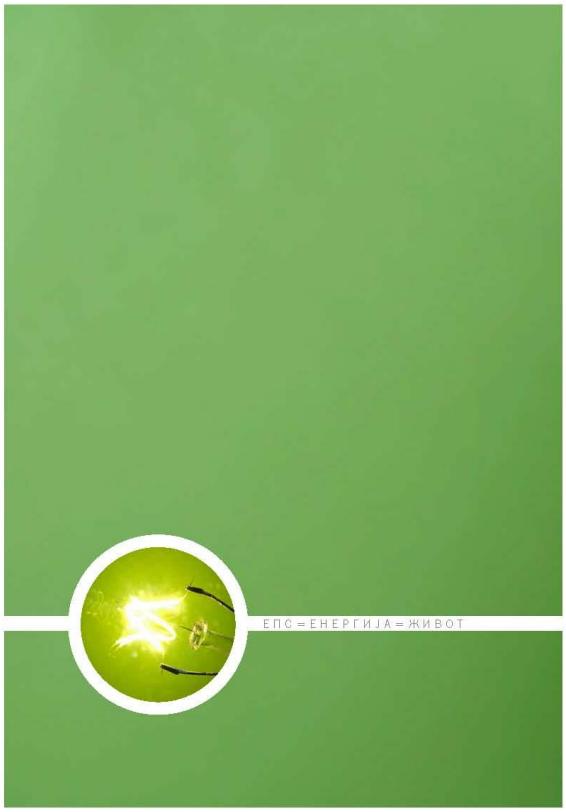
Joint Stock Company Elektroprivreda Srbije

2024 Environmental Report



Belgrade, March 2025

INTRODUCTION

The Joint Stock Company Elektroprivreda Srbije 2024 Environmental Report has been prepared on the basis of recommendations with respect to content and form – report template provided by the European Bank for Reconstruction and Development (APPENDIX 1) and on the basis of data on environmental state monitoring submitted by the responsible persons from EPS JSC Organizational Units.

The data on the quantities of emitted substances affecting air quality is given on the basis of the calculation based on measured mass concentrations, i.e., emission flows and power units (boilers) operating hours in the year 2024.

APPENDIX 2 provides an overview of the legislation of the Republic of Serbia referring to environmental protection which was used as the basis for evaluation and comparison of the measured values of pollutants and other parameters with the allowed values.

Abbreviations used during Report preparation are given in APPENDIX 3.

I JOINT STOCK COMPANY ELEKTROPRIVREDA SRBIJE

The Joint Stock Company Elektroprivreda Srbije Belgrade is a vertically organized company 100% owned by the state. The founder of EPS JSC is the Republic of Serbia, and the Founder rights are exercised by the Government of the Republic of Serbia. The bodies of the Joint Stock Company Elektroprivreda Srbije Belgrade are the Executive Board, Supervisory Board and Assembly.

The predominant activity of the Joint Stock Company Elektroprivreda Srbije Belgrade is energy related activity: electricity generation, activity code 35.11.

The mission of Elektroprivreda Srbije is stable electricity generation and secure electricity supply to consumers in accordance with market principles and trends, gradual achievment of carbon neutrality, with increasing exploitation of renewable sources for electricity generation, implementation of environmental preservation and improvement, implementaton of innovative solution and advanced technologies, with continuous enhancement of service quality and customers' satisfaction.

The vision of Elektroprivreda Srbije is to be a professional, market-oriented and profitable power company, with highly developed corporate organization and culture, a leader on the local electricity market, influential in the regional and European electricity market, driver of national and economic development, as well as a reliable partner of local and international institutions in implementing innovative solutions and services.

Company EPS Trading LLC Ljubljana was founded on July 1st, 2014, as the first company founded abroad by EPS JSC with the purpose of electricity trade.

EPS JSC has founder rights in three public enterprises in Kosovo and Metohija. As of June 1999, EPS JSC has not been able to manage its capacities in K&M.

Company ELEKTROSEVER LLC with its seat in North Mitrovica was founded with consent of the Government 05 No. 023-923/2016 dated February 11th, 2016 and it performs the supply activity and electricity distribution services for the population of the four municipalities in the north of AP Kosovo and Metohija: North Mitrovica, Zvečan, Leposavić and Zubin Potok.

EPS JSC Coal Production

In EPS JSC, coal production is performed within EPS JSC Organizational Units: Branch MB Kolubara, Branch TPP-OCM Kostolac and PE OCM Kosovo**. The quantities of raw and dry coal produced in year 2024 are given in Table 1 (except for PE OCM Kosovo**).

Table 1

JOINT STOCK COMPANY ELEKTROPRIVREDA SRBIJE							
COAL PRODUCTION IN 2024							
Organizational part		**Coal production (t)**			**Overburden production (m3sm)**		
		Plan	**Achieved**	**%**	**Plan**	**Achieved**	**%**
BRANCH MB KOLUBARA – OPEN CAST MINES							
Field B		-	-	-	-	-	-
Field D		-	-	-	-	-	-
Field G		**4.517.000**	**4.525.633**	**100,19**	**7.376.000**	**8.132.613**	**110,26**
Tamnava – West Field		**11.640.000**	**11.617.395**	**99,81**	**24.687.000**	**24.698.803**	**100,05**
Radljevo		**-**	**-**	**-**	**3.694.000**	**3.853.359**	**104,31**
Field E		**6.293.000**	**6.038.998**	**95,96**	**28.833.000**	**22.893.332**	**79,40**
TOTAL(RAW COAL*): BRANCH MB KOLUBARA – OPEN CAST MINES		**22.450.000**	**22.182.026**	**98,81**	**64.590.000**	**59.578.107**	**92,24**
Kolubara Processing Plant (dry coal)	With dust	**220.000**	**185.675**	**84,40**	**-**	**-**	**-**
	Without dust	**220.000**	**184.549**	**83,84**	**-**	**-**	**-**
BRANCH TPP-OCM KOSTOLAC – OPEN CAST MINES							
Drmno		**9.128.000**	**8.540.142**	**93,56**	**47.260.000**	**44.157.179**	**93,43**
TOTAL: BRANCH TPP-OCM KOSTOLAC – OPEN CAST MINES		**9.128.000**	**8.540.142**	**93,56**	**47.260.000**	**44.157.179**	**93,43**
TOTAL: EPS JSC OPEN CAST MINES		**31.578.000**	**30.722.168**	**97,29**	**111.850.000**	**103.735.286**	**92,75**

* Total quantity of raw coal from which one portion is used for producing dry coal

** As of June 1999, EPS JSC has not been managing its capacities in Kosovo and Metohija

Electricity Generation in EPS JSC

Electricity generation in EPS JSC is performed in thermal power facilities: TPP Nikola Tesla, TPP-OCM Kostolac, CHP Panonske, PE TPP Kosovo* and in hydro power plants: HPP Djerdap and HPP Drinsko–Limske. Data on electricity generation (except for PE TPP Kosovo*) in the year 2024 is given in Table 2.

Table 2

JOINT STOCK COMPANY ELEKTROPRIVREDA SRBIJE			
ELECTRICITY GENERATION IN 2024			
Branch	**Unit**	**Electricity generation (GWh)**	
		In generator	**Sent to grid**
TPP NIKOLA TESLA			
TPP NIKOLA TESLA A	A1 - A2	1.275,73	1.150,034
	A3 - A5	4.967,11	4.464,249
	A6	1.848,75	1.631,284
TPP NIKOLA TESLA B	B1 - B2	7.625,10	7.156,108
TPP KOLUBARA A	A1 - A4	188,65	180,692
	A5	134,23	123,006
TPP MORAVA	A	304,10	275,948
TOTAL: TPP NIKOLA TESLA		**16.343,67**	**14.981,321**
TPPs-OCMs KOSTOLAC			
TPP KOSTOLAC A	A1	654,69	582,400
	A2	1.474,80	1.351,625
TPP KOSTOLAC B	B1	1.477,37	1.325,688
	B2	2.301,17	2.066,140
	B3*	966,924	966,924
TOTAL: TPPs-OCMs KOSTOLAC		**6.874,95**	**6.292,776**
PANONSKE CHP			
TE-TO NOVI SAD		386,609	336,489
TE-TO ZRENjANIN		5,579	5,084
TE-TO SREMSKA MITROVICA		0	0
UKUPNO: PANONSKE CHPs		**392,188**	**341,573**
TOTAL: TPP and CHP		**23.610,81**	**21.615,670**
HYDROPOWER PLANTS			
HPP ĐERDAP		7.823,302	7.789,049
DRINSKO-LIMSKE HPPs		2.439,594	2.423,776
SMALL HPPs		32,538	32,538
TOTAL: HYDROPOWER PLANTS		**10.295,434**	**10.245,363**
PE ELEKTROKOSMET*			
TOTAL: EPS JSC (without K&M)		**33.906,244**	**31.861,033**

* As of June 1999, EPS JSC has not been managing its capacities in Kosovo and Metohija
* Data on electricity generation in generator (gross generation) of Kostolac B TPP B3 Unit were not available in 2024.

Fuel Consumption in EPS JSC Thermal Power Plants

Data on the consumption of solid, liquid and gaseous fuel in TPPs and CHPs of EPS JSC in 2024 is given in Table 3.

Table 3

JOINT STOCK COMPANY ELEKTROPRIVREDA SRBIJE						
FUEL CONSUMPTION IN 2024						
Organizational part	**Power unit /boiler**	**Fuel**				
		Coal	**Fuel oil**	**Oil**	**Gas**	**Biomass**
		t	**t**	**t**	**Stm3**	**t**
BRANCH TPP NIKOLA TESLA						
TPP NIKOLA TESLA A	A1	937.565	12.614	-	-	-
	A2	1.181.327	12.031	-	-	-
	A3	2.467.586	6.404	-	-	-
	A4	2.889.187	6.278	-	-	-
	A5	2.904.068	10.136	-	-	-
	A6	3.035.435	6.449	-	-	-
TPP NIKOLA TESLA B	B1	5.370.356	11.306	-	-	-
	B2	5.271.330	9.273	-	-	-
TPP KOLUBARA A	K1	150.309	-	813	-	-
	K2	-	-	-	-	-
	K3	-	-	-	-	-
	K4	136.636	-	545	-	-
	K5	135.024	-	410	-	-
	K6	264.944	-	636	-	-
TPP MORAVA	A1	396.293	854	424	-	-
TOTAL:		**25.140.060**	**75.345**	**2.828**	**0**	**0**
KOSTOLAC TPPs – OCMs BRANCH						
TPP KOSTOLAC A	A1	976.485	-	2.905	-	-
	A2	1.963.731	-	1.418	-	-
TPP KOSTOLAC B	Б1	1.727.684	3.538	-	-	-
	Б2	2.703.139	3.303	-	-	-
TOTAL:		**7.371.039**	**6.841**	**4.323**	**0**	**0**
MB KOLUBARA BRANCH						
VREOCI HEATING PLANT	K1 and K2	168.679	324,200	-	-	-
UKUPNO:		**168.679**	**324,200**	**-**	**-**	**-**
PANONSKE CHPs BRANCH						
CHP NOVI SAD	A1	-	-	-	26.542,383	-
	A2	-	-	-	71.762,741	-
	Stack, both power units – continuous measuring	-	-	-	36.894,074	-
CHP ZRENJANIN	A1	-	-	-	2.531,244	-
	A2	-	-	-	121,042	-
CHP SREMSKA MITROVICA	A3 (K3 and K4)	-	-	-	-	-
	S2400 1-3	-	-	-	904,735	-
	Biomass boiler	-	-	-	4,332	4.331,550
TOTAL: TPP and CHPs		**0**	**0**	**0**	**138.76,551**	**4.331,550**
TOTAL: EPS JSC		**32.679.778**	**82.510,200**	**7.151**	**138.760,551**	**4.331,550**

Emission of Substances from Thermal Power Plants that Affect Air Quality and CO_2 emissions

Data on the total emission of substances from thermal power plants and CO_2 emissions that affect air quality in year 2024 for Organizational Units of EPS JSC (except for PE TPP Kosovo*) is given in Table 4.

Table 4

JOINT STOCK COMPANY ELEKTROPRIVREDA SRBIJE				
QUANTITY OF SUBSTANCES EMITTED FROM THERMAL POWER PLANTS THAT AFFECT AIR QUALITY IN 2024				
Organizational part	t / year			
	Particulate matter	SO_2	NO_x(NO_2)	CO_2
TPP NIKOLA TESLA BRANCH	3.498,860	153.959,540	24.020,320	18.436.725,880
TPPs-OCMs KOSTOLAC BRANCH	1.385,610	66.843,580	7.602,540	6.258.784,700
PANONSKE CHPs BRANCH	2,383	0,080	686,215	257.504,331
MB KOLUBARA BRANCH	254,500	3.000,800	199,300	140.730,450
TOTAL: EPS JSC	5.141,353	223.804,000	32.508,375	25.093.745,361

Injuries at Work in EPS JSC

Data on the number of injuries of employees at work in the year 2024 for Organizational units of EPS JSC is given in Table 5.

Table 5

JOINT STOCK COMPANY ELEKTROPRIVREDA SRBIJE						
INJURIES AT WORK IN 2024						
Organizational part	Number of employees	Injuries with respect to number of employees				
		Mild	Severe	Fatal	Total	%
BRANCH MB KOLUBARA	**10.406**	123	55	3	181	1,74
BRANCH TPPs-OCMs KOSTOLAC – OPEN CAST MINES	**1.834**	11	6	0	17	0,93
OPEN CAST MINES:	**12.240**	134	61	3	198	1,62
BRANCH TPP NIKOLA TESLA	**2.225**	21	7	0	28	1,26
BRANCH TPPs-OCMs KOSTOLAC – THERMAL POWER PLANTS	**864**	7	1	0	8	0,93
BRANCH CHPs PANONSKE	**335**	7	1	0	8	2,39
THERMAL POWER PLANTS:	**3.424**	35	9	0	44	1,29
BRANCH HPP DJERDAP	**647**	3	1	0	4	0,62
BRANCH HPP DRINSKO – LIMSKE	**472**	4	0	0	4	0,85
BRANCH RENEWABLE ENERGY SOURCES	**53**	0	0	0	0	0,00
HYDROPOWER PLANTS:	**1.172**	7	1	0	8	0,68
EPS JSC HEAD OFFICE	**989**	5	0	0	5	0,51
BRANCH EPS SUPPLY	**1.304**	8	2	0	10	0,77
TOTAL: EPS JSC	**19.129**	**189**	**73**	**3**	**265**	**1,39**

Health Protection of Employees in EPS JSC

Table 6 provides the data on health protection of employees which includes mandatory examinations upon entering employment, as well as periodic examinations performed with the aim of checking the work ability of employees, and which were performed in year 2024 in EPS JSC Organizational Units.

Table 6

JOINT STOCK COMPANY ELEKTROPRIVREDA SRBIJE											
WORK ABILITY OF EMPLOYEES IN 2024											
Organizational Part	**Number of employees**	**Periodic examinations**				**Work ability**					
		Referred for examination		**Examined**		**Able**		**Limited ability**		**Unable**	
		no	**%**	**no**	**%**	**no**	**%**	**no**	**%**	**no**	**%**
BRANCH MB KOLUBARA	**10.406**	8.513	81,81	7.716	90,64	6.012	77,92	1.427	18,49	277	3,59
BRANCH TPPs-OCMs KOSTOLAC - OCM	**1.834**	1.220	66,52	1.210	99,18	1.084	89,59	117	9,67	9	0,74
OPEN CAST MINES:	**12.240**	9.733	79,52	8.926	91,71	7.096	79,50	1.544	17,30	286	3,20
BRANCH TPP NIKOLA TESLA	**2.225**	1.738	78,11	1.700	97,81	1.512	88,94	176	10,35	12	0,71
BRANCH TPPs-OCMs KOSTOLAC	**864**	806	93,29	806	100,00	777	96,40	29	3,60	0	0,00
BRANCH CHPs PANONSKE	**335**	240	71,64	240	100,00	123	51,25	116	48,33	1	0,42
THERMAL POWER PLANTS:	**3.424**	2.784	81,31	2.746	98,64	2.412	87,84	321	11,69	13	0,47
BRANCH HPP DJERDAP	**647**	435	67,23	419	96,32	388	92,60	30	7,16	1	0,24
BRANCH HPP DRINSKO–LIMSKE	**472**	162	34,32	162	100,00	129	79,63	33	20,37	0	0,00
BRANCH RENEWABLE ENERGY SOURCES	**53**	35	66,04	35	100,00	29	82,86	6	17,14	0	0,00
HYDROPOWER PLANTS:	**1.172**	632	53,92	616	97,47	546	88,64	69	11,20	1	0,16
EPS JSC HEAD OFFICE	**989**	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
BRANCH EPS SUPPLY	**1.304**	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
TOTAL: EPS JSC	**19.129**	**13.149**	**68,74**	**12.288**	**93,45**	**10.054**	**81,82**	**1.934**	**15,74**	**300**	**2,44**

Submissions by Stakeholders in EPS JSC

Table 7 provides data on total number of environment-related submissions of stakeholders in EPS JSC for 2024.

Table 7

JOINT STOCK COMPANY ELEKTROPRIVREDA SRBIJE	
SUBMISSIONS BY STAKEHOLDERS IN 2024	
Organizational Part	**Number of submissions**
TOTAL: EPS JSC	**18**

Detailed review of all environment-related submissions of stakeholders at the level of EPS JSC are presented in Table 148**.**

1. BRANCH MINING BASIN KOLUBARA

Branch MB Kolubara is a part of the company whose main activity is coal exploitation, processing and transport. In terms of organization, it consists of the Head Office and four organizational units:

1. Open cast mines
2. Processing plant
3. Project and
4. Metal

The following open cast mines are active in the organizational unit Open Cast Mines - Baroševac:

1. Tamnava West Field
2. Field G
3. Field E
4. Radljevo

Environmental protection activities are performed by the Environmental Protection and Improvement Department the role of which is to prevent, control, reduce and remediate all forms of environmental pollution. The Department is organized into four Divisions:

1. Environmental Protection and Improvement Division – organizational unit Open Cast Mines-Baroševac;
2. Biological Reclamation Division;
3. Waste and Hazardous Substances Division; and
4. Environmental Protection and Improvement Division – organizational unit Processing Plant - Vreoci.

A. BRANCH MB KOLUBARA – OU OPEN CAST MINES

1.1. Permits Overview and Status

The overview and status of permits, licenses and other necessary approvals realized in 2024 is given in table 8.

Table 8

BRANCH MB KOLUBARA– OU OPEN CAST MINES			
Overview and status of permits in 2024			
Open cast mine	**Permits, licenses and other necessary approvals (number and date)**	**New requests for obtaining or extending valid permits**	**Note**
Field E	-	-	-
Tamnava West Field	Technical mining project for the Open Cast Mine Tamnava West Field in 2023-2025 period	-	The application on commencement of mining works execution was submitted on 08.11.2023. Still valid in 2024.
Field G	-	-	
Radljevo - North	Technical mining project for overburden excavation and disposal for 2023 and 2024 in OCM Radljevo - North	-	The application on commencement of mining works execution was submitted on 30.08.2023. Still valid in 2024.
Licenses overview and status in 2024			
Environmental Protection and Improvement Department	License for executing professional tasks in forest management (2 pcs) License no.935, issued on 12.08.2021. License no.992 issued on 04.07.2023.	Professional development	Professional development is carried out annually for keeping the licenses
Environmental Protection and Improvement Department	Decision on awarding marks for forest crime, decision by the Ministry of Agriculture, Forestry and Water Management, No. 322-01-299/1/2023-10 as of 28 April 2023.	-	The decision ceases to be valid upon the cessation of cumulative fulfillment of the prescribed conditions. The procurement of marks

			has not been carried out yet.
Environmental Protection and Improvement Department	Decision on awarding marks for a cut tree, decision by the Ministry of Agriculture, Forestry and Water Management, No. 322-01-299/2023-10 as of 28 April 2023.	-	The decision ceases to be valid upon the cessation of cumulative fulfillment of the prescribed conditions. The procurement of marks has not been carried out yet.

1.2. Environmental Impact Monitoring

1.2.1. Measuring Air Quality

In 2024, air quality measurements were performed. In 2023, based on the inspection order, the public procurement for services number JN/4000/0470/2023, JANA number 3412/2023 “Interventions per extraordinary inspection decisions and unforeseen requirements” was initiated, where air quality measurements would be performed at two measuring points. The public procurement was realized in April 2024. Results of the measurements did not show any exceedances of the limit values at two measuring points. The measuring points were the Head Office building of the open cast mines Baroševac (mp1) and Medoševac Waterworks (mp2).

Under the inspection order in 2024, the public procurement number JN/4000/0102/2024, JANA number 844/2024 “Interventions per extraordinary inspection decisions and unforeseen requirements” was initiated, where air quality measurements would be performed at two measuring points. The public procurement was realized in August 2024. Results of the measurements did show exceedances of the limit values. The measuring points were the Head Office building of the open cast mines Baroševac (mp1) and Medoševac Waterworks (mp2). Measured values of NO_x were not aligned for 6 days of measuring at the measuring point 1. Suspended particles PM_{10} were not aligned for 6 days of measuring at the measuring point 1 and 8 days at the measuring point 2.

The Tables 9, 10, 11, 12 and 13 represent the results of air quality examinations in OU Open Cast Mines in 2024.

Table 9

BRANCH MB KOLUBARA– OU OPEN CAST MINES				
Air quality in 2024				
Results of examinations at MP1				
	Tested parameter (µg/m³)			
Sampling period	**Particulate matters PM_{10}**	**SO_2**	**Total particulate matters**	**NO_2**
18/19.04.2024.	13,94	< 20	51,69	6,64
19/20.04.2024.	27,52	< 20	44,85	< 3
20/21.04.2024.	31,55	< 20	53,33	< 3
21/22.04.2024.	22,70	< 20	33,60	< 3
22/23.04.2024.	27,16	< 20	83,37	< 3
23/24.04.2024.	18,40	< 20	23,23	< 3
24/25.04.2024.	38,25	< 20	59,30	< 3
25/26.04.2024.	28,32	< 20	49,74	14,71
26/27.04.2024.	39,76	< 20	63,24	12,04
27/28.04.2024.	23,55	< 20	43,79	3,58

Table 10

BRANCH MB KOLUBARA– OU OPEN CAST MINES				
Air quality in 2024				
Results of examinations at MP2				
	Tested parameter ($\mu g/m^3$)			
Sampling period	**Particulate matters PM_{10}**	**SO_2**	**Total particulate matters**	**NO_2**
18/19.04.2024.	37,65	< 20	58,04	4,50
19/20.04.2024.	45,17	< 20	65,96	< 3
20/21.04.2024.	43,22	< 20	66,54	< 3
21/22.04.2024.	30,97	< 20	41,52	< 3
22/23.04.2024.	28,39	< 20	65,91	< 3
23/24.04.2024.	32,33	< 20	38,26	< 3
24/25.04.2024.	37,01	< 20	57,43	< 3
25/26.04.2024.	38,66	< 20	51,34	< 3
26/27.04.2024.	29,73	< 20	45,45	3,95
27/28.04.2024.	28,55	< 20	48,53	< 3

Table 11

BRANCH MB KOLUBARA– OU OPEN CAST MINES			
Air quality in 2024			
Results of examinations at MP1			
	Tested parameter ($\mu g/m^3$)		
Sampling period	**SO_2**	**Soot**	**NO_x**
20/21.08.2024.	< 20	< 1	21.69
21/22.08.2024.	< 20	< 1	15.49
22/23.08.2024.	< 20	< 1	20.22
23/24.08.2024.	< 20	1.14	24.70
24/25.08.2024.	< 20	1.42	22.47
25/26.08.2024.	< 20	< 1	27.63
26/27.08.2024.	< 20	2.34	22.39
27/28.08.2024.	< 20	3.02	84.05
28/29.08.2024.	< 20	2.54	90.53
29/30.08.2024.	< 20	2.31	192.33
30/31.08.2024.	< 20	3.50	100.81
31.08/01.09.2024.	< 20	4.10	85.20
01/02.09.2024.	< 20	2.79	34.90
02/03.09.2024.	< 20	3.51	114.48
03/04.09.2024.	< 20	3.11	129.31

Table 12

BRANCH MB KOLUBARA– OU OPEN CAST MINES			
Air quality in 2024			
Results of examinations at MP1			
	Tested parameter ($\mu g/m^3$)		
Sampling period	**Particulate matters PM_{10}**	**Benzo(a)pyrene**	**Carbon monoxide**

20/21.08.2024.	14.33	< 0.10	< 1.14
21/22.08.2024.	7.07	< 0.10	< 1.14
22/23.08.2024.	40.19	3.196	< 1.14
23/24.08.2024.	36.93	< 0.10	< 1.14
24/25.08.2024.	22.59	< 0.10	< 1.14
25/26.08.2024.	29.90	0.287	< 1.14
26/27.08.2024.	**56.75**	0.713	< 1.14
27/28.08.2024.	**52.01**	0.115	< 1.14
28/29.08.2024.	34.12	< 0.10	< 1.14
29/30.08.2024.	37.80	0.108	< 1.14
30/31.08.2024.	43.14	0.140	< 1.14
31.08/01.09.2024.	**62.00**	0.489	< 1.14
01/02.09.2024.	**71.83**	< 0.10	< 1.14
02/03.09.2024.	**86.34**	0.184	< 1.14
03/04.09.2024.	**82.64**	0.290	< 1.14

Table 13

BRANCH MB KOLUBARA– OU OPEN CAST MINES			
Air quality in 2024			
Results of examinations at MP2			
	Tested parameter (µg/m³)		
Sampling period	**Particulate matters PM_{10}**	**Benzo(a)pyrene**	**Carbon monoxide**
20/21.08.2024.	27.65	< 0.10	< 1.14
21/22.08.2024.	11.28	< 0.10	< 1.14
22/23.08.2024.	33.80	3.324	< 1.14
23/24.08.2024.	40.60	< 0.10	< 1.14
24/25.08.2024.	32.66	< 0.10	< 1.14
25/26.08.2024.	21.43	0.299	< 1.14
26/27.08.2024.	**71.51**	0.775	< 1.14
27/28.08.2024.	**68.20**	< 0.10	< 1.14
28/29.08.2024.	47.85	< 0.10	< 1.14
29/30.08.2024.	**52.21**	0.129	< 1.14
30/31.08.2024.	**56.68**	0.138	< 1.14
31.08/01.09.2024.	**73.99**	0.606	< 1.14
01/02.09.2024.	**82.66**	< 0.10	< 1.14
02/03.09.2024.	**102.04**	0.171	< 1.14
03/04.09.2024.	**103.66**	0.329	< 1.14

1.2.2. Measuring the Emission of Substances Affecting Water Quality

- **Water from the Drainage System**

Water from the pre-drainage and drainage systems represents the technological part of the coal exploitation system. The water pumped out from these systems (mine wastewater) is released without treatment through sedimentation tanks into the nearby recipients, as follows:

- OCM Field E, Baroševac into the river Peštan and the river Turija, Medoševac into the river Peštan;
- OCM Tamnava West Field into the river Kolubara,
- OCM Field G into the river Kolubara,

- OCM Radljevo into the old riverbed of the river Kladnica.

In accordance with the law, the quality control of recipients is performed by the authorized laboratory. The results of the quality of water pumped out from open cast mines (from the sedimentation tank into the recipient) for the year 2024 are shown in Table 14.

Table 14

BRANCH MB KOLUBARA– OU OPEN CAST MINES			
Water quality in 2024			
Parameters	**OCM Field G**	**OCM Field E, Baroševac**	**OCM Tamnava West Field**
Electrical conductivity (μs/cm)	698-776	585-832	538-965
pH	7.3 - 7.9	7.4 - 7.7	7.1 - 7.5

- **Sanitary Water**

The mines are supplied with drinking water from regional waterworks Medoševac, Kalenić, Junkovac, and Tamnava – East Field. The data on the quantity of wastewater produced by mine drainage and the quantity of drinking water consumed in 2024 is given in Table 15. The quantity of produced sanitary wastewater can be estimated based on the quantity of delivered drinking water.

Table 15

BRANCH MB KOLUBARA– OU OPEN CAST MINES			
Water quantity in 2024 (m^3/year)			
Open cast mine	**Total quantity of pumped out water (m^3)**	**Plant / type of water**	**Drinking water-delivered**
Field E	8.986.686,70	**Waterworks Medoševac Auxiliary Mechanization**	1.080.268
Field G	2.559.467,00	**Waterworks East Field Open Cast Mine Field TI**	167.155
Tamnava West Field	11.495.000,00		
Radljevo	592.408,74	**Waterworks Kalenić Open Cast Mine Field T3**	852.595
Auxiliary Mechanization	-		
TOTAL	**23.633.562,44**	**TOTAL**	**2.100.018**

1.2.3. Measuring the Concentration of Substances Affecting Soil Quality

During the previous years, the quality of native soil was measured at dozens of locations within the area directly influenced by MB Kolubara. For the found maximum permissible level exeedances of certain heavy metals, after the spatial analysis and comparison with measurements from previous years, it was concluded that they originate from a natural background.

- **Overview of Expropriated and Reclaimed Areas**

In the Biological Reclamation Division, the Agriculture Office implements biological reclamation measures on 96.84 ha of reclaimed areas.

In the Biological Reclamation Division, the Forestry Office manages 611.30 ha of reclaimed areas (forests and forest land), where 8.58 ha are under the young plants over the final slope of Tamnava West Field, and 602.72 ha are in the Economic Unit MB Kolubara. In the economic unit, within Field D, there are also 49.28 ha of expropriated forests and forest land.

The Forestry Office implements preservation measures for reclaimed forests through protection measures against biotic factors (insects, diseases) and abiotic factors (protection against fires and illegal logging).

Table 16 presents an overview of areas expropriated and reclaimed by the end of 2024.

Table 16

BRANCH MB KOLUBARA– BRANCH OPEN CAST MINES BAROŠEVAC																			
Overview of expropriated and reclaimed areas by the end of 2024																			
Open cast mine/ Facility	Expropr. area (ha)	Area of land registered at the cadaster (ha)		Area of land which purpose was changed (ha)		Area of land under civil structures (ha)		Areas of land used as dump site (ha)				Reclaimed area (ha)							
								Internal		External		Forrest		Arable land		Orchard		Nursery garden	
		by the end of 2023	in 2024	by the end of 2023	in 2024	by the end of 2023	in 2024	by the end of 2023	in 2024	by the end of 2023	in 2024	by the end of 2023	in 2024	by the end of 2023	in 2024	by the end of 2023	in 2024	by the end of 2023	in 2024
Field D	1.955,24	2.332,17	-389,12	810,24	-137,39	18,65	0,00	1.205,89	-27,23	0,00	0,00	430,44	0,00	40,44	0,00	7,00	0,00	0,00	0,00
Field B	951,80	1.172,05	-222,88	526,36	-94.58	18,84	0,00	514,60	11.52	0,00	0,00	111,65	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Auxiliary mechanization	3,98	3,98	0,00	0,54	0,00	3,98	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
OCM Head office	4,53	4,39	0,00	0,67	0,29	4,07	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
South field	442,08	455,79	-14,2	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Field G	455,1	467,08	16,69	0,00	0,00	0,00	0,00	112,6	44,42	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Field E	1.345,17	717,12	616.08	7,07	224.3	12,77	0,00	0,21	21,75	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Tamnava East Field	2.003,22	1.949,28	-94,23	0,00	0,00	0,00	0,00	330,68	286,90	0,00	0,00	60,63	0,00	49,40	0,00	0,00	0,00	0,00	0,00
Field Veliki Crljeni	162,04	162,04	0,28	0,00	0,00	0,00	0,00	20,67	17,23	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Tamnava West Field	1.944,30	1.862,33	0,00	70,13	0,00	46,45	0,00	910,90	52.85	0,00	0,00	8,58	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Radljevo	508,42	482,07	26,35	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
TOTAL:	**9.775,88**	**9.385,95**		**1.409,76**		**104,76**		**3.502,99**		**0,00**		**611,30**		**89,84**		**7,00**		**0,00**	

1.2.4. Environmental Noise Measurements

In 2024, environmental noise measurements were performed. In 2023, based on the inspection order, the public procurement of services number JN/4000/0470/2023, JANA number 3412/2023 "Interventions per extraordinary inspection decisions and unforeseen requirements" was initiated, where environmental noise measurements would be performed at two measuring points. The public procurement was realized in April 2024**.**

The measurements were carried out at four measuring points:

- Measuring point M1 residential building, Baroševac
- Measuring point M2 in the courtyard of a residential building, Baroševac
- Measuring point M3 residential building, Zeoke
- Measuring point M4 in the courtyard of a residential building, Zeoke

Results of the measurements that are presented in the Table 17 below showed that the measured values did not exceed the allowed noise level.

Table 17

MB KOLUBARA BRANCH – OU OPEN CAST MINES							
Noise level in 2024 – measuring point 1							
Period of the day	**Measured level (dB)**	**addition**			**Relevant level (dB)**		
day	34.1	-			34		
evening	32.3	-			32		
night	28.7	-			29		
Allowed level dB(A)	35 / 30						
Assessment	According to the *Regulation on noise indicators, limit values, methods for assessing noise indicators, annoyance and harmful effects of noise in the environment* (“Official Gazette of the Republic of Serbia”, No. 75/2010), the relevant noise levels of the tested sound sources **do not exceed the permitted level** for residential premises of residential buildings during the day and evening (max. permitted level 35 dB) and at night (max. permitted level 30 dB)						
Uncertainty of measurement							
Parameters for uncertainties of measurement	Instrument	X	Y	Z	K	σ_t	$\pm 2\sigma_t$
	0.6 dB	1.2	0.5	0.01	0	1.43 dB	±2.87 dB
MB KOLUBARA BRANCH – OU OPEN CAST MINES							
Noise level in 2024 – measuring point 2							
Period of the day	**Measured level (dB)**	**addition**			**Relevant level (dB)**		
day	63.1	-			63		
evening	60.4	-			60		
night	52.3	-			52		
Allowed level dB(A)	65 / 55						
Assessment	According to the *Regulation on noise indicators, limit values, methods for assessing noise indicators, annoyance and harmful effects of noise in the environment* (“Official Gazette of the Republic of Serbia”, No. 75/2010), the relevant noise levels of the tested sound sources **do not exceed the permitted level** for the zone along the main roads during the day and evening (max. permitted level 65 dB) and at night (max. permitted level 55 dB)						
Uncertainty of measurement							
Parameters for uncertainties of measurement	Instrument	X	Y	Z	K	σ_t	$\pm 2\sigma_t$
	0.6 dB	1.2	0.5	0.01	0	1.43 dB	±2.87 dB

MB KOLUBARA BRANCH – OU OPEN CAST MINES							
Noise level in 2024 – measuring point 3							
Period of the day	**Measured level (dB)**	**addition**			**Relevant level (dB)**		
day	27.2	-			27		
evening	27.0	-			27		
night	26.8	-			27		
Allowed level dB(A)	35 / 30						
Assessment	According to the *Regulation on noise indicators, limit values, methods for assessing noise indicators, annoyance and harmful effects of noise in the environment* ("Official Gazette of the Republic of Serbia", No. 75/2010), the relevant noise levels of the tested sound sources **do not exceed the permitted level** for residential premises of residential buildings during the day and evening (max. permitted level 35 dB) and at night (max. permitted level 30 dB)						
Uncertainty of measurement							
Parameters for uncertainties of measurement	Instrument	X	Y	Z	K	σ_t	$\pm 2\sigma_t$
	0.6 dB	1.2	0.5	0.01	0	1.43 dB	±2.87 dB
MB KOLUBARA BRANCH – OU OPEN CAST MINES							
Noise level in 2024 – measuring point 4							
Period of the day	**Measured level (dB)**	**addition**			**Relevant level (dB)**		
day	46.4	-			46		
evening	45.1	-			45		
night	42.3	-			42		
Allowed level dB(A)	55 / 45						
Assessment	According to the *Regulation on noise indicators, limit values, methods for assessing noise indicators, annoyance and harmful effects of noise in the environment* ("Official Gazette of the Republic of Serbia", No. 75/2010), the relevant noise levels of the tested sound sources **do not exceed the permitted level** for the zone purely residential area during the day and evening (max. permitted level 55 dB) and at night (max. permitted level 45 dB)						
Uncertainty of measurement							
Parameters for uncertainties of measurement	Instrument	X	Y	Z	K	σ_t	$\pm 2\sigma_t$
	0.6 dB	1.2	0.5	0.01	0	1.43 dB	±2.87 dB

1.2.5. Waste

In 2024, the activities of the Waste and Hazardous Substances Division referred to establishing the waste management system, procuring environmental protection equipment with respect to waste management (tank vans, various types of containers) and concluding contracts for delivery of waste to persons with authorization from the competent ministry for taking over and managing waste with the same index number.

The waste generated in the Branch Open Cast Mines Baroševac in 2024 is presented in Table 18 according to the Serbian Waste Management regulations.

Table 18

BRANCH MB KOLUBARA – BRANCH OPEN CAST MINES										
Types of waste generated in 2024										
No.	**Rulebook on Categories, Testing and Classification of Waste (Official Gazette of RS, No . 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit**	**Open Cast Mine/Facility**						
				Field E	**Field B**	**Tamnava West Field**	**Tamnava East Field**	**Auxiliary Machi.**	**Total:**	**Note**
	Name	**Index number**		**Generated waste quantities**						
1.	Waste paint and varnish containing organic solvents or other hazardous matter	08 01 11*	t	0,000	0,000	10,658	0,000	0,000	**10,658**	Expired paints
2.	Waste printing toners other than those mentioned in 08 03 17	08 03 18	t	0,002	0,000	0,000	0,000	0,000	**0,002**	Waste printing toners
3.	Mineral-based non-chlorinated engine, gear and lubricating oils	13 02 05*	t	0,000	0,000	0,000	0,000	41,401	**41,401**	Engine oil, gear oils
4.	Packaging containing residues of or contaminated by hazardous substances	15 01 10*	t	0,000	0,080	0,000	0,000	20,400	**20,480**	Waste metal barrels of oil and lubricants, waste barrels of grease and oil, metal packaging of paints, varnishes and thinners
5.	Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	15 02 02*	t	0,000	0,000	0,000	0,000	0,155	**0,155**	Oily wiping cotton fibers, workwear, wiping cloths
6.	Absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	15 02 03	t	0,403	0,455	0,050	0,040	5,608	**6,556**	PP equipment, workwear, personal protective equipment, air filters

7.	Waste rubber	16 01 03	t	0,000	0,000	0,350	0,000	20,000	**20,350**	Tires
8.	Waste vehicles that do not contain liquids or other hazardous components	16 01 06		0,000	0,000	0,000	0,000	100,000	**100,000**	Waste vehicles that do not contain liquids or other hazardous components
9.	Oil filters	16 01 07*	t	0,000	0,000	0,000	0,000	4,512	**4,512**	Waste oil filters
10.	Waste not otherwise specified - iron and steel	16 01 99/17 04 05		0,000	0,000	0,000	0,000	600,000	**600,000**	Waste construction machinery and parts thereof
11.	Laboratory chemicals including or containing hazardous matters, including laboratory mixtures	16 05 06*	t	0,000	0,000	0,000	0,091	0,000	**0,091**	Chemicals – disposed from warehouse
12.	Lead batteries	16 06 01*	t	0,735	0,029	0,820	0,000	17,929	**19,513**	Lead batteries
13.	Wood	17 02 01	t	0,000	0,000	0,020	0,000	0,000	**0,020**	
14.	Aluminum	17 04 02	t	0,010	0,005	0,000	0,000	0,000	**0,015**	Waste aluminum ropes with iron core
15.	Iron and steel	17 04 05	t	43,000	0,000	81,400	0,000	0,000	**124,400**	Alloy steel (crawler track links, crusher hammers, excavator teeth)
				108,500	23,820	0,000	0,000	0,000	**132,320**	Iron over 6 mm (rails, parts of structures, idlers and shafts)
				32,000	3,841	0,000	0,000	0,000	**35,841**	Iron and steel up to 3 mm (sheets, electrical switching cabinets, vulcanization container, sheet metal profiles, mixed category cabinets)
				56,300	9,115	1.019,700	128,000	17,000	**1.230,115**	Iron and steel over 3 mm (sheets, idlers, shafts, structures, steel ropes, pieces of various sizes and shapes, unclassified, steel ropes,

										sheets, steel bodies idlers, structures, crates, pontoons, rails)
16.	Cables other than those mentioned in 17 04 10	17 04 11	t	124,140	1,180	180,000	3,000	0,000	**308,320**	High voltage copper cables incl. insulation, low voltage copper cables incl. insulation, telephone cable
17.	Insulation material other than those provided in 17 06 01 and 17 06 03	17 06 04	t	7,000	0,000	0,000	0,000	0,000	**7,000**	Ceramic insulators with iron impurities, sandwich panels
18.	Plastic and rubber	19 12 04	t	0,002	0,000	0,000	0,000	0,000	**0,002**	Waste tires, plastic and rubber, waste rubber rings, Rubber chips from scraped rubber drum lining, waste conveyor belt
19.	Other waste (including mixtures of materials) from mechanical treatment of waste other than those mentioned in 19 12 11	19 12 12	t	103,800	33,680	0,000	0,000	0,000	**137,480**	Conveyor belt with steel cord
20.	Discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components	20 01 35*	t	10,560	6,293	0,250	0,220	0,000	**17,323**	Electro-hydraulic thrusters, electronic equipment, other

21.	Discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	20 01 36	t	43,064	1,215	1,348	0,060	1,200	**46,887**	El.tools, devices and equipment (disposed electrical machines and electric motors, tools, other)
22.	Plastics	20 01 39	t	0,000	0,002	0,0015	0,000	0,000	**0,0035**	Plastic rings, chairs, PET packaging, cotherm boards

* hazardous waste

B. BRANCH MB KOLUBARA - OU PROCESSING PLANT AND OU KOLUBARA - METAL

B.1. OU PROCESSING PLANT

Within the Branch MB Kolubara - OU Processing Plant, processing and refinement of open cast coal from the open cast mines Field E is carried out. The obtained coal is used to supply thermal power plants, general consumption, industry, etc.

OU Processing Plant includes the following organizational units:

- Operations Centre
- Dry Separation - plant
- Coal Refinement - plant
  - Wet Separation
  - Drying and Classification Plant
  - Heating Plant
  - Maintenance
- Railway transport - plant
- Coal and wastewater testing center (accredited laboratory)

All plants were constructed based on designs and they possess the necessary certificates of occupancy.

