



**NPDES Attachment**  
**Practical Quantitation Limits (PQLs) and Approved Test Methods**  
 (listed based on Form 2C Application)

No.	Section V Part A	PQL (µg/l)	Sample Type	EPA Approved Method(s) <sup>1,2</sup>	Other Methods <sup>3,4</sup>
a.	Biochemical oxygen demand	2000	Comp	SM5210B	
b.	Chemical oxygen demand	20,000	Comp	SM 5220D, Hach 8000, or EPA 410.4 (Rev. 2.0 1993)	
c.	Total organic carbon	1000	Grab	SM5310 B, SM5310 C, SM5310 D	
d.	Total suspended solids	1000	Comp	SM2540D	
e.	Ammonia	100	Comp	SM4500NH3 C, F, G or H, or EPA 350.1 (Rev. 2.0 1993)	
	Total Kjeldahl Nitrogen (TKN)	100	Comp	SM4500NH3 C, F, G, EPA 351.1 (1978) or EPA 351.2 (Rev. 2.0 1993)	
g,h.	Temperature		Grab	SM 2550 B	
i.	pH		Grab	SM4500H B	
No.	Section V Part B	PQL (µg/l)	Sample Type	EPA Approved Method(s) <sup>1,2</sup>	Other Methods <sup>3,4</sup>
a.	Bromide	2000	Comp	300.0, 300.1	
b.	Chlorine, total residual	50	Grab	SM4500Cl B, C, D, E, F or G	
c.	Color	5 CU	Grab	NCASI-TB253 (Platinum Cobalt), SM 2120 C	
		25 CU	Grab	SM2120E (ADMI)	
d.	Fecal Coliform	2/100mL	Grab	SM9221C, SM9221E	
		1/100mL	Grab	SM9222D	
e.	Fluoride	100	Comp	300.0, 300.1, SM4500F C, D, E	
f.	Nitrate-Nitrite	20	Comp	SM 4500 NO <sub>3</sub> E, H	
g.	Nitrogen, total organic	-		TKN result minus NH <sub>3</sub> result	
h.	Oil & Grease	5 mg/l	Grab	1664A	
i.	Phosphorus, total	50	Comp	365.1( Rev. 2.0 1993), 365.3, 365.4, or SM 4500 P, E, or F	
j.	Radioactivity	-	-	-	
j(1)	Alpha, total	-	Comp	EPA 900.0 or SM 7110 B	
j(2)	Beta, total	-	Comp	EPA 900.0 or SM 7110 B	
j(3)	Radium, total	10	Comp	EPA 903.0 or SM 7500 Ra B	
j(4)	Radium 226, total	10	Comp	EPA 903.1 or SM 7500 Ra C	
k.	Sulfate	5000	Comp	300.0, 300.1, 375.2 (Rev 2.0 1993), or SM 426 C (15 <sup>th</sup> Ed.)	
l.	Sulfide	1000	Grab	SM 4500 S <sup>2-</sup> E	
		100		SM 4500 S <sup>2-</sup> D or G	
m.	Sulfite	2000	Comp	SM 4500 SO <sub>3</sub> <sup>2-</sup> B	
n.	Surfactants	50	Grab	SM 5540 C	
o.	Aluminum, total	50	Comp	200.7, 200.8	
p.	Barium	50	Comp	200.7, 200.8, or SM 3113B	
q.	Boron	50	Comp	200.7, 200.8	
r.	Cobalt	20	Comp	200.7, 200.8, 200.9	
s.	Iron	20	Comp	200.7, 200.8, 200.9	
t.	Magnesium	50	Comp	200.7, 200.8	
u.	Molybdenum	20	Comp	200.7, 200.8	
v.	Manganese	10	Comp	200.7, 200.8, 200.9	
w.	Tin	10	Comp	200.7, 200.8, 200.9	
x.	Titanium	50	Comp	200.7, 200.8, 283.2	
No.	Section V Part C: Metals, Cyanide and Phenols	PQL (µg/l)	Sample Type	EPA Approved Method(s) <sup>1,2</sup>	Other Methods <sup>3,4</sup>
1M	Antimony	5.0	Comp	200.8, 200.9, SM3113B	
2M	Arsenic, total	5.0	Comp	200.8, 200.9, SM3113B	
3M	Beryllium	1.0	Comp	200.8, 200.9, SM3113B	
4M	Cadmium, total	0.1	Comp	200.8, 200.9, SM3113B	
5M	Chromium, total	5.0	Comp	200.7, 200.8, 200.9, SM3113B	
6M	Copper, total	10	Comp	200.7, 200.8, 200.9, SM3113B	
7M	Lead	2.0	Comp	200.8, 200.9, SM3113B	
8M	Mercury	0.0005	Grab	1669(sampling)/1631E (analysis)	
9M	Nickel	10	Comp	200.8, 200.9, SM3113B	
10M	Selenium	5.0	Comp	200.8, 200.9, SM3113B	
11M	Silver, total	5.0	Comp	200.8, 200.9, SM3113B	
12M	Thallium	0.5	Comp	200.8, 200.9, SM3113B	
13M	Zinc, total	10	Comp	200.7, 200.8, SM3111B	
14M	Cyanide, total	10	Grab	335.4 Rev. 1.0, SM4500Cn C,E	
15M	Phenols, Total	5.0	Grab	420.1, 420.4 Rev. 1.0, SM510B	

