

ANNEX 3.5:

REGULATION ON SANITARY AND TECHNICAL CONDITIONS FOR WASTEWATER DISCHARGE INTO PUBLIC SEWERAGE



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Page 242, No. 14

REGULATION

ON SANITARY AND TECHNICAL CONDITIONS FOR WASTEWATER DISCHARGE INTO PUBLIC SEWERAGE

GENERAL PROVISIONS

Article 1

The present Regulation prescribes protective measures for public sewerage, maximum allowed concentration (MAC) of specific substances that may be discharged into the public sewerage, manners of wastewater discharge control of the public sewerage users, and manner of supervision of the Regulation's application.

Article 2

Protection of the public sewerage against detrimental effects of substances contained in wastewater discharges of the public sewerage users is carried out in the following three ways:

- protection against mechanical impact
- protection against flammable and explosive substances
- protection against chemical substances

PROTECTION AGAINST MECHANICAL IMPACT

Article 3

It is prohibited to discharge the following substances into the stormwater drainage system, within the public sewerage:

- sanitary and wastewater from residential, public, communal and industrial premises;
- storm water from surfaces severely polluted by industrial products;
- industrial wastewater with and without pre-treatment at internal treatment facilities.

Article 4

No legal entity or physical person is allowed to neither discharge or cause discharge into a public sewerage, of wastewater which endanger the envisaged hydraulic regime, operational stability of the sewerage network facilities, functioning of devices in the sewerage pumping stations, normal biochemical processes in the sewerage wastewater, conditions foreseen for the execution of regular network control and repairs, nor it is allowed to increase the operational costs by the above mentioned activities, or in any other way.

Wastewater discharged into public sewerage must not contain the following:

- temperature over 40⁰C
- content of total suspended solids over 400 mg/dm³
- content of settled solids in 2 hours, according to Imhoff, over 65 cm³/dm³
- any other solid substances, such as: sand, soil, stone, wood, metal, glass, plastic substances, fibre material, feather, tar, innards, large food waste portions, or any other solid substances or high-viscosity substances;
- wastewater from septic tanks and urban waste;
- waste substances with abrasive features damaging the sewerage pipes.

PROTECTION AGAINST CHEMICAL SUBSTANCES

Article 5

Discharge of the following flammable and explosive substances into the public sewerage collectors is prohibited:

- oil and its light and heavy derivatives, as well as all other solid, liquid and gas flammable and explosive substances.

PROTECTION AGAINST CHEMICAL SUBSTANCES

Article 6

Maximum allowed concentrations (MAC) of substances in waste waters that may be discharged in public sewerage, measured at the discharge point, prior to the mixing with waste waters running through the public sewerage, are presented in the table below:

No.	Substances	Unit of measure	MAC
1	2	3	4
1.	pH value		6.5 - 9
2.	Temperature	C	40
3.	Floating substances		
4.	Settling of solids in 2 hours		0.5
5.	Suspended solids		
6.	COD - Chemical oxygen demand	MgO ₂ /dm ³	550
7.	BOD - Biological oxygen demand	"	550
8.	Fats and oils	mg/dm ³	40
9.	Heavy oil derivatives		
10.	Light and evaporable oil derivatives (forming explosive mixtures with air)		0.1
11.	Chlorides (Cl)	mg/dm ³	450
12.	Sulphates (SO ₄)	"	350
13.	Sulphites (SO ₃)	"	
14.	Sulphides (S ₂)	"	1
15.	Cyanides (CN)	"	0.5
16.	Ammonium (NH ₄)	"	5
17.	Ammonium salts	"	10
18.	Nitrites (N)	"	10
19.	Hydrogen oxide sulphide (H ₂ S)	"	001
20.	Fluorides (F)	"	10
21.	Calcium-carbide (CaC ₂)	"	0
22.	Active chlorine (Cl ₂)	"	0.5
23.	Iron (Fe)	"	4
24.	Chromium total (Cr)	"	1
	-six-valent (Cr + 6)	"	0.5
	-three-valent (Cr + 3)	"	0.5
25.	Copper (Cu)	"	1
26.	Zinc (Zn)	"	2
27.	Nickel (Ni)	"	2
28.	Lead (Pb)	"	0.5
29.	Aluminium (Al)	"	10
30.	Mercury (Hg)	"	001
31.	Barium (Ba)	"	4
32.	Cadmium (Cd)	"	05
33.	Silver (Ag)	"	01
34.	Arsenic (As)	"	01
35.	Selenium (Se)	"	1
36.	Tin (Sn)	"	1
37.	Phenol compounds, like phenols	"	5
38.	Detersives anion-active	"	5
39.	Detersives non-ionising	"	5
40.	Carbon tetrachloride (CCl ₄)	"	0
41.	Benzol	"	05
42.	Chloroform	"	01
43.	Ethers	"	01
44.	Ketones	"	05
45.	Pesticides	"	02