1.1. Overview and Status of Permits

The overview and status of permits for 2024 for OU Processing Plant is given in Table 19**.**

Table 19

BRANCH MB KOLUBARA – OU PROCESSING PLANT			
Overview and Status of Permits in 2024			
Plant	**Permits, licenses and other necessary approvals (number and date)**	**New applications for obtaining or extension of valid permits**	**Note**
OU Processing Plant Vreoci	Decision - on issuing the water permit - to the applicant PE “Electric Power Industry of Serbia“, Belgrade, Branch MB Kolubara, - OU Processing Plant, a water permit is issued for the supply of technical water (water intake, pumping station, pipeline and access road) from the river Kolubara CM Vreoci, the municipality of Lazarevac, for the needs of the OU Processing Plant (No. 325-04-0:433/2019-07)	-	Expiry date 14.07.2026.
	The water permit with a new validity period is issued to the applicant PE “Electric Power Industry of Serbia“ Branch MB Kolubara OU Processing Plant, for the storage of petroleum products for the needs of the “Heating Plant" facility and the discharge of atmospheric wastewater and steam condensate used for heating the fuel oil from the “Heating Plant“ complex within the OU Processing Plant, which is located at CP 1828/1 CM Vreoci, the municipality of Lazarevac on the territory of the city of Belgrade (No. 04.08-584512/1-2021)	-	Expiry date 31.10.2024.
	Decision on issuance of greenhouse gas emission permits (GHG) for Vreoci Heating Plant, No. 002289109 2024 14850 005 018 501 142 dated 16.10.2024 issued by the Ministry of Environmental Protection		5-year validity period as per the Law

1.2. Environmental Impact Monitoring

1.2.1. Air Quality Measurements

The air quality measurements in the vicinity of the organizational units of the Branch MB Kolubara are carried out as part of the network of the City of Belgrade for automatic monitoring of air quality.

The network of the City of Belgrade for automatic monitoring of air quality, which is under the jurisdiction of the City of Belgrade, includes, inter alia, the measuring points on the territory of the municipality of Lazarevac in the town center, where soot, SO_2, NO_2, O_3 and PM_{10} are measured.

1.2.2. Emission Measurements of Air Pollutants

OU Heating Plant Vreoci is a thermal power facility for generating superheated steam used in technological processes, for heating of industrial area and the town of Lazarevac, with a capacity of 2x60 MW. Flue gases are treated by an electrostatic precipitator and discharged into the air through an 80m high stack.

In 2022, OU Processing Plant received the Decision from the Ministry of Environmental Protection, by which it obtained the approval for the independent continuous measurement of emissions from stationary sources of pollution in Heating Plant, Coal Refinement Plant Vreoci at the emitter Heating Plant Vreoci (No. 353-01-01565/2021-03 as of 30 March 2022).
The results of the continuous measurement of emissions from Heating Plant are shown in Table 20a for 2024.

Table 20a

BRANCH MB KOLUBARA - OU PROCESSING PLANT				
Air pollutant emissions for the year 2024 (t/year)				
Facility	**Heating Plant Vreoci**			
	Particulate matter	**SO_2**	**NO_x (NO_2)**	**CO_2**
BOILER 1	254,5	3.000,8	199,3	140.730,45
BOILER 2				
TOTAL: BRANCH MB KOLUBARA - OU PROCESSING PLANT	**254,5**	**3.000,8**	**199,3**	**140.730,45**

The CO_2 calculation was made based on the fuel consumption data shown in Table 21 and the corresponding emission factor (CEF – Carbon Emission Factor).

Table 20b shows the automatic measuring devices from the Ministry's decision that gave approval for continuous measurements of air emissions.

Table 20b

Measuring point equipment for continuous emission measuring in the Heating Plant Vreoci			
Particulate Matter	**Pollutants**	**Parameters**	
	Gases	Content	
	SO_2, NO_x (NO_2), CO	**Moisture, CO_2, O_2**	**P, t, flow**
1 analyzer	1 analyzer	per 1 analyzer	1 gauge each
The measuring equipment is installed at an elevation of 41m, on the outer shell of the stack. The platform is at elevation of 40m, at the outer shell of the stack.			

Table 21 shows the fuel consumption for the OU Processing Plant for 2024.

Table 21

BRANCH MB KOLUBARA - OU PROCESSING PLANT		
Fuel consumption in 2024		
Facility	**Heating Plant Vreoci**	
	t/year	
	coal	**coal**
BOILER 1	168.679,00	324,20
BOILER 2		
TOTAL: BRANCH MB KOLUBARA - OU PROCESSING PLANT	**168.679,00**	**324,20**

1.2.3. Emission Measurements of Water Pollutants

Process water is used in technological processes and coal refinement (Wet Separation, Drying Plant, Heating Plant) from the water intake from the Kolubara River reservoir. The largest process water amounts are used in the OU Processing Plant to generate superheated steam, ash and slag transport and wet coal separation. OU Processing Plant also includes the Vreoci Waterworks and Dry Separation Waterworks, supplying potable water to industrial facilities and the Vreoci village.

Wastewater is generated during the technological process of lignite processing and refinement (Wet Separation, Drying Plant, Heating Plant) - chemical treatment of boiler water and sanitary water treated by the wastewater treatment plant.

Wastewater treatment plant comprises a receiving tank, filter sedimentation tank, fast mixing tank, Emscher filters, secondary sedimentation tank, lagoons and purified water collectors. The treated water from the wastewater treatment plant is discharged through the gauging station into a channel and transported to the Kolubara River via a 7km long channel.

The Monitoring Programme includes the following types of water:

- the Kolubara River water upstream of the wastewater discharge;
- wastewater at the entrance to the treatment system;
- wastewater at the exit from the treatment system;
- the Kolubara River water downstream of the wastewater discharge.

Testing includes the determination of physical-chemical and microbiological characteristics of water which are of hygiene, water management and technical-technological importance, as follows: water appearance, visible waste materials, water temperature, air temperature, turbidity, color, pH, sulfates, specific conductivity, ammonia, total nitrogen, chloride, $KMnO_4$ demand, COD, BOD_5, suspended solids, sedimentary matter, phenolic matter, and mineral oil.

Underground water quality control was carried out in 8 piezometers (3 in surroundings of the plant for waste water treatment and 5 in surroundings of ash and slag landfill in Medoševac).

In 2024, testings were carried out by the authorized and accredited laboratories of the Institute for Safety at Work JSC Novi Sad and the Center for caol and wastewater testing of the Branch Procesing Plant. Reports presenting the quality control of the wastewater and ground water under influence of the Branch Processing Plant are submitted to the Ministry of Environmental Protection, Public Water Management Company Srbijavode, City Administration - Department for Utilities and Housing Services - Water Division, Joint Stock Company Elektroprivreda Srbije and the Secretariat (Environmental Protection Division – Belgrade)

Table 22 shows the analysis of underground water quality data in surroundings of ash and slag landfill in Medoševac. Assessment of compliance with legal regulations was performed by comparing the measured values of groundwater pollutant concentrations in piezometers with the remediation values of concentrations of hazardous and harmful substances and values that may indicate significant groundwater contamination.

Table 22

BRANCH MB KOLUBARA - OU PROCESSING PLANT		
Underground water quality in 2024		
Concentration	**RV[1]**	**Medoševac - ash and slag landfill**
Arsenic (mg/l)	0,06	Measured values are within the range <0,01 - 0,034
Phenols (mg/l)	/	All measured values are under the remediation value (<0,006)
Mineral oils (mg/l)	0,6	All measured values are under the remediation value (<0,01)

RV[1] – remediation values of concentrations of hazardous and harmful substances and values that may indicate significant groundwater contamination according to the Regulation on limit values of polluting, harmful and hazardous substances in soil ("Official Gazette of the Republic of Serbia", No. 30/2018 and 64/2019).

Piezometers in surrounding of the plant for wastewater treatment are dry and underground water sample has not been taken.

Table 23 shows the analysis of wastewater quality data at the wastewater treatment plant inlet and outlet in 2024.

Wastewater treatment plant discharges do not adversely affect the quality of the recipient, i.e., the Kolubara River and there is no significant change in the water quality of the Kolubara River.

Table 23

BRANCH MB KOLUBARA - OU PROCESSING PLANT		
Wastewater treatment plant operation in 2024		
Parameter	**Concentration (mg/l)**	
Pollutant	**Plant inlet**	**Plant outlet**
Suspended solids	1.068,98-4.375,24	549,39-2.598,53
Organic substances COD	1.107,00-7.271,85	720,05-5.164,12
Phenols	0,672-5,322	0,193-3,749

1.2.4. Measurements of Concentration of Soil Pollutants

In accordance with the Law on soil protection and Regulation on limit values of polluting, harmful and hazardous substances in soil ("Official Gazette of the Republic of Serbia", No. 30/2018 and 64/2019), OU Processing Plant is obliged to monitor the impact of its activities on soil quality.

In 2024, physical and chemical soil tests were performed at 10 locations of OU Processing Plant. The tests included determination of soil quality parameters, namely: pH, clay content, humus content, TOC, Readily available phosphorus, Total content of N, Cd, Cr, Cu, Ni, Pb, Zn, Hg, As, B, Ca, Mg, Mn, Fe, Chlorides, Fluorides, Sulfates, Nitrates, Nitrites, Bromides, Orthophosphates, C_6-C_{10} (gasoline fraction), C_{10}-C_{28} (diesel fraction), C_{10}-C_{40} (mineral oils), (PAH)-total, (PSB)

Table 24 shows the parameters for which the limit value was exceeded while the remediation values are within the limits.

Table 24

MB KOLUBARA BRANCH – OU PROCESSING PLANT						
Concentrations of substances that affect soil quality in 2024						
Measuring point	**Parameter**	**Determined value**	**Correction limit max.value**	**Table limit max.value**	**Correction remediation value**	**Table remediation value**
Dry separation	Ni	74,76	31	35	187	210
	C_6-C_{40}	3.790	50	50	5.000	5.000
Dry separation (oil and lubricants warehouse)	Ni	103,63	29	35	173	210
	Cu	40,08	35	36	184	190
	C_6-C_{40}	4.760	50	50	5.000	5.000
Wet separation	Ni	84,60	27	35	163	210
	Cu	42,83	34	36	179	190
	C_6-C_{40}	3.840	50	50	5.000	5.000
Dryer	Ni	61,94	19	35	112	210
	C_6-C_{40}	4.300	50	50	5.000	5.000
Heating plant	Ni	140,97	24	35	142	210
	C_6-C_{40}	2.020	50	50	5.000	5.000
Heating plant (CWT)	Ni	84,27	36	35	214	210
	C_6-C_{40}	2.182	50	50	5.000	5.000
Heating plant (fuel oil station)	Ni	142,42	33	35	196	210
	C_6-C_{40}	2.303	50	50	5.000	5.000
Warehouse 078	Ni	76,37	30	35	178	210
	Cu	40,83	31	36	165	190
	C_6-C_{40}	2.386	50	50	5.000	5.000
Ash and slag landfill (old cassette)	Ni	124,19	24	35	146	210
	Cu	38	28	36	149	190
	Cr	118,12	79	100	299	380
	C_6-C_{40}	4.138	50	50	5.000	5.000
Ash and slag landfill (new cassette)	Ni	84,44	30	35	179	210
	Cu	36,50	31	36	165	190
	Hg	2,22	0,28	0,3	9	10
	C_6-C_{40}	3.328	50	50	5.000	5.000

1.2.5. Environmental Noise Measurements

In 2024, there were no environmental noise measurements. Pursuant to Article 23 of the Law on Environmental Noise Protection ("Official Gazette" of RS, No. 96/2021), regular periodical environmental noise measurements are done once in three years.

1.2.6. Waste

Waste amounts generated in 2024 for OU Processing Plant are shown in Table 25 according to the Serbian Waste Management regulations.

Table 25

BRANCH MB KOLUBARA - OU PROCESSING PLANT					
Generated types of waste in 2024					
Rulebook on categories, testing and classification of waste (Official Gazette of the RS, No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)					
No.	**Name**	**Index number**	**Unit**	**Waste quantity**	**Note**
1.	Waste printing toner other than the one mentioned in 08 03 17	08 03 18	t	1,474	Waste printing toners
2.	Mineral non-chlorinated hydraulic oils	13 01 09*	t	0,970	Hydraulic oils
3.	Mineral-based non-chlorinated engine oils, gear oils and lubrication oils	13 02 05*	t	1,000	Gear oils
4.	Mineral-based chlorinated oils for insulation and heat transfer	13 03 07*	t	0,600	Transformer oils
5.	Packaging containing residues of or contaminated by hazardous substances	15 01 10*	t	0,030	Waste chemicals contaminated packaging
6.	Absorbents, filter mat. (including oil filters not otherwise specified), wiping cloths, protective clothing, contaminated with hazardous substances	15 02 02*	t	0,150	Oily wiping cotton fibers, wiping cloths
7.	Waste tires	16 01 03	t	0,400	Conveyor belt with a fabric core
8.	Antifreeze containing hazardous substances	16 01 14*	t	0,650	Waste antifreeze that expired
9.	Organic waste containing hazardous substances	16 03 05*	t	0,080	Waste hydrazine
10.	Lead-acid batteries	16 06 01*	t	0,970	Batteries
11.	Nickel-cadmium batteries	16 06 02*	t	0,300	Nickel-cadmium batteries
12.	Waste aluminum	17 04 02	t	0,325	Waste aluminum (sheet, ropes, parts of joints)
13.	Iron and steel	17 04 05	t	10,070	Over 3 mm (steel ropes, sheets, steel idlers bodies)
				5,980	Under 3 mm (sheet, profiles, cabinets, mixed categories)
				57,120	Over 6 mm (rails, structure parts)
14.	Cables other than those mentioned in 17 04 10	17 04 11	t	2,580	High-voltage, low-voltage, telephone cables
15.	Insulation materials containing asbestos	17 06 01*	t	13,300	Roofing sheets - salonit asbestos sheets
16.	Insulation materials other than those mentioned in 17 06 01 and 17 06 03	17 06 04	t	0,020	Mineral wool

17.	Saturated or used-up ion exchange resins	19 09 05	t	6,720	Ion exchange resins
18.	Fluorescent tubes and other waste containing mercury	20 01 21*	t	0,054	Fluo-tubes
19.	Discarded electrical and electronic equipment other than the one mentioned in 20 01 21, 20 01 23 and 20 01 35	20 01 36	t	9,360+0,026+0,382	Oil-free electric motors, Light bulbs - ordinary and sodium, telephone devices, boilers, etc.
20.	Plastics	20 01 39	t	2,140	Cotherm boards
21.	Metals	20 01 40	t	0,005	Fluo reinforcement – steel sheet

*hazardous waste

B.2. OU KOLUBARA - METAL

Branch MB Kolubara – OU Kolubara-Metal performs designing, manufacturing, assembly and maintenance of mining, energy and processing equipment.

Kolubara-Metal comprises of the following organizational parts, with short descriptions of technological processes:

- Operations Centre;
- Manufacturing unit: mechanical and thermal treatment of materials and molding, machine parts washing, washing oily and greasy surfaces of parts;
- Overhaul unit: overhaul of mining equipment, machine parts washing, cleaning of oily and greasy surfaces of parts;
- Unit Montaža, relocated from the OU complex, performs electromechanical assembly of mining, processing and thermal power equipment and facilities;
- Unit ELMONT, relocated from the OU complex, manufactures parts and assemblies in workshops, revitalization and regeneration of electrical equipment, maintenance of power and telecommunication facilities on-site, and car and electrical equipment washing;
- Maintenance.

All units were constructed based on valid designs and they possess certificates of occupancy.

1.1. Overview and Status of Permits

In 2024, the Branch Kolubara-Metal did not obtain any new permits. Overview and status of inspection checks and decisions is provided in Table 26.

Table 26

BRANCH MB KOLUBARA - OU KOLUBARA-METAL		
Overview and status of inspection controls and decisions in 2024		
No.	**Reference**	**Name**
1.	501-63/2024-08, 13.11.2024.	The order for office inspection supervision in the ELMONT Unit
2.	501-63/2024-08, 28.11.2024.	Record of inspection supervision in the ELMONT Unit

1.2. Environmental Impact Monitoring

1.2.1. Emission Measurements of Air Pollutants

In accordance with the Law and Decision of Environmental Protection Inspector of the competent Ministry, OU Kolubara-Metal is obliged to measure air pollutant emissions from the production capacities within the Production Unit, as well as boiler emission measurements within Montaža and ELMONT Units.

In accordance with the Framework Agreement no. E-04.04-305866/23-2023 dated 23 October 2023 for the provision of service "Air Quality Analysis", individual measurements of pollutant emissions into the air were performed by the accredited laboratory of the “Institute for Occupational Safety“ JSC Novi Sad. The inspection program included measurement of flue gas conditions (temperature, pressure and humidity), volumetric flow rate, as well as mass concentrations and emission factors for sulfur dioxide (SO_2), nitrogen oxides (NO_x - NO_2), particulate matter and organic compounds expressed as total carbon.

The measured emission values were compared with the emission limit values prescribed by the Regulation on measuring emissions of pollutants in the air from stationary sources of pollution (Official Gazette of RS, No. 5/2016 и 10/2024). The results of emission measurements are shown in Tables 27, 28, 29 and 30, at measuring points**.**

Table 27

BRANCH MB KOLUBARA - OU KOLUBARA-METAL		
Emission Measurements of Air Pollutants in 2024 – ELMONT Unit **Date of measuring: 15.03. 2024.**		
Emitted pollutant	**ELMONT Unit - coal-fired boiler ($E_м$) (mg/Nm^3)**	
	1	**2**
CO	1.200,72	934,96
SO_2	531,37	780,46
Nitrogen oxides expressed as NO_2	119,00	105,96
Total particulate matter	83,65	69,66

$E_м$- the highest value of the pollutant emission measurement results reduced by the value of the measurement uncertainty.
*Legal regulations: Regulation on measuring emissions of pollutants in the air from stationary sources of pollution (Official Gazette of RS, No. 5/2016 and 10/2024)

Table 28

BRANCH MB KOLUBARA - OU KOLUBARA-METAL	
Emission Measurements of Air Pollutants in 2024 – ELMONT Unit **Date of measuring: 16.10. 2024.**	
Emitted pollutant	**ELMONT Unit - coal-fired boiler ($E_м$) (mg/Nm^3)**
CO	934,96
SO_2	780,46
Nitrogen oxides expressed as NO_2	105,96
Total particulate matter	69,66

$E_м$- the highest value of the pollutant emission measurement results reduced by the value of the measurement uncertainty.
*Legal regulations: Regulation on measuring emissions of pollutants in the air from stationary sources of pollution (Official Gazette of RS, No. 5/2016 and 10/2024)

Table 29

BRANCH MB KOLUBARA - OU KOLUBARA-METAL		
Emission Measurements of Air Pollutants in 2024 – Montaža Unit **Date of measuring: 15.03.2024.**		
Emitted pollutant	**Montaža Unit – coal-fired boiler ($E_м$) (mg/Nm^3)**	
	1	**2**
CO	>2.500	>2.500

$E_м$- the highest value of the pollutant emission measurement results reduced by the value of the measurement uncertainty.
*Legal regulations: Regulation on measuring emissions of pollutants in the air from stationary sources of pollution (Official Gazette of RS, No. 5/2016 and 10/2024)

Table 30

BRANCH MB KOLUBARA - OU KOLUBARA-METAL	
Emission Measurements of Air Pollutants in 2024 – Montaža Unit **Date of measuring: 18.11. 2024.**	
Emitted pollutant	**Montaža Unit – coal-fired boiler ($E_м$) (mg/Nm^3)**
CO	>2.500

$E_м$- the highest value of the pollutant emission measurement results reduced by the value of the measurement uncertainty.
*Legal regulations: Regulation on measuring emissions of pollutants in the air from stationary sources of pollution (Official Gazette of RS, No. 5/2016 and 10/2024)

The results of the analysis confirm that there is an emission exceedance, according to the Regulation on measuring emissions of pollutants in the air from stationary sources of pollution (Official Gazette of RS, No. 5/16) for boiler rooms in Montaža Unit and ELMONT Unit in Lajkovac. The stated exceedance for carbon monoxide (SO), which occurred in the boiler rooms of Montaža and ELMONT Units, occurred partly due to the obsolescence of the boilers and congestion during firing.

The results of measuring the emission of pollutants into the air from production capacities in the area of the Production unit are shown in Table 31 for a series of measurements during the heating season, at measuring points.

Table 31

BRANCH MB KOLUBARA - OU KOLUBARA-METAL							
Emission Measurements of Air Pollutants in 2024 - Production Unit							
Emitted pollutant	**Production Unit -Steel structure hall (left outlet) ($E_м$) (mg/Nm^3)**	**Production Unit – Plasma cutter - old ($E_м$) (mg/Nm^3)**	**Production Unit – Plasma cutter - new ($E_м$) (mg/Nm^3)**	**Production Unit - Paint workshop Line 2 emitter (left outlet) ($E_м$) (mg/Nm^3)**	**Production Unit - Paint workshop Line 2 emitter (right outlet) ($E_м$) (mg/Nm^3)**	**ELV (mg/Nm^3)**	**Evaluation of the results**
Nitrogen oxides expressed as NO_2	<0,6	<0,6	<0,6	-	-	350	Compliant with legal regulations*
SO_2	<2,00	<2,00	<2,00	-	-	350	Compliant with legal regulations*
Organic compounds expressed as total carbon (C)	-	-	-	145,59	142,39	75	Not compliant with legal regulations*
Particulate matter	1,47	86,09	24,52	-	-	150	Compliant with legal regulations*

$E_м$- the highest value of the pollutant emission measurement results reduced by the value of the measurement uncertainty.
*Legal regulations: Regulation on measuring emissions of pollutants in the air from stationary sources of pollution (Official Gazette of RS, No. 5/2016 и 10/2024); Regulation on limit values of air pollutant emissions from stationary sources of pollution, except from combustion installations (Off. Gazette of RS, No. 111/2015 and 83/2021) - Appendix, General emission limit values, Emission limit values for total particulate matter and Emission limit values for inorganic gaseous substances.

Based on the measurement results in the Production Unit, nitrogen oxides expressed as NO_2, SO_2 and organic compounds expressed as total carbon (C) are in accordance with legal regulations at all measuring points, and as for particulate matters, the measured values are in accordance with legal regulations, except for measuring points – Paint workshop (left and right outlet). All measured values of particulate matter are aligned with legal regulations.

1.2.2. Emission Measurements of Matters Affecting Water Quality

Treated water from the wastewater treatment plant (separator), installed at washing points of mining equipment and car parts, as well as regenerated parts of equipment for excavators, flows into

atmospheric wastewaters collectors and is conveyed from the OU Kolubara-Metal via storm drainage into the PUTOKS plant and subsequently over a channel into the Kolubara River.

In accordance with the Law on Water (Official Gazette of the RS, No. 30/2010, 93/2012, 101/2016, 95/2018 and 95/2018 – other law), in 2024 the tests were carried out by the authorized and accredited laboratory of the Institute for Safety at Work, JSC Novi Sad based on the Framework Agreement. The testing included the determination of the physical and chemical and microbiological properties of water that are of hygienic, water management and technical-technological importance, namely: water temperature, electrical conductivity, turbidity, phosphorus (P), iron (Fe), manganese (Mn), arsenic (As), mineral oils (TRN) and E.coli concentration. The results of physical-chemical tests of wastewater are given in Tables 32, 33, 34 and 35.

Table 32

BRANCH KOLUBARA MB – OU KOLUBARA-METAL					
Wastewater physical-chemical testing for 2024 – Q1 **Sampling done on 6 March 2024**					
Tested parameter	**Measured value**				
	I	**II**	**III**	**IV**	**V**
Water temperature (˚C)	17,8	13,0	11,5	13,6	14,3
Turbidity (NTU)	27,9	43,2	268	6,86	69,7
Electrical conductivity (µS/cm)	543	673	197,5	512	578
Phosphorus (P) (mg/l)	0,36	0,47	0,18	0,57	0,03
Iron (Fe) (mg/l)	0,7	1,98	2,96	0,133	1,06
Manganese (Mn) (mg/l)	0,156	0,293	0,198	0,077	0,319
Arsenic (As) (mg/l)	0,154	<0,01	0,014	<0,01	0,035
Mineral oils (TRN) (mg/l)	0,045	0,535	2,762	0,08	0,152
E.coli(MPN/100ml)	$2x10^4$	$3,5x10^2$	$4,6x10^2$	$1,6x10^4$	<1

Table 33

BRANCH KOLUBARA MB – OU KOLUBARA-METAL					
Wastewater physical-chemical testing for 2024 – Q2 **Sampling done on 15 August 2024**					
Tested parameter	**Measured value**				
	I	**II**	**III**	**IV**	**V**
Water temperature (˚C)	27,1	30,1	30,2	23,5	25,3
Turbidity (NTU)	107	30	21,5	8,16	85
Electrical conductivity (µS/cm)	620	716	531	563	615
Phosphorus (P) (mg/l)	0,30	0,92	0,04	0,07	0,09
Iron (Fe) (mg/l)	2,903	4,133	3,88	0,395	10,6
Manganese (Mn) (mg/l)	0,556	0,502	0,162	0,046	0,669
Arsenic (As) (mg/l)	0,017	<0,01	<0,01	<0,01	0,020
Mineral oils (TRN) (mg/l)	<0,01	0,811	1,544	0,188	1,815
E.coli(MPN/100ml)	$6x10^4$	$3x10^2$	$3x10^2$	$5,5x10^3$	<1

Table 34

BRANCH KOLUBARA MB – OU KOLUBARA-METAL				
Wastewater physical-chemical testing for 2024 – Q3 **Sampling done on 23 October 2024**				
Tested parameter	**Measured value**			
	II	**III**	**IV**	**V**
Water temperature (˚C)	19,2	18,1	17,9	11,0
Turbidity (NTU)	95,8	60,7	44,3	3,94
Electrical conductivity (µS/cm)	590	83,1	448	231
Phosphorus (P) (mg/l)	0,75	0,27	0,21	0,14
Iron (Fe) (mg/l)	3,17	2,13	2,08	1,19
Manganese (Mn) (mg/l)	0,198	0,167	0,087	0,123
Arsenic (As) (mg/l)	<0,01	<0,01	<0,01	<0,01
Mineral oils (TRN) (mg/l)	5,52	1,53	<0,01	<0,01
E.coli(MPN/100ml)	$3,6x10^2$	$1x10^2$	$3,1x10^2$	<1

*Reference value: Regulation stipulating emission limit values for pollutants in water and deadlines for their achievement (OG RS, No. 67/2011, 48/2012 and 1/2016). Emission limit values for wastewater containing mineral oils, Table 4.1. Emission limit values at the point of discharge into surface waters

In Q3, sampling at measuring point I – rainwater drainage from the Production Plant was not carried out due to insufficient amount of wastewater in the manhole (evaporation due to high external temperature).

Table 35

BRANCH KOLUBARA MB – OU KOLUBARA-METAL					
Wastewater physical-chemical testing for 2024 – Q4 **Sampling done on 5 December 2024**					
Tested parameter	**Measured value**				
	I	**II**	**III**	**IV**	**V**
Water temperature (˚C)	17,5	9,0	12,0	13,9	9,4
Turbidity (NTU)	10,9	14,1	212	4,95	8,13
Electrical conductivity (µS/cm)	498	359	299	460	107
Phosphorus (P) (mg/l)	0,63	0,45	1,66	0,41	0,24
Iron (Fe) (mg/l)	0,679	1,75	2,92	0,689	0,275
Manganese (Mn) (mg/l)	0,104	0,266	0,161	0,101	0,022
Arsenic (As) (mg/l)	<0,01	<0,01	0,025	<0,01	<0,01
Mineral oils (TRN) (mg/l)	0,052	2,82	0,156	<0,01	<0,01
E.coli(MPN/100ml)	$7{,}1x10^4$	<1	50	$3{,}1x10^4$	<1

*Reference value: Regulation stipulating emission limit values for pollutants in water and deadlines for their achievement (OG RS, No. 67/2011, 48/2012 and 1/2016). Emission limit values for wastewater containing mineral oils, Table 4.1. Emission limit values at the point of discharge into surface waters.

In 2024, sampling was not performed at measuring point VI (separator outlet – car and truck wash) in the Overhaul Unit, due to the non-functionality of the separator.

Measuring points II, III and V are outlets from the separator inside the Production Unit, Overhaul Unit and ELMONT in Lajkovac, while measuring points I and IV are storm drainage outlets from the Production Unit and Overhaul Unit.

During sampling at some measuring points, no samples were taken at the inlets due to separator clogging. Some of the presented results do not provide a realistic image of the separator efficiency due to the clogging and abundant precipitation within the intervals before and after sampling.

For the samples taken, the examined parameters meet the values prescribed by the Regulation on limit values for the emission of polluting substances into water and deadlines for reaching them (Official Gazette of the RS, No. 67/2011, 48/2012 and 1/2016). Emission limit values of wastewater containing mineral oils, table 4.1. Emission limit values at the point of discharge into surface waters.

Based on the presented results, it is concluded that the efficiency of wastewater treatment is satisfactory and that the wastewater exiting the separators is characterized of a satisfactory quality, in terms of reaching the values prescribed by the Regulation and that the separators perform their function. Also, the concentration of suspended matter, organic substances (COD) increases significantly).

1.2.3. Waste

Waste generated in 2024 for OU Kolubara Metal, are shown in the Table 36 according to the Serbian Waste Management regulations.

Table 36

BRANCH MB KOLUBARA - OU "KOLUBARA – METAL"					
Generated types of waste in 2024					
Rules defining waste categories, its testing and classification (OG RS No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)					
Item No.	**Name**	**Index number**	**Unit**	**Waste amount**	**Note**
1.	Scraping and processing of ferrometals	12 01 01	t	240,400	Metal veneer
2.	Turnings from bronze and brass processing	12 01 03	t	21,400	Waste bronze and aluminum veneer

BRANCH MB KOLUBARA - OU "KOLUBARA – METAL"					
Generated types of waste in 2024					
Rules defining waste categories, its testing and classification (OG RS No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)					
Item No.	**Name**	**Index number**	**Unit**	**Waste amount**	**Note**
3.	Waste mineral non-chlorinated engine oils (gear oils)	13 02 05*	t	0,150	Waste motor (gearbox) oil
4.	Other emulsions	13 08 02*	t	40,000	Washing sediments
5.	Packaging containing residues of hazardous substances or contaminated with hazardous substances	15 01 10*	t	0,750	Metal packaging from paints, varnishes and thinners
6.	Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing, contaminated with hazardous substances	15 02 02*	t	4,510	Oiled shot blasting, wiping cloths, work clothes
7.	Waste tires	16 01 03	t	3,760	Waste vehicle tires (Pneumatics)
8.	Lead-acid batteries	16 06 01*	t	4,300	Lead-acid batteries
9.	Copper, bronze, brass	17 04 01	t	1,850+6000	Copper enameled wire, bronze in pieces
10.	Aluminum	17 04 02	t	1,000	Waste aluminum sheet
11.	Iron and steel	17 04 05	t	20,000	Below 3 mm (sheet metal, profiles, cabinets, mixed categories...)
				304,520	Over 3 mm (pieces of various dimensions and shapes, unsorted, steel ropes, sheets, steel bodies of rolls, structures, boxes...)
				426,729	Over 6 mm (rails, parts of structures...)
				66,600	Waste iron and steel with rubber lining
				60,000	Damaged parts, gears, shafts, axles
12.	Metal waste contaminated with dangerous substances	17 04 09*	t	11,000	Greased roller bearings
13.	Waste rubber chips	19 12 04	t	5,150	Rubber chips from scraped rubber lining of drums
14.	Waste rubber and plastic	19 12 11*		1,200	Greased rubber-plastic gaskets
15.	Discarded electrical and electronic equipment other than those mentioned in 20 01 01, 20 01 23 and 20 01 35	20 01 36	t	3,359	Electrical and electronic waste

* hazardous waste

The cumulative quantity of waste for the MB Kolubara MB (Open Cast Mines Baroševac, OU Processing Plant and Kolubara-Metal) generated in 2024 is provided in the Table 37 in accordance with Serbian Waste Management regulations.

Table 37

BRANCH MB KOLUBARA - OU OPEN CAST MINES, OU "PROCESSING PLANT" AND OU "KOLUBARA METAL"													
No	**The Rulebook on categories, testing and classification of waste (Official Gazette of RS No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit**	**Generated types of waste in 2024**									
				Field E	**Field B**	**Tamnava – West Field**	**Tamnava – East Field**	**Auxiliary machinery**	**Total: OCM**	**Total: Processing Plant**	**Total: Kolubara Metal**	**Total: MB Kolubara**	**Note**
	Name	**Index No.**		**Waste quantities**									
1.	Expired waste paint and varnishes containing organic thinners or other hazardous substances	08 01 11*	t	0,000	0,000	10,658	0,000	0,000	**10,658**	**0,000**	**0,000**	**10,658**	Expired paints
2.	Waste toner for printing other than that specified in 08 03 17	08 03 18	t	0,002	0,000	0,000	0,000	0,000	**0,002**	**1,474**	**0,000**	**1,476**	Waste toners
3.	Scraping and processing of ferrometals	12 01 01	t	0,000	1,300	0,000	0,000	0,000	**1,300**	**0,000**	**240,400**	**241,700**	Iron and steel scrapings, metal scrapings, clean waste ferrometal scrapings without impurities, ferrous metal waste scrapings with impurities
4.	Scraping and processing of non-ferrous metals	12 01 03	t	0,000	0,000	0,000	0,000	0,000	**0,000**	**0,000**	**21,400**	**21,400**	Waste bronze scrapings, aluminum scrapings
5.	Mineral chlorinated hydraulic oils	13 01 09*	t	0,000	0,000	0,000	0,000	0,000	**0,000**	**0,970**	**0,000**	**0,970**	Waste hydraulic oils

BRANCH MB KOLUBARA - OU OPEN CAST MINES, OU "PROCESSING PLANT" AND OU "KOLUBARA METAL"													
No	**The Rulebook on categories, testing and classification of waste (Official Gazette of RS No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit**	**Generated types of waste in 2024**									
				Field E	**Field B**	**Tamnava – West Field**	**Tamnava – East Field**	**Auxiliary machinery**	**Total: OCM**	**Total: Processing Plant**	**Total: Kolubara Metal**	**Total: MB Kolubara**	**Note**
	Name	**Index No.**		**Waste quantities**									
6.	Mineral non-chlorinated motor oils, transmission oils and lubricants	13 02 05*	t	0,000	0,000	0,000	0,000	41,401	**41,401**	**1,000**	**0,150**	**42,551**	Motor oil, gearbox oils
7.	Mineral non-chlorinated oils for insulation and heat transfer	13 03 07*	t	0,000	0,000	0,000	0,000	0,000	**0,000**	**0,600**	**0,000**	**0,600**	Transformer oil
8.	Other emulsions	13 08 02*	t	0,000	0,000	0,000	0,000	0,000	**0,000**	**0,000**	**40,000**	**40,000**	Waste emulsions, mechanical emulsions and solutions without halogenated matters, Waste sludge from washing points, oily water
9.	Plastic containers	15 01 02	t	0,011	0,000	0,000	0,000	0,000	**0,011**	**0,000**	**0,000**	**0,011**	Waste plastic containers

10.	Packaging containing residues of hazardous substances or contaminated with hazardous substances	15 01 10*	t	0,000	0,080	0,000	0,000	20,400	**20,480**	**0,030**	**0,750**	**21,260**	Waste metal drums from oils and lubricants, waste drums from fats and oils, metal packaging from paints, varnishes and thinners
11.	Absorbents, filter materials (including oil filters not otherwise specified), wipes, protective clothing, contaminated with hazardous substances	15 02 02*	t	0,000	0,000	0,000	0,000	0,155	**0,155**	**0,150**	**4,510**	**4,815**	Oily wiping cotton fibers, working suits, wiping clothes
12.	Absorbent, filter materials, wiping cloths and protective clothing, different than those specified in 15 02 02	15 02 03	t	0,403	0,455	0,050	0,040	5,608	**6,556**	**0,000**	**0,000**	**6,556**	PP equipment, working suits, personal protective items, air filters
13.	Waste rubber	16 01 03	t	0,000	0,000	0,350	0,000	20,000	**20,350**	**0,400**	**3,760**	**24,510**	Pneumatics
14.	Waste vehicles that do not contain liquid or other hazardous components	16 01 06	t	0,000	0,000	0,000	0,000	100,000	**100,000**	**0,000**	**0,000**	**100,000**	Abandoned vehicles without liquids and hazardous materials

15.	Oil filters	16 01 07*	t	0,000	0,000	0,000	0,000	4,512	**4,512**	**0,000**	**0,000**	**4,512**	Waste oil filters
16.	Antifreeze containing hazardous matters	16 01 14*	t	0,000	0,000	0,000	0,000	0,000	**0,000**	**0,650**	**0,000**	**0,650**	Waste antifreeze agent
17..	Waste not otherwise specified - iron and steel	16 01 99/17 04 05	t	0,000	0,000	0,000	0,000	600,000	**600,000**	**0,000**	**0,000**	**600,000**	Waste construction machinery and parts thereof
18.	Organic waste containing hazardous substances	16 03 05*	t	0,000	0,000	0,000	0,000	0,000	**0,000**	**0,080**	**0,000**	**0,080**	Waste hydrazine
19.	Laboratory chemicals including or containing hazardous matters, including laboratory mixtures	16 05 06*	t	0,000	0,000	0,000	0,091	0,000	**0,091**	**0,000**	**0,000**	**0,091**	Chemicals – disposed from the warehouse
20.	Lead batteries	16 06 01*	t	0,735	0,029	0,820	0,000	17,929	**19,513**	**0,970**	**4,300**	**24,783**	Lead batteries
21.	Nickel-cadmium batteries	16 06 02*	t	0,000	0,000	0,000	0,000	0,000	**0,000**	**0,300**	**0,000**	**0,300**	Nickel-cadmium batteries
22.	Wood	17 02 01	t	0,000	0,000	0,020	0,000	0,000	**0,020**	**0,000**	**0,000**	**0,020**	
23.	Copper, bronze, brass	17 04 01	t	0,000	0,000	0,000	0,000	0,000	**0,000**	**0,000**	**7,850**	**7,850**	Copper, copper strips, copper enameled wire, bronze in pieces, copper coils with insulation, scrap tin bronze, scrap aluminum

													bronze, bushings
24.	Aluminum	17 04 02	t	0,010	0,005	0,000	0,000	0,000	**0,015**	**0,325**	**1,000**	**1,340**	Scrap aluminum ropes with steel core
25.	Iron and steel	17 04 05	t	43,000	0,000	81,400	0,000	0,000	**124,400**	**0,000**	**60,000**	**184,400**	Alloy steel (shoe segments, crusher hammers, excavator teeth)
				10,000	0,000	0,000	0,000	0,000	**10,000**	**0,000**	**66,600**	**76,600**	Iron and steel with rubber lining, upholstered rolls
				108,500	23,820	0,000	0,000	0,000	**132,320**	**57,120**	**426,729**	**616,169**	Iron over 6 mm (rails, structural parts, rollers and axles)
				32,000	3,841	0,000	0,000	0,000	**35,841**	**5,980**	**20,000**	**61,821**	Iron and steel up to 3 mm (sheet metal, electrical distribution cabinets, street houses, sheet metal profiles, cabinets of mixed categories)

				56,300	9,115	1.019,700	128,000	17,000	**1.230,115**	**10,070**	**304,520**	**1.544,705**	Iron and steel over 3 mm (sheets, rolls, shafts, structures, steel ropes, pieces of various dimensions and shapes, unsorted, steel ropes, sheets, steel roll bodies, structures, crates, pontoons, rails)
26.	Metal waste contaminated with hazardous substances	17 04 09*	t	0,000	0,000	0,000	0,000	0,000	**0,000**	**0,000**	**11,000**	**11,000**	Oily ball bearings
27.	Cables other than those indicated under 17 04 10	17 04 11	t	124,140	1,180	180,000	3,000	0,000	**308,320**	**2,580**	**0,000**	**310,900**	High-voltage copper cables with insulation, low-voltage copper cables with insulation, telephone cable
28.	Insulation materials containing asbestos	17 06 01*	t	0,000	0,000	0,000	0,000	0,000	**0,000**	**13,300**	**0,000**	**13,300**	Roofing sheets – salonit asbestos sheets
29.	Insulation materials other than those indicated under 17 06 01 и 17 06 03	17 06 04	t	7,000	0,000	0,000	0,000	0,000	**7,000**	**0,020**	**0,000**	**7,020**	Ceramic insulators with iron

													impurities, sandwich panels
30	Saturated or worn ion exchange resins	19 09 05	t	0,000	0,000	0,000	0,000	0,000	**0,000**	**6,720**	**0,000**	**6,720**	Ion exchange resins

31.	Plastic and rubber	19 12 04	t	0,002	0,000	0,000	0,000	0,000	**0,002**	**0,000**	**5,150**	**5,152**	Waste tires, plastic and rubber, waste rubber rings, Rubber chips from scraped rubber drum lining, waste conveyor belt
32.	Other wastes (including mixtures of materials) from mechanical treatment of waste containing hazardous substances	19 12 11*	t	0,000	0,000	0,000	0,000	0,000	**0,000**	**0,000**	**1,200**	**1,200**	Greased rubber plastic seals
33.	Other wastes (including mixtures of materials) from mechanical treatment of waste other than those mentioned in 19 12 11	19 12 12	t	103,800	33,680	0,000	0,000	0,000	**137,480**	**0,000**	**0,000**	**137,480**	Steel cord conveyor belt
34.	Fluorescent tubes and other waste containing mercury	20 01 21*	t	0,000	0,000	0,000	0,000	0,000	**0,000**	**0,054**	**0,000**	**0,054**	Waste fluorescent tubes
35.	Discarded electrical and electronic equipment other than those indicated under 20 01 21 and 20 01 23 containing hazardous components	20 01 35*	t	10,560	6,293	0,250	0,220	0,000	**17,323**	**0,000**	**0,000**	**17,323**	Electro-hydraulic brakes, electronic equipment, other

36.	Discarded electrical and electronic equipment other than those indicated under 20 01 21, 20 01 23 and 20 01 35	20 01 36	t	43,064	1,215	1,348	0,060	1,200	**46,887**	**9,768**	**3,359**	**60,014**	Power tools, devices and equipment (consumable electrical machines and electric motors, tools, other)
37.	Plastics	20 01 39	t	0,000	0,002	0,0015	0,000	0,000	**0,0035**	**2,140**	**0,000**	**2,144**	Plastic rings, sun loungers, PET packaging, cotherm plates
38.	Metals	20 01 40	t	0,000	0,000	0,000	0,000	0,000	**0,000**	**0,005**	**0,000**	**0,005**	Fluo fittings - tin

* hazardous waste

Tables 38 and 39 provide the quantities of submitted waste and the R/D operations for managing this waste with an authorized legal entity are shown, according to the waste submission contract and Annex 6 of the Regulation on categories, testing and classification of waste. The first table refers to sold waste, and the second table refers to waste for which EPS JSC pays waste management services.