No.	Section V Part C: Dioxin	PQL (µg/l)	Sample Type	EPA Approved Method(s) <sup>1,2</sup>	Other Methods <sup>3,4</sup>
	2,3,7,8-Tetrachlorodibenzo-p-dioxin	10 µg/l	Comp	1613B	
No.	Section V Part C: GC/MS Volatile Compounds	PQL (µg/l)	Sample Type	EPA Approved Method(s) <sup>1,2</sup>	Other Methods <sup>3,4</sup>
1V	Acrolein	5.0	Grab	603, 1624B	8260B
2V	Acrylonitrile	5.0	Grab	603, 1624B	8260B
3V	Benzene	2.0	Grab	624, 1624B	8260B
4V	Bis (Chloromethyl) Ether	-	Comp		
5V	Bromoform	2.0	Grab	624, 1624B	8260B
6V	Carbon Tetrachloride	2.0	Grab	624, 1624B	8260B
7V	Chlorobenzene	2.0	Grab	624, 1624B	8260B
8V	Chlorodibromomethane	2.0	Grab	624, 1624B	8260B
9V	Chloroethane	2.0	Grab	624, 1624B	8260B
10V	2-Chloroethyl vinyl ether	5.0	Grab	624, 1624B	8260B
11V	Chloroform	2.0	Grab	624, 1624B	8260B
12V	Dichlorobromomethane	2.0	Grab	624, 1624B	8260B
13V	Dichlorodifluoromethane	2.0	Grab	601	8260B
14V	1,1-Dichloroethane	2.0	Grab	624, 1624B	8260B
15V	1,2-Dichloroethane	2.0	Grab	624, 1624B	8260B
16V	1,1-Dichloroethene	2.0	Grab	624, 1624B	8260B
17V	1,2-Dichloropropane	2.0	Grab	624, 1624B	8260B
18V	1,3-Dichloropropylene	2.0	Grab	624, 1624B	8260B
19V	Ethylbenzene	2.0	Grab	624, 1624B	8260B
20V	Methyl bromide	2.0	Grab	624, 1624B	8260B
21V	Methyl chloride	2.0	Grab	624, 1624B	8260B
22V	Methylene chloride	2.0	Grab	624, 1624B	8260B
23V	1,1,2,2-Tetrachloroethane	2.0	Grab	624, 1624B	8260B
24V	Tetrachloroethylene	2.0	Grab	624, 1624B	8260B
25V	Toluene	2.0	Grab	624, 1624B	8260B
26V	1,2-Trans-dichloroethylene	2.0	Grab	624, 1624B	8260B
27V	1,1,1-Trichloroethane	2.0	Grab	624, 1624B	8260B
28V	1,1,2-Trichloroethane	2.0	Grab	624, 1624B	8260B
29V	Trichloroethylene	2.0	Grab	624, 1624B	8260B
