NEW SOURCE CHEMICAL TESTING

LOUISIANA DEPARTMENT OF HEALTH • OFFICE OF PUBLIC HEALTH

The goal of this requirement is to protect the consumer by ensuring potential new source meet the minimum quality standards. To accomplish this goal, water system representatives must submit chemical contaminant sample results analyzed from each new source by a LDH-certified Laboratory. The representative of the water system shall provide a copy of the results for review and approval to the Louisiana Department of Health (LDH) – Office of Public Health (OPH) – Engineering Services office prior to the water system placing the new source in service to provide water to consumers.

NEW SOURCE TESTING REQUIREMENTS

Per LAC 51:XII.165-Plans and Specifications, for new water source(s), approved by LDH-OPH carry the understanding that the quality of water from all finished wells or intakes shall comply with the National Primary Drinking Water Regulations promulgated by the U.S. Environmental Protection Agency (USEPA). Water systems should comply with National Secondary Drinking Water Regulations. Water systems shall collect and have an LDH-OPH certified laboratory for Drinking Water Analyses analyze samples for the constituents listed in the tables below. The water system shall submit a copy of the full lab report from the laboratory doing the analysis. LDH-OPH will review and approve by submitting a summary to the permitting LDH-OPH office for any last items needed for the water system to place the source into service. Plans and specifications should include testing requirements for new water wells and water intakes. Additional testing may be required based on the results of the initial tests. For a list of certified laboratories, please go to http://ldh.la.gov/index.cfm/page/490. When submitting to laboratories, please ensure the laboratory reports to the method detection limits set by the USEPA.

Plans and Specifications shall not preclude the necessity of appropriate treatment should the water not comply with these standards. Should any treatment be necessary, the engineer on the project must submit plans and specifications to the LDH-OPH – Engineering Services for review and approval showing the water system is capable of providing the appropriate treatment to consistently and reliably .

TABLE 1. INORGANIC CONTAMINANTS (IOCs), NITRATES/NITRITES, AND CYANIDE

IOC CONTAMINANTS (Methods-40 CFR 141.23(k)(1))		ANALYTICAL CODE	MCL or AL (mg/L)
1	Antimony	1074	0.006
2	Asbestos	1094	7 MFL (> 10um)
3	Arsenic	1005	0.01 – as of Jan 23, 2006
4	Barium	1010	2
5	Beryllium	1075	0.004
6	Cadmium	1015	0.005
7	Chromium	1020	0.1
8	Lead	1030	AL = 0.015
9	Copper	1022	AL = 1.3
10	Cyanide	1024	0.2
11	Fluoride	1025	4.0
12	Mercury	1035	0.002
13	Nitrate	1040	10 (as Nitrogen)
14	Nitrite	1041	1 (as Nitrogen)
15	Selenium	1045	0.05
16	Thallium	1085	0.002

TABLE 2. SYNTHETIC ORGANIC CONTAMINANTS (SOCs)

SOC CONTAMINANTS (Methods-40 CFR 141.24(e))		ANALYTICAL CODE	MCL (mg/L)
1	Alachlor	2051	0.002
2	Atrazine	2050	0.003
3	Benzo [a] pyrene (PAHs)	2306	0.0002
4	Carbofuran	2046	0.04
5	Chlordane	2959	0.002
6	Dalapon	2031	0.2

SOC CONTAMINANTS (Methods-40 CFR 141.24(e))		ANALYTICAL CODE	MCL (mg/L)
7	2, 4-D (2,4-Dichlorophenoxyacetic acid)	2105	0.07
8	Di [2-ethylhexyl] adipate	2035	0.4
9	Di [2-ethylhexyl] phthalate	2039	0.006
10	Dibromochloropropane [DBCP]	2931	0.0002
11	Dinoseb	2041	0.007
12	Dioxin (2, 3, 7, 8-TCDD)	2063	0.00000003
13	Diquat	2032	0.02
14	Endothall	2033	0.1
15	Endrin	2005	0.002
16	Ethylene Dibromide [EDB]	2946	0.00005
17	Glyphosate	2034	0.7
18	Heptachlor	2065	0.0004
19	Heptachlor epoxide	2067	0.0002
20	Hexachlororbenzene	2274	0.001
21	Hexachlorocyclo-pentadiene	2042	0.05
22	Lindane	2010	0.0002
23	Methoxychlor	2015	0.04
24	Oxamyl [Vydate]	2036	0.2
25	Pentachlorophenol	2326	0.001
26	Picloram	2040	0.5
27	Polychlorinated biphenyls [PCBs]	2383	0.0005
28	Simazine	2037	0.004
29	Toxaphene	2020	0.003
30	2,4,5-TP [Silvex]	2110	0.05