Table 38

BRANCH "MB KOLUBARA"					
Sold quantity of waste in 2024					
Item No.	**Waste**	**Waste index number**	**Unit**	**Sold quantity**	**R/D management operation**
1.	Waster printer cartridges other than those specified under 08 03 17	08 03 18	t	1,480	R13
2.	Ferrometal scraping and processing - corroded waste ferrous metal veneer with impurities	12 01 01	t	247,360	R4
3.	Shavings from bronze and brass processing - waste bronze veneer (tin)	12 01 03	t	24,760	R13
4.	Air filters	15 02 03	t	10,520	R4
5.	Waste tires	16 01 03	t	1,980	R12
6.	Lead batteries (accumulators)	16 06 01*	t	20,840	R13
7.	Copper, bronze, brass (bronze pieces)	17 04 01	t	5,080	R13
8.	Copper, bronze, brass (copper enameled wire, copper coils with insulation)			2,800	R13
9.	Aluminum scrap – steel cored aluminum wire	17 04 02	t	11,840	R4
10.	Aluminum scrap – aluminum sheet			1,000	R4
11.	Iron and steel, alloy steel, shoe segments, crusher hammers, excavator teeth, impact plates	17 04 05	t	80,320	R4
12.	Iron and steel, rubber-lined iron and steel scrap (upholstered rolls), rubber-lined iron and steel (rolls, drums)			96,960	R12
13.	Iron and steel under 3 mm (unsorted mixed categories, sheet metal, profiles, cabinets…)			123,940	R4/R12
14.	Iron and steel (over 3 mm unsorted, steel wire ropes, rolls, profiles, sheet metal, steel roll bodies, structures, crates)			838,780	R4/R12
15.	Iron and steel over 6 mm (steel rolls, rails, structures, miscellaneous)			716,540	R4/R12
16.	Iron and steel - damaged parts, gears, shafts, axles		t	57,120	R4
17.	Cables other than those mentioned in 17 04 10 - low-voltage, high-voltage and telephone copper cables with insulation and the like	17 04 11	t	408,060	R12/R13
18.	Insulating material other than those mentioned in 170601 and 170603 - ceramic insulators with iron impurities	17 06 04	t	6,600	R4
19.	Waste rubber rings	19 12 04	t	24,800	R12/R13
20.	Waste rubber – rubber chips from scraped rubber drum lining			4,680	R12/R13
21.	Waste rubber – waste raw rubber			3,380	R4
22.	Waste tires – steel cord conveyor belt (unwound in pieces from 0.5 to 50 m)	19 12 12	t	137,480	R4

23.	Waste electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components (computers, printers, monitors, etc.)	20 01 35*	t	16,840	R13
24.	Waste electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35 – electric motors, tools, electrical appliances	20 01 36	t	60,640	R4/R13
TOTAL: BRANCH 'MB KOLUBARA"				**2.903,800**	

* hazardous waste

Table 39

BRANCH "MB KOLUBARA "					
Waste quantities submitted against payment to the authorized entity in 2024					
Item No.	**Waste name**	**Waste index number**	**Unit**	**Waste quantity**	**Operation**
1.	Expired paints and protective coatings	08 01 11*	t	8,840	R13
2.	Waste adhesive	08 04 09*	t	0,160	R13
3.	Other emulsions - cleaning of existing washes and wash sludge	13 08 02*	t	40,620	R13
4.	Metal packaging from fats and oils (drums)	15 01 10*	t	18,300	R12
5.	Waste contaminated packaging from paints and chemicals			2,700	R12
6.	Oil and grease packaging (plastic cans)			0,140	R12
7.	Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing, contaminated with hazardous substances	15 02 02*	t	4,280	R13
8.	Oil filters	16 01 07*	t	7,360	R12
9.	Greased rubber and plastic seals	17 02 04*	t	5,260	R13
10.	Greased bearings	17 04 09*	t	54,520	R12
TOTAL: BRANCH 'MB KOLUBARA"				**142,180**	

* hazardous waste

1.3. Working Environment Monitoring, Occupational Health and Safety

The 2024 Occupational Safety and Health Reports include the following elements:

- **Working Environment Monitoring**
  - working environment noise measurement
- **Occupational Safety**
  - training of employees
  - injuries at work
- **Health Protection**

1.3.1. Working Environment Monitoring

- **Noise Measurement in Working Environment**

Working environment noise levels measurement results are provided in Table 40.

Table 40

BRANCH MB KOLUBARA			
Noise in working environment for 2024			
Organizational Unit	**Plant**	**Registered noise level (dB(A))**	**Permitted noise level (dB(A))**

Open cast mines	--During July and August 2024, the Branch "Open Cast Mines" conducted an examination of the working environment conditions at the "Field E", "Tamnava East Field", "Tamnava West Field", "Radljevo North" and "Auxiliary Mechanization" Plants.	
Processing Plant	/	85
Metal	- Branch In the Kolubara Metal, during July 2024, a survey of working environment conditions was conducted in the summer period. On this occasion, noise was measured at the following measuring points: ➢ Production plant, expert report no. 2413040000456-1 dated 12.08.2024, 66 measuring points ➢ Repair plant, expert report no. 2413040000456-2 dated 12.08.2024, 19 measuring points ➢ Elmont plant, expert report no. 2413040000456-3 dated 12.08.2024, 8 measuring points. Own maintenance, expert report No. 2413040000456-4 dated August 12, 2024, 6 measuring points	
Headquarter	/	85
Project	/	

1.3.2. Occupational Safety

Analysis of high-risk jobs was carried out and it was established that such jobs are adequately protected in line with legislation

- **Training of Employees**

Occupational health and safety training is conducted when new employees are employed, when the existing employees are transferred to other positions, and when new technologies and tools are introduced. Training courses are both theoretical and practical.

Theoretical (general) training is performed by the Health and Safety Division introducing normative acts in the field of occupational safety and health to employees. Practical training is conducted at the workplace and implemented by line managers. Theoretical training of newly recruited employees and the ones transferred to new positions is performed regularly.

In 2024, occupational health and safety training was performed for 2,310 persons in MB Kolubara (the number includes those who are newly employed, transferred to other positions, contractors, students employed at MB Kolubara via some other companies). Apart from those persons previously mentioned, the training and knowledge checks through tests is regularly being done by all the employees in MB Kolubara. This accounts for 10,406 employees.

Under the Law on Mining and Geological Exploration, Occupational Health and Safety Law, Law on Fire Fighting, OHS Regulations, and FP Regulations, the employer is under the obligation to perform OHS and FP testing of employees.

The training of employees is conducted in accordance with "Occupational Health and Safety Training Programme". Training and testing is conducted for employees working at job positions with higher risk, as well as for employees working at job positions that are not of higher risk.

Knowledge checks from the field of OHS and FP are compulsory for every employee of Branch MB Kolubara.

Table 41 shows the overview of the number of employees who have undergone the knowledge checks.

Table 41

BRANCH MB KOLUBARA					
Knowledge test in 2024					
Organizational Unit	**Number of employees**	**Planned to be trained**	**%**	**Trained**	**%**
Open cast mines	5.956	5.972	100,27	4.745	79,45
Processing Plant	1.241	1.240	99,92	1.196	96,45

Metal	1.651	1.644	99,58	1.552	94,40
Headquarter	1.470	1.542	104,90	1.493	96,82
Project	88	88	100,00	82	93,18
TOTAL: BRANCH "MB KOLUBARA"	**10.406**	**10.486**	**100,77**	**9.068**	**86,48**

Note: Some employees underwent more than one training. for example. due to transfer to other jobs and similar.

- **Injuries at Work**

In 2024, a total of 181 injuries occurred at work, of which 55 were serious injuries at work, 123 were minor injuries at work, and 3 were fatal. The injuries were:
1. a traffic accident on the regular way home from work (the employee had a traffic accident while driving home from work in his own car),
2. When arriving at work for the second shift in his own car, the employee had a traffic accident on the road in Jabučje, resulting in death.
3. a traffic accident where a car hit a pedestrian during working hours (the pedestrian was an employee of the Kolubara Regional Health Office who died). While crossing the street in front of the old administration building, Prerada, Vreoci, the employee was hit by a car and killed.

Table 42 provides the 2024 injuries at work data.

Table 42

BRANCH MB KOLUBARA						
Injuries at work in 2024						
Organizational Unit	**Number of employees**	**Injuries – employees' ratio**				
		Mild	**Severe**	**Fatal**	**Total**	**%**
Open cast mines	5.956	86	33	2	121	2,03
Processing Plant	1.241	8	5	1	14	1,13
Metal	1.651	23	10	0	33	2,00
Headquarter	1.470	6	7	0	13	0,88
Project	88	0	0	0	0	0,00
TOTAL: BRANCH "MB KOLUBARA"	**10.406**	**123**	**55**	**3**	**181**	**1,74**

1.3.3. Health Protection

Medical examinations are performed by the Occupational Health Department of Dr. Đorđe Kovačević Lazarevac Medical Centre. Periodic medical examinations are performed annually, and employees working in high-risk workplaces and those operating at computer screens are referred to examination.

Table 43 presents periodic examinations data for employees working in high-risk workplaces in 2024.

Table 43

BRANCH MB KOLUBARA											
Employees' work capability in 2023											
Organizational Unit	**Number of employees**	**Previous and periodical examinations**				**Work capability**					
		Referred to examination		**Examined**		**Capable**		**Limited Capability**		**Incapable**	
		no	**%**	**no**	**%**	**no**	**%**	**no**	**%**	**no**	**%**
Open cast mines	5.956	5.541	93,03	4.889	88,23	3.951	80,81	738	15,10	200	4,09
Processing Plant	1.241	1.230	99,11	1.181	96,02	767	64,94	379	32,09	35	2,96
Metal	1.651	1.278	77,41	1.245	97,42	944	75,82	262	21,04	39	3,13
Headquarter	1.470	457	31,09	394	86,21	344	87,31	47	11,93	3	0,76
Project	88	7	7,95	7	100,00	6	85,71	1	14,29	0	0,00
TOTAL: BRANCH MB KOLUBARA	**10.406**	**8.513**	**81,81**	**7.716**	**90,64**	**6.012**	**77,92**	**1.427**	**18,49**	**277**	**3,59**

1.4. Stakeholders Submissions

Detailed presentation of environmental stakeholder submissions at the Branch MBK level as well as all submissions at the EPS JSC are provided in Table 148.

2. BRANCH THERMAL POWER PLANTS AND OPEN CAST MINES KOSTOLAC - OPEN CAST MINES

Branch “TPPs & OCM Kostolac” consists of four organizational units:

- **TPP Kostolac A**
- **TPP Kostolac B**
- **Open Cast Mine Drmno (OCM Drmno)**
- **Open Cast Mine Cirikovac (OCM Cirikovac)**

Activities in open cast mines are executed within the organizational units OCM Drmno and OCM Ćirikovac.

2.1. Overview and Status of Permits

In 2024, the status of existing permits, licenses and other required approvals did not change in Branch TPPs & OCM KOSTOLAC – for organizational units OCM Drmno and OCM Ćirikovac.

2.2. Environmental Impact Monitoring

2.2.1. Air Quality Measurements

Air quality in the vicinity of open-cut mines OCM Drmno and OCM Ćirikovac and TPP Kostolac A and TPP Kostolac B is carried out within a unique network of measuring points.

2.2.2. Emission Measurements of Matters Affecting Water Quality

- **Dewatering System Waters**

Water from the dewatering system of OCM Drmno are mostly drained into the cooling water sump of TPP Kostolac B and some minor quantites into the Mlava River. Water from the drainage system of OCM Cirikovac is accumulated near the open cast mine. Water quantities for OCM Klenovnik are small and are not being measured.

The control of the quality of drainage water from the dewatering system of OCM Drmno in 2024 was carried out by the authorized legal entity “Institute for Occupational Safety” - Novi Sad. Table 44 provides the results of the drainage water quality from the OCM Drmno for 2024.

Table 44

BRANCH TPPs & OCMs KOSTOLAC – OPEN CAST MINES			
Drainage water quality in 2024			
OCM Drmno	**Drainage well 3 (inlet into pumping lake TPP B)**	**Drainage well 68 (the eastern contour of OCM Drmno)**	**Overflow station - Mlava OCM Drmno**
Total non-organic nitrogen	<0,2-14,07	7,19-9,94	3,49-9,17
Sulphates (mg/l)	42,15-221,4	8,87-12,86	45,89-102,9
Phenols (mg/l)	<0,006	<0,006	<0,006
Electrical conductivity (µS/cm)	269-1.641	355-784	384-949
Arsenic (mg/l)	<0,01	<0,01	<0,01

- **Sanitary Water**

The water that is used for drinking and sanitary needs at OCM Drmno comes from the source of Bradarac. Drinking water quality control is carried out by the authorized legal entity Institute for Health Protection from Požarevac.

The control of the quality of sanitary water from the drainage system of OCM Drmno in 2024 was carried out by the authorized laboratory "Institute for Occupational Safety" - Novi Sad.

Table 45 shows data about sanitary waste water treatment plant in 2024.

Table 45

TPPs & OCMs KOSTOLAC Branch –OPEN CAST MINES	
Sanitary wastewater treatment plant operation in 2024	
Pollutants concentration (mg/l)	**BIODISC OCM Drmno**
Suspended solids (mg/l)	
Plant inlet	12,8 - 499,6
Plant outlet	7,2 -28,60
5-day biological oxygen demand (BOD_5)	
Plant inlet	15,5 -147,1
Plant outlet	8,5 -23,9
Operation efficiency evaluation	Meets guaranteed values for suspended solids and BOD for all measurements

Table 46 shows data on the quantities of water consumed for drinking and sanitary needs, as well as the quantity of drainage water from OCM Drmno in 2024.

Table 46

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES				
Water quantities in 2023 (m^3/year)				
Open cast mine		**Dewatering**	**Sanitary water for the OCM needs**	
		Total water quantity	**Water lines**	**Total quantity**
Klenovik			6.602 m^3	**6.602 m^3**
Ćirikovac			1.033 m^3	**1.033 m^3**
Drmno	**Surface dewatering**	7.319.743 m^3	54.883 m^3	**47.550.898 m^3**
	Deep dewatering	40.176.272 m^3		
TOTAL: TPPs & OCM KOSTOLAC – OPEN CAST MINES			**62.518 m^3**	**47.558.533 m^3**

2.2.3. Emission Measurements of Matters Affecting Soil Quality

Under the Law of Soil Protection (OG RS № 112/2015) and Act on Systematic Monitoring of the Status and Quality of Soil (OG RS No. 88/2020) sampling of the soil at OCM Drmno has been done by the Institute for occupational protection and environmental protection – Belgrade LLC and the Institute for soil Belgrade. Sampling was done on 8 May 2024 and 9 May 2024 for sampling the soil during vegetation period and for testing soil during non-vegetation period 16 10 2024 at the following locations:

1. Transformer station Rudnik 3;
2. Temporary storage for hazardous waste;
3. Fuel and lubricant storage;
4. Biodisc;
5. Transformer station Rudnik 1;
6. Heavy duty mechanization workshop;
7. Transformer station Rudnik 2;

Data evaluation was done in accordance with the Regulation on the list of activities that may cause soil pollution and degradation, the procedure and content of data, deadlines and other requirements for soil monitoring ("Official Gazette of the Republic of Serbia", No. 102/2020) and the Regulation on limit values of polluting, harmful and hazardous substances in soil ("Official Gazette of the Republic of Serbia", No. 30/2018 and 64/2019), Appendix 1, Maximum and remedial limit values of polluting, harmful and hazardous substances in soil and Regulation on systematic monitoring of the condition and quality of soil (Official Gazette of the Republic of Serbia, No. 88 as of 22 June 2020).

In all tested samples, the content of heavy metals and other pollutants in the soil was within the usual concentrations and below the remedial values.

Tables 47 and 48 show concentration of substances during vegetation period affecting the soil quality.

Table 47

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES								
Concentration of substances affecting the soil quality in 2024								
Sampling point	**Chemical properties**							
	pH of the soil		**Easily accessible**		**Total nitrogen content**	**Humus content**	**Anion content**	
	H_2O	**KCl**	**P_2O_5 mg/100g**	**K_2O mg/100g**	**% N**	**%**	**NO_2- mg/kg**	**NO_3- mg/kg**
Transformer station Rudnik 3 (Z31/1)	8,21	7,56	<5,0	13,9	1,1	1,25	1,77	47,2
Transformer station Rudnik 3 (Z31/2)	8,14	7,49	<5,0	17,2	1,6	1,83	1,18	69,86
Transformer station Rudnik 3 (Z31/3)	8,28	7,63	<5,0	11,7	0,7	0,83	2,59	31,86
Temporary storage for hazardous waste (Z32/1)	8,29	7,64	<5,0	10,7	1,0	1,11	2,38	42,37
Temporary storage for hazardous waste (Z32/2)	8,15	7,5	<5,0	17	1,1	1,31	2,38	50,01
Fuel and lubricant storage (Z33/1)	8,16	7,51	<5,0	7,8	1,0	1,68	1,57	64,13
Fuel and lubricant storage (Z33/2)	7,93	7,58	<5,0	24,4	1,4	1,68	1,86	64,13
Biodisc (Z34)	8,06	7,41	<5,0	17,1	1,4	1,0	1,42	38,17
Transformer station Rudnik 1 (Z35/1)	7,93	7,28	7,0	24,4	0,9	2,30	3,26	87,8
Transformer station Rudnik 1 (Z35/2)	8,04	7,39	<5,0	13,1	2,0	1,81	2,56	69,1
Transformer station Rudnik 1“ (Z35/2)	8,15	7,5	<5,0	11,2	1,6	1,61	2,28	61,46
Heavy duty mechanization workshop (Z36/1)	8,07	7,42	8,9	14,7	1,4	1,47	2,08	56,12
Transformer station Rudnik 2 (Z37/1)	8,14	7,5	20,2	30,8	1,3	1,3	1,84	49,63
Transformer station Rudnik 2 (Z37/1)	8,3	7,65	13,7	23,7	1,1	0,75	1,06	28,63
Transformer station Rudnik 2 (Z37/2)	8,7	7,31	15,9	40,0	0,6	2,38	3,37	90,85

Table 48

TPPs & OCMs KOSTOLAC Branch – OPEN-CAST MINES														
Concentration of substances affecting the soil quality in 2024														
Sampling point	**Metal content**													
	Accessible form of heavy metals mg/kg				**Total heavy metal content mg/kg**									
	Cu	**Zn**	**Mn**	**Fe**	**Cr**	**Ni**	**Pb**	**Cu**	**Zn**	**Cd**	**Hg**	**B**	**As**	**Fe**
Transformer station Rudnik 3 (Z31/1)	1,0	1,3	10,4	16,1	53,5	60,3	37,6	22,2	78,1	1,15	<0,2	10,0	13,6	29.993,7
Transformer station Rudnik 3 (Z31/2)	1,3	1,5	11,0	18,4	52,7	59,5	37,0	21,8	77,0	1,13	<0,2	<10,0	13,5	29.755,9
Transformer station Rudnik 3 (Z31/3)	1,1	1,2	9,8	15,5	52,3	58,9	36,9	21,6	76,4	1,12	<0,2	<10,0	14,1	29.721.4
Temporary storage for hazardous waste (Z32/1)	2,0	1,8	9,6	74,8	40,9	38,8	23,6	16,9	70,7	<1,0	<0,2	<10,0	10,8	24.448,0
Temporary storage for hazardous waste (Z32/2)	2,0	1,9	9,4	72,1	44,2	39,0	26,8	17,4	72,50	<1,0	0,27	<10,0	11,2	22.316,5
Fuel and lubricant storage (Z33/1)	1,2	2,4	12,8	24,6	37,2	38,7	21,5	17,3	50,2	<1,0	<0,2	<10,0	<10	13.689,8
Fuel and lubricant storage (Z33/2)	1,3	2,3	13,2	26,0	34,2	38,6	23,5	17,6	53,8	<1,0	<0,2	<10,0	<10,0	14.082,5
Biodisc (Z34)	2,2	2,9	9,3	24,1	37,5	49,8	20,0	18,4	54,3	<1,0	<0,2	<10,0	11,6	20.942,0
Transformer station Rudnik 1 (Z35/1)	2,3	2,8	14,1	29,6	33,4	39,8	24,4	20,2	65,2	<1,0	<0,2	<10,0	11,7	24.829,3
Transformer station Rudnik 1 (Z35/2)	2,0	2,2	11,8	24,4	33,1	39,3	23,6	19,8	64,6	<1,0	<0,2	<10,0	10,9	24.318,2
Transformer station Rudnik 1“ (Z35/2)	2,2	2,6	8,7	23,9	34,2	36,3	25,8	20,1	66,4	<1,0	<0,2	<10,0	11,3	24.610,5
Heavy duty mechanization workshop (Z36/1)	0,7	0,8	7,4	21,1	37,5	38,3	20,0	18,6	58,3	<1,0	<0,2	<10,0	10,2	21.405,5
Transformer station Rudnik 2 (Z37/1)	0,6	1,0	7,2	25,0	36,8	42,5	26,9	19,7	65,1	<1,0	<0,2	<10,0	12,5	25.231,2
Transformer station Rudnik 2 (Z37/1)	0,7	0,8	6,9	13,8	36,7	40,8	26,1	21,3	66,2	<1,0	<0,2	<10,0	11,9	22.318.4
Transformer station Rudnik 2 (Z37/2)	2,2	3,1	15,4	22,2	36,4	41,2	27,2	22,0	67,4	<1,0	<0,2	<10,0	12,6	26.422,1

Tables 49 and 50 show concentration of substances during non-vegetation period affecting the soil quality from the Regulation on systematic monitoring of the condition and quality of soil (Official Gazette of the Republic of Serbia, No. 88 as of 22 June 2020).

Table 49

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES								
Concentration of substances affecting the soil quality in 2024								
Sampling point	**Chemical properties**							
	pH of the soil		**Easily accessible**		**Total nitrogen content**	**Humus content**	**Anion content**	
	H_2O	**KCl**	**P_2O_5 mg/100g**	**K_2O mg/100g**	**% N**	**%**	**NO_2- mg/kg**	**NO_3- mg/kg**
Transformer station Rudnik 3 (Z31/1)	8,22	7,58	22,4	31,1	1,0	1,2	1,7	45,8
Transformer station Rudnik 3 (Z31/2)	8,15	7,50	25,1	27,5	1,5	1,76	2,49	67,2
Transformer station Rudnik 3 (Z31/2)	8,30	7,66	21,3	20,4	0,8	0,90	1,27	34,4
Temporary storage for hazardous waste (Z32/1)	8,30	7,65	25,4	29,6	1,0	1,2	1,7	45,8
Temporary storage for hazardous waste (Z32/2)	8,20	7,53	20,4	22,4	1,1	1,30	1,84	49,6
Fuel and lubricant storage (Z33/1)	8,18	7,52	13,1	12,9	1,5	1,7	2,41	64,9
Fuel and lubricant storage (Z33/2)	8,0	7,35	21,3	25,4	1,5	1,7	2,41	64,9
Biodisc (Z34)	8,1	7,42	17,1	18,2	0,9	1,0	1,42	38,2
Transformer station Rudnik 1 (Z35/1)	8,0	7,3	35,5	33,0	2,0	2,3	3,26	87,8
Transformer station Rudnik 1 (Z35/2)	8,06	7,40	35,9	37,1	1,6	1,8	2,55	68,7
Transformer station Rudnik 1“ (Z35/2)	8,17	7,52	35,4	35,1	1,4	1,6	2,27	61,1
Heavy duty mechanization workshop (Z36/1)	8,1	7,43	36,3	31,2	1,3	1,5	2,12	57,3
Transformer station Rudnik 2 (Z37/1)	8,18	7,5	39,8	30,8	1,1	1,29	1,83	49,2
Transformer station Rudnik 2 (Z37/1)	8,3	7,65	29,2	23,7	0,7	0,8	30,5	1,13
Transformer station Rudnik 2 (Z37/2)	8,0	7,33	39,2	37,5	2,1	2,4	3,4	91,6

Table 50

TPPs & OCMs KOSTOLAC Branch – OPEN-CAST MINES														
Concentration of substances affecting the soil quality in 2024														
Sampling point	**Metal content**													
	Accessible form of heavy metals mg/kg				**Total heavy metal content mg/kg**									
	Cu	**Zn**	**Mn**	**Fe**	**Cr**	**Ni**	**Pb**	**Cu**	**Zn**	**Cd**	**Hg**	**B**	**As**	**Fe**
Transformer station Rudnik 3 (Z31/1)	0,8	1,1	8,8	14,3	34,54	34,53	36,99	12,79	54,26	1,53	<0,2	<10,0	<10,0	25.814,1
Transformer station Rudnik 3 (Z31/2)	0,7	0,7	9,0	12,6	34,3	33,88	25,91	12,66	52,25	1,48	<0,2	<10,0	<10,0	24.964,0
Transformer station Rudnik 3 (Z31/2)	0,9	0,8	8,3	70,8	32,46	32,53	23,16	12,39	48,55	1,47	<0,2	<10,0	<10,0	25.075,0
Temporary storage for hazardous waste (Z32/1)	1,1	2,3	14,2	20,9	41,65	38,91	32,47	13,23	57,42	1,53	<0,2	<10,0	<10,0	26.809,1
Temporary storage for hazardous waste (Z32/2)	1,3	2,6	14,7	33,2	36,39	38,59	37,2	15,2	67,54	1,51	<0,2	<10,0	<10,0	23.972,3
Fuel and lubricant storage (Z33/1)	1,6	2,5	11,2	40,5	31,65	34,31	20,91	15,15	124,59	1,41	<0,2	<10,0	<10,0	16.638,1
Fuel and lubricant storage (Z33/2)	1,8	2,0	10,8	59,6	50,72	67,85	36,00	15,53	70,17	1,52	<0,2	10,86	10,01	26.261,5
Biodisc (Z34)	1,7	2,7	10,6	27,9	39,69	56,07	30,45	11,21	56,51	1,48	<0,2	<10,0	<10,0	24.273,2
Transformer station Rudnik 1 (Z35/1)	2,6	2,7	15,6	30,8	46,81	54,35	35,87	32,95	77,27	1,52	<0,2	11,08	10,08	28.481,4
Transformer station Rudnik 1 (Z35/2)	2,0	2,8	12,8	27,3	45,75	42,87	37,08	18,38	83,33	1,55	<0,2	12,3	<10,0	29.240,5
Transformer station Rudnik 1“ (Z35/2)	2,3	2,4	12,3	28,0	40,74	41,02	33,6	17,01	78,22	1,54	<0,2	11,87	10,16	29.538,5
Heavy duty mechanization workshop (Z36/1)	0,8	1,1	9,2	27,2	39,64	43,47	26,97	13,91	59,3	1,51	<0,2	10,64	10,2	28.092,0
Transformer station Rudnik 2 (Z37/1)	1,8	1,5	9,3	26,4	45,78	54,96	33,21	22,34	79,00	1,53	<0,2	11,21	10,89	27.450,7
Transformer station Rudnik 2 (Z37/1)	1,2	2,9	8,3	20,6	41,96	41,67	29,99	18,52	63,43	1,53	<0,2	11,24	<10,0	28.292,4
Transformer station Rudnik 2 (Z37/2)	0,7	3,2	11,7	25,3	50,52	55,77	36,99	23,12	84,92	1,55	<0,2	<11,5	<11,56	28.489,0

- **Overview of the Expropriated and Reclaimed Area**

An overview of expropriated and reclaimed areas in Branch TPPs and OCMs Kostolac, which includes the periods by the end of 2023, changes in 2024 and total area as of 2024, by location and specified types of reclaimed area is given in Table 51.

There was no expropriated area in 2024.

The land registered in the real estate cadastre amounts to a total of 582,97 ha.

The area of the land which purpose was changed was not increased in 2024 and amounts to 458,61 ha.

The areas of land under construction remained unchanged compared to 2023 and amount to a total of 1,41 ha.

The area of land under the disposal site remained unchanged in comparison to 2023 and amounts to a total of 859,20.

Reclaimed areas include area under forest, arable land, orchard, and nursery.

In 2024, the reclaimed area under the forest increased by 15,00 ha, and as of 2024, they amount to a total of 201,21 ha.

In 2024, the reclaimed area under arable land were increased by 8,00 ha, and as of 2024, they amount to a total of 400,80 ha.

In 2024, the reclaimed area under orchards was not increased, and as of 2024, they amount to a total of 4,00 ha.

In 2024, the reclaimed area under nursery was not increased, and as of 2024, they amount to a total of 15,00 ha.

Table 51

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES																			
Overview of expropriated and reclaimed area by the end of 2024																			
OCM	**Expropriated area (ha)**	**Area of land registered in the cadaster (ha)**		**Area of land with changed purpose (ha)**		**Area of land under facilities (ha)**		**Area of land under the disposal site (ha)**				**Reclaimed area (ha)**							
								Internal		**External**		**Forests**		**Arable land**		**Orchards**		**Nursery**	
		by the end of 2023	**in 2024**	**by the end of 2023**	**in 2024**	**by the end of 2023**	**in 2024**	**by the end of 2023**	**in 2024**	**by the end of 2023**	**in 2024**	**by the end of 2023**	**in 2024**	**by the end of 2023**	**in 2024**	**by the end of 2023**	**in 2024**	**by the end of 2023**	**in 2024**
Klenovnik	472,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Ćirikovac	1.047,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Drmno	2.881,64	463,92	0,00	458,61	0,00	1,41	0,00	859,20	0,00	0,00	0,00	60,01	15,00	392,80	8,00	4,00	0,00	15,00	0,00
Kličevac	169,55	119,05	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	126,20	0,00	0,00	0,00	0,00	0,00	0,00	0,00
TOTAL	**4.570,19**	**582,97**		**458,61**		**1,41**		**859,20**		**0,00**		**201,21**		**400,8**		**4,00**		**15,00**	

2.2.4. Environmental Noise Measurements

The measurement of the noise level in the environment as part of regular monitoring for the winter and summer period was carried out in the vicinity of OCM Drmno.

The ultimate goal of the measurement is the determination of the relevant noise level, which is given through the measured equivalent levels and possible additions to the level depending on the type of observed noise.

Noise measurement has been executed in three intervals of 15 minutes for day and evening and two intervals of 15 minutes for night at three measuring points:

1. MMB – 1D – Measuring point in village Drmno on the West side of the mine nearby crushing plant (44°43'13.50"N and 21°13'24.47"E);
2. MMB – 2B – Measuring point nearby village Bradarac on the South side of the mine (44°41'50.55"N and 21°13'54.44"E);
3. MMB – 3K – Measuring point on the North-East side of the mine near village Kličevac (44°44'53.14"N and 21°16'53.43"E).

The measurement was carried out by the Ocupational Safety Institute JSC Novi Sad. The measurements were done on 21 May 2024.

The noise measurements were carried out in accordance with the Law on Protection against Noise in the Environment (Official Gazette of the RS No. 96/2021), the Rulebook on Noise Measurement Methods, Content and Scope of Noise Measurement Reports (Official Gazette of the RS No. 139/2022), Regulation on noise indicators, limit values, methods for evaluating noise indicators, disturbance, and harmful effects of noise in the environment (Official Gazette of RS No. 75/10). Noise measurements for 2024 are shown in Tables 52, 53, 54 and 55.

Table 52

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES					
Noise levels at measuring point MMB 3K – Kličevac					
Measuring point No. 1	**MMB – 3K**				
Reference time interval	Day		Evening	Night	
Measuring period	Day 1	Day 2	Evening	Night 1	Night 2
Date of measuring	21.05.2024.	21.05.2024.	21.05.2024.	21.05.2024.	21.05.2024.
Reference time	13:30 – 13:45	14:45 – 15:00	20:00- 20:15	22:00 – 22:15	23:15 – 23:30
Equivalent level $L_{Aeq,15min}$ [dB]	48,6	47,8	47,0	47,6	45,3
Correction K*[dB]	0	0	0	0	0
Competent level $L_{RAeq,15min}$ [dB]	49	48	47	48	45

Table 53

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES					
Noise levels at measuring point MMB 2B – Bradarac					
Measuring point No. 2	**MMB – 2B**				
Reference time interval	Day		Evening	Night	
Measuring period	Day 1	Day 2	Evening	Night 1	Night 2
Date of measuring	21.05.2024.	21.05.2024.	21.05.2024.	21.05.2024.	21.05.2024.
Reference time	13:45 – 14:00	14:30 – 14:45	20:15- 20:30	22:15 – 22:30	23:00 – 23:15

Equivalent level $L_{Aeq,15min}$ [dB]	51,6	51,3	49,7	49,6	48,6
Correction K*[dB]	0	0	0	0	0
Competent level $L_{RAeq,15min}$ [dB]	52	51	50	50	49

Table 54

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES					
Noise levels at measuring point MMB 1D – Drmno village					
Measuring point No. 3	**MMB – 1D**				
Reference time interval	Day		Evening	Night	
Measuring period	Day 1	Day 2	Evening	Night 1	Night 2
Date of measuring	21.05.2024.	21.05.2024.	21.05.2024.	21.05.2024.	21.05.2024.
Reference time	14:00 – 14:15	14:15 – 14:30	20:30- 20:45	22:30 – 22:45	22:45 – 23:00
Equivalent level $L_{Aeq,15min}$ [dB]	45,1	45,3	43,0	42,5	42,0
Correction K*[dB]	0	0	0	0	0
Competent level $L_{RAeq,15min}$ [dB]	45	45	43	43	42

Table 55

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES							
Data analysis based on noise measurements – OCM Drmno							
Measuring point	**ELV**		**Competent level** [dB]				
	Reference time interval		**Measuring interval**				
	Day	**Night**	**Day 1**	**Day 2**	**Evening**	**Night 1**	**Night 2**
MMB – 3K	65	55	48,6	47,8	47,0	47,6	45,3
MMB – 2B	65	55	51,6	51,3	49,7	49,6	48,6
MMB – 1D	55	45	45,1	45,3	43,0	42,5	42,0

Data analysis was done based on noise measurements at each measuring point. According to the assessment of the authorized legal entity from the measurement report, the measurement results do not exceed the limit values of 65 dB for the daytime and evening periods and 55 dB for the night period, which were determined based on the Decision on determining acoustic zones on the territory of the city of Požarevac (Official Gazette of the City of Požarevac, No. 2/2023) and the Regulation on noise indicators, limit values, methods for assessing noise indicators, annoyance and harmful effects of noise in the environment (Official Gazette of the Republic of Serbia, No. 75/2010).

- **Investigation of the Environment Zero State in the Area of the Zapadni Kostolac Coal Deposit**

For investigation of the environment zero state of the future coal deposit Zapadni Kostolac, ambient air, surface water, environment noise and soil quality were tested and measured in the very vicinity of the deposit.

Ambient Air Quality Tests

In January 2024, air quality tests were done within the area of the future coal deposit Zapadni Kostolac for investigation of the environment zero state.

Ambient air quality tests were performed at the following locations:

1. The village of Batovac - determination of the content of total particulate matters (TPM), the content of sulfur dioxide and soot, the concentration values of suspended particles PM10 and heavy metals (Pb, Cd, As and Ni)
2. The village of Dubravica - determination of the content of total particulate matters (TPM), the content of sulfur dioxide and soot, the concentration values of suspended particles PM10 and heavy metals (Pb, Cd, As and Ni)

The tests were carried out by the authorized laboratory "Institute for Mining and Metallurgy Bor" from January to December 2024. The assessment of air quality compliance with legal regulations was done by comparing the measured values with the values prescribed by the Regulation on monitoring conditions and air quality requirements (Official Gazette No. 11/2010, 75/2010, 63/2013). Air quality in 2024 is shown in Table 56.

Table 56

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES						
Air quality in 2024						
Data compliance with legal requirements (number of data or number of days exceeding prescribed values)						
Air quality indicators		**TPM contents ($mg/m^2/day$)**	**Soot ($\mu g/m^3$)**	**SO_2 concentration ($\mu g/m^3$)**		
Averaging period		**Maximum permissible value (MPV)**	**Maximum permissible concentration (MPC)**	**LV**	**TV**	**TL**
One hour		-	-	350	350	0
*One day		-	50	125	-	
**One month		450	-	-		
***Calendar year		200	50	50	-	
	Measuring point	Exceedance count	Exceedance count	Exceedance count		
*	1	-	No exceedance	No exceedance		
	2	-	1-day exceedance in February	No exceedance		
**	1	No exceedance	-	-		
	2	No exceedance	-	-		
***	1	No exceedance	No exceedance	No exceedance		
	2	No exceedance	No exceedance	No exceedance		
Air quality indicators		Particulate matters PM10 ($\mu g/m^3$)				
Averaging period		LV	TV	TL		
* One day		50	50	0		
*** Calendar year		40	40	0		
*	1	No exceedance	No exceedance	-		
	2	13-day exceedance (January 2, February 5, March 1, April 2, November 2, December 1) out of 69 days total	1-day exceedance (November) out of 69 days total	-		
***	1	No exceedance	No exceedance	-		
	2	No exceedance	No exceedance	-		

Soil Quality Tests

Soil quality testing was done at 20 measuring points in the vicinity of coal deposits, both in vegetation and non-vegetation period. The tests were done by the Jaroslav Černi Institute for the Development of Water Resources Belgrade in 2024. The concentration of substances that affected soil quality in 2024 are shown in Tables 57, 58, 59 and 60.

Table 57

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES								
Concentration of substances affecting the soil quality in vegetation period 2024 – Zapadni Kostolac coal deposit								
Sample	**Chemical properties**							
	pH of the soil		**Easily accessible**		**Total nitrogen content**	**Humus content**	**Anion content**	
	H_2O	**KCl**	**P_2O_5 mg/100g**	**K_2O mg/100g**	**% N**	**%**	**NO_2- mg/kg**	**NO_3- mg/kg**
Z2	7,83	7,58	37,2	23,7	2,4	2,76	3,91	105,36
Z3	7,86	7,21	35,1	34,8	2,3	2,72	3,85	103,83
Z12	7,3	6,65	6,9	23,8	2,0	2,27	3,21	86,66
Z13	7,0	6,35	9,9	25,6	2,4	2,84	4,02	108,41
Z14	7,57	6,92	11,5	38,7	1,8	2,05	2,9	78,26
Z15	7,57	6,92	17,3	24,2	1,6	1,82	2,58	69,48
Z16	7,45	6,8	16,0	22,4	2,0	2,35	3,33	89,71
Z17	7,65	7,0	20,9	38,6	2,5	2,91	4,12	11,09
Z18	7,4	6,75	22,4	34,5	2,5	2,89	4,09	110,32
Z19	6,07	5,42	6,7	22,9	2,3	2,67	3,78	101,93
Z20	7,06	7,31	22,3	39,8	2,0	2,34	3,31	89,33
Z21	6,64	6,0	<5,0	12,7	1,6	1,8	2,55	68,71
Z23	7,63	7,0	11,2	25,9	1,9	2,26	3,2	86,27
Z24	8,02	7,37	24,8	27,4	1,8	2,08	2,95	79,4
Z25	7,82	7,17	9,5	17,5	1,9	2,25	3,19	85,89
Z26	7,82	7,12	9,5	17,2	1,3	1,52	2,15	58,02
Z27	6,36	5,71	<5,0	11,5	1,8	2,06	2,92	78,64
Z28	7,62	6,97	21,7	32,8	2,6	3,02	4,28	115,29
Z29	7,64	7,0	39,7	45,3	2,7	3,09	4,38	117,96
Z30	7,66	7,01	27,0	43,5	2,1	2,29	3,24	87,42

Table 58

TPPs & OCMs KOSTOLAC Branch – OPEN-CAST MINES														
Concentration of substances affecting the soil quality in vegetation period 2024 – Zapadni Kostolac coal deposit														
Sample	**Metal content**													
	Accessible form of heavy metals mg/kg				**Total heavy metal content mg/kg**									
	Cu	**Zn**	**Mn**	**Fe**	**Cr**	**Ni**	**Pb**	**Cu**	**Zn**	**Cd**	**Hg**	**B**	**As**	**Fe**
Z2	2,2	3,4	18,8	29,6	92,4	131,0	45,7	31,2	95,4	1,2	<0,2	<10	22,4	33.945,1
Z3	2,8	3,6	20,5	2,0	122,5	168,6	60,1	38,9	129,9	1,63	<0,2	11,8	28,0	35.765,3
Z12	3,0	2,8	24,5	40,6	102,5	140,1	48,6	32,5	110,8	1,5	<0,2	10,9	25,3	34.820,6
Z13	2,9	2,7	27,4	46,8	92,2	134,5	52,4	31,0	94,6	1,37	<0,2	10,2	24,5	36.410,2
Z14	2,0	2,6	19,9	30,1	74,2	101,6	40,2	29,6	74,3	1,16	<0,2	<10	20,1	32.436,9
Z15	2,2	2,4	19,5	32,2	73,8	102,5	40,5	30,1	72,8	1,3	<0,2	<10	19,8	32.512,0
Z16	2,7	2,3	21,4	38,6	107,3	145,2	56,9	34,1	102,6	1,6	<0,2	11,2	23,9	35.920,7
Z17	2,3	3,0	20,2	27,1	51,1	65,3	28,8	26,7	73,8	1,1	<0,2	<10	14,7	29.332,5
Z18	1,8	2,7	12,5	28,9	50,4	66,1	26,7	25,6	72,1	1,2	<0,2	<10	13,3	29.281,3
Z19	1,9	8,2	22,2	50,3	87,2	132,8	41,0	49,9	98,2	1,45	<0,2	<10	19,9	33.736,5
Z20	2,3	2,9	15,2	25,3	50,2	66,4	38,9	23,4	75,0	1,19	<0,2	<10	12,9	29.234,6
Z21	1,4	6,1	15,4	42,3	84,5	106,1	45,0	30,3	80,7	1,46	<0,2	10,1	20,9	36.118,9
Z23	1,8	2,9	13,7	29,3	52,2	61,1	34,5	22,2	73,3	1,09	0,26	<10	16,7	29.011,3
Z24	2,4	2,7	16,4	23,3	46,5	66,0	33,0	28,1	78,7	1,16	<0,2	<10	14,0	29.902,0
Z25	2,2	2,5	10,9	28,6	56,3	68,2	63,4	22,0	72,9	<1	<0,2	<10	15,3	31.703,8
Z26	2,7	2,2	19,9	41,3	92,8	138,9	53,7	30,4	99,5	1,35	<0,2	<10	23,6	36.316,4
Z27	1,3	7,1	19,2	52,8	139,7	206,9	62,2	51,1	149,7	2,3	<0,2	15,6	31,1	35.248,3
Z28	2,8	3,3	20,6	39,5	131,9	203,5	106,8	54,6	188,8	2,48	<0,2	14,4	38,8	36.439,5
Z29	2,7	2,9	18,3	36,1	114,8	188,6	75,0	44,0	148,4	1,93	0,56	12,4	29,4	35.715,0
Z30	2,5	2,1	20,4	43,2	116,2	190,3	73,8	46,1	150,2	2,0	<0,2	19,8	27,4	35.812,1

Table 59

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES								
Concentration of substances affecting the soil quality in non-vegetation period 2024 – Zapadni Kostolac coal deposit								
Sample	**Chemical properties**							
	pH of the soil		**Easily accessible**		**Total nitrogen content**	**Humus content**	**Anion content**	
	H_2O	**KCl**	**P_2O_5 mg/100g**	**K_2O mg/100g**	**% N**	**%**	**NO_2- mg/kg**	**NO_3- mg/kg**
Z2	7,94	7,24	34,3	35,6	2,4	2,8	3,97	106,9
Z3	7,9	7,25	24,5	34,8	2,4	2,8	3,97	106,9
Z12	8,07	7,42	10,3	25,8	2,0	2,3	3,2	87,8
Z13	7,57	6,92	11,6	26,9	2,4	2,8	3,97	106,9
Z14	6,44	5,79	11,5	37,6	1,7	2,0	2,83	76,3
Z15	7,0	6,35	16,9	25,4	1,5	1,7	2,41	64,9
Z16	7,24	6,59	16,7	26,3	1,9	2,2	3,12	84,0
Z17	6,14	5,49	21,6	35,4	2,4	2,8	3,97	106,9
Z18	7,6	6,95	15,6	34,8	2,4	2,8	3,97	106,9
Z19	6,31	5,66	10,1	25,6	2,2	2,6	3,68	99,3
Z20	8,16	7,51	24,4	35,1	2,0	2,3	3,26	87,8
Z21	7,57	6,98	8,4	15,9	1,4	1,6	2,27	61,1
Z23	6,27	5,62	9,3	24,8	1,9	2,2	3,12	84,0
Z24	7,46	6,81	19,1	28,3	1,7	2,0	2,83	76,3
Z25	7,48	6,83	11,8	18,4	1,9	2,2	3,12	84,0
Z26	7,95	7,3	12,4	15,6	1,3	1,5	2,12	57,3
Z27	6,99	6,34	5,6	14,7	1,7	2,0	2,83	76,3
Z28	7,65	7,02	18,5	32,8	2,6	3,0	4,25	114,5
Z29	8,0	7,38	36,2	35,8	2,6	3,0	4,25	114,5
Z30	7,76	7,11	22,8	38,5	2,1	2,4	3,4	91,6

Table 60

TPPs & OCMs KOSTOLAC Branch – OPEN-CAST MINES														
Concentration of substances affecting the soil quality in non-vegetation period 2024 – Zapadni Kostolac coal deposit														
Sample	Metal content													
	Accessible form of heavy metals mg/kg				Total heavy metal content mg/kg									
	Cu	Zn	Mn	Fe	Cr	Ni	Pb	Cu	Zn	Cd	Hg	B	As	Fe
Z2	2,0	3,2	16,4	23,1	75,89	93,0	43,03	25,6	107,17	1,53	0,6	11,76	12,02	24.797,5
Z3	2,7	3,1	19,5	24,2	77,58	108,71	58,02	31,56	95,68	1,58	0,3	13,02	15,31	29.135,2
Z12	3,1	2,7	26,3	32,6	129,95	161,43	62,92	33,1	106,23	1,69	<0,2	17,94	16,97	30.088,8
Z13	3,0	2,4	27,2	40,3	106,24	123,39	49,35	28,77	88,51	1,63	<0,2	15,54	14,68	29.248,2
Z14	2,2	2,7	25,3	31,8	89,09	106,84	59,08	33,19	84,69	1,68	1,9	16,26	14,42	31.934,7
Z15	2,3	2,5	21,2	32,6	108,6	140,99	53,59	30,11	91,11	1,65	<0,2	16,44	16,26	31.342,4
Z16	2,4	1,8	20,4	27,5	71,51	88,02	37,74	22,3	61,03	1,51	<0,2	10,6	10,81	24.161,1
Z17	2,4	2,9	22,1	29,5	62,5	72,16	45,42	26,58	75,45	1,6	<0,2	14,05	12,73	31.732,2
Z18	2,0	2,5	14,8	29,3	67,85	75,33	45,78	31,06	78,14	1,59	<0,2	13,87	12,29	30.999,8
Z19	1,8	7,9	24,3	44,1	107,14	140,26	53,85	48,45	94,71	1,66	<0,2	17,03	15,44	30.566,1
Z20	2,3	3,3	16,8	27,6	64,49	71,42	41,06	23,5	98,66	1,58	<0,2	13,47	11,45	29.425,5
Z21	1,5	5,4	16,3	30,3	64,83	42,66	24,01	21,88	59,94	1,44	<0,2	12,28	<10	24.473,0
Z23	1,7	2,9	14,5	30,8	63,75	68,75	46,92	22,01	87,83	1,61	0,3	13,68	29	31.226,0
Z24	2,6	2,8	17,2	24,7	62,67	74,06	41,54	25,87	82,2	1,6	<0,2	14,07	11,9	31.686,2
Z25	2,0	2,6	11,8	25,9	57,78	70,67	69,82	19,72	75,34	1,5	<0,2	<10	10,99	24.025,4
Z26	2,1	2,5	20,3	33,2	98,56	131,13	70,23	23,37	106,07	1,61	<0,2	14,27	16,84	30.837,7
Z27	1,4	5,8	20,4	43,9	124,86	164,3	63,98	32,07	106,69	1,72	<0,2	19,61	19,9	29.893,6
Z28	2,5	3,1	20,8	32,7	135,69	177,05	105,59	42,41	171,59	1,82	<0,2	20,78	26,08	30.617,5
Z29	2,6	2,7	19,3	30,5	135,23	181,95	89,28	38,22	141,26	1,75	<0,2	20,09	21,65	30.120,6
Z30	2,3	2,4	20,5	34,6	111,82	143,28	59,57	32,02	106,15	1,68	<0,2	18,19	18,07	28.999,5

The evaluation of the data was done in accordance with the Rulebook on the list of activities that may be the cause of soil pollution and degradation, the procedure and content of data, times and other requirements for soil monitoring (Official Gazette of the RS No. 102/2020) and the Regulation on limit values of pollutants, harmful and dangerous substances in the soil (Official Gazette of the RS, No. 30/2018, 64/2019), Appendix 1, Limit maximum and remediation values of polluting, harmful and dangerous substances in the soil. Analysis of data on soil quality in 2024 is given in Table 61.