30V	Trichlorofluoromethane	2.0	Grab	624	8260B
31V	Vinyl chloride	2.0	Grab	624, 1624B	8260B
No.	Section V Part C: GC/MS Fraction Acid Compounds	PQL (µg/l)	Sample Type	EPA Approved Method(s) <sup>1,2</sup>	Other Methods <sup>3,4</sup>
1A	2-Chlorophenol	10	Comp	625, 1625B	8270D
2A	2,4-Dichlorophenol	10	Comp	625, 1625B	8270D
3A	2,4-Dimethylphenol	10	Comp	625, 1625B	8270D
4A	4,6-Dinitro-o-cresol	10	Comp	625, 1625B	8270D
5A	2,4-Dinitrophenol	50	Comp	625, 1625B	8270D
6A	2-Nitrophenol	10	Comp	625, 1625B	8270D
7A	4-Nitrophenol	10	Comp	625, 1625B	8270D
8A	P-Chloro-m-cresol	10	Comp	625, 1625B	8270D
9A	Pentachlorophenol	10	Comp	625, 1625B	8270D
10A	Phenol	10	Comp	625, 1625B	8270D
11A	2,4,6-Trichlorophenol	10	Comp	625, 1625B	8270D
No.	Section V Part C: GC/MS Fraction Base-Neutral Compounds	PQL (µg/l)	Sample Type	EPA Approved Method(s) <sup>1,2</sup>	Other Methods <sup>3,4</sup>
1B	Acenaphthene	10	Comp	625, 1625B	8270D
2B	Acenaphthylene	10	Comp	625, 1625B	8270D
3B	Anthracene	10	Comp	625, 1625B	8270D
4B	Benzidine	100	Comp	625, 1625B	8270D
5B	Benzo(a)anthracene	10	Comp	625, 1625B	8270D
6B	Benzo(a)pyrene	10	Comp	625, 1625B	8270D
7B	3,4-benzofluoranthene	10	Comp	625, 1625B	8270D
8B	Benzo(ghi)perylene	10	Comp	625, 1625B	8270D
9B	Benzo(k)fluoranthene	10	Comp	625, 1625B	8270D
10B	Bis(2-chloroethoxy) methane	10	Comp	625, 1625B	8270D
11B	Bis(2-chloroethyl)ether	10	Comp	625, 1625B	8270D
12B	Bis(2-chloroisopropyl) ether	10	Comp	625, 1625B	8270D
13B	Bis(2-ethylhexyl) phthalate	10	Comp	625, 1625B	8270D
14B	4-Bromophenyl phenyl ether	10	Comp	625, 1625B	8270D
15B	Butyl Benzyl Phthalate	10	Comp	625, 1625B	8270D
16B	2-Chloronaphthalene	10	Comp	625, 1625B	8270D
17B	4-Chlorophenyl phenyl ether	10	Comp	625, 1625B	8270D