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46.	Radioactivity (pursuant to the Regulation on preservation and disposal of radioactive waste)	pC/(dm ³)	10
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WASTEWATER QUALITY CONTROL

Article 7

Assessment of the wastewater pollution level, i.e. quality control, is performed by chemical analysis of the sample, and by measuring the discharged water quantity. Quality control of hazardous and toxic substances in waste waters is mandatory performed once a month.

Article 8

Wastewater quality control at the discharge point, prior to the mixing with wastewater in the public sewerage, as well as operational control of the internal treatment facility, is carried out by the public sewerage user, at its own expense, through an authorised organisation laboratory, pursuant to the current regulation.

In case the public sewerage user fails to present to the Public Utility Company the wastewater analyses, it will be considered that the waste water quality corresponds to average samples of wastewater quality control, according to the following table. In such case, the fees for discharged waste water will be calculated according to the table below.

No.	Industrial sector	Hazardous substances	COD	BOD ₅	Detersives	Oil derivatives	Fats&oils	Chromium	Suspended solids	Settled solids	Copper	Nickel	Cyanide	Zinc	Iron
1.	"Crvena zvezda" – wool laundry		5585	1781	162	-	358	0.68	2294	1.87	-	-	-	-	-
2.	"Resort" – prep. of textile yarns		1441	375	-	-	62	-	565	-	-	-	-	-	-
3.	Textile industry "Zeke Veljkovic"		11254	356	-	-	135	-	682	-	-	-	-	-	-
4.	"Srbijanka" knitted fabrics, woven		1171	368	19	-	30	638	-	-	-	-	-	-	-
5.	Food industry – Dairy factory		1715	968	-	-	-	481	-	-	-	-	-	-	-
6.	Food industry - mills		-	-	-	-	-	-	615	-	-	-	-	-	-
7.	Bakery		3051	1238	-	-	99	-	1499	-	-	-	-	-	-
8.	"RUL" Electric industry		-	-	-	-	-	4.57	-	-	5.2	0.6	0.042	-	-
9.	Leminf "R. Metalac"		-	-	-	-	-	1.64	-	-	1.41	7.92	-	-	-
10.	Lemind "Plastic tinplate industry"		-	-	-	-	56	0.67	-	-	-	-	0.08	-	-
11.	"Zdravlje" Chemical industry		758	-	-	-	76.5	-	-	-	-	-	-	-	-
12.	"Nevena" Chemical industry		794	476	24.65	-	41.5	-	-	-	-	-	-	-	-
13.	"Zvezda" Mirror industry		-	-	-	-	-	-	-	-	20.37	-	-10.87	8.26	-
14.	"Jugoekspres" Transport company		4250	1763	33.40	108	343	-	3089	-	-	-	-	-	-
15.	Textile industry "Leteks"		680	-	12	-	-	-	700	-	-	-	-	-	-

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Article 9

Quality control from Article 8 is performed by the Public Utility Company. Such control may be performed at any time, without prior notice to the public sewerage user, whereby the user is obliged to enable free access to the control point.

Article 10

At taking samples for the wastewater quality control, a record is made on taking samples of the discharged wastewater, according to the instructions on the manner and procedure of establishing the actual level of treatment of discharged waste water.

Article 11

All public sewerage users who carry out the analysis of their waste water via an authorised organisation are obliged to submit the results of such analyses to the Public Utility Company.