Table 61

TPPs & OCMs KOSTOLAC Branch – OPEN-CAST MINES	
Analysis of soil quality in 2024 – Zapadni Kostolac coal deposit	
Chromium (Cr)	Of 40 samples – 15 samples exceed LV, and none exceeds RV
Copper (Cu)	Of 40 samples – 9 samples exceed LV, and none exceeds RV
Nickel (Ni)	Of 40 samples – all samples exceed LV, and none exceed RV
Zinc (Zn)	Of 40 samples – 6 samples exceed LV, and none exceeds RV
Mercury (Hg)	Of 40 samples – 5 samples exceed LV, and none exceeds RV
Lead (Pb)	Of 40 samples – 3 samples exceed LV, and none exceeds RV
Cadmium (Cd)	Of 40 samples – 39 samples exceed LV, and none exceeds RV

2.2.5. Waste

Table 62 shows the quantity of waste generated in 2024 for the TPPs & OCMs KOSTOLAC Branch (from the OCM Drmno and Ćirikovac as parts of the Branch).

Table 63 shows the quantity of submitted waste and R/D operations of the waste management at authorized legal entity, according to the Waste Submission Contract in Appendix 6 to the Rulebook on categories, tests and classification of waste.

Table 62

TPPs & OCMs KOSTOLAC Branch – OPEN-CAST MINES					
Waste generated in 2024					
No.	**The official nomenclature of Rulebook on categories, testing and classification of waste (Official Gazette of RS, 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**	**Index number**	**Unit**	**Organizational unit**	**Note**
	Name			**OCM Drmno**	
1.	Waste printer cartridges other than the ones indicated under 08 03 17	08 03 18 08 03 99	t	0,045	-
2.	Waste mineral non-chlorinated motor oils, gearbox oils and lubricating oils	13 02 05*	t	26,587	waste mineral oil
3.	Other emulsions	13 08 02*	t	0,720	-
4.	Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing, contaminated with hazardous substances	15 02 02*	t	2,725	Cotton
5.	Waste tyres	16 01 03	t	10,500	Car tires
6.	Discarded equipment containing hazardous components other than that specified under 16 02 09 and 16 02 12	16 02 13*	t	0,200	-
7.	Components removed from the discarded equipment other than specified under 16 02 15	16 02 16/ 20 01 36	t	1,000	Electric motors
8.	Lead batteries	16 06 01*	t	8,220	Batteries
9.	Glass	17 02 02/ 20 01 02	t	2,100	-
10.	Plastics	17 02 03	t	0,178	-
11.	Copper, brass, bronze	17 04 01	t	0,7008	-

12.	Aluminum	17 04 02	t	1,309	-
13.	Iron and steel	17 04 05	t	1151,180	Variouos thickness
14.	Cables other than those specified under 17 04 10	17 04 11	t	25,316	Copper cables
15.	Plastic and rubber	19 12 04	t	0,440	Rubbe materials
16.	Fluorescent tubes and other waste containing mercury	20 01 21*	t	0,030	Flue pipes and mercury bulbs
17.	Discarded electrical and electronic equipment other than the one indicated under 20 01 21 and 20 01 23 which contains hazardous components	20 01 35*	t	5,0282	Eeo
18.	Discarded electrical and electronic equipment other than those specified in 20 01 21, 20 01 23 and 20 01 35	20 01 36	t	0,060	Sodium and Wolfram bulbs 0,05 t Led lights and panels 0,01 t

*hazardous waste

Table 63

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES							
Sold-disposed waste in 2024							
No.	**The official nomenclature of Rulebook on categories, testing and classification of waste (Official Gazette of RS, 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)** **Name**	**Index number**	**Unit**	**Organizational unit** **OCM Drmno**	**R/D management operation**	**Sold/Submitted with financial compensation to an authorized entity**	**Note**
1.	Waste mineral non-chlorinated motor oils, gearbox oils and lubricating oils	13 02 05*	t	45,450	R13	Submitted with financial compensation to an authorized entity	-

2.	Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing, contaminated with hazardous substances	15 02 02*	t	6,220	R13	Submitted with financial compensation to an authorized entity	Cotton
3.	Absorbents, filter materials, wiping cloths, protective clothing different from those specified in 15 02 02	15 02 03	t	4,628	R13	Sold	Air filters 4,05 t Protective equipment 0,578 t
4.	Waste tyres	16 01 03	t	9,550	R5	Sold	Car tires
5.	Oil filters	16 01 07*	t	6,200	R13	Submitted with financial compensation to an authorized entity	-
6.	Lead batteries	16 06 01*	t	15,500	R13	Sold	Batteries
7.	Other batteries	16 06 05	t	0,012	R4	Sold	Alkaline batteries
8.	Plastics	17 02 03	t	1,050	R5	Sold	-
9.	Copper, brass, bronze	17 04 01	t	1,035	R4	Sold	-
10.	Aluminum	17 04 02	t	0,250	R4	Sold	-
11.	Iron and steel	17 04 05	t	1.359,550	R4	Sold	Iron with various thickness
12.	Plastic and rubber	19 12 04	t	76,750	R5	Sold	Rubber materials 4,45 t Conveyor belts 72,3 t
13.	Fluorescent tubes and other waste containing mercury	20 01 21*	t	0,450	R13	Submitted with financial compensation to an authorized entity	Fluo tubes and mercury bulbs
14.	Discarded electrical and electronic equipment other than the one indicated under 20 01 21 and 20 01 23 which contains hazardous components	20 01 35*	t	10,750	R12	Submitted with financial compensation to an authorized entity	Eeo
15.	Discarded electrical and electronic equipment other than those specified in 20 01 21, 20 01 23 and 20 01 35	20 01 36	t	0,114	R4	Sold	Sodium and wolfram bulbs

*hazardous waste

2.3. Working Environment Monitoring, occupational safety and health protection

Occupational Safety and Health Reports for 2024 include the following elements:

- **Working Environment Monitoring**
  - working environment noise measurements
- **Safety**
  - training of employees
  - injuries at work
- **Health Protection**

2.3.1. Working environment monitoring

- **Working Environment Noise Measurements**

In 2024, at OCM Drmno and OCM Ćirikovac, no working environment monitoring was done, i.e., no working environment noise measurements were done.

2.3.2. Occupational Safety

- **Training of Employees**

Employees are trained according to the Health and Safety Training Programme in the Joint Stock Company Elektroprivreda Srbije and in accordance with the procedures of the Health and safety management system, according to the requirements of ISO 45001 standard. Testing of occupational safety competence and knowledge is carried out minimum once a year in compliance with the Risk Assessment Act of TPP&OCMs Kostolac Branch, in accordance with the Law on Mining and Geological Surveys and Law on Occupational Safety and Health. According to Law on Occupational Health and Safety training within Kostolac TPP&OCMs is performed whenever new workers are recruited, deployed to new workplaces, in the process of technological changes and the introduction of new equipment and work tools as well as for all employees working at high risk posts. Periodic training was done for some employees that do not work at posts with increased risk.

Also, at OCM Drmno training course was performed for 6 individuals being employed.

Table 64 shows a number of employees planned for training and number of employees who passed the training course 2024.

Table 64

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES					
Training of employees in 2024					
Organizational unit	**number of employees**	**Planned to be trained**		**Trained**	
		n	**%**	**N**	**%**
OCM Drmno	1.307	1.082	82,79	1.107	102,31
OCM Ćirikovac	68	31	45,59	33	106,45
Headquarters	459	115	25,05	115	100,00
Total: TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES	**1.834**	**1.228**	**66,96**	**1.255**	**102,20**

Note: Some employees went through more than one training, for example due to relocation to other jobs and similar.

- **Injuries at Work**

Table 65 provides data on number of injuires at work in 2024.

Table 65

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES						
Injuries at work in 2024						
Organizational unit	**Number of employees**	**Injuries – Number of employees' ratio**				
		Mild	**Severe**	**Fatalities**	**Total**	**%**
OCM Drmno	1.307	11	5	0	16	1,22
OCM Cirikovac	68	0	0	0	0	0,00
Headquarters	459	0	1	0	1	0,22
Total: TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES	**1.834**	**11**	**6**	**0**	**17**	**0,93**

2.3.3. Health Protection

All employees at OCMs Kostolac, working at increased risk workplaces, undergo pre-employment and periodic medical examinations. Workers are referred to pre-employment medical examinations before they are hired and when they are deployed to a different workplace that has a higher risk factor. Employees working at high-risk posts are referred to periodic medical examinations once a year. Periodic examinations in 2024 were done at Occupational healthcare center Pozarevac.

Table 66 provides periodic examination data verifying the work capability of employees in 2024.

Table 66

TPPs & OCMs KOSTOLAC Branch – OPEN CAST MINES											
Work capability in 2024											
Organizational unit	**Number of employes**	**Periodical examinations**				**Work capability**					
		Referred to examination		**Examined**		**Capable**		**Limited capability**		**Not capable**	
		n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**no**	**%**
OCM Drmno	**1.307**	1.072	82,02	1.062	99,07	951	89,55	104	9,79	7	0,66
OCM Cirikovac	**68**	33	48,53	33	100	24	72,73	8	24,24	1	3,03
Headquarters	**459**	115	25,05	115	100	109	94,78	5	4,35	1	0,87
Total: TPPs&OCMs KOSTOLAC Branch – OPEN-CAST MINES	**1.834**	**1.220**	**66,52**	**1.210**	**99,18**	**1.084**	**89,59**	**117**	**9,67**	**9**	**0,74**

2.4. Stakeholders Submissions

There were no stakeholders' submissions regarding environment in 2024.

3. NIKOLA TESLA THERMAL POWER PLANT BRANCH

TPP Nikola Tesla Branch (TENT Branch) includes five organizational units:

- **TPP Nikola Tesla A (TENT A);**
- **TPP Nikola Tesla B (TENT B);**
- **TPP Kolubara A (TEK A);**
- **TPP Morava (TEM);**
- **Railway transport (RT).**

3.1. Overview and Status of Permits

Table 67 shows an overview of obtained permits, as well as submitted applications for new permits or extension of existing ones in 2024.

Table 67

NIKOLA TESLA THERMAL POWER PLANT BRANCH			
Overview and status of permits in 2024			
Organizational unit	**Obtained permits and approvals (number and date)**	**New applications for obtaining or extension of valid permits**	**Note**
TENT A		An updated application was submitted to the Ministry of Environmental Protection for the issuance of an integrated permit for the TENT A facility, No. 12.03.-51044/1-2024 as of 26/01/2024.	The Ministry is still processing this subject
			The Report and verification of the technical inspection commission on the commissioning of the flue gas desulfurization plant of the TPP Nikola Tesla A - Absorber system - Phase II was submitted to the competent ministry (MCTI) for obtaining a usage permit. The registration number of the MCTI is 369 dated 19/03/2024.
		An application for issuance of a certificate of exemption from the obligation to obtain a permit for the disposal of non-hazardous waste (ash and slag) by waste producers at the TENT A	The Ministry in charge has not passed the necessary rulebook from Article 61 of the Waste Management Law
	Decision on granting consent for independent continuous emission measurement, No. 353-01-01275/2022-3 dated 22 March 2023 issued by the Ministry of Environmental Protection		

NIKOLA TESLA THERMAL POWER PLANT BRANCH			
Overview and status of permits in 2024			
Organizational unit	**Obtained permits and approvals (number and date)**	**New applications for obtaining or extension of valid permits**	**Note**
	Decision on issuing a permit for greenhouse gas (GHG) emissions for TENT A, No. 002288673 2024 14850 005 018 501 142 dated 01/11/2024, issued by the Ministry of Environmental Protection		
TENT B		An updated application was submitted to the Ministry of Environmental Protection for the issuance of an integrated permit for the TENT B facility, No. 12.03.-51055/1-2024 as of 26/01/2024	The Ministry is still processing this subject
		An application for issuance of a certificate of exemption from the obligation to obtain a permit for the disposal of non-hazardous waste (ash and slag) by waste producers at the TENT B	The Ministry in charge has not passed the necessary rulebook from Article 61 of the Waste Management Law
	Decision on issuing a permit for greenhouse gas (GHG) emissions for TENT B, No. 002288790 2024 14850 005 018 501 142 dated 01/11/2024, issued by the Ministry of Environmental Protection		
	Decision on granting consent for independent continuous emission measurement, No. 353-01-01275/2022-3 dated 22 March 2023 issued by the Ministry of Environmental Protection		
TPP KOLUBARA A		An updated application for issuing an integrated permit was submitted on 21 April 2017 and a new application is currently being prepared, which refers to the operation and decommissioning of the thermal power plant under the contract concluded after the Public Procurement for the services "Updating the application for an integrated permit for TEK and TEM with compliance with new regulations and BAT documents on best available techniques from 2017" dated 6 December 2024.	

NIKOLA TESLA THERMAL POWER PLANT BRANCH			
Overview and status of permits in 2024			
Organizational unit	**Obtained permits and approvals (number and date)**	**New applications for obtaining or extension of valid permits**	**Note**
		An application for issuance of a certificate of exemption from the obligation to obtain a permit for the disposal of non-hazardous waste (ash and slag) by waste producers at the TPP Kolubara	The Ministry in charge has not passed the necessary rulebook from Article 61 of the Waste Management Law
	Decision on issuing a permit for greenhouse gas (GHG) emissions for TPP Kolubara, No. 002143625 2024 14850 005 018 000 001 dated 28/10/2024, issued by the Ministry of Environmental Protection		
	Decision on granting consent for independent continuous emission measurement on stack D2 (boilers K3, K4 and K5) and stack D3 (boiler K6) number 353-01-2764/2022-03 dated 22 March 2023 issued by the Ministry of Environmental Protection		
TPP MORAVA		An updated application for issuing an integrated permit was submitted on 7 April 2017 and a new application is currently being prepared, which refers to the operation and decommissioning of the thermal power plant under the contract concluded after the Public Procurement for the services "Updating the application for an integrated permit for TEK and TEM with compliance with new regulations and BAT documents on best available techniques from 2017" dated 6 December 2024	
		An application for issuance of a certificate of exemption from the obligation to obtain a permit for the disposal of non-hazardous waste (ash and slag) by waste producers at the TPP Morava.	The Ministry in charge has not passed the necessary rulebook from Article 61 of the Waste Management Law
		An application was submitted to the Water Directorate for the issuance of a water permit	
	Decision on issuing a permit for greenhouse gas (GHG) emissions for TPP Morava, No. 002288980 2024 14850 005 018 501 142 dated 24/10/2024, issued by the Ministry of Environmental Protection		

An application has been submitted to the Ministry of Environmental Protection for issuance of a certificate of exemption from the obligation to obtain a permit for the disposal of non-hazardous ash and slag waste from the locations of the TENT A, TENT B, TPP Kolubara and TPP Morava thermal power plants and gypsum from the TENT A location to disposal sites of these thermal power plants, pursuant to Article 61, paragraphs 2 and 7 of the Waste Management Law. The Ministry has not yet adopted the necessary regulations that should prescribe the conditions for issuing this certificate, pursuant to Article 61, paragraph 8 of this Law.

In 2024, EPS JSC, in accordance with the Regulation on Monitoring and Reporting on Greenhouse Gas Emissions (Official Gazette of the Republic of Serbia, No. 118/2023) and the instructions from the eGHG Platform portal, submitted a Monitoring Plan and a request for issuing GHG permits for four thermal power plants: TENT A, TENT B, TPP Kolubara and TPP Morava. The Ministry issued a decision with a permit for each thermal power plant, as follows:
for TENT A, No. 002288673 2024 14850 005 018 501 142 dated 1 November 2024, a permit for the emission of greenhouse gases (GHG) for TENT B, No. 002288790 2024 14850 005 018 501 142 dated 1 November 2024, greenhouse gas emission permit (GHG) for TPP Kolubara A, No. 002143625 2024 14850 005 018 000 001 dated 28 October 2024 and greenhouse gas emission permit (GHG) for TPP Morava, No. 002288980 2024 14850 005 018 501 142 dated 24 October 2024.

3.2. Environmental Impact Monitoring

3.2.1. Air Quality Monitoring

Air quality monitoring is the responsibility of state authorities (the competent ministry and CA Belgrade, Svilajnac), and accordingly, air quality monitoring is carried out through the state air quality monitoring network, which also includes measurement points in the vicinity of the TENT branch (three automatic measurement stations in Obrenovac and one each in Lazarevac and Veliki Crljeni). Current results obtained from measurements at these automatic measurement stations can be monitored on the website of the Environmental Protection Agency. Dedicated air quality measurements in Svilajnac are provided by the local government unit in accordance with the obligation under the Air Protection Act.

In 2024, air quality measurements were performed in the proximity of all four organizational units TENT A, TENT B, TPP Kolubara and TPP Morava TPP by the authorized companies. The measurements between 1 January 2024 and 29 January 2024 were done by legal persons, Institut Vatrogas doo Novi Sad and Institute of Mining and Metallurgy from Bor. The contract was terminated at the end of February 2024 because the Institut Vatrogas lost its authorization for air quality measurement. Between 1 October 2024 and 31 December 2024, air quality monitoring was done by the following authorized legal entities: Mining Institute LLC Belgrade, Aerolab LLC Belgrade and City Institute for Public Health Belgrade. In the vicinity of TENT A and TENT B, some measurements were done by the laboratory at TENT Environmental Control and Protection Service, which is not accredited.

TENT A and TENT B

In 2024 in the vicinity of TENT A and TENT B, in the period January-February and October – December, the measurements of the total particulate matter content (TPM) were done by the accredited laboratories at 18 measuring points, sulphur dioxide and soot concentration measurements were done at two measuring points, and suspended matter smaller than 10μm (PM_{10}) at two measuring points.

In 2024 there was no significant ash dispersion from ash landfills and no citizens' complaints to air pollution. All existing active cassettes protection systems on TENT A and TENT B ash landfills were

in regular operation, water lens covered an optimal area in accordance with the technical requirements. Moreover, wetting of dry surfaces was also executed.

TPP Kolubara A

Air quality measurements in the TPP Kolubara A surroundings have been performed for over thirty years. In 2024, measurements were done in the period: from 1 January 2024 to 29 February 2024 by the Institute of Mining and Metallurgy Bor from Bor and from 1 October 2024 to 31 December 2024 by the Mining Institute doo Belgrade. TPM content was measured at 8 measuring points, and concentration of SO_2, soot and total suspended particles PM_{10} was measured at 1 measuring point.

TPP Morava

Air quality monitoring in the vicinity of Morava TPP started on 1 September 2023 by measuring the TPM content at 8 measuring points, and concentration of SO_2, soot and total suspended particles PM_{10} at 1 measuring point.

In 2024, ash was dispersed from ash landfills to a much lesser extent. Water lens at active cassettes covered an optimal area in accordance with the technical requirements.

Table 68 shows air quality data analysis for 2024 in terms of compliance with the legal requirements for the plants of TENT Branch. The data for air quality in the vicinity of TENT A and TENT B are given collectively and include the data obtained by measurements of the Institute for Mining and Metallurgy Bor and the City Institute for Public Health Belgrade for period January-February and October - December, while for the rest of the year the data obtained by measurements by the laboratory of the TENT Environmental Control and Protection Service, which is not accredited, are shown. Measurements by the laboratory of the TENT Environmental Control and Protection Service refer to measurements of total particulate matters at 18 measurement points, as well as measurements of sulfur dioxide and soot at two measurement points.

Air quality assessment was performed based on the measuring results compared to the limit and tolerable values for SO_2, TPM, total suspended matter PM_{10} and soot, specified by the Regulation stipulating air quality monitoring conditions and requirements (Official Gazette of RS, No. 11/2010, 75/2010 and 63/2013). The regulation is compliant with the European Union Regulation.

Table 68

<table>
<tr><td colspan="6">NIKOLA TESLA THERMAL POWER PLANT BRANCH</td></tr>
<tr><td colspan="6">Air quality in 2024</td></tr>
<tr><td colspan="6">Legal compliance of data
(number of data or number of days exceeding legal limits)</td></tr>
<tr><td colspan="2" rowspan="2">Air quality indicators</td><td colspan="2">Total particulate matters levels - TPM (mg/m²/day)</td><td colspan="2">Concentration of SO_2 (μg/m³)</td></tr>
<tr><td>Maximum permissible value (MPV)</td><td>LV</td><td>TV</td><td>TL</td></tr>
<tr><td colspan="2">Averaging period</td><td colspan="4"></td></tr>
<tr><td colspan="2">One hour</td><td>-</td><td>350</td><td>350</td><td>0</td></tr>
<tr><td colspan="2">*One day</td><td>-</td><td>125</td><td colspan="2">-</td></tr>
<tr><td colspan="2">**One month</td><td>450</td><td colspan="3">-</td></tr>
<tr><td colspan="2">***Calendar year</td><td>200</td><td>50</td><td colspan="2">-</td></tr>
<tr><td>TENT A and TENT B</td><td>*</td><td>-</td><td colspan="4">Within total of 667 data (244 City Institute for Public Health and 483 laboratory of Environmental Control and Protection Service) there was no exceedance. Measuremetns were done at two measuring points – Rojkovac and Grabovac.</td></tr>
</table>

	**	Measurements were done at 18 measuring points, as follows: - 2 measuring points, TENT A landfill area; - 3 measuring points, TENT B landfill area; - 4 measuring points in the vicinity of TENT A; - 5 measuring points in the vicinity of TENT B; - 3 measuring points in Obrenovac and its vicinity; - 1 measuring point in Vladimirci. Out of a total of 211 data for average monthly TPM values (36 Institute for Mining and Metallurgy Bor, 54 Aerolab and 121 Environmental Control and Protection Service), there were 10 exceedances of MPV.	-
	***	Out of 18 measuring points, MPV exceedances for the mean annual TPM value were at four measuring points.	No exceedance
TPP Kolubara A	*	-	Within the total of 147 daily samples (40.16% of samples for the calendar year) there was no exceedance of daily limit value. Measurement is done at one measuring point.
	**	Measurements were done at 8 measuring points from 1 January 2024 to 29 February 2024 and from 1 October 2024 to 31 December 2024 There was no exceedance of MPV at any measuring point for the measuring period.	There was no exceedance (for the measuring period mean monthly values were: January:15,0 µg/m^3; February: 12,9 µg/m^3; October:13,1 µg/m^3; November: 22,4 µg/m^3 and December:16,9 µg/m^3. Measurement is done at one measuring point.
	***	For the measuring period from 1 January 2024 to 29 February 2024 and from 1 October 2024 to 31 December 2024, there was exceedance of MPV at measuring point MM8 – 50 m east from HPV (209.98 mg/m^2/day); there was no MPV exceedance at other measuring points.	There was on exceedance at the measuring point Veliki Crljeni pool. Mean annual concentration, i.e., for the measuring period January-February 2024 and October – December 2024 was 16.06 µg/m3 and it does not exceed annual limit value.
TPP Morava	*	-	No exceedance.
	**	Measurements were done at 8 measuring points: - 2 measuring points near TEM ash landfill; - 1 measuring point near the coal stocks; - 4 measuring points in Svilajnac; - 1 measuring point in the village of Crkvenac; There was exceedance of MPV in November at MM41, at TEM scale	No exceedance
	***	There was no MPV exceedance for the measuring period	No exceedance

Air quality indicators	**Total suspended matters PM_{10} (µg/m^3)**			**Soot (µg/m^3)**
Averaging period	**LV**	**TV**	**TL**	**Maximum permissible concentration (MPC)**
***One day**	**50**	**50**	**0**	**50**
****Calendar year**	**40**	**40**	**0**	**50**

TENT A and TENT B	*	done at the measuring point in Rojkovac in the period October - December and at the measuring point EMS Mladost. Seven exceedances were registered in October, 12 exceedances in December and 7 exceedances at the measuring point Rojkovac.	-	-	Measurements were done at two measurement sites - Rojkovac and Grabovac. Out of a total of 667 data (184 City Institute for Public Health Belgrade and 483 laboratories of Environmental Control and Protection Service) there were three exceedances according to the results from laboratories of Environmental Control and Protection Service, on 7, 8, and 9 May 2024
	**	-	-	-	-
	***	Due to the insufficient number of data, it is not possible to give an assessment of compliance with LV for any of the two measuring points	-	-	
TPP Kolubara A	*	The number of mean daily values exceeding the LV is a total of 75 (of which in January 11, February 17, October 9, November 20 and December 18, which amounts to 51.37% (based on 146 data). The measurement is done at one measuring point on a daily basis. Based on 39.89% of the samples for 2024, there were more than 35 exceedances of limit values in one calendar year.	-	-	Out of a total of 147 daily samples (40.16% of samples for the calendar year) there was no exceeding of the daily limit value. The measurement was done at one measuring point.
	**				There was no exceedance (for the measuring period mean monthly values were: January: 10,7 µg/m^3; February: 9,9 µg/m^3; October:13,5 µg/m^3; November: 20,0 µg/m^3 and December:17,5 µg/m^3. The measurement was done at one measuring point.
	***	For the measuring period January-February 2024 and October-December 2024, mean value is: 59,18 µg/m^3 (per 146 inputs, that is 39,89% data for 2024)	-	-	At the measuring point Veliki Crljeni pool, there were no exceedances. Mean annual value of concentrations ie. for the measured period January-February 2024 and October-December 2024, it was 14.32 µg/m^3 and does not exceed the annual limit value.
TPP Morava	*	Number of mean daily values exceeding LV is total 31 January 6 February 5 October 5 November 8 December 7	-	-	No exceedance
	**	-			-

	***	No exceedance			No exceedance
Air quality indicators		**Total suspended matters $PM_{2,5}$ ($\mu g/m^3$)**			
Averaging period		**LV**	**TV**		**TL**
***** Calendar year**		**25**	**25**		**0**
TENT A and TENT B	***	Due to the insufficient number of data, compliance with the target value for the mean annual concentration cannot be given			

LV – Limit value, TV – Tolerance value, TL – Tolerance limit
Note: hourly values are not measured for sulphur dioxide

As part of air quality monitoring in the vicinity of TENT A and TENT B at the measuring points Rojkovac and EMS Mladost, the concentration of benzo(a)pyrene and heavy metals (Pb, Cd, Ni, As Cr^{6+}) from suspended PM_{10} particles was also measured. Of that, for Pb and Cr^{6+}, the limit value for the mean daily concentration was given and it was not exceeded at both measurement sites for 14 days of measurement. For other parameters, target values for average annual concentrations have been defined, and due to the insufficient number of data, an evaluation of compliance cannot be given for them.

Based on the long-term air quality monitoring in this area, the following may be concluded:

- SO_2 concentrations are below the prescribed average daily and annual mean limit values;
- Air pollution by ash particles PM_{10} and $PM_{2,5}$ is of local significance, mainly the result of different sources of pollution (traffic, household furnces and the like). Pollution is higher during winter months.

3.2.2. Emission Measurements of Matters Affecting Air Quality

Flue gases containing sulphur dioxide, nitrogen oxides, carbon monoxide and dust, after treatment and dust separation by electrostatic precipitators, are emitted into the air through stacks of the following heights:

- TENT A – 150 m (units A1, A2 and A3) and 220 m (units A4, A5 and A6); and after the construction of the flue gas desulfurization plant and through a stock 140 m high for units A3 and A4 and 140 m for units A5 and A6
- TENT B - 280m (units B1 and B2)
- Kolubara A TPP – 105 m (boiler K1), 105 m (boilers K3, K4 and K5) and 130 m (unit A5, K6);
- Morava TPP – 105 m.

In line with the legal requirements continuous measurements are carried out regularly, as well as control measurement to check the correctness of continuous measurements, and in TPP Kolubara on boiler K1 and in TPP Morava, periodic measurements were performed.

- **Periodic Emission Measurements of Matters Affecting Air Quality**

At outlets where there is no proper equipment for continuous emission measurement, periodic measurements are performed twice a calendar year.

Periodic emission measurements of matters affecting air quality were performed by accredited legal entities for the Nuclear Science Institute Vinča and Mining Institute - Belgrade, in line with the Air Pollutants Emission Periodic Measuring Plan.

Table 69 shows the results of periodic emission measurements of air pollutants affecting air quality for the TENT Branch, performed in 2024.

Table 69

NIKOLA TESLA THERMAL POWER PLANT BRANCH								
Periodic emission measurements of matters affecting air quality in 2024								
Mass concentrations of matters affecting air quality (mg/Nm^3)								
Organizational part	TENT A						TENT B	
Unit	A1	A2	A3	A4	A5	A6	B1	B2
Power MWth	660	660	932	943	934	934	1.809	1.826
SO_2 -unit	–	-	-	-	-	-		
SO_2 -stack	-			-				
NO_x (NO_2) -unit			-		-	-		
NO_x (NO_2) -stack	-			-				
CO -unit		-	-	-	-	-		
CO- stack	-			-				
Particulate matter - unit					-	-		
Particulate matter - stack	-				-			

Organizational unit	TPP KOLUBARA A			TPP Morava
Unit, boiler	K1	K3,K4 and K5	A5,K6	
Power MWth	125,6	-	-	380
SO_2	3.577,6	-	-	7.214,1
	3.934,0			6.228,9
NO_x (NO_2)	304,9	-	-	682,2
	288,5			741,7
CO	64,1	-	-	45,4
	60,7			37,5
Particulate matter	612,8	-	-	40,4
	948,1			31,4

On units A3, A5 and A4 in TENT A and unit B1 in TENT B, burners were reconstructed in order to reduce nitrogen oxide emissions and increase unit capacity.

- **Continuous Emissions Measurements of Matters Affecting Air Quality**

In the period between 2004 to the end of 2014, equipment for continuous measurement of air emissions from the thermal power units TENT A, TENT B, TPP Morava and the thermal power units of two of the three stacks of TPP Kolubara (boilers K3, K4, K5 of stack D2 and boiler K6 of stack D3) were installed. In addition to the basic equipment for measuring mass concentration of particulate matters and gas substances, some additional measuring equipment was installed for oxygen (O_2) and moisture, as well as temperature (t), pressure (*p*) and flue gases flow rate. Data acquisition and processing equipment was also installed.

The project funded through an IPA donation included design, supply, delivery, installation, commissioning, calibration - QAL2 certification of the continuous measuring system for sulphur dioxide (SO_2), nitrogen oxides (NO_x(NO_2), carbon monoxide (CO), carbon dioxide (CO_2), particulate matter:

- all units (A1-A6) in Nikola Tesla A TPP (completion of existing equipment),
- units B1 and B2 Nikola Tesla B TPP and
- unit A5 - Kolubara A TPP.

CEMS Reports were established in line with the Large Combustion Plants Directive 2001/80/EC and in accordance with the applicable regulations in the Republic of Serbia. The entire system was reconciled with EN 14181 (QAL1, QAL2 and QAL3) standard and national legislation. Pursuant to the Air Protection Act (Official Gazette of RS No. 36/2009, 10/2013 and 26/2021) and the Rulebook on conditions for giving approval to operators for air quality measurements and/or emissions from

stationary pollution sources (Official Gazette of RS No. 16/2012), TENT A, TENT B, MTPP and KTPP boilers K3, K4 and K5 and unit A5 obtained approvals for continuous emission measurements from stationary pollution sources.

The equipement for measuring pollutant emissions was installed in the flue gas desulfurization plant, for which the operator will obtain a permit from the competent ministry.

Table 70 shows the overview of results for continuous emission measurements of matters affecting air quality (mean annual mass concentration) for TENT Branch in 2024, without operation of the flue gas desulphurization plant for units A3, A4, A5 and A6.

Table 70

NIKOLA TESLA THERMAL POWER PLANT BRANCH								
Continuous emission measurements of matters affecting air quality in 2024								
Mass concentrations of matters affecting air quality (mg/Nm^3)								
Organizational unit	**TENT A**						**TENT B**	
Unit	**A1**	**A2**	**A3**	**A4**	**A5**	**A6**	**B1**	**B2**
Power MWth	**660**	**660**	**932**	**943**	**934**	**934**	**1.809**	**1.826**
SO_2	3.337			2.615			2.487	
NO_x (NO_2)	327			288			403	
CO	76			58			51	
Particulate matter	117			40			29	
Organizational unit	**TPP Kolubara A**							**TPP Morava**
Unit, boiler	**K1**			**K3, K4 and K5**		**A5, K6**		
Power MWth	**125,6**			**376,8**		**333,5**		**380**
SO_2	-			3.614,9		3.405,0		-
NO_x (NO_2)	-			323,4		363,0		-
CO	-			75,8		54,0		-
Particulate matter	-			559,6		20,0		-

Table 71 shows data on equipment in units for continuous emission measurement of matters affecting air quality (mean annual mass concentrations) in TENT Branch with operation of the flue gas desulphurization plant from units A3, A4, A5 and A6 in 2024.

Table 71

NIKOLA TESLA THERMAL POWER PLANT BRANCH								
Continuous emission measurements of matters affecting air quality in 2024 at FGD plant								
Mass concentrations of matters affecting air quality (mg/Nm^3)								
Organizational unit	**TENT A**						**TENT B**	
Unit			**A3**	**A4**	**A5**	**A6**		
Power MWth			**932**	**943**	**934**	**934**		
SO_2			39,8		63,2			
NO_x (NO_2)			482,6		415,8			
CO			75,5		120			
Particulate matter			8		8,2			

Table 72 shows data on equipment in units for continuous emission measurement of matters affecting air quality in TENT Branch organizational units.

Table 72

NIKOLA TESLA THERMAL POWER PLANT BRANCH										
Equipment in TPP units for continuous measurement of matters affecting air quality in 2024										
Emitted matter					**Parameters**					
Organizational unit		**Particulate matter (PM)**	**Gases**		**Content**			**p**	**T**	**Flow**
			SO_2, NO_x(NO_2), CO	**HCl and HF**	**Humidity**	**CO_2**	**O_2**			
TENT A	**A1**	Measuring devices installed on stacks of units A1A2A3	The device installed on stacks of units A1A2A3		Humidity measurement installed on stack of units A1, A2, A3 1 measuring device	Total: 4 measuring devices	Devices installed on the stacks of the units A1, A2, A3 on flue ducts after the left and right ESP, behind flue gas fan, on units A4, A5 and A6			
	A2									
	A3									

<table>
<tr><td colspan="11">NIKOLA TESLA THERMAL POWER PLANT BRANCH</td></tr>
<tr><td colspan="11">Equipment in TPP units for continuous measurement of matters affecting air quality in 2024</td></tr>
<tr><td colspan="3">Emitted matter</td><td colspan="8">Parameters</td></tr>
<tr><td colspan="2" rowspan="2">Organizational unit</td><td rowspan="2">Particulate matter (PM)</td><td colspan="2">Gases</td><td colspan="3">Content</td><td rowspan="2">p</td><td rowspan="2">T</td><td rowspan="2">Flow</td></tr>
<tr><td>SO_2, $NO_x(NO_2)$, CO</td><td>HCl and HF</td><td>Humidity</td><td>CO_2</td><td>O_2</td></tr>
<tr><td rowspan="3"></td><td>A4</td><td rowspan="3">Measuring devices installed on each unit on flue ducts after the left and right ESP, behind flue gas fan (FGF)
Total:
6 devices</td><td rowspan="3">Sampling is done on flue ducts, continuously, behind the left and right FGF. Flue gas is mixed and led to measuring devices for gases. Total 3 sets of measuring devices.</td><td rowspan="3"></td><td rowspan="3">Humidity adopted for units A4, A5 and A6.</td><td rowspan="3"></td><td colspan="4" rowspan="3">A total of 6 devices each for pressure, temperature and flow and 4 for oxygen O2</td></tr>
<tr><td>A5</td></tr>
<tr><td>A6</td></tr>
<tr><td rowspan="2"></td><td>A3</td><td rowspan="2">Measuring device installed on the stack of units A3A4</td><td rowspan="2">Measuring device installed on the stack of units A3A4</td><td rowspan="2"></td><td colspan="6" rowspan="2">Devices for each parameter installed on the stack of units A3A4</td></tr>
<tr><td>A4</td></tr>
<tr><td rowspan="2"></td><td>A5</td><td rowspan="2">Measuring device installed on the stack of units A5A6</td><td rowspan="2">Measuring device installed on the stack of units A5A6</td><td rowspan="2"></td><td colspan="6" rowspan="2">Devices for each parameter installed on the stack of units A5A6</td></tr>
<tr><td>A6</td></tr>
<tr><td></td><td></td><td colspan="9">The stacks are steel structures, 140 m high and with inner cross-section of 11.8 m. Total height, the level of measuring plane is 96,9 m.</td></tr>
<tr><td rowspan="4">TENT B</td><td rowspan="2">B1</td><td colspan="2">Measuring device installed on the flue duct, at the elevation 55.1 m in the inner stack lining.</td><td>-</td><td colspan="6">Measuring device installed on the flue duct, at the level 55.1m in the inner stack lining.</td></tr>
<tr><td colspan="9">Platform located at the elevation 54m, inner stack lining Total: 1 set of measuring devices</td></tr>
<tr><td rowspan="2">B2</td><td colspan="2">Measuring device installed on the flue duct, at the elevation 55.1 m in the inner stack lining.</td><td></td><td colspan="6">Measuring device installed on the flue duct, at the level 55.1m in the inner stack lining.</td></tr>
<tr><td colspan="9">Platform located at the elevation 54m, inner stack lining Total: 1 set of measuring devices</td></tr>
<tr><td rowspan="6">TPP KOLUBARA A</td><td>K1</td><td colspan="2">-</td><td>-</td><td colspan="6">-</td></tr>
<tr><td>K3</td><td colspan="9" rowspan="3">Measuring devices (except HC and HF devices) installed at the elevation of 46.25m, outer stack lining. Platform is located at the elevation of 45m, outer stack lining. Control measurements openings at the elevation of 46.75m. Stack height - 105m</td></tr>
<tr><td>K4</td></tr>
<tr><td>K5</td></tr>
<tr><td>A5-K6</td><td rowspan="2">Installed
• behind ESP
after FGF:
Left ESP
Right ESP
• on the stack</td><td>Installed on the stack</td><td>-</td><td>Installed on the stack</td><td colspan="2">Installed
• behind ESP
after FGF:
Left ESP
Right ESP
•on the stack</td><td>Installed on the stack</td></tr>
<tr><td colspan="9">Measuring devices installed at the elevation of 51m, outer stack lining. Platform is located at the elevation of 50m, outer stack lining. Measuring plane with measuring</td></tr>
</table>

NIKOLA TESLA THERMAL POWER PLANT BRANCH									
Equipment in TPP units for continuous measurement of matters affecting air quality in 2024									
Emitted matter				**Parameters**					
Organizational unit	**Particulate matter (PM)**	**Gases**		**Content**			**p**	**T**	**Flow**
		SO_2, $NO_x(NO_2)$, CO	**HCl and HF**	**Humidity**	**CO_2**	**O_2**			
		opening for control measurements located at the elevation of 51.5m. Stack height - 130m.							
TPP MORAVA	At the measuring section of the stack three measuring planes were located (50.3m 50.7m and 56.7m). In the measuring plane MP1 at the elevation 50.3m there are openings for AMS. Measuring devices for pressure, gases and dust on the outer side of the stack lining. Measuring plane MP2 at 50.7m have openings for CPM. MP3 is located at 56.7m. The inlet part of the plane is at 46.7m and the outer is at 48.3m. Plane is at the elevation 49m. Stack height is 105 m.								