No.	Section V Part C: GC/MS Fraction Base-Neutral Compounds	PQL (µg/l)	Sample Type	EPA Approved Method(s) <sup>1,2</sup>	Other Methods <sup>3,4</sup>
18B	Chrysene	10	Comp	625, 1625B	8270D
19B	Dibenzo(a,h)anthracene	10	Comp	625, 1625B	8270D
20B	1,2-Dichlorobenzene	2.0	Grab	624, 1625B	8270D
21B	1,3-Dichlorobenzene	2.0	Grab	624, 1625B	8270D
22B	1,4-Dichlorobenzene	2.0	Grab	624, 1625B	8270D
23B	3,3'-Dichlorobenzidine	10	Comp	625, 1625B	8270D
24B	Diethyl phthalate	10	Comp	625, 1625B	8270D
25B	Dimethyl phthalate	10	Comp	625, 1625B	8270D
26B	Di-n-butyl phthalate	10	Comp	625, 1625B	8270D
27B	2,4-Dinitrotoluene	10	Comp	625, 1625B	8270D
28B	2,6-Dinitrotoluene	10	Comp	625, 1625B	8270D
29B	Di-n-octyl phthalate	10	Comp	625, 1625B	8270D
30B	1,2 Diphenylhydrazine	10	Comp		8270D
31B	Fluoranthene	10	Comp	625, 1625B	8270D
32B	Fluorene	10	Comp	625, 1625B	8270D
33B	Hexachlorobenzene	10	Comp	625, 1625B	8270D
34B	Hexachlorobutadiene	10	Comp	625, 1625B	8270D
35B	Hexachlorocyclopentadiene	10	Comp	625, 1625B	8270D
36B	Hexachloroethane	10	Comp	625, 1625B	8270D
37B	Indeno(1,2,3-c,d)pyrene	10	Comp	625, 1625B	8270D
38B	Isophorone	10	Comp	625, 1625B	8270D
39B	Naphthalene	10	Comp	625, 1625B	8270D
40B	Nitrobenzene	10	Comp	625, 1625B	8270D
41B	n-Nitrosodimethylamine	10	Comp	625, 1625B	8270D
42B	n-Nitrosodi-n-propylamine	10	Comp	625, 1625B	8270D
43B	n-Nitrosodiphenylamine	10	Comp	625, 1625B	8270D
44B	Phenanthrene	10	Comp	625, 1625B	8270D
45B	Pyrene	10	Comp	625, 1625B	8270D
46B	1,2,4-Trichlorobenzene	2.0	Grab	624, 1624B	8260B
No.	Section V Part C: Pesticides	PQL (µg/l)	Sample Type	EPA Approved Method(s) <sup>1,2</sup>	Other Methods <sup>3,4</sup>
1P	Aldrin	0.050	Comp	608	8081B
2P	alpha-BHC	0.050	Comp	608	8081B
3P	beta-BHC	0.050	Comp	608	8081B
4P	gamma-BHC	0.050	Comp	608	8081B
5P	delta-BHC	0.050	Comp	608	8081B
6P	Chlordane	0.50	Comp	608	8081B
7P	4,4'-DDT	0.050	Comp	608	8081B
8P	4,4'-DDE	0.050	Comp	608	8081B
9P	4,4'-DDD	0.050	Comp	608	8081B
10P	Dieldrin	0.050	Comp	608	8081B
11P	a-Endosulfan	0.050	Comp	608	8081B
12P	b-Endosulfan	0.050	Comp	608	8081B
13P	Endosulfan sulfate	0.050	Comp	608	8081B
14P	Endrin	0.050	Comp	608	8081B
15P	Endrin aldehyde	0.050	Comp	608	8081B
16P	Heptachlor	0.050	Comp	608	8081B
17P	Heptachlor Epoxide	0.050	Comp	608	8081B
18-24P	Polychlorinated Biphenyls (PCBs,	0.50	Comp	608	8082A
25P	Toxaphene	0.50	Comp	608	8081B
Other Parameters	PQL (µg/l)	Sample Type	EPA Approved Method(s) <sup>1,2</sup>	Other Methods <sup>3,4</sup>	
Acetone	50	Grab		8260B	
Alachlor	0.05	Comp		8081B	
Atrazine	1.0	Comp		8141B	
AOX (Adsorbable Organic Halides)	20		1650, 1653		
n-Butylbenzene	5.0	Grab		8260B	
sec-Butylbenzene	5.0	Grab		8260B	
tert-Butylbenzene	5.0	Grab		8260B	
Carbofuran	10	Comp		8318A	
3-Chlorophenol	10	Comp		8270D	
4-Chlorophenol	10	Comp		8270D	
Chlorophenoxy Herbicide 2,4,5,-TP	0.025	Comp	6640B	8151A	
Chlorophenoxy Herbicide 2,4-D	0.05	Comp	6640B	8151A	
Chloropyrifos	1.0	Comp		8141B	
Chromium III	10	Comp	Chromium total result minus Chromium VI		
Chromium VI	10	Grab	SM3500Cr D, E, 218.6 Rev. 3.3		