Article 12

Fees for wastewater discharge are established by the Public Utility Company, in accordance with the Municipal Assembly or its authorised body, according to the following criteria:

- quantity
- level of water pollution.

Article 13

Quantity of the waste water discharged into the public sewerage is established in the following cases:

1. For the users discharging industrial wastewater, besides the sewage, into the public sewerage, the measurement is carried out by flowmeter, or based on the data of the authorised organisation for the wastewater quality control, in compliance with the technological processes.
2. For the users who have no flowmeter, the measurement of discharged wastewater quantity is carried out by the quantity of water used from the public water supply system.
3. For the public sewerage users who are supplied with water from their own sources, the measurement is carried out according to the quantity of used water, which they are obliged to register.

Article 14

Reading of flow meters for discharged wastewater is carried out by authorised personnel of the Public Utility Company, accompanied by the user or its representative.

The Public Utility Company is obliged to inform the user on the date and time scheduled for reading. In case the user or its representative fails to respond to the invitation, the reading will be performed without their presence.

Article 15

The amount of the fees for the wastewater pollution level is established by types and quantities of substances discharged in the public sewerage.

Article 16

The fee from Article 15 of the present Decision is established based on the ratio of the actual concentration measured and the maximum allowed concentration, multiplied by the cost for specific parameter and the quantity of wastewater discharged in the public sewerage.

Article 17

Calculation of the fees, established by the wastewater quality, is carried out once a month. The sum collected from the above fees is used for covering the costs occurred on sewer pipeline and facilities repairs, as well as for the allocation of funds on a special account for the construction of future wastewater treatment facility.

Article 18

The amount of the fees for wastewater pollution is established in the manner defined by Article 22 of the present Regulation.

FINAL PROVISIONS

Article 19

Supervision over the application of the present Regulation is carried out by the competent local self-government authorities for water management and water inspection of the Leskovac Municipality.

Article 20

In case the wastewater quality is below the norms prescribed by the present Regulation, the public sewerage user is obliged to perform pre-treatment of wastewater prior to discharge, in order to satisfy the prescribed quality, at the internal treatment facility.

Article 21

Approval of the facility and the treatment technology is issued by the communal organisation managing the public sewerage.

Article 22

Pursuant to Article 18 of the present Decision, the amount of the fees for waste water discharging, according to the parameters analysed, in percentage, by 1m³ of used water, is as follows:

1.	pH value	6.8%
2.	Temperature	10%
3.	Settled solids in 2 hours	0.22%
4.	COD	0.56%
5.	BOD	0.34%
6.	Fats and oils	0.56%
7.	Heavy oil derivatives	10.5%
8.	Light oil derivatives	10.5%
9.	Sulphates	1.13%
10.	Sulphides	13.4%
11.	Sulphites	50%
12.	Cyanides	56.8%
13.	Nitrites	1.13%
14.	Hydrogen oxide sulphide	5.68%
15.	Iron	1.13%
16.	Chromium six-valent	11.36%
17.	Chromium three-valent	11.36%
18.	Copper	3.4%
19.	Zinc	2.27%
20.	Nickel	3.4%
21.	Lead	22.7%
22.	Silver	11.30%
23.	Phenol compounds	22.7%
24.	Detersives	0.34%
25.	Mercury	30%
26.	Aluminium	21%
27.	Ketones	10%

Article 23

By the entering into force of the present Regulation, the Regulation on technical and sanitary conditions for wastewater discharge in public sewerage ceases to be valid (Official Gazette JMR No. 11/89).

Article 24

The present Regulation enters into force on the eighth day after the publishing in the Official Gazette of the Leskovac Municipality.