Data acquisition and processing equipment (software) is an integral part of the above automatic measuring system (AMS). Under the Decisions issued by the competent ministries, i.e.: 2nd December 2013 Ministry of Energy, Development and Environment, 22nd December 2014, and 16th January 2017 Ministry of Agriculture and Environment, and 25th November 2019 the Ministry of Environmental Protection, TENT was granted Approval for independent continuous stationary pollutant sources measurements for the following pollutants: SO_2, NO_x, CO and total particulate matter for TENT A units A1 to A6, TENT B units B1 to B2 and Kolubara A TPP unit A5, Approval of 1st February 2021 for TENT A on the common stack of units A 123 for units A1, A2 and A3, and Decision as of 22 March 2023 for the Thermal Power Plant Nikola Tesla A (for units A1-A6) and TENT B (for units B1 and B2).

The abovementioned devices for boilers K3, K4, and K5 at Kolubara A TPP were installed on joint stack 2 (105 m high), at the elevation of 46.25m. The first calibration of devices - QAL2 tests of basic and additional equipment were conducted in November 2014 by the accredited laboratory AEROLAB d.o.o. Beograd. Under Decisions issued by the competent ministries, i.e. on November 30th, 2015 by the Ministry of Agriculture and Environment, on 11th October 2017 and August 21st, 2020 by the Ministry of Environmental Protection, TENT was granted approval for continuous measurement of pollutant emissions from stationary pollution sources for boilers K3, K4, and K5 TPP Kolubara.

On 22 March 2023, TENT Branch obtained the Decision of the Ministry of Environmental Protection, by Decision i.e., approval for the independent continuous measurement of the emission of pollutants into the air using devices for the continuous measurement of emissions from stationary sources of pollution in PE EPS Branch TENT, location of TPP Kolubara A, for two emission sources - for the joint boiler plant K3, K4 and K5 and for the plant unit A5 (boiler K6).

In 2018, new equipment for the continuous measurement of the emission of polluting substances into the air was installed on the stack of the TPP Morava. The equipment is in operation and calibrated according to the QAL-2 method. In 2019, the consent of the competent ministry was obtained for the continuous measurement of emissions from stationary sources of pollution. The device for measuring particulate matter presented values beyond limit values, but since there was no contract for servicing, it is out of function.

Annual Emissions of Matters Affecting Air Quality and CO_2 emissions

Table 73 provides an overview of mass air emissions: particulate matter, SO_2, NO_2 and CO_2 for TENT Branch in 2024. The values of mass concentrations and volume flow of these matters were obtained by continuous measurements of emissions in the period from 01st January until 31st December 2024. On the stack D1 (boiler K1) of TPP Kolubara there is no equipment for continuous measurement of emissions of substances that affect air quality and quantities of emissions affecting air quality are calculated by multiplication, based on the results of occasional measurements of the legal entity, operating hours during normal operation of the plant (h) with output volume flow of substances (Nm^3

/h) and average measured mass concentrations (mg/Nm^3) obtained from occasional measurements of pollutant emissions in 2024.

Table 73

NIKOLA TESLA THERMAL POWER PLANT BRANCH				
Emissions of matters affecting air quality in 2024 (t/year)				
Organizational unit	**Particulate matter**	**SO_2**	**NO_x (NO_2)**	**CO_2**
TPP NIKOLA TESLA A				
A1-A2-A3	1.236,69	35.271,99	3.456,38	
A4-A5-A6	362,21	23.679,19	2.607,88	
A3- A3	16,49	82,05	994,94	
A5-A6	54,13	417,22	2.744,92	
Total: TENT A	**1.669,52**	**59.450,45**	**9.804,12**	**9.506.693,14**
TPP NIKOLA TESLA B				
Total: TENT B	**894,01 (with auxiliary cot.)**	**76.640,91 (with auxiliary cot.)**	**12.421,50 (with auxiliary cot.)**	**8.027.513,28**
TPP Kolubara A				
K1	388,37	1.855,16	146,06	115.462,33
K3, K4 and K5	476,36	3.077,15	275,29	207.081,75
A5, K6	17,00	2.894,61	308,59	201.081,38
Total: TPP KOLUBARA A	**881,73**	**7.826,92**	**729,94**	**523.625,46**
TPP Morava				
Total: TPP MORAVA	**53,60**	**10.041,26**	**1.064,76**	**378.894**
TOTAL: NIKOLA TESLA THERMAL POWER PLANT BRANCH	**3.498,86**	**153.959,54**	**24.020,32**	**18.436.725,88**

Calculation for CO_2 was made based on data on fuel consumption, shown in Table 74 and corresponding emission factor (CEF- *Carbon Emission Factor*).

Table 74

NIKOLA TESLA THERMAL POWER PLANT BRANCH								
Fuel consumption in 2024								
Org. unit	**TENT A**		**TENT B**		**TPP KOLUBARA A**		**TPP MORAVA**	**Branch Total**
Raw materia	**Unit**	**(t/year)**	**unit**		**Boiler**	**(t/year)**	**(t/year)**	**(t/year)**
COAL	A1	937.565	B1	5.370.356	K1	150.309	396.293	**25.140.060**
	A2	1.181.327	B2	5.271.330	K2	-		
	A3	2.467.586			K3	-		
	A4	2.889.187			K4	136.636		
	A5	2.904.068			K5	135.024		
	A6	3.035.435			K6	264.944		
	TOTAL	**13.415.168**		**10.641.686**		**686.913**	**396.293**	
HEAVY FUEL OIL, S<1%	A1	12.614	B1	11.306	K1	-	854	**75.345**
	A2	12.031	B2	9.273	K2	-		
	A3	6.404			K3	-		
	A4	6.278			K4	-		
	A5	10.136			K5	-		
	A6	6.449			K6	-		
	TOTAL	**53.912**		**20.579**		-	**854**	
OIL	A1	-	B1	-	K1	813	424	**2.828**
	A2	-	B2	-	K2	-		
	A3	-			K3	-		
	A4	-			K4	545		
	A5	-			K5	410		
	A6	-			K6	636		
	TOTAL	-		-		**2.404**	**424**	

- **Complying Emissions of Matters Affecting Air Quality with European Union Regulations**

Particulate matter

In 2014, the electrostatic precipitator of unit A3 was reconstructed. This means that the electrostatic precipitators of all units in TPP Nikola Tesla A (A1, A2, A3, A4, A5 and A6) and in TPP Nikola Tesla

B (B1 and B2), as well as unit A5 in TPP Kolubara A have been reconstructed. Supplier's guarantee for mass concentrations of particulate matter at the outlet of the electrostatic precipitator is ≤ 50mg/Nm3, which is in accordance with the requirements from the Regulation on limit values of emissions of pollutants into the air from combustion plants (Official Gazette of RS, No. 6/2016 and 67/2021).

Performance tests of the flue gas desulphurization plant in TENT A were done in March 2024 on the absorber stack C1 of units A3 and A4 and the absorber stack C2 of units A5 and A6. The required guarantee values were confirmed for both absorbers, that the outlet concentrations of powder materials are less than 20 mg/Nm^3.

The electrostatic precipitator of TPP Morava was reconstructed in order to achieve the output dust concentration of 50 mg/Nm^3, during the 2016 overhaul. Periodic measurements of air pollutants done in May and November 2024 confirmed an outlet particulate mass concentration within the values guaranteed by the equipment supplier (40.4 and 31.4 mg/Nm^3).

Sulphur Dioxide

During the designing and construction of Nikola Tesla A and B TPPs, no sulphur oxides emissions reduction measures were undertaken because at that time there were no prescribed limit values of emissions (ELV). To reduce sulphur oxide emissions below 200mg/Nm3 in line with the Directive on industrial emissions of the European Union, flue gas desulphurization plants should be introduced in the forthcoming period in TPP 'TENT A' units A3-A6 and in TPP TENT B units B1-B2.

In 2011, the Japanese Government approved a loan to introduce the flue gas desulphurisation system at the Nikola Tesla A TPP. After receiving the approval of the Ministry of Environmental Protection for the Environmental Impact Assessment Study of the project for construction a flue gas desulphurization plant of units A3-A6 at the location of the Nikola Tesla A TPP in 2019, construction permits were obtained.

In 2024, the flue gas desulphurization plant was put into Trial Run and hence the realization level of the completed works was 100,00% at the end of the year.

Performance tests of the flue gas desulphurization plant in TENT A were done in March 2024 on the absorber stack C1 of units A3 and A4 and the absorber stack C2 of units A5 and A6. The required guarantee values were confirmed for both absorbers, that the outlet concentrations of sulphur dioxide are less than 200 mg/Nm^3.

The construction project of the flue gas desulfurization plant of units B1-B2 at the TPP Nikola Tesla B location is divided into 4 phases. The consent of the Ministry of Environmental Protection (No. 353-02-02974/2021-03 dated 28th March 2022) was obtained for the Environmental Impact Assessment Study of the flue gas desulfurization project in TENT B.

With the construction of a flue gas desulphurization plant, it is expected that the concentration of sulfur dioxide from both units will decrease to the level of 130 milligrams per cubic meter. Phase I includes construction of the limestone and gypsum system, Phase II includes construction of the absorber and stack system, Phase III includes construction of flue gas ducts and the installation of booster fans, and Phase IV includes construction of bridges for to carrying pipelines and electrical cables.

At the end of 2024, the realization of completed project works was 91.10%.

Nitrogen Oxides

In the previous period, primary measures have been introduced on units A3, A4 and A5 in TENT A and on unit B1 TENT B for reducing the emission of nitrogen oxides below 200 mg/Nm3. The guarantee tests of Low NOx burners on unit B1, the test B on unit B1, were succesfully conducted in July 2023. The plan is to introduce primary nitrogen oxide reduction measures in the coming period on unit A6 in TENT A, as well as on unit B2 in TENT B.

3.2.3. Emission Measurements of Matters Affecting Water Quality

Water used for condenser vapour cooling has the highest share in the total amount of technical water used by EPS JSC Nikola Tesla Branch TPPs. River water is captured, used to cool condensers, and discharged via the return tunnel back into the recipient. TENT A and TENT B use the Sava River water for cooling, while the TPP Morava uses the Velika Morava River water, and those three thermal power plants have an open cooling system. TPP Kolubara A uses the Kolubara River water and it has a closed cooling system with towers.

Approximately 2.7% of captured water is used for ash and slag transport in TENT A, while 0.8% of captured water was used in 2024 in TENT B for ash and slag transport and wetting of the landfill.

Wastewater originating from the ash and slag hydraulic transportation system is discharged directly or indirectly into the recipient in the form of overflow and drainage water, in old technology of hydraulic transport of “thin” ash water ratio (1:10) in TENT A and Kolubara A TPP. Drainage and overflow waters in TPP Morava are collected in overflow basins and then returned by pumps to the system for ash and slag transport.

In the case of the thick slurry transport (ash/water ratio - 1:1) used by TENT B there is no overflow and discharge of drainage water into the recipient, but water is stored and used for ash disposal site wetting.

Demineralized water (demi water) used in boilers and the water-vapour system is produced by a chemical water treatment plant. In TPP Kolubara A demi water is obtained by treating decarbonised water in ion exchangers - columns. The source of the raw water is the water intake Peštan on the Kolubara River. HCl or NaOH solution is used to regenerate ion exchange masses, resulting in acid and alkaline wastewater that are used for ash and slag transport after having been neutralized.

Sanitary wastewater after mechanical-biological treatment under aerobic conditions in purification devices (TENT A and TENT B) is discharged directly or indirectly into the river. The equipment for sanitary wastewater treatment Biodisk, in TENT A has a UV lamp for water desinfection before it is released into the Sava. At the TPP Morava, sanitary water is discharged into the city sewer network.

Water containing oil and/or fuel oil, after oil or fuel oil removal from the water surface by means of adsorption agents indirectly via storm drainage or a return cooling water tunnel, is discharged back into the recipient (TENT B, TEK and TEM).

Wastewater treatment plant was constructed and commissioned at TENT A in 2016, and it consists of several units:

- atmospheric water from the concrete surfaces and roofs of the administrative building, the maintenance building, the main power building and the fleet building as well as other facilities at site, runs through the main collector, and from the concrete surfaces and roofs of the RT buildings, warehouse and the external fleet facility runs through the secondary collector and flow into the return cooling water channel. Atmospheric water and other wastewater from the coal stocks, (water from wagons defrosting, washing of inclined bridges and conveyor belts, from bulldozer depots) after purification at the wastewater treatment plant (G1), are discharged into the old drainage channel of the ash landfill, where atmospheric wastewater from waste landfill after passing the oil separator is also discharged,
- waste waters from drainage pit of heavy oil station, condensate expander and drainage pits of heavy oil heating stations, after treatment at the plant for pretreatment of heavy oil waste waters (UM1), are taken to the oily wastewater treatment plant (U1),
- except the heavy oil contaminated waste waters which were pretreated on API- separator (UM1), waste waters from machine hall drainage pits are treated at U1 plant as well and then discharged into the old ash landfill drainage channel,
- plant for treatment of waste waters resulting from the flue gas desulphurization process (FGD) was commissioned in 2024, within of scope of completion of works in construction of FGD plant.

Control of wastewater quality in the facilities of TENT Branch and its impact on recipients and groundwater is done 4 times a year, except for the return cooling water at TENT A and TENT B which is analyzed once a month.

The program of control of each organizational part of the TENT Branch includes the physical and chemical, bacteriological, and radiological parameters that are given as necessary for monitoring the compliance with the legal regulations related to certain types of water.

Control includes the following types of water:

- Waste waters at discharging points into the river;
- River waters – recepients' waters on the profiles upstream and downstream of the wastewafter discharge point;
- Groundwater in the vicinity of ash and slag landfill (piezometers and rural wells).

Within the control program, monitoring of the efficiency of devices for wastewater treatment is also carried out at TENT A - G1, UM1 and Biodisk at TENT A and Putoks at TENT B. Ash and slag landfills groundwater quality impact is monitored by testing water quality in the piezometers and rural wells located in the landfill vicinity. Long-term studies have shown that concentrations of sulphate and arsenic are relevant parameters to monitor the impact of ash and slag landfills on groundwater. Sulphate ion, originating from the landfill is characterised by the fastest migration and is considered to be an excellent tracer for monitoring of the landfill groundwater impact. There is groundwater control in piezometers in storages for temporary waste disposal in TENT A and TENT B.

TENT B recorded the current state, so-called "zero state", of groundwater quality prior to the comencement of ash landfill site exploitation. Groundwater quality data, "zero state", are of great importance for further monitoring and evaluation of the ash landfill impact on the groundwater quality.

Annual surface and groundwater quality reports for each TENT unit are submitted by authorized person to Serbian Environmental Protection Agency, The Ministry of Environmental Protection and the Public Water Management Company, also to the competent inspectors upon their request, as well as to the relevant institutions during the opinion obtaining process for the purpose of issuance of water permits.

Results of water quality measurements are presented in the Environmental Report developed each year for every organisational unit. Additionally, data are presented in the National Pollution Sources Registry delivered by EPS JSC TENT Branch each year to the Environmental Protection Agency in line with the legal regulations. Surface, groundwater, and wastewater quality control for 2024 at all four locations of TENT was executed by authorized legal entities – in Q1 by the Institute for Occupational Safety JSC Novi Sad, in Q2 it was not done due to delays in public procurement procedure for services, while ANAHEM llc, Belgrade did controls in Q3 and Q4.

Table 75 shows the analysis of wastewater and recipient quality data for 2024 in terms of their legal compliance.

In case of surface waters, legal compliance was evaluated by comparing the measured values of parameters with the limit values defined by the Regulation stipulating limit values for pollutants in surface and ground waters and sediments, and due dates for their achievement (Official Gazette of RS No. 50/2012), while wastewater values were compared with the limit values defined by the Regulation stipulating limit values of pollutants in water and due dates for their achievement (Official Gazette of RS No. 67/2011, 48/2012 and 1/2016).

Table 75

NIKOLA TESLA THERMAL POWER PLANT BRANCH				
Water quality in 2024				
Organizational unit	**TENT A**	**TENT B**	**TPP KOLUBARA A**	**TPP MORAVA**
Water type	**Wastewater and recipients**			
Drainage wastewater from the landfill	▪ suspended solids: 2,4 – 38,8 mg/l (LV 35 mg/l), one exceedance in the first series of sampling. Wastewater of the new drainage channel ▪ arsenic: 9– 48 µg/l, three LV exceedances each 10µg/l in samples of new and old drainage channel ▪ sulphates: 101 – 798 mg/l, below LV (2.000 mg/l) ▪ fluorides: 1-1,8 mg/l, no LV exceedance (2mg/l)	▪ Water from the perimeter channel around the ash landfill - a mixture of overflow and drainage waters: ▪ suspended solids: 2 – 10 mg/l, ▪ arsenic: 30 - 50 µg/l, ▪ sulphates: 401-571 mg/l ▪ fluorides: 0.,788 - 4,5 mg/l Note: these waters are not discharged into the recipient, so compliance with the limit values is not given.	-	Not discharged into recipient.
Overflow wastewater from the landfill	▪ suspended solids: 2,1 – 3,5 mg/l, no LV exceedance (35 mg/l) ▪arsenic: 49 – 79µg/l above LV (10µg/l) ▪sulphates:410 – 636 mg/l, below LV (2.000mg/l) ▪fluorides: 1,6 – 1,88 mg/l, no LV exceedance (2 mg/l) **Note:** analyzed sample is a mixture of overflow and drainage waters with mostly overflow waters		**Suspended solids:** <8,2-18 mg/l, in all three sampling series below ELV: 35 mg/l; **arsenic:** 1,0-2,9 mg/l, in all three series above ELV: 0,01 mg/l; **sulphates:** 284-511 mg/l, in three sampling series below ELV 2.000 mg/l; **fluorides**: 1,2-<6,9 mg/l, in I and II series below ELV, while in III series above ELV: 2 mg/l	Not discharged into recipient.
Recipient	No changes of the Sava River quality upstream - downstream TENT A for: ▪arsenic: no LV exceedance (10 µg/l) ▪sulphates: no LV exceedance (100 mg/l) ▪mineral oil: not identified. In some sampling batches some parameters (nitrites, ammonia) deviate from LV both downstream and upstream TENT A. In the second sampling series, ammonia was elevated upstream and downstream TENT A, while nitrites were elevated in the second	No changes of the Sava River quality upstream - downstream of TENT B for: ▪arsenic: no LV exceedance (10 µg/l) ▪sulphates: to 28 mg/l, below LV (100 mg/l) ▪mineral oil: not identified. In some sampling batches some parameters (iron, ammonia, dissolved oxygen, phosphate) deviate from LV both upstream and downstream TENT	**<u>Turija River:</u>** **arsenic**: upstream: in series I and II (I -0.006 mg/l, II-0.0019 mg/l) are below LV, while in series III it is 0.015 mg/l, i.e. above LV: 0.010 mg/l downstream: in all three series (I -0.069 mg/l II-0.044 mg/l and III -0.93 mg/l) are above the LV: 0.010 mg/l, **sulphates**: upstream: 43.13-97 mg/l, in all three sampling series	**Velika Morava River upstream wastewater discharge:** Below LV: Dissolved oxygen 5-5,9 mg/l (Q3 and Q4) Oxygen saturation 54,1-65 % (Q3 and Q4) Above LV: Suspended matters 29 mg/l (Q1) HPK 21-36 mg/l (Q3 and Q4) BPK_5 6-15 mg/l (Q3 and Q4) Total nitrogen 2,5-3,3 mgN/l (Q3 and Q4) Ammonium ion 0,42 mgN/l (Q4) Ammonia 0,19-0,39 mg/l (Q3 and Q4)

NIKOLA TESLA THERMAL POWER PLANT BRANCH				
Water quality in 2024				
Organizational unit	**TENT A**	**TENT B**	**TPP KOLUBARA A**	**TPP MORAVA**
Water type	**Wastewater and recipients**			
	and third sampling series. Sava River temperature difference, TENT A upstream and downstream is 1°C on average, 1,6 °C at most.	B. In the second sampling series, ammonia was elevated upstream and downstream TENT B, and phosphates and iron in the first and third sampling series upstream TENT B. Sava River temperature differences (TENT B upstream and downstream) is less than 3°C (in accordance with legal regulations) and it averages 1°C, 2.6°C at most.	are below LV: 100 mg/l downstream: in all three series (I-111.4 mg/l II -117 mg/l and III series 233 mg/l) are above the LV: 100 mg/l; **<u>Kolubara River</u>**: **arsenic**: upstream: 0.0050-0.0092 mg/l, in all three series it is below LV: 0,010 mg/l; - downstream: in all three series (I-0.037 mg/l, II-0.017 mg/l, III-0.17 mg/l) are above the LV: 0,010 mg/l; **sulphates:** upstream: in all three series below LV; downstream: in series I and II are below LV, while in series III: 103 mg/l i.e. above LV:100 mg/l; **Mineral oils**: upstream: <0.01mg/l - <1 mg/l downstream: <0.01mg/l - <1, no LV provided. Kolubara River temperature difference upstream and downstream TPP Kolubara is less than 3°C in all three batches of sampling.	Nitrites 0,41 mgN/l (Q4) Phosphates 0,15 mgP/l (Q4) **Velika Morava River downstream wastewater discharge:** Below LV: Dissolved oxygen 4,7-6,9 mg/l (Q3 and Q4) Oxygen saturation 62-62,7 % (Q3 and Q4) Above LV: COD 39-107 mg/l (Q3 and Q4) BOD_5 14-46 mg/l (Q3 and Q4) Total organic carbon (TOC) 6,6-9,9 mg/l (Q3 and Q4) Total nitrogen 3,1 mg/l (Q3) Ammonia 0,26 mg/l (Q4) Nitrite 0,042 mgN/l (Q4) Total phosphorus 0,33mgP/l (Q4) Phosphates 0,26 mgP/l (Q4) **Velika Morava River during discharge of wastewater from sand filters washing:** Below LV: Dissolved oxygen 5,1-6,7 mg/l (Q3 and Q4) Oxygen saturation 60,9-66 % (Q3 and Q4) Above LV: COD 23-28 mg/l (Q3 and Q4) BOD_5 8-18 mg/l (Q3 and Q4) Total nitrogen 2,7 mg/l (Q3) Ammonia 0,18 mg/l (Q3) Nitrites 0,33 mgN/l (Q4) Phosphates 0,15 mgP/l (Q4) **Return cooling water at discharge of the Velika Morava River:** No exceedance for any of three measuring periods

Table 76 shows the analysis of groundwater quality data in the vicinity of ash and slag landfills for 2024 in terms of compliance with legal requirements. The analysis is given for some of the examined parameters that are of greater importance.

In 2024 groundwater quality monitoring in TENT A was conducted in 10 piezometers (they are, in addition to the vicinity of ash landfill, located within TENT A area, near MPB, next to the coal stock

and in the waste storage) and 2 rural wells, TENT B – 9 piezometers (they are, in addition to the vicinity of ash landfill, located in the waste storage) and 3 rural wells. InTPP KOLUBARA A – in the first series, sampling was done from 4 piezometers and 3 rural wells, in the second and third series from 6 piezometers and 3 rural wells since two piezometers within the temporary waste storage were included, marked as CHO piezometer at non-hazardous waste storage and COO peizeometer at hazardous waste storage. In TPP Morava, quality control of the groundwater from 1 piezometer and 2 rural wells and 2 technical water wells was done.

Legal compliance was evaluated by comparing the aquifer measured values in piezometers with remediation values of pollutant, hazardous and harmful substances in aquifer in line with the Regulation on limit values of pollutant, hazardous and harmful substances in soil (Official Gazette of RS No. 30/2018, 64/2019). When there is soil pollution, it is checked in the aquifer whether the pollution spreads and whether there is a chance of groundwatter pollution (under the competence of the Ministry for Environmental Protection). Compliance of groundwater limit values (competence of the Water Directorate) is evaluated in accordance with Regulation on limit values of pollutants in surface water and groundwater and sediments and timeframes for reaching these (Official Gazette of RS, No. 50/2012). Rural wells water data are compared with the maximum permissible concentrations (MPCs) stipulated by the Rulebook on hygienic correctness of drinking water (Official Gazette of FRY No. 42/1998 and 44/1999 and Official Gazette of RS, No. 28/2019).

Table 76

NIKOLA TESLA TPPs BRANCH						
Groundwater quality around ash and slag landfills in 2024						
	Permissible values		**Organizational unit**			
	*	**	**TENT A**	**TENT B**	**TPP KOLUBARA A**	**TPP MORAVA**
Sulphates (mg/l)	250		Highest in piezometers Ps2 (from 269 mg/l – 344.8 mg/l). Below MPC in all samples of rural wells.	Highest in piezometers: P2 and P48: 655 mg/l and 687.4 mg/l. Below MPC in all samples of rural wells.	**In wells:** ▪ N1 and N2, in all three series below MPC ▪ N3 in I-306,5 mg/l and II-302 mg/l, above MPC while in III series below MPC: 250 mg/l; **In piezometers:** ▪ I-2, 346-466 mg/l; ▪ VIII-2, 582-725 mg/l, ▪ XV-1, 363-436,2 mg/l, ▪ B2- 385-440,0 mg/l, For II and III series in piezometers at non-hazardous and hazardous waste storage ▪ CHO – 55-66 mg/l ▪ COO- 144-232 mg/l No reference value for piezometers (Regulation on limit values of pollutants, hazardous and harmful substances in soil (Official Gazette of RS No. 30/2018 and 64/2019).	**In technical water wells:** -Tubular well within the site 201-481mg/l -Topoljar well 129-373 mg/l -Hydrant water well 487,4-341mg/l **In drinking water wells:** -Manual pump at the hunting lodge 253,8-312 mg/l -Rural well (Crkvenac) 31,1-56 mg/l

NIKOLA TESLA TPPs BRANCH						
Groundwater quality around ash and slag landfills in 2024						
	Permissible values		**Organizational unit**			
	*	**	**TENT A**	**TENT B**	**TPP KOLUBARA A**	**TPP MORAVA**
Arsenic (µg/l)	10	60	Below MPC in all samples of piezometers and rural wells.	Below MPC in all samples of piezometers and rural wells.	**In wells:** ▪ N1, N2 и N3, in all three series below MPC: 0,010 mg/l; **In piezometers:** ▪ I-2: 0,15-1,29 mg/l, in all samples above MPC: 0,060 mg/l; ▪VIII-2: 0,18-0,34 mg/l, in all samples above MPC; ▪XV-1: 0,129-0,37 mg/l, in all samples above MPC; ▪B2: <0,003-0,0076 mg/l, in all samples above MPC; For series II and III: ▪ CHO:0,0011-0,0012 mg/l ▪ COO:0,0019-0,0023 mg/l	**In technical water wells:** -Tubular well within the site <0,003 mg/l -Topoljar well <0,005mg/l -Hydrant water well 0,01-0,013mg/l **In drinking water wells:** -Manual pump at the hunting lodge <0,005 mg/l -Rural well (Crkvenac) <0,0053 mg/l
Lead and cadmium (mg/l)	Pb 0,01	Pb 0,075 Cd 0,006	Lead above RV in two piezometer samples P1/4 (0,325 mg/l in I sampling series and 0,37 mg/l in III sampling series) and in one piezometer sampling P19 in I sampling series (0,086 mg/l). Cadmium above RV in two piezometer samplings P1/4 (0,0088 mg/l in I sampling series and 0,0090 mg/l in III sampling series). Lead and cadmium below MPC in all samples of rural wells.	Lead and cadminum below MPC in all piezometers a. Lead below MPC in all samples of rural wells.	**In wells**: ▪N1, N2 и N3 in all three series Pb is below PMC: 0,01 mg/l **Pb in piezometers:** ▪I-2: 0,14-0,059 mg/l in all three series below reference value 0,075 mg/l ▪VIII-2: < 0,001-0,026 mg/l, in all three series below reference value ▪XV-1: < 0,001-0,017 mg/l in all three series below reference value ▪B2, 0,0065-0,023 mg/l in all three series below reference value For series II and III: ▪ CHO 0,0011-0,0024 mg/l ▪ COO 0,0018-0,0029 mg/l **Cd in piezometers:** In piezometers: I series: ▪I-2: 0,019 mg/l and VIII-1:0,0069 mg/l Cd is above remediation value (RV): 0,006 mg/l. In other series it was below RV. ▪XV-1 and B2 in all Cd samples below remediation value: 0,006 mg/l;	**In technical water wells:** -Tubular well within the site <0,075 mg/l Pb < 0,001 mg/l Cd -Topoljar well <0,01 mg/l Pb < 0,001 mg/l Cd -Hydrant water well <0,01 mg/l Pb < 0,001 mg/l Cd **In drinking water wells:** -Manual pump at the hunting lodge <0,01 mg/l Pb -Rural well (Crkvenac) <0,01 mg/ l Pb

NIKOLA TESLA TPPs BRANCH						
Groundwater quality around ash and slag landfills in 2024						
	Permissible values		**Organizational unit**			
	*	**	**TENT A**	**TENT B**	**TPP KOLUBARA A**	**TPP MORAVA**
Zinc (mg/l)	3,0	0,8	Above MPC in most samples of piezometers (up to 32,6 mg/l in piezometer sample P1/4). Below MPC in all samples of rural wells.	Above MPC in some samples of piezometers P59, P74, P32, P2 and Ps1 (0,86– 7,4 mg/l) Below MPC in all samples of rural wells.	**In wells:** in all three series in all wells, Zn is below MPC: 3,0 mg/l **In piezometers:** in all three series in all piezometers, Zn is below reference value: 0,8 mg/l, except in piezometer VIII-1 in II series:1,50 mg/l	**In technical water wells:** -Tubular well within the site 0,007-0,039 mg/l -Topoljar well 0,016-0,03 mg/l -Hydrant water well 0,0017-0,03 mg/l **In drinking water wells:** -Manual pump at the hunting lodge 0,098-0,33 mg/l -Rural well (Crkvenac) 0,022-0,535 mg/l
Manganese (mg/l)	0,05		Below MPC in all piezometer samples. Above MPC in two samples of rural wells Krtinska: 10 and 6,9 mg/l.	Above MPC in one sample of well in Ušće in II sampling series (0,068 mg/l).	**In wells:** **N1** – In I series below MPC, in II: 0,68 mg/l and in III series : 0,17 mg/l above MPC: 0,05 mg/l **N2** – in I series below MPC, in II: 0,98 mg/l and in III : 0,62 mg/l above MPC 0,05 mg/l **N3** – in I and III sampling series below MPC 0,05 mg/l, while in II series: 0,079 mg/l above MPC 0,05 mg/l **In piezometers:** There is no reference value for piezometers (Regulation on limit values for pollutants, harmful and hazardous matters in soil, Official Gazette RS, No.30/2018 and 64/2019).	**In technical water wells:** -Tubular well within the site 0,095-0,392 mg/l -Topoljar well 0,063-0,392 mg/l -Hydrant water well 0,011-0,018 mg/l **In drinking water wells:** -Manual pump at the hunting lodge 0,005-0,119-1,2 mg/l -Rural well (Crkvenac) <0,011-0,0018 mg/l
Ammonia (mg/l)	0,5		Below MPC in all piezometer samples. Above MPC in two samples of rural wells Krtinska: 37 and 41 mg/l.	Ammonia is below MPC in all samples of piezometers and rural wells.	**In wells:** in all samples from wells, N1, N3 ammonia is below MPC 0,5 mg/l, while in well N2 in II series: 0,76 mg/l above MPC 0,5 mg/l and in III: 0,94 mg/l **In piezometers:** There is no reference value for piezometers for ammonia (Regulation released in Official Gazette of the Republic of Serbia No. 30/2018 and 64/2019).	**In technical water wells:** -Tubular well within the site 0,078-1,5mg/l -Topoljar well 0,078-0,51 mg/l -Hydrant water well 0,289-0,49mg/l **In drinking water wells:** -Manual pump at the hunting lodge <0,1 - 0,75 mg/l -Rural well (Crkvenac) <0,01 - 0,24 mg/l

NIKOLA TESLA TPPs BRANCH						
Groundwater quality around ash and slag landfills in 2024						
	Permissible values		**Organizational unit**			
	*	**	**TENT A**	**TENT B**	**TPP KOLUBARA A**	**TPP MORAVA**
Nitrites (mg/l)	0,1		Nitrites are below MPC in all samples of rural wells.	Nitrites are below MPC in all samples of rural wells.	**In wells:** In all samples of wells N1, N2, N3 nitrites are below MPC 0,03 mg/l. **In piezometers**: nitrites were not tested.	**In drinking water wells:** -Manual pump at the hunting lodge <0,01 -Rural well (Crkvenac) <0,01 - 0,02 mg/l
Nitrates (mg/l)	50		Below MPC in all piezometer samples. Nitrates above MPC were registered in I sampling series from wells in Urovci (56,7 mg/l).	Below MPC in all piezometer samples.	**In wells:** in all samples of wells N1 and N3 nitrates were below MPC: 50 mg/l, while in well N2 in III series 0,57 mg/l above MPC 50 mg/l **In piezometers:** ▪ I-2, <0,5-1,27mg/l; ▪ VIII-2, <0,5 -0,013 mg/l, ▪ XV-1, <0,5-0,020 mg/l, ▪ B2, <0,5-0,012 mg/l, For II and III series: ▪ CHO 0,67-0,79 mg/l ▪ COO 0,011-0,38 mg/l There is no reference value for piezometers (Regulation on limit values for pollutants, harmful and hazardous matters in soil, Official Gazette RS, No.30/2018 and 64/2019).	**In technical water wells:** -Tubular well within the site 0,1-0,5 mg/l -Topoljar well 0,1-0,161 mg/l -Hydrant water well <0,05-0,12mg/l **In drinking water wells:** -Manual pump at the hunting lodge <0,01-1,71 mg/l -Rural well (Crkvenac) 2,9-21,83 mg/l

* MPC for potable water;
** remediation values of concentration of hazardous and harmful substances and values indicating Severe groundwater contamination.

Of the other exceedances of MPC in piezometers, an elevated concentration of boron (B) was found in one sample batch of piezometer Ps2, 0.15 mg/l, while at one location in TWNT B in III sampling series, in piezometer P80, there was elevated concentration of nickel, 0.24 mg/l.

In samples from rural wells in Urovci and Krtinska, elevated iron concentrations were found in the second series of sampling (Urovci 0.89 mg/l and Krtinska 0.35 mg/l).

For the rural well samples at the TENT A and TENT B locations, apart from the parameters listed in the table, the other exceedances refer mainly to the parameters of oxygen saturation, potassium permanganate consumption and microbiological incorrectness.

As the concentration of manganese in the overflow and drainage waters of ash landfill is low, increased manganese concentration in rural wells water is caused by the high level of this element in soil. The elevated concentration of manganese and nitrates in rural well water in the vicinity of TENT B ash landfill, which is a consequance of agricultural activities, was also identified by “zero state” testing.

Annual reports of authorized persons from the previous years state that measured high concentration of zinc in piezometers in TENT A and TENT B is interpreted as dissolution of metal from galvanized pipes the piezometers are made of (elevated levels of zinc are not result of Branch TENT’s activities).

Microbiological incorrectness of rural wells water is caused by the proximity of septic tanks and stables, which is concluded based on the data on ”zero state“.

Table 77 provides the analysis of sanitary wastewater quality data at the treatment plant inlet and outlet for 2024.

Table 77

NIKOLA TESLA TPPs BRANCH			
Sanitary wastewater treatment plant operation in 2024			
Pollutants concentration (mg/l)	**MPC (mg/l)**	**Biodisk plant TENT A**	**Putoks* plant TENT B**
Suspended matters (mg/l)			
Plant inlet	-	<2-16	35,5
Plant outlet	75	<2-10	41,2
Biological oxygen demand for 5 days (BOD5)			
Plant inlet	-	10-169	95
Plant outlet	50	3,5-15	60

*Data are provided only for sampling in Q1, because Putoks was under reconstruction

Both plants exceeded the limit values for microbiological parameters, while in terms of physico-chemical parameters, Biodisk and Putoks worked with satisfactory efficiency.

- **Water Quanities**

Table 78 provides an overview of water quantities captured and discharged by TENT Branch organisational units for 2024. TENT A and TENT B calculation of annual amounts of captured surface waters and discharged return cooling water, as well as discharged overflow and drainage waters in TENT A was prepared based on the data on capacity and operating time of the pumps for capturing i.e., discharging water. In TENT A and TENT B, there are flow meters both for captured underground and discharged sanitary wastewater. In the case of gravitational wastewater discharges, calculations were made based on previous wastewater measurements (overflow and drainage waters from the ash and slag landfill). Veliki Crljeni potable water treatment plant supplies Veliki Crljeni and TPP Kolubara A with potable water. A gauge was installed for the line running towards the TPP Kolubara A, also supplying one part of the settlement Veliki Crljeni and the sports centre.

Table 78

NIKOLA TESLA TPPs BRANCH						
Water quantities in 2024 (m^3 / year $x10^3$)						
Organizational unit	**Reservoir**		**Discharged wastewater**			
	Used quantities		**Return cooling water**	**Wastewater discharged into Bare Channel**	**Overflow and drainage water – ash disposal site**	**Sanitary wastewater**
	Surface	***Groundwater**				
TPP Nikola Tesla A	1.263.396	993,157	1.233.907,810	-	28.103,85	44,119
TPP Nikola Tesla B	1.211.114	494,228	1.201.551,837	-	-	-**
TPP Kolubara A	3.179	-	-	419	126	376
TPP Morava	40.861	35,6	39.285	-	-	3,6
TOTAL: TPP NIKOLA TESLA BRANCH	**2.518.550**	**1.522,985**	**2.474.744.647**	**419**	**28.229,85**	**423,719**

* For technological water preparation
** No data provide because Putoks was not operating during most of the year

Improvements Aimed at Reducing Wastewater Impacts on Surface and Groundwater

For complying with the Law on Waters (Official Gazette of RS, No. 30/2010, 93/2012, 101/2016, 95/2018 and 95/2018 – other law) and the Regulation on limit values for the emission of pollutants in waters and deadlines for their achievement (Official Gazette of RS, No. 67/2011, 48/2012 and 1/2016) measures to reduce emissions into water have been implemented or they are planned until the entry into force of the prescribed deadline of 31 December 2025.

TENT A

TENT A wastewater treatment plant consisting of several parts has been operating since 2016 and it includes treatment plants for coal contaminated waste waters (G1), oil contaminated waste waters (U1) including pre-treatment of heavy oil contaminated waste waters (UM1) and FGD wastewaters, which had been in operation since 2024. In 2024 sampling was done quarterly by accredited laboratories (Institute for Occupational Safety Novi Sad in Q1 and Anahem LLC in Q3 and Q4) for monitoring efficiency of equpment. There was no sampling in Q2 due to delays of public procurement, because there was no contract with an accredited laboratory.

In 2024, plants UM1 and U1 operated with satisfactory efficiency.

In the water sample at the outlet of the coal contaminated wastewater treatment plant (G1), the tested parameters did not exceed the limit values defined by the Regulation in the first series of sampling, except for the arsenic parameter. In the second series of sampling, the parameters that exceeded the limit value were chemical oxygen demand, biochemical oxygen demand, arsenic, lead, chromium (total), copper and nickel. In the third series of sampling, suspended matter exceeded the limit value.

TENT B

In TENT B, the construction of a wastewater Treatment Plant was continued in 2024.

3.2.4. Emission Measurements of Matters Affecting Soil Quality

In 2024 the testing of soil quality and the content of total and available forms of heavy metals and pollutants in soil was continued.

In 2024, one sampling and testing of soil were performed by a legal entity authorized to monitor the soil MIPHEM LLC Belgrade in TENT A, TENT B, TPP Kolubara and TPP Morava. The following analyses of samples were done: mechanical soil composition, soil acidity (active acidity pH in H_2O, substitution acidity pH in 1M KCl), $CaCO_3$ content, capacity of exchangeable cations Na^+, K^+, Ca^{2+}, Mg^{2+}, degree of base saturation, organic matter content , physical properties of soil: dry soil density; solid phase density and total porosity; accessible water; water permeability rate, structure and hardness, chemical properties of soil: hydrolytic acidity of soil, accessible macroelements (N, P, K, Ca, Mg), total nitrogen and sulfur, electrical conductivity of soil extract, nitrate and nitrite content, total and accessible heavy metals (Cr, Ni, Pb, Cu, Zn, Cd, Hg, B, As and Fe), potentially toxic elements, hydrocarbons of petroleum origin (C_6 – C_{40}), polycyclic aromatic hydrocarbons (PAH).

The soil monitoring program includes field and laboratory measurements at representative measuring points entered on the topographic map (places determined by GPS), which will enable monitoring of changes in the examined parameters at the same measuring points in the coming period.

The number and arrangement of measuring points are defined in accordance with Annex 2 of the Rulebook on the list of activities that may be the cause of soil pollution and degradation, procedure, data content, deadlines and other requirements for land monitoring (Official Gazette of RS, No. 68/19). In particular, the following were taken into account: places where soil or groundwater pollution is known to have occurred, places for storage of raw materials, chemicals or waste, places in the immediate vicinity of the plant where the production process takes place, places where loading takes place and unloading of chemicals and/or waste, warehouses for new and worn out equipment that can be a source of soil pollution, space for servicing and maintenance of machines, space for washing of equipment, places near underground septic tanks, tanks and pipelines, areas outside the factory may be affected by factory activities.