TABLE 3. VOLITILE ORGANIC CHEMICALS (VOCs)

CONTAMINANTS (Methods-40 CFR 141.24(e))		ANALYTICAL CODE	MCL (mg/L)
1	Benzene	2990	0.005
2	Carbon tetrachloride	2982	0.005
3	o-Dichlorobenzene	2968	0.6
4	para-Dichlorobenzene	2969	0.075
5	1,2-Dichloroethane	2980	0.005
6	1,1-Dichloroethylene	2977	0.007
7	cis-1,2-Dichloroethylene	2380	0.07
8	trans-1,2-Dichloroethylene	2979	0.1
9	Dichloromethane	2964	0.005
10	1,2-Dichloropropane	2983	0.005
11	Ethylbenzene	2992	0.7
12	[Mono]chlorobenzene	2989	0.1
13	Styrene	2996	0.1
14	Tetrachloroethylene	2987	0.005
15	Toluene	2991	1
16	1,2,4-Trichlorobenzene	2378	0.07
17	1,1,1-Trichloroethane	2981	0.2
18	1,1,2-Trichloroethane	2985	0.005
19	Trichloroethylene	2984	0.005
20	Vinyl chloride	2976	0.002
21	Xylenes [total]	2955	10

TABLE 4. RADIONUCLIDES

RADIONULCIDE (Methods-40 CFR 141.25(a))		ANALYTICAL CODE	MCLs
1	Gross Alpha particle	4109	15 pCi/L
2	Combined Radium 226/228	4010	5 pCi/L
3	Uranium [as of 12/08/03]	4006	30 ug/L
4	Beta particle and Photon emitters	4101	4 mrem/yr [1]
5	Gross Beta	4100	4 mrem/yr[1]

[1] Speciation for Strontium and Tritium is required when Gross Beta exceeds 8 pCi/L.

TABLE 5. PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

PFAS (Methods - 40 CFR 141.901(b))		ANALYTICAL CODE	MCL[1] (mg/L)	Trigger Level (mg/L)
1	Perfluorooctanoic Acid (PFOA)	2806	0.0000040	0.0000020
2	Perfluorooctanesulfonic (PFOS)	2805	0.0000040	0.0000020
3	Perfluorohexane Sulfonate (PFHxS)	2803	0.00001	0.000005
4	Perfluorononanoate (PFNA)	2804	0.00001	0.000005
5	2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy) propanoate (HFPO-DA)	2816	0.00001	0.000005
6	Perfluorobutane Sulfonate (PFBS)	2801	N/A[2]	
7	Hazard Index[3]	2840	1	0.5

[1] MCLs are not effective until 2030.
[2] PFBS is analyzed as a component to the Hazard index, but does not have an individual MCL.
[3]The Hazard index is a weighted unitless value incorporating he results of (PFBS, HFPO-DA, PFNA, and PFHxS)

$$Hazard\ Index\ (1\ unitless) = (([\text{HFPO-DA}_{ppt}]/\ [10\ ppt]) + (([\text{PFBS}_{ppt}]/\ [2000\ ppt]) + (([\text{PFNA}]/\ [10\ ppt]) + (([\text{PFHxS}_{ppt}]/\ [10\ ppt])$$

TABLE 6. DISINFECTION BY-PRODUCT FORMATION POTENTIAL

For water systems with known Disinfection By-Products, such as Total Trihalomethanes (> 80 ug/L) and Haloacetic Acids (> 60 ug/L) exceedances.

Disinfection By Product Potential (Methods - 40 CFR 141.131)		ANALYTICAL CODE	Levels
1	Total Organic Carbon (TOC)	4109	
2	Dissolved Organic Carbon (DOC)	2919	
2	Color	1905	15 CU (Secondary MCL)
3	Chloroform	2941	
4	Bromoform	2942	
5	Bromodichloromethane	2943	
6	Dibromochloromethane	2944	
7	Trihalomethanes (THM)	2950	0.080 mg/L (MCL)
8	Monochloroacetic acid	2450	
9	Dichloroacetic acid	2451	
10	Trichloroacetic acid	2452	
11	Monobromoacetic acid	2453	
12	Dibromoacetic acid	2454	
13	Haloacetic Acids (HAA5)	2456	0.060 mg/L (MCL)
14	Bromide	1004	

SUBMIT ALL RESULTS TO THE FOLLOWING OFFICES FOR REVIEW AND APPROVAL:

ATTN: SEAN NOLAN
LDH - OPH, ENGINEERING SERVICES
P.O. BOX 4489
BATON ROUGE, LA 70821

ATTN: REGIONAL OPH OFFICE
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