No. 06-3/92-01

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Municipal Assembly of Leskovac

President of the Assembly

Gojko Velickovic, in person



RULEBOOK ON AMMENDMENTS AND SUPPLEMENTS TO THE RULEBOOK ON SANITARY AND TECHNICAL CONDITIONS FOR WASTE WATER DISCHARGE INTO THE PUBLIC SEWERAGE SYSTEM

Article 1

In the Rulebook on sanitary and technical conditions for wastewater discharge into the public sewerage system (OG of the Municipality of Leskovac, No: 14/92), article 6 has been changed and it is as follows:

Maximum allowable concentration of wastewater constituents (hereinafter referred to as MAC) which are not allowed to be discharged into the public sewerage, measured at the discharge point, and before mixing with wastewater running through the public sewerage, are given in the table below:

No:	Substance	Unit	MAC
1	2	3	4
1.	pH	-	4
2.	Temperature	°C	6.5-9
3.	Floating substances	cm ³ /dm ³	40
4.	Suspended substances	mg-dm ³	0.1
5.	Sediment substances	cm ³ -dm ³	400
			0.5
6.	Oils and fats	mg/dm ³	40
7.	COD	mgO ₂ /dm ³	550
8.	BOD	mgO ₂ /dm ³	300
9.	Oil derivatives	mg/dm ³	0.1
10.	Chlorides	''	450
11.	Sulphates	''	350
12.	Sulphites	''	5
13.	Sulphides	''	1
14.	Cyanides	''	0.5
15.	Nitrites	''	10
16.	Ammonium salts	mg/dm ³	10
17.	Free Chlorine	''	5
18.	Phenol compound, like phenol	''	5
19.	Detergents	''	5
20.	Poly-chlorine bi-phenyls	''	0.1
21.	Iron	''	4
22.	Aluminium	''	4
23.	Nickel	''	2
24.	Zinc	''	2
25.	Lead	''	0.5
26.	Tin	''	0.5
27.	Mercury	''	0.1
28.	Silver	''	0.1
29.	Chrome+ ⁶	''	0.5
30.	Chrome+ ³	''	0.5
31.	Pesticides	''	0.5
32.	Copper	''	1

For the substances not mentioned in the previous table, the Decision on maximum allowable concentration of hazardous and dangerous substances in water courses ('OGSFRJ', No: 8/78) applies.

Article 2

Article 8 has a new paragraph 3 added, which reads as follows:

“For companies and other legal entities not included in the table from paragraph 2 of this article, the following regulations are applied:

1. Car-wash and car-repair services-number 14 of the table
2. Chemist's and colouring shops-number 4 of the table”

After paragraph 3, there is a new paragraph 4 added, which reads as follows:

“For companies discharging wastewater into septic tanks or open canals, valid are the regulations regarding MAC of hazardous and dangerous substances in water courses, type III and IV, and the methodology for sewerage users will be used for billing.”

Article 3

Article 16 is changed and it reads as follows:

“The tariff from Article 15 of the Decision is defined based on difference between registered concentration and MAC, multiplied by percentile amount, by discharged water and by the price of drinking water for each parameter individually.”

Article 4

Article 22 is changed and it reads as follows:

“According to Article 18 of the Decision, the tariff is defined proportionally per 1m³ of water taken from public system and from own sources and it is as follows”:

No:	Substances	Percentage per 1m ³ (%)
1	2	3
1.	pH	69
2.	Temperature	10
3.	Floating substances	22
4.	Suspended substances	22
5.	Settled matter	22
6.	Oils and fats	56
7.	COD	56
8.	BOD	22
9.	Oil derivatives	11
10.	Chlorides	11
11.	Sulphates	11
12.	Sulphites	50
13.	Sulphides	50
14.	Cyanides	150
15.	Nitrites	50
16.	Ammonium salts	11
17.	Free Chlorine	50
18.	Phenol compound, like phenol	50

19.	Detergents	50
20.	Poly-chlorine bi-phenyls	150
21.	Iron	22
22.	Aluminium	22
23.	Nickel	22
24.	Zinc	22
25.	Lead	50
26.	Tin	22
27.	Mercury	50
28.	Silver	50
29.	Chrome+ ⁶	50
30.	Chrome+ ³	50
31.	Pesticides	50
32.	Copper	50

For the substances not mentioned in the previous table, the Decision on maximum allowable concentration of hazardous and dangerous substances in water courses ('OGSFRJ', No: 8/78) is applied, and the tariff per 1m³ of water is 50%.

Article 5

The Rulebook becomes valid on the eight day from the announcement date in the "Official gazette of the municipality of Leskovac."

No: 06-4/93/01
In Leskovac, 15th June 1993

The Assembly of Leskovac municipality

Mayor,
Gojko Velickovic