The content of heavy metals and other toxic elements in the soil was within the range of the usual concentrations and below the remediation values for: chromium (Cr), nickel (Ni), lead (Pb), copper (Cu), zinc (Zn), cadmium (Cd), mercury (Hg), arsenic (As) and boron (B) and iron (Fe).

The evaluation of data was performed in accordance with the Rulebook on the list of activities that can cause pollution and degradation of land, the procedure and content of data, deadlines and other

requirements for land monitoring (Official Gazette of RS No. 102/2020) and the Regulation on Limit Values of polluting, harmful and hazardous substances in soil (Official Gazette of RS, No. 30/2018, 64/2019), Annex 1, Limit maximum and remediation values of polluting, harmful and dangerous substances in soil.

TENT A and TENT B

The disposal of ash in TENT A is done by evenly discharging the mixture of water and ash into the accumulation space (active cassette), while the remaining space is temporarily still (passive cassette). Even disposal of ash is achieved by changing the outlets on the active cassette, as well as switching from one cassette to another, every 1 to 2 years (transition period). The landfill covers a total area of 400 ha. The entire surface is made in 3 cassettes. The disposal of ash and slag was performed on cassette I, II and III in 2024.

The total area of the TENT B landfill is 600 ha, of which ash and slag have been disposed of so far on 400 ha. The technology of collecting, transporting and disposing of ash was changed from thin to thickened ash-water mixture (on October 4th, 2009, unit B2 was connected to the new system, while unit B1 was connected on May 30th, 2010). Cassette II is currently active and Cassette I is passive.

At the location of TENT A and TENT B, analyzes of soil samples from 30 measuring points were performed. The surface layer on the profile from 0 to 30 cm was sampled.

TPP Kolubara A

At the site of TPP Kolubara A, analyzes of 17 soil samples were performed. The surface layer on the profile from 0 to 30 cm was sampled at all 17 measuring points.

TPP Morava

Retention of ash and slag is achieved by building peripheral embankments. There are a total of eight tubs (cassettes), of which I, II, III, IV, V and VI are biologically recultivated (by sowing grass, fruit and other plants), part of cassette VI is a borrowing pit from which ash is exploited for cement, and cassettes VI and VIII are active and serve for the disposal of ash and slag. In 2014, a system of overflow basins was created in which drainage water is collected from the ash and slag landfill, and then the pump system is returned to the excavator station for the re-transport of ash and slag. Analyzes of ash from the landfill and 17 soil samples were performed at the TPP Morava.

In Table 79, the evaluation of measurement results was performed in accordance with the above-mentioned legislation.

Table 79

NIKOLA TESLA TPPs BRANCH				
Concentration of substances affecting the soil quality in 2024				
Content (mg/kg)	**TENT A**	**TENT B**	**TPP Kolubara A**	**TPP Morava**
Chromium (Cr)	Out of 30 samples 5 samples exceed LV and none exceeds RV.	Out of 30 samples, none exceeds LV. None exceeds RV.	Out of 17 samples 6 samples exceed LV and none exceeds RV.	Out of 17 samples 5 samples exceed LV and none exceeds RV.
Nickel (Ni)	Out of 30 samples 28 samples exceed LV and none exceeds RV.	Out of 30 samples 24 samples exceed LV and none exceeds RV.	Out of 17 samples 16 samples exceed LV and none exceeds RV.	Out of 17 samples all 17 samples exceed LV and none exceeds RV.
Lead (Pb)	Out of 30 samples none exceeds LV nor RV.	Out of 30 samples none exceeds LV nor RV.	Out of 17 samples 3 samples exceed LV and none exceeds RV.	Out of 17 samples 9 samples exceed LV and none exceeds RV.

NIKOLA TESLA TPPs BRANCH				
Concentration of substances affecting the soil quality in 2024				
Content (mg/kg)	**TENT A**	**TENT B**	**TPP Kolubara A**	**TPP Morava**
Copper (Cu)	Out of 30 samples 10 samples exceed LV and none exceeds RV.	Out of 30 samples 1 sample exceeds LV and none exceeds RV.	Out of 17 samples 10 samples exceed LV and none exceeds RV.	Out of 17 samples 5 samples exceed LV and none exceeds RV.
Zinc (Zn)	Out of 30 samples 4 samples exceed LV and none exceeds RV.	Out of 30 samples 1 sample exceeds LV and none exceeds RV.	Out of 17 samples 2 samples exceed LV and none exceeds RV.	Out of 17 samples 3 samples exceed LV and none exceeds RV.
Cadmium (Cd)	Out of 30 samples none exceeds LV nor RV.	Out of 30 samples none exceeds LV nor RV.	Out of 17 samples none exceeds LV nor RV.	Out of 17 samples 15 samples exceed LV and none exceeds RV.
Mercury (Hg)	Out of 30 samples none exceeds LV nor RV .	Out of 30 samples none exceeds LV nor RV.	Out of 17 samples none exceeds LV nor RV.	Out of 17 samples 3 samples exceed LV and none exceeds RV.
Arsenic (As)	Out of 30 samples none exceeds LV nor RV.	Out of 30 samples none exceeds LV nor RV.	Out of 17 samples 4 samples exceed LV and none exceeds RV.	Out of 17 samples none exceeds LV nor RV.
Boron (B)	Out of 30 samples none exceeds LV nor RV.	Out of 30 samples none exceeds LV nor RV.	Out of 17 samples none exceeds LV nor RV .	Out of 17 samples none exceeds LV nor RV.
Iron (Fe)	Out of 30 samples none exceeds LV nor RV.	Out of 30 samples none exceeds LV nor RV.	Out of 17 samples none exceeds LV nor RV .	Out of 17 samples none exceeds LV nor RV.
Mineral oils (fractions C6-C40)	Out of 30 samples none exceeds LV nor RV.	Out of 30 samples none exceeds LV nor RV.	Out of 17 samples none exceeds LV nor RV .	Out of 17 samples none exceeds LV nor RV.
Total polycyclic aromatic hydrocarbons	Out of 30 samples none exceeds LV nor RV.	Out of 30 samples none exceeds LV nor RV.	Out of 17 samples none exceeds LV nor RV .	Out of 17 samples none exceeds LV nor RV.

3.2.5. Environmental Noise Measurement

In 2024, environmental noise was measured at the locations of the TENT Branch facilities, as a 15-minute measurement, with two measurement intervals in the daytime, one in the evening and two in the night mode, by the Institute for Occupational Safety Novi Sad for location TENT A and TENT B and Belgrade Mining Institute for locations TPP Kolubara A and TPP Morava.

Measurements were done at four measuring points in the vicinity of each plant. At the location TENT A, the measuring points were in the vicinity of the plant in the nearest residential zones, while at the locations TENT B, TEK and TEM, the measuring points were chosen so that they are located on the boundaries of the property of the plant. In Table 69, the values for day and night measurements are given as mean values of two fifteen-minute measurements. Measurements were made in accordance with SRPS ISO 1996-1 and SRPS ISO 1996-2 standards. The ultimate goal of the measurement is the determination of the relevant noise level, which is given through the measured equivalent levels.

Noise in the process of electricity production in thermal power plants is caused by the operation of the following plants: mills, turbines, flue gas fans and occasionally in case of disturbance of the operating mode of the unit (boiler) there is noise from the inclusion of safety valves that lasts up to 1 minute.

At the time of measuring and drafting the reports of the Local Self-Government of the Municipalities of Obrenovac, Lazarevac (City of Belgrade) and Svilajnac, they have not yet performed acoustic zoning in accordance with the Law on Environmental Noise Protection, Official Gazette of RS, No. 96/2021). Due to the lack of clearly limited acoustic zones, it is not possible to precisely determine the measuring points, which should be located on the border of zone 5 - City center, craft, trade, administrative zone with apartments, zone along highways, state and city roads and 6 - Industrial, warehouses and service areas and transport terminals without residential buildings.

According to the applicable legal regulation, due to undefined acoustic zones, the measured values were compared with the highest permitted noise levels for the day and night period.

At the TENT A location, the relevant noise levels of the tested sound sources at measurement point 1 (M1) exceed the permitted level for zone 5, the zone along highways, main and city roads at night (the maximum permitted level is 55 dB).

At the TENT B location, no measured noise level value exceeds the highest prescribed limit values.

The measurement of the noise level in the vicinity of the TPP Kolubara A was done on 8/9 February 2024, during the operation of boilers K1 and TA1. At the time of the measurements and preparation of the report, there was no data on acoustic zoning in the vicinity of the TPP Kolubara and Article 17, paragraph 5 of the Law on Environmental Noise Protection, stipulates that until the acoustic zones are adopted, the highest prescribed values from the by-law, the Regulation on Noise Indicators, Limit Values, Methods for Assessing Noise Indicators, Disturbance and Harmful Effects of Noise in the Environment (Official Gazette of the Republic of Serbia, No. 75/2010) shall apply as limit values. The highest prescribed limit values are: 65 dB during the day (06:00-18:00) and evening (18:00-22:00) and 55 dB at night (22:00-06:00). No measured noise level value exceeds the highest prescribed limit values.

Table 80 shows the data of the measured noise levels for 2024 for the facilities of the TENT Branch.

Table 80

NIKOLA TESLA TPPs BRANCH				
Noise levels in 2024 (dB)(A)				
Noise indicators limit values, Regulation stipulating noise indicators, limit values, methods assessing noise indicators, disturbance levels and harmful living environment noise effects (OG RS № 75/2010)	*** Closed area**		**Day and evening**	**Night**
			35	**30**
	Open areas	Areas for rest and recreation, hospital zones and rehabilitation centers, cultural and historical sites, large parks	**50**	**40**
		Tourist areas, camps and school zones	**50**	**45**
		Purely residential areas	**55**	**45**
		Commercial-residential areas, trading-residential areas and children's playgrounds	**60**	**50**

		City center, trading, crafts, administrative zones containing flats, zones along motorways, state and city roads		**65**	**55**
		Industrial, storage and service areas and transport terminals without residential buildings		At the border of this zone noise must not exceed the limit value in the zone with which it borders.	
Measuring points		**TENT A**	**TENT B**	**TPP KOLUBARA A**	**TPP MORAVA**
Day 15 min	**1**	55,05	46,90	46-51	61
	2	51,35	40,05	53-52	58-61
	3	47,85	43,00	50-52	56
	4	49,15	52,50	50-51	49-51
Evening 15 min	**1**	58,00	47,10	47	54
	2	54,50	43,30	53	58
	3	51,80	45,10	54	55
	4	49,40	50,90	49	50
Night 15 min	**1**	58,45	43,90	49-46	52
	2	49,70	45,50	53-50	55-60
	3	47,10	41,20	54-49	55-59
	4	48,40	52,50	49-47	49-50

Preparation of Study for noise decrease in the environment was completed in 2024 by the authorized laboratory with the Occupational Safety and Enivoronmental Protection – Belgrade, for TENT B.

3.2.6. Waste

In the thermal power plants TENT A, TPP Kolubara, TPP Morava, in 2017, 2022, and 2023, the construction of facilities designed for the storage of hazardous and non-hazardous waste was completed, respectively. The storage facilities were built according to the measures from the Environmental Impact Assessment study.

Waste generated in 2024 is shown in Table 81.

Table 82 shows the quantities of delivered waste, and the R/D operations for managing this waste with an authorized legal entity, according to the waste delivery contract and Annex 6 of the Regulation on categories, testing and classification of waste.

Dry electrostatic precipitator ash generated in the technological process of lignite combustion in the boilers of the TPP Kolubara and TENT B is stored in a silo and sold to interested buyers for use as raw material in the construction industry, based on ash sales contracts, and the remainder is disposed of at the ash and slag landfill. Calculated percentage of fly ash sold in relation to the produced for TENT B: 8.27%, for TPP Kolubara A: 9.67%.

Table 81

NIKOLA TESLA TPPs BRANCH									
Generated waste in 2024									
No.	**Rulebook on Waste Categories, Testing and Classification (Official Gazette of RS, No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit of measure**	**Organizational unit**				**Total**	**Note**
				TPP Nikola Tesla A	**TPP Nikola Tesla B**	**TPP Kolubara A**	**TPP Morava**		
	Name	**Index no.**		**Quantities**					
1.	Waste printer cartridges other than those under 08 03 17	08 03 18	t	0.320	0.000	0.011	0.000	**0.331**	Printer cartridges
2.	Ash, slag and dust from boiler (except the dust from boiler stated in 10 01 04	10 01 01	t	2,489,081.241	1,636,611.515	121,321.930	125,292.000	**4,372,306.685**	Ash and slag from coal
	Coal fly ash	10 01 02							Dry electrostatic precipitator ash
3.	Solid waste based on calcium in the process of flue gas desulphurization	10 01 05	t	46,574.820	0.000	0.000	0.000	**46,574.820**	Gypsum**
4.	Consumed wax and grease	12 01 12*	t	0.000	0.840	0.000	0.030	**0.870**	Grease
5.	Other hydraulic oils	13 01 13*	t	2.320	6.492	0.180	2.880	**11.872**	Hydraulic oils
			t	4.500	0.000	0.172	2.200	**6.872**	Turbine oils
6.	Other motor oils, transmission and lubricating oils	13 02 08*	t	19.840	47.254	0.000	0.000	**67.094**	Oil for lubrication and regulation
			t	0.860	9.552	0.000	3.080	**13.492**	Engine oil, gear oil and lubrication oil
7.	Other oils for insulation and heat transfer	13 03 10*	t	2.020	4.576	0.693	3.740	**11.029**	Insulation oil and heat transfer oil
8.	Other fuels (including mixtures)	13 07 03*	t	0.000	0.000	0.000	0.660	**0.660**	Oil additives
9.	Other emulsions	13 08 02*	t	32.060	11.704	0.511	9.570	**53.845**	Emulsions (oil-water mix)
10.	Other solvents and solvent mixtures	14 06 03*	t	0.000	0.042	0.000	0.000	**0.042**	Solvents and solvent mixtures
11.	Plastic packaging	15 01 02	t	0.050	0.000	0.000	0.000	**0.050**	Plastic packaging
12.	Wooden packaging	15 01 03	t	0.000	0.000	3.740	0.000	**3.740**	Wooden packaging waste
13.	Metal packaging	15 01 04	t	1.120	0.000	0.000	0.000	**1.120**	Fire extinguisher cylinders
14.	Packaging with residue of hazardous substances or contaminated with hazardous substances	15 01 10*	t	0.040	0.067	0.000	0.000	**0.107**	Waste contaminated glass packaging
			t	1.522	1,326	0.061	0.340	**3.249**	Waste contaminated PVC packaging from chemicals
			t	4.320	1.240	0.132	0.000	**5.692**	Metal packaging from oil and lubricants

NIKOLA TESLA TPPs BRANCH									
Generated waste in 2024									
No.	**Rulebook on Waste Categories, Testing and Classification (Official Gazette of RS, No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit of measure**	**Organizational unit**				**Total**	**Note**
	Name	**Index no.**		**TPP Nikola Tesla A**	**TPP Nikola Tesla B**	**TPP Kolubara A**	**TPP Morava**		
				Quantities					
15.	Absorbent, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	15 02 02*	t	0.010	2.941	0.104	0.090	**3.145**	Cotton fiber with oil and heavy oil
			t	0.400	0.372	0.000	0.000	**0.772**	Oily filters
			t	14.100	0.000	0.000	0.600	**14.700**	Adsorption means with oil and heavy oil
16.	Absorbent, filter materials, wiping cloths, protective clothing other than those specified in 15 02 02	15 02 03	t	0.000	0.000	0.000	0.040	**0.040**	Silica gel
			t	0.320	0.000	0.000	0.080	**0.400**	Non-hazardous filters
17.	Waste rubber	16 01 03	t	1.200	0.030	0.000	0.280	**1.510**	Pneumatic tires
				0.000	4.720	0.000	0.000	**4.720**	Rubber hoses
				0.000	0.260	0.000	0.000	**0.260**	Rubber waste
			t	16.780	49.210	6.335	9.200	**81.525**	Rubber conveyor belts
18.	Discarded equipment containing hazardous components other than those indicated under 16 02 09 and 16 02 12	16 02 13*	t	0.000	0.000	0.000	0.820	**0.820**	Transformers
			t	29.204	1.359	0.619	1.970	**33.152**	Waste from electric and electronic devices
19.	Lead batteries	16 06 01*	t	15.800	8.280	0.121	0.140	**24.341**	Lead batteries
20.	Nickel–cadmium batteries	16 06 02*	t	1.020	0.000	0.000	0.000	**1.020**	Ni-Cd batteries
21.	Roof tiles and ceramics	17 01 03	t	0.460	0.000	0.000	0.780	**1.240**	Ceramics
22.	Wood	17 02 01	t	1.160	0.085	22.000	0.000	**23.245**	Wood
23.	Glass	17 02 02	t	0.180	1.460	0.000	1.000	**2.640**	Glass waste
24.	Plastics	17 02 03	t	9.402	2.650	1.532	0.460	**14.044**	Mixed plastics
25.	Glass, plastic and wood containing hazardous substances or contaminated with hazardous substances	17 02 04*	t	0.000	599.020	19.720	0.000	**618.740**	Railway sleepers
26.	Cooper, bronze, brass	17 04 01	t	0.420	7.840	0.033	0.040	**8.333**	Copper and brass waste
			t	0.330	2.330	0.274	0.000	**2.934**	Waste copper cables
27.	Aluminum	17 04 02	t	0.140	0.000	0.000	0.000	**0.140**	Aluminum cables
			t	1.780	4.620	0.133	0.000	**6.533**	Aluminum – miscellaneous
			t	0.000	0.000	0.511	0.040	**0.551**	Aluminum sheet

NIKOLA TESLA TPPs BRANCH									
Generated waste in 2024									
No.	**Rulebook on Waste Categories, Testing and Classification (Official Gazette of RS, No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit of measure**	**Organizational unit**				**Total**	**Note**
	Name	**Index no.**		**TPP Nikola Tesla A**	**TPP Nikola Tesla B**	**TPP Kolubara A**	**TPP Morava**		
				Quantities					
28.	Iron and steel	17 04 05	t	2.900	17.470	3.318	0.140	**23.828**	Galvanized and black sheet metal
			t	0.000	0.000	3.272	0.000	**3.272**	Iron with admixtures of other substances
			t	154.600	271.400	10.400	54.110	**490.510**	Impact plates
			t	5.580	0.000	0.000	0.000	**5.580**	Steam pipeline pipes
			t	4.800	3.260	0.000	3.460	**11.520**	Boiler pipelines
			t	26.360	239.790	20.292	5.530	**291.972**	Iron up to 5mm thick
			t	0.000	0.620	108.687	0.000	**109.307**	Grey cast iron
			t	0.000	0.000	34.682	0.000	**34.682**	Cast steel
			t	36.860	46.370	0.000	0.000	**83.230**	Iron and steel waste
			t	692.400	1,794.920	54.561	49.780	**2,591.661**	Iron over 5mm thick
			t	0.000	0.000	2.760	0.340	**3.100**	Metal shavings
			t	8.740	0.000	0.000	0.000	**8.740**	Rail accessories
			t	18.240	45.340	0.000	0.000	**63.580**	Railway rails
			t	0.000	0.000	0.000	8.440	**8.440**	Metals from magnetic separator
29.	Mixed metals	17 04 07	t	36.640	9.590	8.159	0.000	**54.389**	Mixed metals
			t	0.000	2.500	0.000	0.000	**2.500**	Metal shavings
			t	0.000	0.000	1.310	0.160	**1.470**	Valves
30.	Soil and rock containing hazardous substances	17 05 03*		0.000	0.444	0.000	0.000	**0.440**	Soil contaminated with oil
31.	Insulation material other than specified in 17 06 01 and 17 06 03	17 06 04	t	219.780	30.900	14.430	6.180	**271.290**	Mineral stone wool
32.	Construction materials containing asbestos	17 06 05*	t	2.580	41.860	0.000	0.000	**44.440**	Corrugated sheets
33.	Mixed construction and demolition waste other than those indicated under 17 09 01 and 17 09 02 and 17 09 03	17 09 04	t	0.180	0.000	0.000	0.000	**0.180**	Graphite
			t	3,007.420	7,980.000	0.000	0.000	**10,987.420**	Mixed construction waste
34.	Sludge from other industrial wastewater treatments other than that indicated in 19 08 13	19 08 14	t	14.780	0.000	0.000	0.000	**14.780**	Sludge from industrial wastewater treatment
35.	Saturated or exhausted ion-exchanging resins	19 09 05	t	2.400	1.700	2.880	0.000	**6.980**	Ionic mass

NIKOLA TESLA TPPs BRANCH									
Generated waste in 2024									
No.	**Rulebook on Waste Categories, Testing and Classification (Official Gazette of RS, No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit of measure**	**Organizational unit**				**Total**	**Note**
	Name	**Index no.**		**TPP Nikola Tesla A**	**TPP Nikola Tesla B**	**TPP Kolubara A**	**TPP Morava**		
				Quantities					
36.	Minerals (e.g. sand and stone)	19 12 09	t	0.000	0.000	99.560	0.000	**99.560**	Sand
37.	Textile	20 01 11	t	0.000	0.000	0.163	0.000	**0.163**	Fire hoses
38.	Fluorescent tubes and other mercury-containing waste	20 01 21*	t	0.380	0.000	0.015	0.010	**0.485**	Fluorescent tubes
			t	0.110	0.000	0.000	0.000	**0.110**	Mercury-vapor lamps and thermometers
39.	Discarded electrical and electronic equipment other than those specified under 20 01 21, 20 01 23 and 20 01 35	20 01 36	t	0.000	0.000	0.000	0.090	**0.114**	Sodium-vapor lamps

*hazardous waste
** The data in the table refers to the quantities recorded as waste, excluding the quantities recorded as chemicals and by-products. The actual quantity of gypsum produced is 74,000.00 tons.

Table 82

NIKOLA TESLA TPPs BRANCH										
Disposed waste in 2024										
No.	**Rulebook on Waste Categories, Testing and Classification (Official Gazette of RS, No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit of measurement**	**Organizational unit**				**Total**	**R/D**	**Note**
				TPP Nikola Tesla A	**TPP Nikola Tesla B**	**TPP Kolubara A**	**TPP Morava**			
	Name	**Index no.**		**Quantities of waste sold or submitted against payment to the authorized entity**						
1.	Coal fly ash	10 01 02	t	0.000	158,864.680	11,73.310	0.000	**170,595.990**	**R5**	Dry electrostatic precipitator ash
2.	Solid waste based on calcium in the process of flue gas desulphurization	10 01 05	t	22,908.000	0.000	0.000	0.000	**22,908.000**	**R5**	Gypsum**
3.	Consumed wax and grease	12 01 12*	t	0.140	0.000	0.000	0.090	**0.230**	**R13**	Grease
4.	Other emulsions	13 08 02*	t	20.380	3.000	0.000	9.570	**32.950**	**R13**	Emulsions (oil-water mix)
5.	Plastic packaging	15 01 02	t	0.150	0.000	0.000	0.000	**0.150**	**D1**	Plastic packaging
6.	Packaging with residue of hazardous substances or contaminated with hazardous substances	15 01 10*	t	1.620	0.440	0.152	0.340	**5.697**	**R12**	Contaminated PVC packaging from chemicals
			t	3.040	0.000	0.105	0.000			Metal packaging from oil and lubricants
7.	Absorbents, filter materials (including oil filters not otherwise specified), wipes, protective clothing, contaminated with hazardous substances	15 02 02*	t	0.000	1.060	0.160	0.460	**13.900**	**R13**	Cotton fiber with oil and heavy oil
			t	0.500	0.140	0.000	0.220			Oily filters
			t	4.760	3.580	1.340	1.680			Adsorption means with oil and heavy oil
8.	Discarded equipment containing hazardous components other than those indicated under 16 02 09 and 16 02 12	16 02 13*		12.680	4.980	2.840	1.360	**21.860**	**R13**	Waste from electric and electronic devices
9.	Lead batteries	16 06 01*	t	0.000	7.690	0.000	0.000	**7.690**	**R13**	Lead batteries
10.	Waste containing oil	16 07 08*		0.000	13.940	0.000	0.000	**13.940**	**R13**	Heavy oil and coal dust mix
11.	Roof tiles and ceramics	17 01 03		0.000	0.000	0.000	0.980	**0.980**	**D1**	Ceramics

NIKOLA TESLA TPPs BRANCH										
Disposed waste in 2024										
No.	**Rulebook on Waste Categories, Testing and Classification (Official Gazette of RS, No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit of measurement**	**Organizational unit**				**Total**	**R/D**	**Note**
				TPP Nikola Tesla A	**TPP Nikola Tesla B**	**TPP Kolubara A**	**TPP Morava**			
	Name	**Index no.**		**Quantities of waste sold or submitted against payment to the authorized entity**						
12.	Glass	17 02 02	t	1.000	0.000	0.000	0.000	**1.000**	**D1**	Glass waste
13.	Glass, plastic and wood containing hazardous substances or contaminated with hazardous substances	17 02 04*	t	0.000	599.020	19.720	0.000	**618.740**	**R13**	Railway sleepers
14.	Insulation materials other than those indicated under 17 06 01 and 17 06 03	17 06 04		219.780	30.900	14.160	6.600	**271.440**	**D1**	Mineral stone wool
15.	Mixed construction and demolition waste other than those indicated under 17 09 01 and 17 09 02 and 17 09 03	17 09 04	t	0.150	0.000	0.000	0.000	**0.150**	**D1**	Graphite
				3,007.420	7,980.000	0.000	0.000	**10,987.420**	**D1**	Mixed construction waste
16.	Sludge from other industrial wastewater treatments other than that indicated in 19 08 13	19 08 14	t	14,780	0.000	0.000	0.000	**14.780**	**R13**	Sludge from industrial wastewater treatment
17.	Saturated or exhausted ion-exchanging resins	19 09 05	t	0.000	1.700	2.880	0.000	**4.580**	**D1**	Waste ionic mass

* hazardous waste

** The data in the table refers to the quantities submitted as waste, excluding quantities submitted as by-products and chemicals. The actual quantity of gypsum submitted is: 50,333.18. Where 22,908.00 tons were sold as waste, 27,425.18 tons were sold as chemicals, while there was no submission as a by-product.

3.3. Working Environment Monitoring, Occupational Health and Safety

Occupational Safety and Health Reports for 2024 include the following elements:

- **Working Environment Monitoring**
  - measurement of working environment noise
- **Occupational Safety**
  - employee training
  - occupational accidents
- **Health Protection**

3.3.1. Working Environment Monitoring

- **Measurement of Working Environment Noise**

In 2024 at all locations of the TENT Branch, no periodical inspections of the conditions of the working environment were carried out.

3.3.2. Occupational Safety

- **Employee Training**

Table 83 shows the number of employees planned for training and the number of employees who underwent training in 2024.

Table 83

NIKOLA TESLA TPPs BRANCH					
Employee training in 2024					
Organizational unit	**Number of employees**	**Planned to be trained**		**Trained**	
		No.	**%**	**No.**	**%**
Joint services	326	195	59.82	190	97.44
TPP Nikola Tesla A	674	600	89.02	572	95.33
TPP Nikola Tesla B	348	339	97.41	335	98.82
TPP Kolubara	295	254	86.10	253	99.61
TPP Morava	103	103	100.00	103	100.00
Railway transport	479	459	95.82	459	100.00
TOTAL: NIKOLA TESLA TPPs BRANCH	**2,225**	**1,950**	**87.64**	**1.912**	**98.05**

Note: In 2024, a total of 1,234 PRO TENT employees who perform duties within the organizational unit TENT were trained.

- **Occupational Accidents**

Table 84 gives data on a number of occupational accidents in 2024.

Table 84

NIKOLA TESLA TPPs BRANCH						
Occupational accidents in 2024						
Organizational unit	**Number of employees**	**Accidents – number of employees ratio**				
		Mild	**Severe**	**Fatal**	**Total**	**%**
Joint services	326	0	0	0	0	0.00
TPP Nikola Tesla A	674	13	4	0	17	2.52
TPP Nikola Tesla B	348	3	0	0	3	0.86
TPP Kolubara	295	2	1	0	3	1.02
TPP Morava	103	0	0	0	0	0.00
Railway transport	479	3	2	0	5	1.04
TOTAL: NIKOLA TESLA TPPs BRANCH	**2,225**	**21**	**7**	**0**	**28**	**1.26**

3.3.3. Health Protection

Medical examinations of employees working in high-risk workplaces according to the assessed risks are carried out once a year or once in two years. Table 85 provides periodic examinations data verifying the work capability of employees for 2024.

Table 85

NIKOLA TESLA TPPs BRANCH											
Work capability in 2024											
Organizational unit	**Number of employees**	**Periodical examination**				**Work capability**					
		Referred to examination		**Examined**		**Capable**		**Limited capability**		**Incapable**	
		No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Joint services	326	147	45.09	141	95.92	131	92.91	10	7.09	0	0.00
TPP Nikola Tesla A	674	606	89.91	598	98.68	514	85.95	77	12.88	7	1.17
TPP Nikola Tesla B	348	248	71.26	246	99.19	224	91.06	21	8.54	1	0.41
TPP Kolubara	295	206	69.83	184	89.32	158	85.87	25	13.59	1	0.54
TPP Morava	103	100	97.09	100	100.00	84	84.00	16	16.00	0	0.00
Railway transport	479	431	89.98	431	100.00	401	93.04	27	6.26	3	0.70
TOTAL: NIKOLA TESLA TPPs BRANCH	**2,225**	**1,738**	**78.11**	**1,700**	**97.81**	**1,512**	**88.94**	**176**	**10.35**	**12**	**0.71**

3.4. Stakeholders Submissions

A detailed overview of stakeholder submissions related to the environment as regards TENT Branch, as well as all submissions as regards EPS JSC, is provided in Table 148.

4. TPPS-OCMS KOSTOLAC BRANCH

TPPs-OCMs Kostolac branch comprises the following organizational units:

- **TPP Kostolac A**
- **TPP Kostolac B**
- **OCM Drmno**
- **OCM Ćirikovac**

Activities with thermal power plants are conducted at TPP Kostolac A and TPP Kostolac B.

4.1. Overview and Status of Permits

Table 86 provides an overview of obtained permits and applications for new permits or extension of existing ones in 2024 –TPPs-OCMs Kostolac Branch.

Table 86

TPPs-OCMs KOSTOLAC BRANCH			
Overview and permit status for 2024			
Organizational unit	**Acquired permits and approvals (number and date)**	**New applications for permits or extension of valid permits**	**Note**
TPP KOSTOLAC A	1. Greenhouse gas (GHG) emission permit for the TPP Kostolac A facility, No. 002288390 2024 14850 005 018 501 142 dated 17.12.2024 2. Notice for the arrangement of the request for issuing an integrated permit for the TPP Kostolac A facility, No. 000437432 2023 14850 dated 18.12.2024 3. By the Decision of the Ministry of Environmental Protection for independent measurement of pollutant emissions for TPP Kostolac A - No. 353-01-01913/2019-03 as of 23 October 2019. and TPP Kostolac B based on the obtained consent by the Decision of the Ministry of Environmental Protection for independent measurement of pollutant emissions for TPP Kostolac B - No. 353-01-01225/2018-03 as of 20 December 2019.	1. An updated application for issuing an integrated permit for TPP Kostolac A was submitted to the Ministry of Environmental Protection on 12/12/2023. The Ministry is still processing this subject.	-
TPP KOSTOLAC B	1. Water permit for the transport of ash and slag via an external transport system from the TPP Kostolac B location to the OCM Ćirikovac landfill, No. 001008778 2024 14843 001 001 325 011 dated 21.03.2024 2. Water permit for TPP Kostolac B for the storage of fuel oil in an aboveground tank within the external fuel oil facility with a bund wall , No. 0011008509 2024 14843 001 001 325 011 dated 21.03.2024 3. Water permit for the treatment and discharge of treated wastewater from the TPP Kostolac B location (including sanitary, oily and contaminated wastewater, wastewater from flue-gas desulfurization, acidic and alkaline waters, and stormwater from the TPP Kostolac B premises) into the Mlava River, No. 002043012 2024 14843 001 001 325 011 dated 28.06.2024 4. Use permit for the WWTP of TPP Kostolac B – ROP-MSGI-2839-IUPH-8/2024, No. 001295949 2024 14810 005 001 000 001 dated 22.05.2024	1. The request for Water, for a water permit for the ammonia tank for the application of secondary measures on the boilers of TPP Kostolac B was submitted to the competent Ministry –f Republic Directorate for Water.	-

	5. Decision on granting an integrated permit for the TPP Kostolac B facility, units B1 and B2, No. 000437314 2023 14850 dated 05.08.2024 6. Greenhouse gas (GHG) emission permit for the TPP Kostolac B facility, units B1 and B2, No. 002288527 2024 14850 005 018 501 142 dated 28.10.2024 7. Greenhouse gas (GHG) emission permit for the TPP Kostolac B3 facility, No. 002447814 2024 14850 005 018 501 142 dated 03.12.2024 8. By the Decision of the Ministry of Environmental Protection for independent measurement of pollutant emissions for TPP Kostolac A - No. 353-01-01913/2019-03 as of 23 October 2019. and TPP Kostolac B based on the obtained consent by the Decision of the Ministry of Environmental Protection for independent measurement of pollutant emissions for TPP Kostolac B - No. 353-01-01225/2018-03 as of 20 December 2019.		

An application has been submitted to the Ministry of Environmental Protection for the issuance of certificates of exemption from the obligation to obtain permits for the disposal of non-hazardous waste (ash and slag) produced at the TPP Kostolac A, pursuant to Article 61, paragraphs 2 and 7 of the Waste Management Law. The Ministry has not yet adopted the necessary regulations that should prescribe the conditions for issuing this certificate, pursuant to Article 61, paragraph 8 of this Law. An integrated permit has been issued for the TPP Kostolac B in the meantime, after which there is no obligation to obtain a waste management permit or a certificate pursuant to Article 59 of this Law.

In 2024, EPS JSC, in accordance with the Regulation on Monitoring and Reporting on Greenhouse Gas Emissions (Official Gazette of the Republic of Serbia, No. 118/2023) and the instructions from the eGHG Platform portal, submitted a Monitoring Plan and an application for issuing GHG permits for the thermal power plants TPP Kostolac A and TPP Kostolac B, after which the ministry issued a decision with a permit for each thermal power plant in 2024.

4.2. Environmental Impact Monitoring

4.2.1. Air Quality Measurements

Air quality monitoring in the vicinity of TPPs-OCMs Kostolac Branch organizational units is carried out as part of the Monitoring Plan of the Environmental Management Department. The air quality monitoring in the vicinity of the TPPs-OCMs Kostolac Branch is financed by EPS JSC which employs an authorized legal entity.

In Kostolac, there is a measuring point with automatic measuring of pollutants (sulfur dioxide, nitrogen oxide, and carbon monoxide), belonging to the national automatic air quality monitoring network, and under the jurisdiction of the Agency for Environmental Protection.

Since 2008 for the services of measuring the quality of environmental air in the vicinity of TPPs-OCMs Kostolac Branch, EPS JSC, acting via its TPPs-OCMs Kostolac Branch, hires an authorized legal entity.

In 2024, for EPS, air quality measurements in the TPPs-OCMs Kostolac Branch area were performed by the authorized laboratory with the Institute for Mining and Metallurgy Bor, Laboratory for Chemical Testing, Zeleni Bulevar 35, Bor (No. of authorization for immission measurements 353-01-02241/2022-03 dated 15 August 2022).

In 2024, the authorized legal entity carried out the measuring of total particulate matter (TPM), sulfur oxides (SO_2), suspended particulate matter (PM_{10}), soot, and heavy metals (Pb, Cd, As, and Ni) by

analyzing samples collected within a month for TPM, while SO_2 concentrations were determined by analyzing 24-hour air samples.

SO_2 and soot concentrations, total particulate matters and suspended particulate matter – PM_{10} were tested and measured on 7 measuring points, every day in 2024 in the following measuring points:

1. MP1-village Klenovnik, local office
2. MP2-village Ćirikovac, administrative building
3. MP3-village Petka, elementary school
4. MP4-village Stari Kostolac, local office
5. MP5-village Drmno, infirmary
6. MP6-village Bradarac, elementary school
7. MP7-village Kličevac, infirmary

Suspended particulate matter - PM_{10}, were measured on each of the measuring point for seven days each month in 2024.

The authorized legal entity has prepared annual air quality report for 2024 and provided an interpretation of the results of the measurements it conducted for EPS JSC, TPPs-OCM Kostolac Branch, according to the Regulation on conditions for monitoring and air quality requirements.

Table 87 presents the compliance analysis of the data from the annual air quality report of the authorized laboratory for 2024 with the prescribed air quality requirements of the TPPs-OCMs Kostolac Branch.

Comparison between the results obtained in the defined periods was done by comparing measured values with the values prescribed by the Regulation on conditions for monitoring and air quality requirements (Official Gazette of RS, No. 11/2010, 75/2010 and 63/2013), Law on Air Protection (Official Gazette of RS, No. 36/09, 10/13 and 26/21- other law)

Air quality measuring in the vicinity of TPPs-OCMs Kostolac has beeen carried out internally for 30 years by the Environmental Management Department which is not authorized to perform the measurement of total particulate matter (TPM), soot and sulfur oxides (SO_2).

Table 87

<table>
<tr><td colspan="6">TPPs-OCMs KOSTOLAC BRANCH</td></tr>
<tr><td colspan="6">Air quality in 2024</td></tr>
<tr><td colspan="6">Legal compliance (number of data or days exceeding the defined values)</td></tr>
<tr><td colspan="2" rowspan="2">Air quality indicators</td><td>TPM contents (mg/m^2/dan)</td><td>Soot (μg/m^3)</td><td colspan="2">SO2 concentration (μg/m^3)</td></tr>
<tr><td>Maximum permissible value (MPV)</td><td>Maximum permissible concentration (MPC)</td><td>LV</td><td>TV</td><td>TL</td></tr>
<tr><td colspan="2">Averaging period</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="2">One hour</td><td>-</td><td>-</td><td>350</td><td>350</td><td>0</td></tr>
<tr><td colspan="2">*One day</td><td>-</td><td>50</td><td>125</td><td colspan="2">-</td></tr>
<tr><td colspan="2">**One month</td><td>450</td><td>-</td><td colspan="3">-</td></tr>
<tr><td colspan="2">***Calendar year</td><td>200</td><td>50</td><td>50</td><td colspan="2">-</td></tr>
<tr><td></td><td>Measuring point</td><td>Number of exceedance</td><td>Number of exceedance</td><td colspan="3">Number of exceedance</td></tr>
<tr><td>*</td><td></td><td colspan="4">-</td></tr>
<tr><td rowspan="7">**</td><td>1.</td><td>2</td><td colspan="4" rowspan="7">No exceedance at any measuring point</td></tr>
<tr><td>2.</td><td>No exceedance</td></tr>
<tr><td>3.</td><td>3</td></tr>
<tr><td>4.</td><td>1</td></tr>
<tr><td>5.</td><td>No exceedance</td></tr>
<tr><td>6.</td><td>1</td></tr>
<tr><td>7.</td><td>No exceedance</td></tr>
<tr><td rowspan="4">***</td><td>1.</td><td>1</td><td colspan="4" rowspan="4">No exceedance at any measuring point</td></tr>
<tr><td>2.</td><td>No exceedance</td></tr>
<tr><td>3.</td><td>1</td></tr>
<tr><td>4.</td><td>1</td></tr>
</table>

	5.	No exceedance		
	6.	1		
	7.	No exceedance		
Air quality indicators		**Particulate matters PM_{10} ($\mu g/m^3$)**		
Averaging period		**LV**	**TV**	**TL**
*** One day**		**50 (35 times in a calendar year at most)**	**50**	**0**
***** Calendar year**		**40**	**40**	**0**
*	1.	6-day LV exceedance	No exceedance at any measuring point	
	2.	13-day LV exceedance		
	3.	1-day LV exceedance		
	4.	12-day LV exceedance		
	5.	10-day LV exceedance		
	6.	5-day LV exceedance		
	7.	3-day LV exceedance		
***	1.	No exceedance at any measuring point		
	2.			
	3.			
	4.			
	5.			
	6.			
	7.			

LV – Limit value, TV – Tolerance value, LT – Limit tolerance

4.2.2. Emission Measurements of Matters Affecting Air Quality

Flue gases containing sulfur dioxide, nitrogen oxides, carbon monoxide, and particulate matter, after treatment, i.e., particulate matter separation by electrostatic precipitators are emitted into the air through stacks, with the followting heights:

TPP Kostolac A

- 105 m – Unit A1 (K1 (1 ESP) and K2 (1 ESP))
- 110 m – Unit A2 (1 ESP)

TPP Kostolac B

- 250 m – units B1 and B2
- 180 m after construction of FGD plant for units B1 and B2

In accordance with legal requirements, regular continuous measurements of pollutants emission are done regularly, as well as check measurements of mean annual values of emission for testing correctness of continuous measurements in TEKO A and TEKO B.

- **Continuous Air Measurements of Air Pollutant Emissions that Affect the Air Quality in TPPs Kostolac A and Kostolac B**

In 2024 continuous measurements of air pollutant emissions were performed on the units of TPP Kostolac A, based on the obtained consent by the Decision of the Ministry of Environmental Protection for independent measurement of pollutant emissions for TPP Kostolac A – No. 353-01-01913/2019-03 dated 23 October 2019, and TPP Kostolac B based on the obtained consent by the Decision of the Ministry of Environmental Protection for independent measurement of emissions of pollutants for TPP Kostolac B - No. 353-01-01225/2018-03 dated 20 December 2019.

After desulphurization, waste gases are discharged through a newly built stack on which automatic devices for continuous measurement are installed for which TPP Kostolac B has the approval of the competent Ministry for independent continuous measurement of emissions. When the desulphurization plant is not working, waste gases are discharged via the old system for waste gas treatment with ESP only, without performing continuous measurements.

Continuous measurements include flue gas parameters (temperature, pressure, and humidity), volume flow, oxygen content, and mass concentrations as well as calculations of emission factors for sulfur dioxide (SO2), nitrogen oxides (NOx), carbon monoxide (CO) and particulate matter.
A new data processing software was installed for processing data from the continuous measuring of air pollutant emissions after flue gas desulphurization in TPP Kostolac B, with displaying the measurement results of pollutant emissions of common B1 and B2 units that make a single emitter according to the National Plan for Pollutant Emission Reduction for emissions coming from the old combustion plants.
For the period in which the units of TPP Kostolac B operated, and the flue gas desulphurization plant did not work, the calculation was performed based on periodic measurement of pollutant emissions by the authorized laboratory of the Vinca Institute, published in November, 2024. During the period when the desulphurization plant did not work, after particulate matters were first removed in ESP, and then waste gases were discharged via the old stack.
During the trial operation, the flue gas desulphurization plant achieved a desulphurization level of 96% - 97%.
Table 88 gives an overview of the results of the mean emitted values of pollutants from continuous measurements of particulate matter, NOx, SO_2 and CO emissions in TPP Kostolac B in 2024.