	Other Parameters	PQL (µg/l)	Sample Type	EPA Approved Method(s) <sup>1,2</sup>	Other Methods <sup>3,4</sup>
	Dalapon	5.0	Comp		8151A
	Demeton, O & S	2.0	Comp		8141B
	Di(2-ethylhexyl) adipate	10	Comp		525.2
	1,2-Dibromo-3-chloropropane (DBCP)	0.02	Grab		8011
	1,1-Dichloroethylene	2.0	Grab	624, 1624	8260B
	1,2-cis-Dichloroethylene	2.0	Grab		8260B
	1,2-trans-Dichloroethylene	2.0	Grab	624, 1624	8260B
	2,3-Dichlorophenol	10	Comp		8270D
	2,5-Dichlorophenol	10	Comp		8270D
	2,6-Dichlorophenol	10	Comp		8270D
	3,4-Dichlorophenol	10	Comp		8270D
	Diisopropylether		Grab		8260B
	Dinoseb	2.0	Comp		8151A
	1,4 Dioxane	50	Comp		8260B
	Diquat	1.0			549.2
	Dissolved Oxygen		Grab	SM4500O C, SM4500O G	
	Endothall	20			548.1
	Enterococcus	1/100mL	Grab	Enterolert, EPA 1600	
	Ethylene dibromide	0.02	Grab		8011
	Formaldehyde	50	Grab		8315
	Glyphosate	10			547
	Guthion (Azinphos-methyl)	1.0	Comp		8141B
	2-Hexanone	10	Grab		8260B
	Isopropylbenzene	5.0	Grab		8260B
	p-Isopropyltoluene	5.0	Grab		8260B
	Malathion	1.0	Comp	SM 6630C	8141B
	2-Methyl-4-Chlorophenol	20	Comp		8270D
	3-Methyl-6-Chlorophenol	20	Comp		8270D
	4-Methyl-2-Pentanone	10	Grab		8260B
	1-Methylnaphthalene		Comp		8270D
	2-Methylnaphthalene	10	Comp		8270D
	Methoxychlor	0.50	Comp	SM 6630B, C	8081B
	Mirex (Hexachlorocyclo-pentadiene)	10	Comp	SM 6630B, C	8141B
	Nitrate	20	Comp	SM 4500 NO <sub>3</sub> - E	
	Nitrite	20	Comp	SM 4500 NO <sub>2</sub> B	
	Nitrosodibutylamine	10	Comp		8270D
	Nitrosodiethylamine	10	Comp		8270D
	Nitrosopyrrolidine	10	Comp		8270D
	Oxamyl	20	Comp		531.1, 8321B
	Parathion, methyl & ethyl	0.20	Comp	SM 6630C	8141B
	Pentachlorobenzene	10	Comp		8270D
	Pentachlorethane	2.0	Grab		8260B(DAI)
	Picloram	1.0	Comp		8151A
	n-Propylbenzene	5.0	Grab		8260B
	Salinity	-	Grab		
	Simazine	0.10	Comp		8141B
	Styrene	2.0	Grab		8260B
	1,2,4,5-Tetrachlorobenzene	10	Comp		8270D
	2,3,4,6-Tetrachlorophenol	10	Comp		8270D
	Tetrahydrofuran	20	Grab	1666A	
	Tributyltin	-	-		
	Trichlorofluoromethane	2.0	Grab	624	8260B
	2,4,5-Trichlorophenol	10	Comp		8270D
	1,2,4-Trimethylbenzene	5.0	Grab		8260B
	1,3,5-Trimethylbenzene	5.0	Grab		8260B
	Turbidity	1000	Grab	180.1 Rev. 2.0, SM 2130B	
	Vinyl Acetate	5.0	Grab		8260B
	Xylenes, total	6.0	Grab		8260B

Comp: Composite

<sup>1</sup> Standard Method references included in this list are for the 18<sup>th</sup> Edition. Please refer to 40 CFR Part 136 Table 1B for other Standard Method equivalent editions.

<sup>2</sup> Some methods may require EPA Region IV approval.

<sup>3</sup> For parameters with both an EPA approved method and "Other Method" listed, the most stringent criteria between the two methods must be met. This includes but is not limited to calibration criteria and quality control criteria for matrix and laboratory spikes.

<sup>4</sup> If an EPA approved method is listed for a compound, this method must be referenced for reporting purposes.