

State of waters in the mining operations zones in considered areas

The summary results for the content of elements in surface water samples collected during the **10 September 2020- 9 December 2020** are given in Table 1.

Table 1 – Results for surface water samples

Class of surface water	Element/Parameter	Range (min-max)	Median	MAC*	Content > MAC (%)
IV From Bor city to the confluence Bor and Timok River	Fe (mg/l)	12.9-426.3	247.8	2	100
	Mn (mg/l)	3.9-21.9	7.8	1	100
	Cu (mg/l)	4.1-171.6	49.3	1	100
	Zn (mg/l)	2.6-27.6	8.4	5	80
	As (µg/l)	6.9-19406.3	1564.2	100	90
	Ni (µg/l)	116.1-10500.4	2768.2	34	100
	Pb (µg/l)	3.0-2854.5	658.8	14	85
	Cd (µg/l)	61.9-3300.3	503.8	0.9	100
	Cr (mg/l)	<0.05-0.14	0.0	0.25	0
	Hg (µg/l)	<0.0005	-	0.07	0
	SO ₄ ²⁻ (mg/l)	1805.4-11248.9	2776.3	300	100
III From the confluence Bor and Timok River till to the confluence of Timok and Danube River	Fe (mg/l)	0.027-0.052	0.03	1	0
	Mn (mg/l)	0.20-0.53	0.44	0.3	67
	Cu (mg/l)	0.097-0.24	0.19	0.5	0
	Zn (mg/l)	0.41-0.65	0.63	2	0
	As (µg/l)	3.2-4.2	3.60	50	0
	Ni (µg/l)	3.85-551.9	530.91	34	100
	Pb (µg/l)	<2.1	-	14	0
	Cd (µg/l)	35.5-46.3	44.45	0.6	100
	Cr (mg/l)	<0.005	-	0.1	0
	Hg (µg/l)	<0.0005	-	0.07	0
	SO ₄ ²⁻ (mg/l)	408.8-424.2	415.55	200	100
II From border with Hungary up to border with Bulgaria	Fe (mg/l)	0.008-38.4	0.04	0.5	20
	Mn (mg/l)	<0.006-1.7	0.14	0.1	40
	Cu (mg/l)	<0.005-0.58	0.23	0.005	80
	Zn (mg/l)	<0,005-0.4	0.17	0.3	20
	As (µg/l)	3.1-31.2	7.53	10	20
	Ni (µg/l)	<3.6-388.2	57.76	34	60
	Pb (µg/l)	<2.1-7.1	6.19	14	0
	Cd (µg/l)	<0.14-35.3	5.54	0.45	80
	Cr (mg/l)	<0.005-0.009	0.01	0.05	0
	Hg (µg/l)	<0.0005	-	0.07	0
	SO ₄ ²⁻ (mg/l)	31.9-1699.8	63.04	100	40

*Maximum Allowed Concentration

The summary results for the content of elements in wells collected during **fifth quarterly period** of the implementation of Project RoRS 337 are given in Table 2.

Table 2 – Results for wells

Element/ Parameter	Range (min-max)	Median	MAC for drinking water	Content > MAC (%)
Mn (mg/l)	<0.006-0.011	0.01	0.05	0
Cu (mg/l)	<0.005-0.038	0.02	2	0
Zn (mg/l)	<0.005-0.44	0.041	3	0
As (µg/l)	<2.1-12	7.36	10	10
Ni (µg/l)	<3.6	-	20	0
Pb (µg/l)	<2.1-29.2	-	10	10
Cr (mg/l)	<0.005	-	0.05	0
Mo (mg/L)	<0.007	-	0.07	0
Hg (mg/l)	<0.0005	-	0.001	0

The summary results for the content of elements in soil samples collected during **fifth quarterly period** of the implementation of Project RoRS 337 are given in Table 3.

Table 3 – Results for soil samples

Element/ Parameter	Range (min-max)	Median	MAC	Content > MAC (%)	Remediation values	Content >Remediation values (%)
As (mg/kg)	30.3-368.7	132.1	42	90	55	90
Cd (mg/kg)	<0.71-3.5	2.9	6.4	0	12	0
Cr (mg/kg)	146.6-369.8	203.0	240	20	380	0
Cu (mg/kg)	271.4-7461.9	666.2	110	100	190	100
Hg (mg/kg)	0.05-0.49	0.1	1.6	0	10	0
Pb (mg/kg)	24.7-478	178.8	310	20	530	0
Ni (mg/kg)	4.8-66.9	9.2	44	10	210	0
Zn (mg/kg)	22.8-2657.8	222.2	430	30	720	30

The summary results for the content of elements in sediment samples collected during **fifth quarterly period** of the implementation of Project RoRS 337 are given in Table 4.

Table 4 – Results for sediment samples

Element/ Parameter	Range (min-max)	Median	MAC	Content > MAC (%)	Remediation values	Content >Remediation values (%)
As (mg/kg)	2.7	2.7	42	0	55	0
Cd (mg/kg)	268.8	268.8	6.4	100	12	100
Cr (mg/kg)	5613.3	5613.3	240	100	380	100
Cu (mg/kg)	33.4	33.4	110	0	190	0
Hg (mg/kg)	313.6	313.6	1.6	100	10	100
Pb (mg/kg)	2143.5	2143.5	310	100	530	100
Ni (mg/kg)	0.22	0.22	44	0	210	0
Zn (mg/kg)	612.2	612.2	430	100	720	0