Table 88

TPPs-OCMs KOSTOLAC BRANCH	
Mean annual values of emissions from continuous emission measurements – TPP Kostolac B1 and TPP Kostolac B2	
TPPs Kostolac B1 and B2	**Continuous measurements**
Particulate matter PM_{10} mg/m³	27.7
SO_2 mg/m³	199.5
NO_x mg/m³	253.7
CO mg/m³	89.1

Table 89 gives an overview of the continuous measurements of particulate matter, NOx, SO_2 and CO emissions in TPP Kostolac A in 2024.

Table 89

TPPs-OCMs KOSTOLAC BRANCH		
Mean annual values of emissions from continuous measurements – TPP Kostolac A		
Organizational unit	**TPP Kostolac A**	
Boiler	**A1**	**A2**
Heat capacity MWt	**358**	**689**
SO2 mg/m³	5,473.9	5,318.9
NO_x (NO_2) mg/m³	456.5	435.3
CO mg/m3	35.87	23.7
Particulate matter PM_{10}mg/m³	43.41	166.7

Control Measurement for Testing the Accuracy of Continuous Measurements of Matters Affecting Air Quality

Between 2006 and 2014, in TPPs-OCMs Kostolac Branch, devices for continuous measurement of matters affecting air quality (SO_2, NO_x, CO, and particulate matter) were installed at Kostolac B TPP units (SO_2, NO_x, and particulate matter) and TPP Kostolac A2 unit, while at TPP Kostolac A1, continuous measurements (SO_2, NO_x, CO and particulate matter) have been performed since February 2, 2018. In addition to these basic devices, data acquisition and processing equipment additional measurement devices were also installed: oxygen (O_2) content and humidity as well as temperature, pressure, and flue gases flow volume. During 2024, as part of overhaul activities at TPP Kostolac A, on unit A1 and unit A2, a new CEMS system for data acquisition and processing was installed. After the installation of the new system, the test of the correctness of the automatic measuring systems for continuous emission measurement was conducted in September 2024 on both chimneys, in accordance with the requirements of SRPS 14181 (AST).

TPP Kostolac A

Following the installation of the new data acquisition system, the test of the correctness of the automatic measuring systems for continuous emission measurement was performed in September 2024 on both chimneys, in accordance with the SRPS 14181 (AST) requirements. The annual control test of the automatic measuring systems was performed in September 2024 on both units, which resulted in the submission of Test Report No. E-26/24/PetroprocessTEKO A1/AST for unit A1 and Test Report No. E-28/24/PetroprocessTEKO A2/AST for unit A2. After the control test, periodic measurements were peformed on both units, and the following two test reports were issued: Test Report No. E-27/24/ADEPS/TEKO_A1 - periodic (occasional) emission measurements of air pollutants at TPP Kostolac A on unit A1 in September 2024 and Test Report No. E-29/24/ADEPS/TEKO_A2 - periodic (occasional) emission measurements of air pollutants at TPP Kostolac A on unit A2 in September 2024.

TPP Kostolac B

TPP Kostolac B consists of two identical units, each of 348.5 MW. Each unit has its electrostatic precipitator with two branches.

New equipment for flue gas and dust emissions measurement has been installed in the newly constructed desulphurization plant in Kostolac B (B1 and B2) TPP units downstream of the stack desulphurization plant. Trial run of the plant was performed in the first quarter of 2019. After the trial run, performance measurements were done. After the performance measurements, QAL 2 and QAL 3 measurements were performed at TPP Kostolac B1 and B2 units.

In September 2024, the test of the correctness of the automatic measuring systems was conducted in accordance with Quality Assurance Level 3 (QAL3) for the period from September 2023 to August 2024, under Report No. QAL 3-04/24/ADEPS/TEKO B.

During 2024, in December, an authorized laboratory carried out periodic measurements and testing of total particulate matter in the air at the outlet of the lime slurry preparation plant on units 1 and B2 of the thermal power plant, issuing report No. NIV-LTE-717.

Table 90 provides an overview of data on the equipment of units with equipment for continuous emission measurement in the organizational units of the TPP- OCMs Kostolac Branch, as of 2024.

Table 90

TPPs-OCMs KOSTOLAC BRANCH									
Level of unit being equipped with devices for continuous emission measurement ending with 2024									
Analyzers		**Particulate matters**	**Emitted matters**		**Parameters**				
			Gases		**Content**			**p and t**	**Flow rate**
			SO2, NOx(NO2), CO; particulate matters	**HCl and HF**	**Humidity**	**CO2**	**O2**		
TPP KOSTOLAC A	**A1**	Devices installed on the unit A1 stack, 4 parameters monitored Stack height is 105 m. The platform is located at a level of approximately 60 m m.	Devices installed for both boilers on the stack	-	Device installed on the stack	-	Devices installed for both boilers on the stack		There is measuring
	A2	A2: ESP left and right side (branch), on the stack, at the level of 63 m, external stack lining. The platform is located on the level of around 61m. Stack height – 110m. Total: 3 devices	One device installed	-	-	-	Devices installed on the stack, Total: 1 device In 2015, devices were installed for the measurement of wet O2 and flue gas flow rate on the stack		There is measuring on this unit
TPP KOSTOLAC B	**B1**	Devices are installed after the desulphurization plant (the new stack with a height of 180 m). Each unit has its flue gas duct. Devices for	Devices installed on each flue gas duct	-	-	-	Devices installed on each flue gas duct (2 sets)		Installed on each flue gas
	B2			-	-	-			

		continuous emission measuring are installed on each flue gas duct						

Data acquisition and processing equipment is an integral part of this equipment.

Devices for continuous measuring of chloride and fluoride were not installed on any of the TPP Kostolac A and TPP Kostolac B units, because there is no obligation for continuous measuring of chloride and fluoride emission which bear designations HF and HCl.

Softwares performing statistical analysis of continuous measurements data (SO2, NOx (NO2), CO, and particulate matter are in operation on TPP Kostolac A and TPP Kostolac B units. New flue gas and particulate matter emission monitoring equipment has been installed (on the stack) after the FGD plant and a new data processing software package has been installed, as well.

During 2024, the TPPs-OCMs Kostolac Branch, as the operator of the TPP Kostolac A and TPP Kostolac B facilities, submitted a request for a greenhouse gas (GHG) emissions permit for the purpose of GHG emissions reporting.

Based on the updated request for the issuance of an integrated permit for the TPP Kostolac B power plant, submitted on December 12, 2023, a Decision on the Issuance of an Integrated Permit for TPP Kostolac B, units B1 and B2, was granted under No. 000437314 2023 14850 on August 5, 2024.

For the first time in more than three decades, EPS has constructed a new generation capacity at the TPP Kostolac B site, with the commissioning of unit B3, which has a capacity of 350 MW. The official handover of the certificate of acceptance for the unit took place on December 13, 2024, between the Electric Power Industry of Serbia and the project contractor, China Machinery Engineering Corporation (CMEC).

- **Annual Emissions of Matters Affecting Air and CO_2 emissions**

Table 91 provides an overview of particulate matter emission, SO2, NO2, and CO and CO2 for TPP Kostolac for 2024. In units A1 and A2 mean values of mass concentration and volume flow are calculated based on data from automatic emission measurements. In units, B1 and B2 mean values of mass concentration and volume flow were calculated based on data from periodic measurements of air pollutant emissions (the inspection report by Vinca) and automatic emission measurement on the stack of the FGD plant.

The table shows the annual emissions of air pollutants in t/year from TPP Kostolac B, which were calculated based on annual pollutant emissions based on continuous measurements done when the desulphurization plant operates and occasional measurements of pollutant emissions via the old system. Data related to TPP Kostolac A and TPP Kostolac B working hours were obtained from the Process Analysis Department.

Table 91

TPPs-OCMs KOSTOLAC BRANCH					
Emissions of matters affecting air quality (t/year) in 2024					
Organizational unit	**Particulate matters**	**SO2**	**$NO_x(NO_2)$**	**CO**	**CO_2**
TPP Kostolac A					
A1	176.01	22,190.83	1,850.73	145.41	831,042.67
A2	922.58	29,434.64	2,409.01	131.276	1,663,097.47
Total Kostolac A	**1,098.59**	**51,625.47**	**4,259.74**	**276.686**	**2,494,140.14**
TPP Kostolac B					
B1 and B2	287.02	15,218.11	3,342.80	1,039.65	3,764,644.56
Total: Kostolac B	**287.02**	**15,218.11**	**3,342.80**	**1,039.65**	**3,764,644.56**
TOTAL: TPPs-OCMs KOSTOLAC BRANCH	**1,385.61**	**66,843.58**	**7,602.54**	**1,316.186**	**6,258,784.70**

The CO_2 calculation was made based on fuel consumption data, shown in Table 92, and the corresponding emission factor (CEF – Carbon Emission Factor).

Table 92 gives an overview of fuel consumption in 2024.

Table 92

TPPs-OCMs KOSTOLAC BRANCH		
Fuel Consumption in 2024		
Fuel	**Unit**	**Fuel consumption (t/year)**
TPP KOSTOLAC A		
COAL	A1 - K1	-
	A1 - K2	-
	A1	976,485
	A2	1,963,731
	TOTAL	**2,940,216**
PETROLEUM	A1 - K1	-
	A1 - K2	-
	A1	2,905
	A2	1,418
	TOTAL	**4,323**
TPP KOSTOLAC B		
COAL	Б1	1,727,684
	Б2	2,703,139
	TOTAL	**4,430,823**
HEAVY FUEL OIL, S<1%	Б1	3,538
	Б2	3,303
	TOTAL	**6,841**

- **Matters Affecting Air Quality Emissions Compliance with EU Regulation**

Units B1 and B2 of TPP Kostolac are on the final list of large old plants for combustion in the National Plan for emission reduction according to the letter of the Environmental Protection Ministry No. 353-01-00122/2017-03 dated 29 December 2017 and according to the National Plan for the Reduction of Emissions of Major Pollutants from Old Large Combustion Plants (Official Gazette of RS, No. 10 of February 6, 2020).

Particulate Matters

To date electrostatic precipitators were reconstructed on all Kostolac TPP units: on units A1 and A2 – TPP Kostolac A, and units B1 and B2 – TPP Kostolac B. The guaranteed mass concentration for dust defined by the equipment supplier at the electrostatic precipitator outlet is ≤50mg/Nm^3 which is in line with legal requirements for the period until 2027, according to the Regulation on limit values for emissions of pollutants into the air from combustion plants (Official Gazette of RS No. 6 dated January 28, 2016, No. 67 dated July 2, 2021). The emissions of particulate matter into the air have been reduced by additional treatment of waste gases that are carried out in the newly built desulphurization plant, so as not to exceed the mean annual value that ranges around 20 mg/Nm^3 that was listed in the EU's Industrial Emissions Directive.

Sulfur Dioxide

During the design and construction of TPP Kostolac A and B units, no measures were taken to reduce SO_2 emissions, given that at the time no SO_2 emission limit values (ELVs) were stipulated.

To reduce sulfur oxide emissions below 200mg/Nm^3 in accordance with EU Directive for Industrial Emissions, the desulphurization plant construction was finished at the end of December 2016, as well as a new stack with two pipes (each unit, B1 and B2, has its duct). Performance measurements were executed during the operation of each unit individually and during the simultaneous operation of units.

The operation of the flue gas desulphurization plant has significantly reduced the emitted concentration of sulfur dioxide which amounted to approximately 5000-6000 mg/m^3 at the plant inlet,

depending on many factors, so in 2023, the mean annual value of concentration at the outlet after the desulphurization of unit B1 and B2 was 234.95 mg/Nm^3, which is less than 400 mg/m^3 which is the emission limit value listed in the local regulation in question, i.e, it approaches the emission limit value of 200 mg/Nm^3 prescribed by the EU Directive for Industrial Emissions.

Nitrogen Oxides

New burners were installed on TEKO B unit B1 during unit revitalization in 2014 to reduce nitrogen oxide emissions below the level of 200mg/Nm^3. Measurement results indicate considerable nitrogen oxide emission reduction. Emissions before reconstruction ranged from 450 to 600 mg/Nm^3.

In 2019, the system for the reduction of nitrogen oxides on TPP Kostolac B2 was installed. In 2022, performance tests were carried out in relation to the reduction of nitrogen oxides by applying primary measures. In 2023, a tank with ammonia liquor with accessories for the secondary nitrogen oxide reduction measures for units B1 and B2, was constructed. This was implemented during the capital overhaul in 2024.

Based on the results of continuous measurements, the mean measured value of nitrogen oxides in 2023 for units B1 and B2 was 253.7 mg/Nm3.

During 2024, secondary nitrogen oxide reduction equipment was installed at TPP Kostolac B, utilizing ammonia water dosing. This measure will ensure that emissions comply with the EU Industrial Emissions Directive's limit value of 200 mg/Nm^3.

4.2.3. Emission Measurements of Matters Affecting Water Quality

Water used to cool condensers' steam has the highest share in process water used by Kostolac TPPs. Water used for this process is captured from the Danube River. To be precise, the captured river water is first used to cool the condensers and subsequently discharged into the recipient (the Danube – TPP Kostolac A or the Mlava – TPP Kostolac B) via the return channel.

A small share, about 2.5% of water is used for hydraulic transport of ash and slag. By transition to, i.e. connecting the TPP Kostolac B units to the thick slurry transport system (solids: water ratio - 1:1) water consumption is reduced. Under the thick slurry transportation system in place at the Kostolac B TPP there is no overflow water, while the created drainage water is recycled (returned) from the ash landfill to the thermal power plant and reused for hydraulic transport of ash and slag. In 2024, sampling and testing of wastewater were performed, which was drained under the foil on OCM Ćirikovac ash disposal site, then discharged into the Mlava River via the main water reservoir. The quality of the Mlava River is controlled upstream and downstream from the discharge of drainage water from the main water reservoir, and during 2024 the quality of drainage water from the gypsum landfill was examined.

Decarbonized water of TPP Kostolac A is partly used for cooling while the other part is treated with ion exchangers (ion mass) to obtain demineralized water.

Demineralized water (demi water) used by the boiler water-vapor system is produced by chemical water treatment plants. Demi water is produced by chemical purification of groundwater (TPP Kostolac B) or by purification of the Danube River water (TPP Kostolac A) in ion exchangers.

A plant for water preparation to supplement the remote heating system of the cities of Kostolac and Pozarevac was put in operation.

The source of raw water for TPP Kostolac B are tube wells located along the Mlava River bank. HCl or NaOH solution is used to regenerate ion masses in ion-exchange columns, resulting in acid and alkaline wastewater partly used by the ash and slag transportation system of TPP Kostolac B, while in the case of TPP Kostolac A regeneration products are discharged into the return cooling water channel (hot water channel).

Sanitary wastewater is discharged directly or indirectly into the river Mlava after mechanical-biological treatment under aerobic conditions by treatment devices (TPP Kostolac B). The sanitary

wastewater of TPP Kostolac A is discharged into the municipal sewage system which is subsequently discharged into the TPP Kostolac A return cooling water channel.

After water containing oil and/or heavy fuel oil and/or petroleum is collected, only water containing petroleum is pumped back into the tank. Wastewater is discharged through storm sewage into the TPP Kostolac A hot water channel while waters containing heavy fuel oil are transported to the slurry station and subsequently to the OCM Cirikovac ash landfill.

The TPPs Kostolac Branch Wastewater Management Programme includes physical, chemical, and bacteriological measurements of the following parameters: air and water temperature, water turbidity, pH, electrical conductivity, soluble O_2, % of O_2 saturation, COD, BOD5, unfiltered water evaporation residue, filtered water evaporation residue, total suspended particulate matter, particulate matter, total surfactants, mineral oils, phenols, alkalinity, F, Cl, NO_2, NO_3, SO_4, PO_4, NH_4, Ca, Mg, hardness, Al, Fe, Mn, Cd, Cr^{6+}, total Cr, Cu, Ni, Zn, Pb, Hg, As, B, and microbiological analysis of the waters in the recipient.

Monitoring also includes:

- Wastewater quality at the source point and/or at the point of discharge into the river and/or at the point of discharge into the returning cooling water duct;
- Recepient water quality – wastewater recipient quality on profiles upstream and downstream of the wastewater discharge point;
- Quality of groundwater in the area of the SKO ash and slag landfill and OCM Cirikovac, at the coal depot of the TPP Kostolac B, in the area of the oil tanks at TPP-OCM A and the area of the gas station at OCM Drmno; at the gypsum disposal site
- Quality of sanitary water from the plants in TPP Kostolac B;
- Quality of water coming from the plants for treating water contaminated with oil and fuel oil in TPP Kostolac B

Long-term studies have shown that concentrations of sulfate and arsenic are essential parameters used to monitor the ash landfill's impact on groundwater. Sulfate ions originating from the landfill migrates fastest and are considered to be an excellent tracer to monitor the groundwater impact of landfills. On the other hand, arsenic reaches groundwater much slower because it is previously adsorbed by the aluminosilicate surface (landfill ash and/or clay making an integral part of the soil). OCM Drmno dewatering water quality is also monitored. OCM Drmno dewatering water is discharged to the Mlava and/or Danube rivers, and partly used as cooling water by TPP Kostolac B.

TPPs Kostolac Branch wastewater quality and its impact on recipients is controlled 12 times a year and 4 times a year for groundwater and sanitary water in line with the Law on Waters (Official Gazette of RS, No. 30/2010, 93/2012, 101/2016, 95/2018) and The Rulebook on Methods and Conditions for Wastewater Quantity Measurement and Quality Testing, and the Content of the Measurement Report (Official Gazette of RS, No. 33/2016), Regulation on pollutants' emission limit values in waters and deadline for their achievement (Official Gazette of RS, No. 67/2011,48/2012,1/2016).

Annual surface and groundwater quality reports for each organizational unit of the TPPs-OCMs Kostolac Branch are made available on request to competent inspectors and relevant institutions when providing opinions required for the issuing of water conditions and water permits.

Discharged water quality measurement results are presented in the Environmental Report prepared every year for each organizational unit. In addition, results are presented in the National Pollution Sources Register of Serbia sent by the TPPs-OCMs Kostolac Branch each year in accordance with the legal obligation to the Environmental Protection Agency.

TPPs-OCMs Kostolac Branch surface and groundwater quality was controlled in 2024 by the accredited legal person for chemical testing, Mining and Metallurgy Institute Bor, and Institute for Occupational Safety Novi Sad.

Table 93 provides the analysis of wastewater and recipient watercourse quality data in 2024 in terms of their legal compliance.

In the case of surface waters, legal compliance is evaluated by comparing the measured values of substances affecting water quality with the limits defined by the Regulation stipulating limit values for pollutants in surface and ground waters and sediments, and deadlines for their achievement (OG RS No. 50/2012) while wastewater values are compared with the limits defined by the Regulation stipulating limit values of pollutants emissions in water and deadlines for their achievement (OG RS No. 67/2011, 48/2012 and 1/2016). From the thermal power plant TPP Kostolac B and TPP Kostolac A there are no discharges of wastewater with hazardous substances from the Regulation on the limit values of priority and priority hazardous substances that pollute surface waters and deadlines for their achievement (OG RS No. 24/2014).

Table 93

TPPs-OCMs KOSTOLAC BRANCH		
Wastewater and watercourses-recipients quality in 2024		
Organizational unit / **Water type**	**TPP Kostolac A**	**TPP Kostolac B**
Drainage wastewater from the ash landfill	▪Electrical conductivity: 425.0-691.0 µs/cm ▪Arsenic: 10-34 µg/l ▪Sulphates: 2.79-210.6 mg/l	Main water sump at OCM Cirikovac landfill ▪Electrical conductivity: 601.0-2 080 µs/cm ▪Arsenic: <10 µg/l ▪Sulphates: 79.47 – 1012.8 mg/l
Overflow wastewater from the ash landfill	▪Electrical conductivity: 353.0- 655.0 µs/cm ▪Arsenic: <10-70 µg/l ▪Sulphates: 86.3-219.5 mg/l	
Watercourse (recipient)	There were no significant changes in the Danube River quality upstream-downstream from TPP Kostolac A: ▪Arsenic: <10 µg/l, bellow MLC-50 µg/l, upstream and downstream from the discharge point ▪Sulphates: 18.14-31.14 mg/l upstream, 0.50-28.86 mg/l downstream ▪ Mineral oil, at the Danube testing points upstream and downstream <10 µg/l No temperature increase in the Danube River water	There were no significant changes in the Mlava River quality downstream - upstream from TPP Kostolac B: ▪Arsenic: upstream 10-84 µg/l and downstream from <10 µg/l from the discharge point ▪Sulphates: 17.78-36.50 mg/l, upstream and 13.39-32.93 mg/l downstream ▪ Mineral oil in the Mlava River upstream and downstream < 10µg/l No temperature increase in the Danube River water

Table 94 provides the analysis of groundwater quality data in the piezometers at the locations of TPPs-OCMs Kostolac Branch. In 2024 groundwater quality was controlled in 18 piezometers.

Table 94

TPPS-OCMS KOSTOLAC BRANCH			
Groundwater quality – piezometers in 2024			
Concentration	**Permitted values**		**Organizational unit**
	MPC	**RV**	**TPP Kostolac A and TPP Kostolac B**
Sulfates (mg/l)	**250**		in piezometers around cassette B: 121-232 in piezometers around cassette C: 30-315 in piezometers around the Ćirikovac ash landfill: 4.93-598.0 piezometers away from the SKO landfill: 111.5-831.3 around the coal yard D5: 2.18-30.4 piezometers around oil tanks TPP A: 12.96-170.4 piezometers at gypsum disposal site: 44.7-112.80 piezometer around the gas station at OCM Drmno: 17.51-63.22
Arsenic (µg/l)	**10**	**60**	in piezometers around cassette B:41-420 in piezometers around cassette C: 14-48 in piezometers around the Ćirikovac ash landfill: <10 piezometers away from the SKO landfill: <10 around the coal yard D5: <10 piezometers around oil tanks TPP A: <10 piezometer at gypsum disposal site: <10 piezometer around the gas station at OCM Drmno: <10
Zinc (µg/l)	**3.000**	**800**	in piezometers around cassette B: <30-258 in piezometers around cassette C: <30-101 in piezometers around the Ćirikovac ash landfill: <30-169 piezometers away from the SKO landfill: 32-8810 around the coal yard D5: 824-1630 piezometers around oil tanks TPP A: 35-34 piezometer at gypsum disposal site: <30-109 piezometer around the gas station at OCM Drmno: <30-49
Manganese (mg/l)	**50**		in piezometers around cassette B: 0.005-0.061 in piezometers around cassette C: 0.008-0.101 in piezometers around the Ćirikovac ash landfill: <0.004-0.868 piezometers away from the SKO landfill: 0.019-1.370 around the coal yard D5: 0.087-0.135 piezometers around oil tanks TPP A: 0.037-0.708 piezometer at gypsum disposal site; 0.004-0.825 piezometer around the gas station at OCM Drmno; 0.021-0.207
Ammonia (mg/l)	**0.1**		in piezometers around cassette B: <0.078- 0.156 in piezometers around cassette C: <0.078 – 0.121 in piezometers around the Ćirikovac ash landfill: <0.078 piezometers away from the SKO landfill: <0.078-0.192 around the coal yard D5: <0.078 piezometers around oil tanks TPP A: <0.078 piezometer at gypsum disposal site: <0.078-0.109 piezometer around the gas station at OCM Drmno: <0.078-1.010
Nitrites (mg/l)	**0.03**		in piezometers around cassette B: <0.003-0.008 in piezometers around cassette C:<0.003-0.055 in piezometers around the Ćirikovac ash landfill: <0.003-0120 piezometers away from the SKO landfill: <0.003-0.421 around the coal yard D5: <0.003-0.043 piezometers around oil tanks TPP A: <0.003-0.064 piezometer at gypsum disposal site: <0.003-0.098 piezometer around the gas station at OCM Drmno: <0.003-0.077
Nitrates (mg/l)	**0.05**		in piezometers around cassette B: <0.113-0.178 in piezometers around cassette C: <0.113-1.680 in piezometers around the Ćirikovac ash landfill: < 0.113-6.780 piezometers away from the SKO landfill: <0.113-0.481 around the coal yard D5: <0.113 piezometers around oil tanks TPP A: <0.113- 4.29 piezometer at gypsum disposal site: 0.177-13.56 piezometer around the gas station at OCM Drmno: <0.113-1.30

TPPS-OCMS KOSTOLAC BRANCH			
Groundwater quality – piezometers in 2024			
Concentration	**Permitted values**		**Organizational unit**
	MPC	**RV**	**TPP Kostolac A and TPP Kostolac B**
Copper (µg/l)	**2.000**	**75**	in piezometers around cassette B:<20-30 in piezometers around cassette C: <20 in piezometers around the Ćirikovac ash landfill: <20 piezometers away from the SKO landfill: <20 around the coal yard D5: < 20 piezometers around oil tanks TPP A: < 20 piezometer at gypsum disposal site: < 20 piezometer around the gas station at OCM Drmno: <20
Cadmium (µg/l)	**3**	**6**	in piezometers around cassette B:< 0.4 in piezometers around cassette C: <0.4 in piezometers around the Ćirikovac ash landfill: <0.4-0.7 piezometers away from the SKO landfill: <:0.4-2.2 around the coal yard D5: 0.4-0.9 piezometers around oil tanks TPP A: <0.4 piezometer at gypsum disposal site: <0.4-2.8 piezometer around the gas station at OCM Drmno: <0.4-0.6
Lead (µg/l)	**10**	**75**	in piezometers around cassette B: <10-70 in piezometers around cassette C: < 10-12 in piezometers around the Ćirikovac ash landfill: <10-13 piezometers away from the SKO landfill: < 10 around the coal yard D5: <10 piezometers around oil tanks TPP A: <10 piezometer at gypsum disposal site: <10-173 piezometer around the gas station at OCM Drmno: <10-16
Mercury (µg/l)	**1**	**0,3**	in piezometers around cassette B: <0.3 in piezometers around cassette C: <0.3 in piezometers around the Ćirikovac ash landfill: <0.3 piezometers away from the SKO landfill: <0.3 around the coal yard D5: <0.3 piezometers around oil tanks TPP A: <0.3 piezometer at gypsum disposal site: <0.3 piezometer around the gas station at OCM Drmno: <0.3
Mineral oil (µg/l)		**600**	in piezometers around cassette B: <10-174 in piezometers around cassette C: <10 in piezometers around the Ćirikovac ash landfill: <10-267 piezometers away from the SKO landfill: <10-23 around the coal yard D5: <10-121 piezometers around oil tanks TPP A: <10 piezometer at gypsum disposal site: <10-162 piezometer around the gas station at OCM Drmno: 26-532

MPC for drinking water;
RV – Remediation values of hazardous and harmful substances concentration and values indicating severe groundwater contamination.

Legal compliance is evaluated by comparing the aquifer measured values of hazardous and harmful substances concentration from piezometers, remediation values of hazardous and harmful substances concentration, and values indicating severe groundwater contamination in line with the Regulation on Limit Values for Polluting, Harmful and Hazardous Substances in the Soil (OG RS No. 30/2018 and 64/2019) according to the Law on Soil Protection (OG RS No. 112/2015). For groundwater, the compliance assessment was carried out in accordance with the limit values specified in the Regulation on Limit Values of Pollutants in Surface and Groundwater and Sediment and the Deadlines for Their Achievement (OG RS No. 50/2012).

Table 95 provides an analysis of data related to sanitary wastewater quality at the inlet and outlet of the newly built plant fort treatment (SBR-Sequencing Batch Reactor) at TPP Kostolac B, for 2024.

Table 95

TPPS-OCMS KOSTOLAC BRANCH	
Sanitary wastewater treatment plant operation in 2024	
Pollutants concentration (mg/l)	**SBR (Sequencing Batch Reactor) TPP Kostolac B**
Suspended solids (mg/l)	
Plant inlet	12.8-499.6
Plant outlet	7.2-28.6
5-day biological oxygen demand (BOD_5)	
Plant inlet	15.5-147.1
Plant outlet	8.5-23.9
Operation efficiency evaluation	Meets guaranteed values for suspended solids for all measurements

Emission values for BOD and suspended solids are within allowable limits, based on the Regulation on Emission Limit Values of Pollutants in Water and deadlines for reaching them (OG RS No. 67/2011, 48/2012 and 1/2016).

According to the instructions provided by the manufacturer, the primary sedimentation tanks should be emptied once a year, and all devices should be regularly maintained and overhauled.

- **Water Quantities**

Table 96 provides an overview of water quantities captured and discharged per the organizational units of the TPPs-OCMs Kostolac Branch for 2024.

Table 96

TPPS-OCMS KOSTOLAC BRANCH					
Water quantities in 2024 (m^3 /year x10^3)					
Organizational unit	**Water intake**		**Discharged wastewater**		
	Used quantities		**Return cooling water**	**Overflow and drainage water from the SKO ash landfill**	**Sanitary wastewater**
	Surface	**Ground***			
TPP KOSTOLAC A	**344,940**	**-**	**334,700**	**6,072**	**45**
TPP KOSTOLAC B	**540,154**	**854**	**539,488**	**0**	**112**
TOTAL: TPPs-OCMs KOSTOLAC BRANCH	**885,094**	**854**	**874,188**	**6,072**	**157**

* For technical and potable water preparation
**purified water

For hydro mixture transportation from TPP Kostolac A and TPP Kostolac B to the OCM Cirikovac ash landfill, part of the return cooling water is used and returned by recirculation.

The annual quantity is calculated based on data on the capacity and water capture and discharge pumps operating time. In cases of gravitational wastewater discharge calculations are made based on previously measured wastewater quantities.

- **Improvements Aimed at Reducing Wastewater Impacts on Surface and Groundwater**

A new ash and slag handling system at TPP Kostolac A was put into operation in 2019. Upon system commissioning, new system performances were tested.

Commissioning of the new system (thick slurry transportation) TPP Kostolac A moved to ash and slag disposal to the ash and slag landfill of OCM Cirikovac. The Srednje Kostolacko Ostrvo landfill serves as a backup until the phase of its shutdown.

TPP Kostolac B units have been connected to the new collection, transportation, and disposal system of ash and slurry (thick slurry and ash disposal together with water in a ratio of 1:1, instead of the previous system that used 1 part of ash and slury and 10 parts of water). Ash and slag are disposed to the OCM Cirikovac. A thick slurry transportation system is of recirculation type because water serves to transport ash and slurry and circulates the system.

In 2020, the construction of the TPP Kostolac B Wastewater Treatment Facility commenced. Previously the building permit was issued by the Ministry of Construction, Transportation, and

Infrastructure No. 351-02-00028/2019 as of 16 April 2019, as well as the Decision of the Ministry of Environmental Protection on the approval of the updated Environmental Impact Assessment Study for the Wastewater Treatment Facility (No.353-02-00252/2019-03 as of 11 July 2019).

In 2024, the facilities obtained a water permit for the treatment and discharge of purified wastewater from the TPP Kostolac B site (including sanitary, oily, and contaminated wastewater, wastewater from desulfurization, acidic and alkaline water, and stormwater from the TPP Kostolac B complex) into the Mlava River, under permit No. 002043012 2024 14843 001 001 325 011, issued on 28 June 2024.

The use permit for the TPP Kostolac B Wastewater Treatment Facility (ROP-MSGI-2839-IUPH-8/2024, No. 001295949 2024 14810 005 001 000 001) was issued on 22 May 2024.

The decentralized wastewater treatment system consists of three major plants:

1. Sanitary wastewater treatment plant – SBR (Sequencing Batch Reactor) 1500 EC
2. Oily and fuel oily wastewater treatment plant, with a capacity of 2x30 m^3/h;
3. Wastewater treatment plant from flue gas desulphurization and acid-alkaline water from a chemical water treatment plant, with a capacity of 2 x 45m^3/h.

1. The sanitary wastewater treatment plant was built in 2020 and put into trial operation. In 2024, the sanitary wastewater treatment plant in TPP Kostolac B purified 112,584 m^3 of sanitary wastewater from the thermal powerplant area and employee's barracks located in front of TPP Kostoac B. The process of sanitary water treatment includes equalizing, mechanical treatment on an automatic strainer, biochemical purification inside the SBR reactors, and the stabilizing of mud. The recepient of purified water is the river Mlava.

2. Oily and fuel-oily wastewater treatment plant was completed and put into trial operation in 2021. The sources of oily wastewater to be purified are the powerhouse of the main power buildingy in B1, B2, and the future B3 and covered coal storage. The sources of fuel oily wastewater to be purified are the external fuel oil plant, bundwall of ground-level fuel oil tank, plateau for decanting fuel oil tank, and unit boiler rooms. In 2024, oily and fuel-oily wastewater treatment plant purified and discharged 402,908 m^3 of water.

3. The plant for treating wastewater resulting from desulphurization of flue gases and acid-alkaline water from the plant for chemical preparation of water was operational in 2024 and all tests were carried out to ensure its reliable operation. Sources of wastewater are FGD and CPW which are directed to this facility from the wastewater hydro-cyclones overflow from B1, B2 and B3 units, water that is used for washing the wet ESPs, water that is used for washing sand filters from B1, B2 and B3 units, water used for regeneration of ion-exchanging resins of FGD and CPW and permeate from the reverse osmosis.

During the operation in 2024, 3,514,9 m^3 of wastewater was purified from units B1 and B2, while 54,900 m^3 of wastewater was purified from the FGD system of unit B3.

Within the wastewater treatment plant in TPP Kostolac B, 4 oil separators were installed on the atmospheric sewage.

4.2.4. Emission Measurements of Matters Affecting Soil Quality

In May and October 2024, testing of soil quality was performed as well as determining the content of total and accessible forms of heavy metals and matters which affect the soil quality as well as the inspection of chemical composition at TPP Kostolac A (with the ash landfill at SKO) and TPP Kostolac B (ash landfil at OCM Ćirikovac and gypsum depot). The TPPs-OCMs Kostolac Branch performs the monitoring of the content of matters which affect the soil quality on an annual level.

Sampling and testing of soil was done by a laboratory holding authorization for soil monitoring – the Jaroslav Černi Institute for the Development of Water Resources - Belgrade, on the territory of the branch - TPP Kostolac A, TPP Kostolac B, and OCM Drmno. The taken samples were put through the following analysis: mechanical composition of the soil, soil acidity (active acidity pH in H_2O,

substitutional acidity pH y 1M KCl), the content of $CaCO_3$, the capacity of exchangeable cations Na^+, K^+, Ca^{2+}, Mg^{2+}, degree of base saturation, organic matter content, physical characteristics of soil: dry soil density; solid state density and total porosity; accessible water; the rate of water permeability, structure, and hardness, chemical features of soil: soil hydrolytic acidity, the accessibility to macroelements (N, P, K, Ca, Mg), total nitrogen and sulfur, the electrical conductivity of soil extract, the content of nitrates and nitrites, total and accessible heavy metals (Cr, Ni, Pb, Cu, Zn, Cd, Hg, B, As and Fe), potentially toxic elements, hydrocarbons originating from petroleum ($C_6 – C_{40}$), polycyclic aromatic hydrocarbons (PAH). The Soil Monitoring Program includes field and lab measurements at representative measuring points that were marked on the topographical maps (points determined by GPS), which will enable tracking changes of the tested parameters at the same measuring points in the following period.

The number and arrangement of measuring points are defined in accordance with Appendix 2 to the Rulebook on the list of activities that may cause soil pollution and degradation, the procedure, data content, deadlines, and other requirements for soil monitoring (Official Gazette of the RS, No 102/2020). Thereby the following was particularly taken into account: the points where it is known that soil or underwaters have been polluted, locations for storing raw materials, chemicals, or waste, sites at immediate proximity to plants where the production process takes place, locations where chemicals and/or waste are being loaded and unloaded, storage places of new and worn equipment which can be a potential source of soil pollution, points where machines are being maintained and serviced, equipment washing locations, points near underground tanks, areas outside the factory parameters which can be affected by factory activities. The content of heavy metals and other toxic elements in the soil exceeded the limit values for the parameters being nickel, mercury, cadmium and copper, but it was below the remediation values for all tested parameters.

Valuation of data was carried out in accordance with the Rulebook on the list of activities that may cause soil pollution and degradation, the procedure, data content, deadlines, and other requirements for soil monitoring (Official Gazette of the RS, No 102/2020) Regulation on limit values of polluting, harmful and dangerous substances in soil (Official Gazette of the RS, No 30/2018, 64/2019), Appendix 1, Limit maximum and remediation values of polluting, harmful and hazardous substances in soil.
On the TPP Kostolac A site the samples were taken from the surface layer at profile between 0 and 30 cm, on 15 points, while 5 samples were taken at the depth of 30-60 cm. On the TPP Kostolac B site, the samples were taken on 12 points, and 3 samples were taken at the depth of 30-60 cm

Table 97 shows the concentration of matter affecting the soil quality.

Table 97

TPPS-OCMS KOSTOLAC BRANCH		
Concentration of matters affecting the soil quality in 2024		
Content (mg/kg)	**TPP KOSTOLAC A**	**TPP KOSTOLAC B**
Chromium (Cr)	Out of 20 samples – none of them exceeded LV or RV.	Out of 15 samples – none of them exceeded LV or RV.
Nickel (Ni)	Out of 20 samples – all of them exceeded LV, and none of them exceeded RV.	Out of 15 samples – all of them exceeded LV, and none of them exceeded RV.
Lead (Pb)	Out of 20 samples – 2 samples exceed LV and none exceeds RV.	Out of 15 samples – none of them exceeded LV or RV.
Copper (Cu)	Out of 20 samples – 19 samples exceed LV and none exceeds RV.	Out of 15 samples – 7 samples exceed LV and none exceeds RV.
Zinc (Zn)	Out of 20 samples – 13 samples exceed LV and none exceeds RV.	Out of 15 samples – 2 samples exceed LV and none exceeds RV.
Cadmium (Cd)	Out of 20 samples – 20 samples exceed LV and none exceeds RV.	Out of 15 samples – 9 samples exceed LV and none exceeds RV.
Mercury (Hg)	Out of 20 samples – 9 samples exceed LV and none exceeds RV.	Out of 15 samples – 4 samples exceed LV and none exceeds RV.
Arsenic (As)	Out of 20 samples – none of them exceeded LV or RV.	Out of 15 samples – none of them exceeded LV or RV.
Hydrocarbons (C6-C40)	Out of 20 samples – 15 samples exceed LV and none exceeds RV.	Out of 15 samples – 9 samples exceed LV and none exceeds RV.
Total PAH	Out of 20 samples – 5 samples exceed LV and none exceeds RV.	Out of 15 samples – none of them exceeded LV or RV.

4.2.5. Environmental Noise Measurements

At the TPPs-OCMs Kostolac Branch site, in 2024 noise measurements were performed at six measuring points in accordance with the Noise Protection Act (OG RS No. 96/21), Rules stipulating noise measurement methodology, the content and form of environmental noise measurement reports (OG RS No. 139/2022) and the Regulation stipulating noise indicators, limits, methods for evaluating noise indicators, disturbance, and harmful environmental noise effects (OG RS No.

75/2010). Noise measurement at the locations of thermal power plants was carried out by an authorized legal entity, the Institute of Public Health Požarevac, at 6 measurement points:

1. TEKO A – "Prim" Kostolac (the east side of TPP Kostolac A)
2. TEKO A – "Laser – Balkan", which used to be FIO Minel (south side of TPP Kostolac A
3. TEKO A – the port of Kostolac (west side of TPP Kostolac A)
4. TEKO B – the village of Drmno (south side of TPP Kostolac B)
5. TEKO B – the lake of TPP Kostolac B (west side of TPP Kostolac B)
6. TEKO B – Viminacium (north-east side of TPP Kostolac B)

Table 98 shows data related to the measured environmental noise levels in 2024 for the TPPs-OCMs Kostolac Branch (organizational unit Thermal Power Plant Kostolac A and Thermal Power Plant Kostolac B), during the winter. During noise measuring, the units operated at full capacity (TPP A1 – 100MW; A2 – 210 MW; B1 – 348,5 MW; B2 – 348,5 MW).

The local government of the city municipalities of Kostolac and Pozarevac executed acoustic zoning of the town by the Decision on Determining Acoustic Zones on the teritorry of Požarevac and by the plan of Kostolac General Regulation (OG RS No. 02/2023) in accordance with the Noise Protection Act (OG RS No. 96/21).

The noise measuring results do not exceed the maximum permissible emission limit values (ELV) which are 65 dB during the day and 55 dB during the night, bearing in mind that the local government executed the acoustic zoning of Kostolac.

Table 98

TPPS-OCMS KOSTOLAC BRANCH							**ELV**
Noise levels in 2024 (dB) (A)							
	I measurement						
Measuring point	**TPP Kostolac A**			**TPP Kostolac B**			
	PRIM	**Laser – Balkan**	**The port**	**The village of Drmno**	**The lake**	**Viminacium**	
day	50.9	48.6	55.5	45.7	53.3	46.6	**65**
day	50.4	47.8	53.7	45.1	53.8	47.3	**65**
evening	49.7	47.0	52.3	43.1	52.5	43.8	**60**
night	49.5	47.6	50.3	41.8	51.3	41.4	**55**
night	48.9	45.3	49.7	41.4	50.9	40.7	**55**

The preparation of the Study of Noise Reduction in the Environment by the authorized laboratory of Occupational Health and Environmental Protection – Belgrade has been completed, for TPP Kostolac A – No. 2413050000007-5 dated 6 September 2024, and for TPP Kostolac B – No. 2413050000007- 4 dated 17 June 2024.

4.2.6. Waste

Table 99 shows the types of waste generated in 2024 for TPP-OCMs Kostolac Branch (parts of the Branch: TPP Kostolac A and TPP Kostolac B).

Table 100 provides data on the quantities of waste delivered and the R/D waste management operations conducted by an authorized legal entity, in accordance with the waste delivery contract and Annex 6 of the Rulebook on Waste Categories, Testing, and Classification for the TPP-OCMs Kostolac Branch (TPP Kostolac A and TPP Kostolac B).

The ash that is produced during the technological process of lignite combustion that takes place in the TPP Kostolac B boilers is stored in a silo and sold dry to the interested buyers who use it as a raw product in the construction industry, based on the contract for the purchasing of ash, whereas the rest of it is disposed at a fly and bottom ash landfill of OCM Ćirikovac. In 2024, a total of 94,549.58 tons of dry fly ash from electrostatic precipitators were produced at TPP Kostolac A and TPP Kostolac B and submitted.

In accordance with Waste Management Law, the Ministry of Environmental Protection has issued a certificate to TPP Kostolac Branch for registering the gypsum in the by-products registry, for the quantities that were concluded by the contract. TPPs-OCMs Kostolac Branch is the first commercial entity in Serbia that has registered gypsum in the by-product registry.

In 2024 TPP-OCMs Kostolac Branch delivered 127,348.5 tons of gypsum as a by-product to the interested buyers. On August 12, 2022, PE registered a substance calcium sulfate, ES No. 231-900-3 at the European Agency for Chemicals, in accordance with the REACH Regulation. For calcium sulfate which is produced as part of the flue gas desulphurization process at TPP Kostolac B, EPS JSC has obtained a REACH registration number: 01-2119444918-26-0341.

