chloroethane (75-00-3)	624	10
	10V. 2-Chloroethylvinyl Ether (110-75-8)	624	50
	11V. Chloroform (67-66-3)	624	10
	12V. Dichlorobromomethane (75-27-4)	624	10
	13V. Dichlorodifluoromethane (75-71-8)	624	10
	14V. 1,1-Dichloroethane (75-34-3)	624	10

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	15V. 1,2-Dichloroethane (107-06-2)	624	10
	16V. 1,1-Dichloroethylene (75-35-4)	624	10
	17V. 1,2-Dichloropropane (78-87-5)	624	10
	18V. 1,3-Dichloropropene (542-75-6)	624	10
	19V. Ethylbenzene (100-41-4)	624	10
	20V. Methyl Bromide (74-83-9)	624	50
	21V. Methyl Chloride (74-87-3)	624	50
	22V. Methylene Chloride (75-09-2)	624	20
	23V. 1,1,2,2-Tetrachloroethane (79-34-5)	624	10
	24V. Tetrachloroethylene (127-18-4)	624	10
	25V. Toulene (108-88-3)	624	10
	26V. 1,2-Trans-Dichloroethylene (156-60-5)	624	10
	27V. 1,1,1-Trichloroethane (71-55-6)	624	10
	28V. 1,1,2-Trichloroethane (79-00-5)	624	10
	29V. Trichloroethylene (79-01-6)	624	10
	30V. Trichlorofluoromethane (75-69-4)	624	10
	31V. Vinyl Chloride (75-01-4)	624	10
¹	Acid Compounds		QL µg/l
	1A. 2-Chlorophenol (95-57-8)	625	10
	2A. 2,4-Dichlorophenol (120-83-2).	625	10
	3A. 2,4-Dimethylphenol (105-67-9)	625	10
	4A. 4,6-Dinitro-O-Cresol (534-52-1)	625	50
	5A. 2,4 Dinitrophenol (51-28-5)	625	50
	6A. 2-Nitrophenol (88-75-5)	625	20
	7A. 4-Nitrophenol (100-02-7)	625	50
	8A. P-Chloro-M-Cresol (59-50-7)	625	10
	9A. Pentachlorophenol (87-86-5)	625	50
	10A. Phenol (108-95-2)	625	10
	11A. 2,4,6-Trichlorophenol (88-06-2)	625	10
¹	Base/Neutral Compounds		QL µg/l
	1B. Acenaphthene (83-32-9)	625	10
	2B. Acenaphthylene (208-96-8)	625	10
	3B. Anthracene (120-12-7)	625	10
	4B. Benzidine (92-87-5)	625	50
	5B. Benzo (a) Anthracene (56-55-3)	625	10
	6B. Benzo (a) Pyrene (50-32-8)	625	10
	7B. 3,4-Benzofluoranthene (205-99-2)	625	10
	8B. Benzo (ghi) Perylene (191-24-2)	625	20
	9B. Benzo (k) Fluoranthene (207-08-9)	625	10
	10B. Bis (2-Chloroethoxy) Methane (111-91-1)	625	10
	11B. Bis (2-Chloroethyl) Ether (111-44-4)	625	10
	12B. Bis (2-Chloroisopropyl) Ether (102-60-1)	625	10
	13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	625	10
	14B. 4-Bromophenyl Phenyl Ether (101-55-3)	625	10
	15B. Butyl Benzyl Phthalate (85-68-7)	625	10

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	16B. 2-Chloronaphthalene (91-58-7)	625	10
	17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	625	10
	18B. Chrysene (218-01-9)	625	10
	19B. Dibenzo (a-h) Anthracene (53-70-3)	625	20
	20B. 1,2-Dichlorobenzene (95-50-1)	625	10
	21B. 1,3-Dichlorobenzene (541-73-1)	625	10
	22B. 1,4-Dichlorobenzene (106-46-7)	625	10
	23B. 3,3'-Dichlorobenzidine (91-94-1)	625	50
	24B. Diethyl Phthalate (84-66-2)	625	10
	25B. Dimethyl Phthalate (131-11-3)	625	10
	26B. Di-N-Butyl Phthalate (84-74-2)	625	10
	27B. 2,4-Dinitrotoluene (121-14-2)	625	10
	28B. 2,6-Dinitrotoluene (606-20-2)	625	10
	29B. Di-n-octyl Phthalate (117-84-0)	625	10
	30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	625	20
	31B. Fluoranthene (206-44-0)	625	10
	32B. Fluorene (86-73-7)	625	10
	33B. Hexachlorobenzene (118-74-1)	625	10
	34B. Hexachlorobutadiene (87-68-3)	625	10
	35B. Hexachlorocyclopentadiene (77-47-4)	625	10
	36B. Hexachloroethane (67-72-1)	625	20
	37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	625	20
	38B. Isophorone (78-59-1)	625	10
	39B. Naphthalene (91-20-3)	625	10
	40B. Nitrobenzene (98-95-3)	625	10
	41B. N-Nitrosodimethylamine (62-75-9)	625	50
	42B. N-Nitrosodi-N-Propylamine (621-64-7)	625	20
	43B. N-Nitrosodiphenylamine (86-30-6)	625	20
	44B. Phenanthrene (85-01-8)	625	10
	45B. Pyrene (129-00-0)	625	10
	46B. 1,2,4-Trichlorobenzene (120-82-1)	625	10
¹	GC/MS Fraction - Pesticides		QL µg/l
	1P. Aldrin (309-00-2)	608	0.05
	2P. α-BHC (319-84-6)	608	0.05
	3P. β-BHC (319-85-7)	608	0.05
	4P. γ-BHC (58-89-9)	608	0.05
	5P. δ-BHC (319-86-8)	608	0.05
	6P. Chlordane (57-74-9)	608	0.2
	7P. 4,4'-DDT (50-29-3)	608	0.1
	8P. 4,4'-DDE (72-55-9)	608	0.1
	9P. 4,4' DDD (72-54-8)	608	0.1
	10P. Dieldrin (60-57-1)	608	0.1
	11P. α-Endosulfan (115-29-7)	608	0.1
	12P. β-Endosulfan (115-29-7)	608	0.1

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	13P. Endosulfan Sulfate (1031-07-8)	608	0.1
	14P. Endrin (72-20-8)	608	0.1
	15P. Endrin Aldehyde (7421-93-4)	608	0.1
	16P. Heptachlor (76-44-8)	608	0.05
	17P. Heptachlor Epoxide (1024-57-3)	608	0.05
	18P. PCB-1242 (53469-21-9)	608	1.0
	19P. PCB-1254 (11097-69-1)	608	1.0
	20P. PCB-1221 (11104-28-2)	608	1.0
	21P. PCB-1232 (11141-16-5)	608	1.0
	22P. PCB-1248 (12672-29-6)	608	1.0
	23P. PCB-1260 (11096-82-5)	608	1.0
	24P. PCB-1016 (12674-11-2)	608	1.0
	25P. Toxaphene (8001-35-2)	608	5.0