In 2024, the branch of TPPs-OCMs Kostolac sold gypsum to interested operators as non-hazardous waste, as a by-product and as a chemical registered with the European Chemicals Agency.

The quantity of gypsum delivered as non-hazardous waste was 82,816.40 tone, the quantity delivered as a by-product was 127,348.50 tons, while the quantity delivered as a chemical to interested buyers was 3,249.24 tons.

In the upcoming period, EPS JSC is expected to complete the registration process for dry fly ash, which is separated in electrostatic precipitators, with the European Chemicals Agency, in accordance with the provisions of the REACH Regulation.

Table 99

TPPS-OCMS KOSTOLAC BRANCH							
Types of waste generated in 2024							
No.	**Rulebook waste categories, testing and classification (OG RS No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**	**Index No.**	**Unit of measureme**	**Organizational unit**			**Note**
	Name			**TEKO A**	**TEKO B**	**TOTAL (t)**	
1.	Waste printer cartridges other than those indicated under 08 03 17	08 03 18	t	0.000	0.050	**0.050**	
2.	Fly ash from coal	10 01 01/ 10 01 02	t	541,807.180	1,064,742.200	**1,606,549.380**	-
3.	Solid waste based on calcium in the process of flue gas desulphurization	10 01 05	t	0.000	53.359,02	**53,359.02**	Gypsum**
4.	Mineral non-chlorinated hydraulic oil	13 01 10*	t	1.000	50.000	**51.000**	-
5.	Other oils for insulation and heat transfer	13 03 10*	t	0.000	60.000	**60.000**	Waste transformer oil
6.	Packaging with residue of hazardous substances or contaminated with hazardous substances	15 01 10*	t	0.200	0.580	**0.780**	Hydrazine packing
				0.100	2.114	**2.214**	Oil packing
7.	Absorbent, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	15 02 02*	t	0.080	0.620	**0.700**	Cotton
8.	Lead batteries	16 06 01*	t	0.680	1.015	**1.695**	Batteries
9.	Glass	17 02 02	t	0.000	0.000	**0.000**	
10.	Plastics	17 02 03	t	0.000	0.001	**0.001**	
11.	Copper, bronze, brass	17 04 01	t	27.280	10.92	**38.200**	brass
12.	Aluminum	17 04 02	t	4.900	7.480	**12.380**	-
13.	Iron and steel	17 04 05	t	272.380	1,073.110	**1,345.490**	Various thickness
				250.640	514.000	**764.640**	Impact plates and billets
14.	Cables other than those indicated in 17 04 10	17 04 11	t	0.000	3.000	**3.000**	Copper cables

15.	Insulation material other than those in 17 06 01 and 17 06 03	17 06 04	t	69.220	134.640	**203.860**	Mineral wool
				1.520	0.000	**1.520**	Preinsulation pipes
16.	Sludge from other industrial wastewater treatments other than that indicated in 19 08 13	19 08 14	t	0.000	114.200	**114.200**	
17.	Saturated or exhausted ion-exchanging resins	19 09 05	t	0.000	0.000	**0.000**	
18.	Plastics and rubber	19 12 04	t	0.000	21.298	**21.298**	Rubber stripes
19.	Fluorescent tubes and other waste containing mercury	20 01 21*	t	0.040	0.040	**0.080**	-
20.	Discarded electrical and electronic equipment which contains dangerous components	20 01 35*	t	4.694	2.135	**6.829**	Electric, electronic waste

*Hazardous waste
** Note: The data in the table refers to gypsum recorded as waste. The actual quantity of gypsum produced is 183,956.76 tons, where 3,249.24 tons were recorded and submitted as chemicals and 127,348.50 tons as a by-product.

Table 100

TPPS-OCMS KOSTOLAC BRANCH							
Waste quantities sold in 2024 expressed in tons							
No.	**Rulebook waste categories, testing and classification (OG RS No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**	**Index No.**	**Operation D/R**	**Organizational unit**			**Note**
	Name			**TEKO A**	**TEKO B**	**Total**	
1.	Fly ash from coal	10 01 02	R5	76,775.160	17,774.420	**94,549.580**	Sale
2.	Solid waste based on calcium in the process of flue gas desulphurization	10 01 05	R5	0.000	82.816,40	**82.816,40****	Sale
3.	Mineral non-chlorinated hydraulic oil	13 01 10*	R12	0.000	10.400	**10.400**	Submission against compensation to the authorized operator
4.	Packaging with residue of hazardous substances or contaminated with hazardous substances	15 01 10*	R13	0.000	0.300	**0.300**	Hydrazine barrels
		15 01 10*		0.000	2.500	**2.500**	Submission against compensation to the authorized operator Oil barrels

5.	Absorbent, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	15 02 02*		0.000	0.000	**0.000**	Submission against compensation to the authorized operator
6.	Lead batteries	16 06 01*	R13	0.720	13.595	**14.315**	Sale
7.	Glass	17 02 02/ 17 01 02		0.000	0.000	**0.000**	Sale
8.	Copper, bronze, brass	17 04 01	R4	27.280	10.920	**38.200**	Sale
9.	Aluminum	17 04 02	R4	4.840	7.480	**12.320**	Sale
10.	Iron and steel	17 04 05	R4	261.140	1,072.810	**1,333.950**	Sale
				253.820	514.000	**767.820**	Sale
11.	Cables other than those indicated in 17 04 10	17 04 11	R5	0.000	3.000	**3.000**	Sale
12.	Insulation material other than those in 17 06 01 and 17 06 03	17 06 04	D5	0.000	0.000	**0.000**	Sale – preinsulation pipes
				79.220	134.640	**213.860**	Submission against compensation to the authorized operator – mineral wool
13.	Sludge from other industrial wastewater treatments other than that indicated in 19 08 13	19 08 14	D5	0.000	295.920	**295.920**	Submission against compensation to the authorized operator
14.	Saturated or exhausted ion exchange resins	19 09 05	D5	0.000	0.000	**0.000**	Submission against compensation to the authorized operator
15.	Plastics and rubber	19 12 04	R5	0.000	21.298	**21.2980**	Sale
16.	Fluorescent tubes and other waste containing mercury	20 01 21*	R13	0.040	0.040	**0.080**	Sale
17.	Discarded electrical and electronic equipment other than those under 20 01 21 and 20 01 23 containing hazardous components (electric and electronic equipment)	20 01 35*	R12	3.760	1.760	**5.520**	Submission against compensation to the authorized operator

*Hazardous waste

** Note: the data in the table refers to the quantities submitted as waste, excluding the quantities submitted as by-products and chemicals. The actual quantity of gypsum submitted is 213,414.14 tons, where 3,249.24 tons were submitted as chemicals, 127,348.50 tons as by-products and 82,816.40 tons as waste.

4.3. Working Environment Monitoring, Occupational Health and Safety

Occupational Safety and Health Reports for 2024 include the following elements:

- **Working Environment Monitoring**
  - measurement of working environment noise
- **Occupational Safety**
  - employee training
  - occupational accidents
- **Occupational Safety**

4.3.1. Working Environment Monitoring

- **Measurement of Working Environment Noise**

In 2024, no monitoring of the working environment was carried out at TPP Kostolac A, i.e. no noise measurements were made in the working environment.

In 2024, noise measurements in the working environment were carried out at 8 workplaces at TPP Kostolac B.

4.3.2. Occupational Safety

- **Employee Training**

Employees are trained according to the Health and Safety Training Programme in the Joint Stock Company Elektroprivreda Srbije and in accordance with the procedures of the Health and Ssafety Management System, according to the requirements of ISO 45001 standard. Occasional training is done at least once a year for employees working on tasks with increased risk, and in line with the Risk Assessment Act for TPPs-OCMs Kostolac Branch and Occupational Health and Safety Act. According to the Occupational Health and Safety Act, training within TPP Kostolac is performed whenever new employees are recruited, deployed to new workplaces, in the process of technological changes and the introduction of new equipment and work tools. Training and testing of skills is planned and implemented for employees working at high risk posts.

Further, in TPP Kostolac A and TPP Kostolac B, training was performed for 106 who are employed by other employers.

Table 101 shows number of employees to be trained and number of employees who underwent training in 2024.

Table 101

TPPS-OCMS KOSTOLAC BRANCH					
Employee training in 2024					
Organizational unit	**Number of employees**	**Planned to be trained**		**Trained**	
		No.	**%**	**No.**	**%**
TPP Kostolac A	344	335	97.38	543	162,09
TPP Kostolac B	520	471	90.58	763	162,00
TOTAL: TPPs-OCMs KOSTOLAC BRANCH	**864**	**806**	**93.29**	**1.306**	**162,03**

Note: Some employees underwent more than one training, for example due to relocation to other jobs or as a post injury measure and similar

- **Occupational Accidents**

Table 102 shows data on number of occupational accidents in 2024.

Table 102

TPPS-OCMS KOSTOLAC BRANCH						
Occupational accidents in 2024						
Organizational unit	**Number of employees**	**Occupational accidents – Number of employees' ratio**				
		Mild	**Severe**	**Fatal**	**Total o**	**%**
TPP Kostolac A	344	2	0	0	2	0.58
TPP Kostolac B	520	5	1	0	6	1.15
TOTAL: TPPs-OCMs KOSTOLAC BRANCH	**864**	**7**	**1**	**0**	**8**	**0.93**

4.3.3. Health Protection

All employees at TTPs Kostolac undergo pre-employment and/or periodic medical examinations. Employees are referred to pre-employment medical examinations before they are employed and when they are deployed to a different workplace that has a higher risk factor. Employees working at high-risk posts are referred to periodic medical examinations once a year. Periodic examinations in 2024 were done at Occupational Healthcare Center Pozarevac.

Table 103 shows data on periodic examination of working capability of employees in 2024.

Table 103

TPPS-OCMS KOSTOLAC BRANCH											
Work capability in 2024											
Organizational unit	**Number of employees**	**Perodic examinations**				**Work capabilty**					
		Referred to examination		**Examined**		**Capable**		**Limited capability**		**Incapable**	
		No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
TPP Kostolac A	**344**	335	97.38	335	100.00	322	96.12	13	3.88	0	0.00
TPP Kostolac B	**520**	471	90.58	471	100.00	455	96.60	16	3.40	0	0.00
TOTAL: TPPs-OCMs KOSTOLAC BRANCH	**864**	**806**	**93.29**	**806**	**100.00**	**777**	**96.40**	**29**	**3.60**	**0**	**0.00**

Note: Some employees were referred and examined several times due to transfer to other posts and similar.

4.4. Stakeholders Submissions

There were no stakeholders' submissions regarding environment in 2024.

5. PANONSKE CHPs BRANCH

Panonske CHPPs Branch comprises the following organizational units:

- **CHP Novi Sad**
- **CHP Zrenjanin, and**
- **CHP Sremska Mitrovica**

5.1. Overview and Status of Permits

Overview and status of permits for 2024 are in Table 104.

Table 104

PANONSKE CHPS BRANCH			
Overview and Status of Permits for 2024			
Organizational unit	**Obtained permits and approvals (number and date)**	**New applications for obtaining or extension of valid permits**	**Note**
CHP NOVI SAD	Decision on the issuance of an Integrated Permit, Reg. No. 14, to the operator Electric Power Industry of Serbia JSC – Panonske CHPs Branch – CHP Novi Sad, No. 140-501-400/2023-05 dated 19 February 2024	Consent for independent continuous measurement of air emissions: number 353-01-00293/2019-03 dated 19.09.2019 and number 383892/2024 dated 25.9.2024. of the Ministry of Environmental Protection	An application for issuing an integrated permit was submitted to the competent secretariat of the AP Vojvodina on December 18, 2023, which has not yet completed the proceedings of the subject.
	Decision on the issuance of a Greenhouse Gas (GHG) Emission Permit for CHP Novi Sad, No. 002288930 2024 14850 005 018 501 142 dated 24 October 2024, issued by the Ministry of Environmental Protection		
CHP ZRENJANIN	Decision on the issuance of a Greenhouse Gas (GHG) Emission Permit for CHP Zrenjanin, No. 002288866 2024 14850 005 018 501 142 dated 22 November 2024, issued by the Ministry of Environmental Protection		
CHP SREMSKA MITROVICA	Decision on the issuance of a Greenhouse Gas (GHG) Emission Permit for CHP Sremska Mitrovica, No. 002289168 2024 14850 005 018 501 142 dated 7 November 2024, issued by the Ministry of Environmental Protection		On September 9, 2022, an application with an amendment dated February 7, 2023 was submitted to the Ministry of Environmental Protection to delete the CHP Sremska Mitrovicat from the publicly available list of plants subject to the issuance of an integrated permit.

In 2024, EPS JSC, in accordance with the Regulation on Monitoring and Reporting on Greenhouse Gas Emissions (Official Gazette of the Republic of Serbia, No. 118/2023) and the instructions from the eGHG Platform portal, submitted a Monitoring Plan and a request for issuing GHG permits for the CHP Novi Sad, CHP Zrenjanin and CHP Sremska Mitrovica, after which the Ministry issued a decision with a permit for each facility in 2024.

5.2. Environmental Impact Monitoring

5.2.1. Environmental Impact Monitoring

Air quality monitoring in the vicinity of the Panonske CHPs Branch organizational units is carried out as part of the monitoring financed and organized by individual organizational units (as ordered by inspection). The air quality monitoring is within the competence of the competent authorities, public administration and authorized legal entities (36/2009-60, 10/2013-30, 26/2021-3 (other law)); therefore, air quality monitoring is carried out as part of the national automatic air quality monitoring network, comprising measuring points located in the vicinity of CHP within Panonske CHPs Branch.

Monthly and annual air quality reports in the vicinity of the Panonske CHPs organizational units (when there are measurements) are made available to the local government and public administration upon request.

CHP Novi Sad

No air quality measurements were done in 2024.

CHP Zrenjanin

No air quality measurements were done in 2024**.**

CHP Sremska Mitrovica

No air quality measurements were done in 2024..

5.2.2. Emission Measurements of Matters Affecting Air Quality

Flue gases containing sulphur dioxide, nitrogen oxides and particulate matter are emitted through stacks, with the following heights:

- CHP Novi Sad – 160 m
- CHP Zrenjanin – 160 m
- CHP Sremska Mitrovica:
    1. 105 m, concrete stack,
    2. 77.5 m, brick stack, and

Auxiliary boiler room CHP Sremska Mitrovica (3 boilers, each having its own stack – total 3 small metal stacks)

- 2 metal satcks – 7 m,
- 1 metal stack – 4.7 m.

- In accordance with the legislation, regular periodic measurements of air pollutants are performed, and in CHP Novi Sad control measurements for checking correctness of continuous emission measurements are done as well. Organizational unit CHP Novi Sad performs independent continuous measurement of the emission of polluting substances into the air.

Periodic Measurements of the Polluting Substances Emission into the Air

Emissions of air pollutants for 2023 are given for each CHP individually based on measurements performed by an authorized legal entity the Institute for Occupational Safety, Novi Sad, the Institute Vatrogas, Novi Sad, and Occupational safety and Environmental Protection Belgrade. The programme includes measurement of flue gas condition (temperature, pressure, and humidity), volume flow, oxygen content, as well as mass concentration and calculation of emission factors for

sulfur dioxide (SO2), nitrogen oxides (NOx), carbon monoxide (CO), and particulate matters provided as total carbon. Since 2019, CHP Novi Sad has not been obliged to do periodic emission measurements when it started to docontinuous measurements of air emissions independently based on the Decision of the Ministry of Environmental Protection no. 353-01-00293/2019-03 dated 19 September 2019.

Table 105 summarizes the results of individual measurements of matters emissions affecting air quality for the Panonske CHPs Branch done in 2024.

Table 105

PANONSKE CHPs BRANCH					
Periodic emission measurements of matters affecting air quality in 2024					
Mass concentrations of substances that affect air quality (mg/Nm^3)					
CHP Novi Sad					
Unit	**A1 (K1 and K2)**		**A2 (K3)**		
Heat output	**2x279 MWth**		**320 MWth**		
Heat output at stack	**878 MWth**				
Fuel	**Gas**				
SO2	0		0		
NO_x (NO_2)	672.9		670.4		
CO	4.9		1.4		
Particulate matter	1.7		1		
CHP Zrenjanin					
Unit	**A1 (K1 and K2)**		**A2 (K2, K3, K5,) - out of function**		
Heat output	**2x250 MWth**				
Fuel	**Gas**		-		
SO2	0.77		-		
NO_x (NO_2)	281.62		-		
CO	123.69		-		
Particulate matter	0.44		-		
CHP Sremska Mitrovica					
Unit	**A3 (K3 and K4)**		**AuxiliAry boiler room S-2400**		**BiomAss boiler TE.K - 405**
Heat output	**2x80 MWth**		**2x15 MWth**	**1x14,86 MWth**	**18 MWth**
Fuel	**Gas**	**HeAvy oil**	**Gas**	**Gas**	**Sunflower husk**
ELV					
SO2	-	-	-	< 0.9	1.1
CO	-	-	-	< 0.5	173.1
NO_x (NO_2)	-	-	-	77.48	513.6
Particulate matter	-	-	-	-	4.1
Organic compounds provided as total carbon	-	-	-	-	4.8

In 2024, Boiler 1 at CHP Novi Sad operated for 1,477 hours, Boiler 2 for 2,347 hours, and Boiler 3 for 1,075 hours.

Periodic intermittent measurements of air pollutant emissions were conducted on boilers K2 and K3 during 2024.

In 2024, production plant Unit A1 at CHP Zrenjanin operated for 227 hours (equivalent to 12 days) in January. The production plant was in operation for the optimization and testing of the new SCADA control system. The production plant – Unit A2 operated for 1,432 hours in 2024 (360 hours in January, 249 hours in February, 251 hours in March, 12 hours in April, 267 hours in November, and 293 hours in December). This operation was conducted to provide heating for business facilities.

No periodic intermittent measurements of air pollutant emissions were carried out at CHP Zrenjanin in 2024. Only boiler K1 was in operation for SCADA system optimization. The accredited laboratory that had a contract with CHP Zrenjanin lost its accreditation for air pollutant emission measurements.

An emission calculation was performed based on emission factors for NO_x, SO_x, CO, and particulate matter, using data from the *„EMEP/EEA air pollutant emission inventory guidebook 2023“*, specifically Table 3-14, *„Tier 2 emission factro for source category 1.A.1.a, dry botton boilers using natural gas“* (https://www.eea.europa.eu/publications/emep-eea-guidebook-2023).

For heating the facilities of CHP Zrenjanin, T110 boiler was used, with a heat output of 8.5 MW, on which the emission measurement was performed in December 2023. The results of the measurement of polluting substances in the air did not exceed the emission limit values.

In 2024, the biomass boiler (TE.K – 405, using sunflower husk as fuel) at CHP Sremska Mitrovica operated for 2,086 hours. In the auxiliary boiler plant, the S-2400/2 boiler, running on natural gas, operated for 1,034.5 hours. Unit A3 was not started, while steam boilers S-2400/1 and S-2400/3, running on natural gas, operated for less than 100 hours in 2024.

Continuous Emissions Measurements of Matters Affecting Air Quality

In addition to the basic equipment consisting of analyzers measuring mass concentrations of dust and gases, the additional equipment was also installed on stacks measuring oxygen, carbon dioxide and humidity content as well as temperature, pressure and flue gas flow rate, SO_2, CO, NO_2, NO_x. Data acquisition and processing equipment was also installed.

Table 106 provides an overview of data on equipment for continuous emissions measurement of matters affecting air quality in Panonske CHPs.

Table 106

PANONSKE CHPs BRANCH								
Continuous emission measurement equipment of units in 2024								
Organizational unit	**Particulate matters**	**Pollutants**	**Parameters**					
		Gases	**Content**			**p**	**t**	**Flow**
		SO2, NO_x (NO2), CO	**humidity**	**CO2**	**O2**			
CHP NOVI SAD	1 analyzer	1 analyzer each				1 gauge each		
	Measuring equipment is installed at the elevation of 38.2 m, on the external stack lining. The platform is at the elevation of 37 m, on the external stack lining. Stack height is 160 m							
CHP ZRENJANIN	1 analyzer	1 analyzer each				1 gauge each		
	Measuring equipment is installed at the elevation of 38 m, on the external stack lining. The platform is at the elevation of 37 m, on the external stack lining. Stack height is 160 m.							
CHP SREMSKA MITROVICA	1 analyzer	1 analyzer				1 analyzer each		
	The devices are installed in the horizontal rectangular flue duct of the biomass boiler TE.K – 405, connected to the brick stack 77.5 m high.							

Continuous measurements are in accordance with EN 14181 - QAL1. The software for statistical analysis of continuous measurements data assumes preparation of daily, monthly, and annual reports. The creation of a 48-hour report is assumed only for CHP Novi Sad.

Table 107 provides an overview of air emissions continuous measurements results for CHP Novi Sad in 2024.

Table 107

PANONSKE CHPs BRANCH				
Continuous emissions measurements of matters affecting air quality in 2024 (mg/Nm^3), mean annual values				
Organizational unit	**Particulate matters**	**SO_2**	**CO**	**NO_X (NO_2)**
CHP NOVI SAD	2	0	16.3	423.1

In CHP Novi Sad during 2024, continuous gauges were operational only in January.

- **Annual Emissions of Pollutants Affecting Air Quality**

Table 108 provides an overview of emissions affecting air quality: particulate matters, SO_2, NO_x (NO_2) and CO_2 emissions for the Panonske CHPs Branch in 2024. Annual particulate matter, SO_2 and NO_x (NO_2) emissions were calculated based on the measured mass concentrations, flue gas flow rate and operating time of units, while CO_2 emissions were calculated based on the fuel consumption data shown in Table 109 and corresponding emission factor (CEF).

Table 108

PANONSKE CHPs BRANCH
Emission of matters affecting air quality in 2024 (t/year)

Organizational unit	Particulate matters	SO_2	NO_x (NO_2)	CO_2
CHP NOVI SAD				
UNIT A1	0.8459	0	334.8429	49,641.21
UNIT A2	0.0941	0	63.0531	134,215.11
Stack, both units – continuous measurements	1.1951	0	249.6156	69,001.58
Total: CHP NOVI SAD	**2.1351**	**0**	**647.5116**	**252,857.9**
CHP ZRENJANIN				
UNIT A1	0.012	0.020	7.468	4.897
UNIT A2	0.000	0.000	0.000	0.234
Total: CHP ZRENJANIN	**0.012**	**0.020**	**7.468**	**5.131**
CHP SREMSKA MITROVICA				
Unit A3, K3/K4	0.000	0.000	0.000	0.000
S-2400/1	0.000	0.000	0.000	765.10
S-2400/2	0.000	0.004	0.974	3,097.30
S-2400/3	0.000	0.000	0.000	28.00
Biomass-fired boiler	0.236	0.056	30.261	750.90
Total: CHP SREMSKA MITROVICA	**0.236**	**0.060**	**31.235**	**4,641.3**
Total: Panonske CHPs Branch	**2.3831**	**0.080**	**686.2146**	**257,504.331**

Note: The presented CO_2 emission in biomass-fired boiler is a result of natural gas consumption in the boiler for biomass-fired boiler ignition. Calculation of pollutant emissions does not match the calculation automatically generated from the NRIZ report of the Environmental Protection Agency.

Table 109

PANONSKE CHPs BRANCH			
Fuel consumption in 2024			
Organizational unit	**Fuel type**		
CHP NOVI SAD			
	Gas (kStm³/year)	**Heavy fuel oil (kt/year)**	**Biomass (kt/year)**
UNIT A1	26,542.38348	0.000	-
UNIT A2	71,762.74052	0.000	-
Stack, both units – continuous measurements	36,894.074	0.000	-
Total: CHP NOVI SAD	**135,199.198**	**0.000**	**-**
CHP ZRENJANIN			
UNIT A1	2,531.244	0.000	-
UNIT A2	121.042*	0.000	-
Total: CHP ZRENJANIN	**2,652.286**	**0.000**	**-**
CHP SREMSKA MITROVICA			
Unit A3, K3/K4	0.000	0.000	0.000
S-2400/1	151.041	0.000	0.000
S-2400/2	743.443	0.000	0.000
S-2400/3	10.251	0.000	0.000
Biomass-fired boiler	4.332	0.000	4,331.55
Total: CHP SREMSKA MITROVICA	**909.067**	**0.000**	**4,331.55**
Total: Panonske CHPs Branch	**138,760.551**	**0.000**	**4,331.55**
* Fuel consumption for heating the personal facilities			

- **Air Emissions Compliance with EU Regulation**

Sulphur Dioxide

To reduce the Panonske CHPs Branch SO_2 emissions, the use of heavy fuel oil with sulphur content of up to 1% was planned together with the combined cycle operation – gas/heavy fuel oil.

CHP Novi Sad

Heat output of boilers is 2x279 MW and 1x320MW, whereby when one boiler fires heavy fuel oil with sulphur content up to 1% ELVs will not be exceeded which is in line with EU regulation.

CHP Zrenjanin

Heat output of the boiler is 2x250MW, whereby when one boiler fires heavy fuel oil with sulphur content up to 1% ELVs will not be exceeded which is in line with EU regulation.

CHP Sremska Mitrovica

Heat output of the boiler and auxiliary boiler are 2x80MW and 2x15MW and 14.86MW respectively. When one boiler fires heavy fuel oil with sulphur content up to 1% ELVs will not be exceeded, which is in line with EU legislation. There is also an 18 MW biomass-fired boiler where an authorized legal entity measured low SO_2 emission during its operation which is below proposed ELV.

Nitrogen Oxides

CHP Novi Sad, CHP Zrenjanin and CHP Sremska Mitrovica

To reduce the content of nitrogen oxides, it is planned to prepare a study titled as “Conceptual solution for reducing the content of nitrogen oxides in the steam boiler TGM-84 / B” and "Feasibility study with the preliminary design for reducing the NO_x content in the boiler TGME 464 / C” in CHP Novi Sad.

5.2.3. Emission Measurements of Matters Affecting Water Quality

Measurement of emissions that affected water quality in 2024 are provided for every CHP separately, based on the tests done by authorized legal entity – Institute for Occupational Safety, JSC Novi Sad.

CHP Novi Sad

The greatest consumption of process water in CHP Novi Sad is the water for steam cooling in condensers, there is a circulating cooling system, while water is supplied from the Danube. Return cooling water and all other industrial wastewater (water from the demineralization process and oily water after primary and secondary treatment) is after treatment discharged into the Danube. A small share of water is used to produce demineralized and soft water.

Sanitary-sewage water and storm drainage has been discharged into the city wastewater collector since November 2012. The Danube water belongs to class II.

Wastewater quality and its impact on the Danube is controlled 4 times a year pursuant to the Law on Water. 30/2010-81, 93/2012-27, 101/2016-9, 95/2018-388, 95/2018-267 (other law). CHP Novi Sad wastewater is discharged over three outlets:

- storm drainage;
- sanitary-sewage water system; since 2013, quality of this wastewater has not been subjected to a control, given that the system is connected to the city wastewater collector;
- cooling water channel.

Monitoring programme includes the following physical-chemical parameters: temperature (both water and air), barometric pressure, color, odor, visible substances, settleable substances, dry residu, ignited residue, loss on ignition; electrical conductivity; toxicity; AOX, pH value, turbidity; ammonia; inorganic nitrogen, cyanides, suspended solids, dissolved oxygen, COD, BOD_5, total phosphorus, mineral oils, Pb, Cd, Cu, Cr, Ni and Zn.

Wastewater sampling is performed on 7 measuring points, as follows:

1. Storm drainage – last manhole inside the CHP Novi Sad;
2. Return cooling and process water – the Danube discharge point
3. Danube water – 100 m downstream from the cooling water discharge;
4. Danube water – 100 m upstream from the cooling water discharge;
5. Neutralisation basin;
6. Oily water at the oily water treatment plant inlet – primary treatment;
7. Oily water after secondary treatment (carbon filters).

In 2024 wastewater quality was controlled 4 times.

CHP Zrenjanin

Water used for condenser water vapour cooling has the highest share in the total quantity of process water used by the CHP Zrenjanin. CHP Zrenjanin cooling water system is of the recirculation type including a turbine condenser, cooling towers, cooling water pumps, pipes and reinforcement. Decarbonized water is used as an operating fluid by the cooling water system. The Begej River water is used to produce demineralized and decarbonized water.

Wastewater (from boiler chemical cleaning, cleaning and passivation of water channels and oily water) is discharged after treatment into the Aleksandrovac channel and subsequently into the Begej River. Aleksandrovac channel belongs to Category IV, while the Begej River water belongs to Category II.

Decarbonisation and clarification processes wastewater is fed back to the process while the resulting sludge cakes is transported and disposed at the landfill.

Acid-alkaline water originating from the demineralization process is neutralized and discharged into the Aleksandrovac channel. Acid-alkaline wastewater from regenerative air heater washing is processed (neutralization and sedimentation) and returned to the process as filtrate.

Oily wastewater is also treated (through carbon-anthracite filters) and subsequently discharged into the Aleksandrovac channel.

Sanitary-sewage water is after mechanical-biological treatment by the PUTOX plant discharged over a special channel into the Aleksandrovac channel.

CHP Zrenjanin wastewater quality and its water recipient impact is controlled 4 times a year. Sampling of wastewater and water from Aleksndrovac channel is performed on 5 measuring points, as follows:

Sanitary-sewage water (PUTOX) – before treatment and after treatment

Neutralization pit,

Aleksandrovac channel before discharge,

Aleksandrovac channel after discharge,

Oily water – before inlet in the treatment plant and at the outlet of the treatment plant.

After all measurements performed during the year, an authorized legal entity issues a certificate for the efficiency of the wastewater treatment plant operation (PUTOX) and oily and oily water treatment plants operation.

Monitoring programme includes the following physical-chemical parameters: temperature, pH value, electrical conductivity, dissolved oxygen, turbidity, suspended substances, sedimentary matter, alkalinity, acidity, COD, BOD_5, permanganate demand, chloride demand, total nitrogen, total phosphorus, ammonia, nitrites, nitrates, phosphates, sulphates, phenol index, hardness, grease and oil. Sampling was conducted within the Zrenjanin CHPP grounds, Aleksandrovac channel.

In 2024, wastewater quality was controlled 4 times.

CHP Sremska Mitrovica

Water used for T/G 32 MW turbine condenser cooling has the highest share in the total quantity of process water used by the CHP Sremska Mitrovica. CHP Sremska Mitrovica has a continuous

cooling system and is supplied by water from the Sava River. Return cooling water is discharged into the Sava River. The Sava River is classified as a class II watercourse.

One drilled well is located on the land jointly owned by the ISTEP Company and CHP Sremska Mitrovica. Water from this well acquires quality of drinking water upon deferrization process.

Wastewater are not discharged directly into the recipient but after processing in wastewater treatment plant (oily wastewater and heavy fuel oil contaminated wastewater plant and sludgy water treatment plant) and from the neutralization pool in the plant for chemical water treatment is discharged through the pipeline network for waste, process, and purified water, through control-gauging manhole into the city industrial-sewage collector.

After processing in sewage water treatment plant sanitary water is discharged through sewage pipeline network into the city industrial-sewage collector.

CHP Sremska Mitrovica wastewater quality is controlled 4 times a year. Wastewater from CHP Sremska Mitrovica is discharged via three outlets as:

- Cooling water into recipient the Sava River;
- Part of the wastewater from the accelerator is joined with the wastewater from from ISTEP Company and subsequently as one discharged into the recipient ;
- Sanitary wastewater, after the treatment, is discharged through a separate pipeline into the city industrial-sewage collector;
- Wastewater (from HPV plant, from boilers desludging, water from oil-containing water separators, treated sludgy water) is discharged through through a separate pipeline throught control-gauging manhole into the city industrial-sewage collector.

Monitoring programme includes the following physical-chemical parameters: temperature, pH value, suspended matters, COD, BOD5; ammonia, nitrates, nitrites, total inorganic nitrogen, total phosphorus, mineral oils, sediments, electrical conductivity, dissolved oxygen, cyanides, Pb, Cu, Ni, Zn, Cr, Fe, Cd.

Wastewater sampling is carried out four times a year at 9 measuring points:

1. Wastewter coming from control- gauging manhole at the discharging point into the city collector;
2. Wastewater coming from the last manhole before pouring into the Sava River;
3. Wastewater after boiler sludge removal;
4. Wastewater at the inlet and outlet of the plant for oily water treatment;
5. Wastewater at the inlet and outlet of the plant for sludgy water treatment;
6. Wastewater at the inlet and outlet of the plant for sewage water treatment.

Sampling of the recipient, the Sava River, was done at 2 measuring points:

- At the water inlet into the water intake and
- After the wastewater discharge into the recipient.

Wastewater quality in 2024 was controlled 4 times.

Table 110 shows analysis of wastewater, watercourse - recipient water quality data for 2024 in terms of their legal compliance for Panonske CHPs Branch“.

In the case of surface waters, legal compliance is evaluated by comparing the measured values of pollutant concentrations with the limits defined by the Regulation on limit values for pollutants in surface and ground waters and sediments, and deadlines for their achievement (OG RS No. 50/2012) while wastewater values are compared with the limits defined by the Regulation on limit values of pollutants in water and deadlines for their achievement (OG RS No. 67/2011, 48/2012 and 1/2016).

Table 110

PANONSKE CHPs BRANCH			
The quality of wastewater and receiving water in 2024			
Type of water	**Organizational unit**		
	CHP Novi Sad	**CHP Zrenjanin**	**CHP Sremska Mitrovica**
Wastewater	No exceedance in 2024	Q1 – Q4 – Non-compliance Sanitary-fecal water – AOX (Q2) Oily water – Total inorganic nitrogen (Q1) Neutralization pit – pH (Q1, Q2, Q3)	Q2 – Non-compliance for parameter iron (Fe) in the sludge pit of the biomass boiler, at the outlet of the sanitary-fecal water treatment facility, and at the outlet of the oily and contaminated water treatment facility. Q3 – Non-compliance for parameter iron (Fe) in the sludge pit of the biomass boiler
Recipient	No exceedance in 2024	Non-compliance with water class II Before discharge: BOD_5, COD, total phosphorus (all quarters); ammoniacal nitrogen (Q1, Q2); dissolved oxygen (Q2); nitrite nitrogen (Q2); AOX (Q3). After discharge: BOD_5, COD, total phosphorus (all quarters); ammoniacal nitrogen (Q1, Q3, Q4); nitrite nitrogen (Q3); dissolved oxygen (Q2, Q3); suspended solids (Q2); AOX (Q2, Q3).	Q1 – Q4 – Non-compliance with water class II, parameter: iron (Fe)

- **Water Quantities**

Table 111 gives an overview of the quantities of captured and released water in the organizational units of the Panonske CHPs Branch for 2024. The calculation of the annual quantities was made based on the data on the capacity and operating time of the water intake and discharge pumps and flow meters.

Table 111

PANONSKE CHPs BRANCH								
Quantities of captured and released water in 2024 (m3 /year x103)								
Organizational unit	**Captured water**				**Discharged wastewater**			
	Quantities used		**Quantities permitted**					
	Surface	**Ground**	**Surface**	**Ground**	**Return cooling water**	**Oily water**	**Sanitary wastewater**	**Other (neutralization pit and lave washing)**
CHP Novi Sad	42,272.092	-	45,452.16	-	41,853.337	1.77	3.725	10.000
CHP Zrenjanin	161.797	-	-	-	-	3.61643	0.6963	4.221
CHP Sremska Mitrovica	15.623	7.780	-	*44.150	-	-	5.451	8.429
Total: Panonske CHPs Branch	**42,449.512**	**7.780**	**45,452.16**	***44.150**	**41,853.337**	**5.38643**	**9.8723**	**22.650**

*Data taken from the Book of records on the state of ground water reserves at the source of CHP Sremska Mitrovica

- **Improvements Aimed at Reducing the Impact of Wastewater on Surface and Ground Water**

For controlling the possible contamination of groundwater, which could occur due to the activities of production plants, periodic controls of the quality of groundwater and determination of the level of groundwater were carried out by the Panonske CHPs Branch. Periodic tests of physical and chemical analyzes were carried out in December of 2024.

CHP Novi Sad

For controlling the possible contamination of groundwater, which could occur due to the activities of production plants, periodic controls of the quality of groundwater and determination of the level of groundwater were carried out by the Panonske CHPs Branch. In 2024, two groundwater tests were carried out.

CHP Zrenjanin

In 2024, groundwater tests was carried out once in accordance with the Law.

CHP Sremska Mitrovica

In 2024, two groundwater tests were carried out.

5.2.4. Measuring Concentration of Polluting, Harmful and Hazardous Substances in the Soil

So far, soil testing has been carried out as part of the studies: "Monitoring of soil contamination around tanks and liquid fuel transfer stations in EPS JSC" and "Monitoring of the system of oil pans and pits in EPS JSC plants."

Soil testing was conducted in accordance with the Regulation on Limit Values of Polluting, Harmful, and Hazardous Substances in the Soil (OG of RS, No. 30/2018 and 64/2019). The testing was performed by the accredited laboratory Anachem, and sampling is planned for 2023, 2024, and 2025, with subsequent testing every five years if no soil contamination is detected.

CHP Novi Sad

Soil quality testing was conducted in 2024. Limit values were not exceeded, and therefore, no remediation values were surpassed.

CHP Sremska Mitrovica

Soil quality testing was conducted in 2024. Nickel and cobalt concentrations in all tested samples exceeded the limit values, while lead concentration exceeded the limit at only one measuring point. There were no exceedances of remediation values.

CHP Sremska Mitrovica

Soil quality testing was conducted in 2024. Exceedances of the limit values were observed for nickel, cobalt, cadmium, arsenic, mercury, copper, lead, and zinc in one or more tested samples.

Based on the performed physico-chemical analyses in all soil samples, it was concluded that the measured concentrations of all examined parameters did not exceed the remediation values for concentrations of hazardous and harmful substances in the soil.

5.2.5. Environmental Noise Measurement

Enivronmental noise measurement in CHPs Panoncke Branch in 2023 was done by an accredited legal entity, "Institute for Occupational Safety" JSC Novi Sad in accordance with the Environmental Noise Protection (OG of RS, No. 96/21), Rulebook on Noise Measurement Methods, Content and Scope of Environmental Noise Measurement Reports (OG No. 139/22), Rulebook on the Conditions for Professional Organizations Conducting Environmental Noise Measurements, Required Documentation, Authorization Procedure, Content of Authorization Decision, and Validity of Noise Measurement Reports (OG of RS, No. 139/2022) and the Regulation on noise indicators, limit values, methods for evaluating noise indicators, disturbance and harmful effects of noise in the environment (OG of RS, No. 75/2010).

CHP Novi Sad

In 2024, short-term and continuous noise measurements were carried out for the purpose of preparing a Noise Reduction Study for CHP Novi Sad which, in addition to measurements, contains Noise Management Plan and Noise Reduction Program (Study No. 2413050000007-2 dated 24 April 2024).

By the Decision on determining acoustic zones in the territory of the city of Novi Sad (Official Gazette of Novi Sad, No. 24/2015 and 32/2017), no zoning was done for the area in the vicinity of CHP Novi Sad, so the limit values of the noise level being 65 dB for the day and for evening period from 6 p.m. to 10 p.m. and 55 dB for the night period from 10 p.m. to 6 a.m. are applied.

The Integrated Permit prescribes a noise level limit of 65/55 dB.

CHP Zrenjanin

At CHP Zrenjanin, environmental noise measurements were not done in 2024. Noise measurements will be carried out in 2025 in accordance with the Law.

On the territory of the city of Zrenjanin, no acoustic zoning of the area was done, pursuant to Article 17 of the Environmental Noise Protection Law (OG of RS, No. 96/21), the maximum prescribed limit values from the Regulation on noise indicators, limit values, methods for evaluating noise indicators, disturbance and harmful effects of noise in the environment (OG of RS, No. 75/2010) are applied, that is, for the limit values of the noise level, 65 dB is applied for the day and evening period from 6 p.m. to 10 p.m. and 55 dB for the night period from 10 p.m. to 6 a.m.

CHP Sremska Mitrovica

In CHP Sremska Mitrovica, environmental noise was measured in October 2024.

Noise measurement is planned once a year in the full operating period as per the Environmental Impact Assessment Study of the adaptation, delivery, installation works and commissioning of the biomass hot water boiler plant and the system for connecting to the existing installations CHP Sremska Mitrovica on cadastral plot number 5933/7 CM Sremska Mitrovica and the Environmental Impact Assessment Study of the treatment of waste silted water generated in the process of preparing industrial and decarbonized water on cadastral plot number 5933/8 CM Sremska Mitrovica. Table 112 shows the noise level in 2024.

Table 112

<table>
<tr><td colspan="5">PANONSKE CHPs BRANCH</td></tr>
<tr><td colspan="5">Noise level in 2024 (dB)</td></tr>
<tr><td rowspan="8">Noise indicators limit values, Regulation stipulating noise indicators, limit values, methods assessing noise indicators, disturbance levels and harmful living environment noise effects (OG RS No. 75/10)</td><td rowspan="2">Purpose of the area</td><td>Day and evening</td><td colspan="2">Night</td></tr>
<tr><td>35</td><td colspan="2">30</td></tr>
<tr><td>Areas for rest and recreation, hospital zones and rehabilitation centers, cultural and historical sites, large parks</td><td>50</td><td colspan="2">40</td></tr>
<tr><td>Tourist areas, camps and school zones</td><td>50</td><td colspan="2">45</td></tr>
<tr><td>Purely residential areas</td><td>55</td><td colspan="2">45</td></tr>
<tr><td>Commercial-residential areas, trading- residential areas and children’s playgrounds</td><td>60</td><td colspan="2">50</td></tr>
<tr><td>City center, trading, crafts, administrative zones containing flats, zones along motorways, state and city roads</td><td>65</td><td colspan="2">55</td></tr>
<tr><td colspan="3">Industrial, storage and service areas and transport terminals without residential buildings</td><td colspan="2">At the border of this zone, the noise must not exceed the limit value in the bordering zone</td></tr>
<tr><td>Organizational unit</td><td colspan="4">CHP Sremska Mitrovica</td></tr>
<tr><td>Measuring Point</td><td>MM-1</td><td>MM-2</td><td>MM-3</td><td>MM-4</td></tr>
<tr><td>Day</td><td>40.0 – 46.5</td><td>34.6 – 38.4</td><td>31.7 – 37.0</td><td>38.3 – 44.3</td></tr>
<tr><td>Evening</td><td>42.3 – 43.4</td><td>40.4 – 40.6</td><td>37.6 – 38.9</td><td>35.4 – 37.2</td></tr>
<tr><td>Night</td><td>41.2 – 43.2</td><td>40.2 – 41.2</td><td>41.4 – 42.0</td><td>36.7 – 39.5</td></tr>
</table>

5.2.6. Waste

The waste generation in 2024 is shown in Table 104 according to the Serbian Waste Management regulations.

Table 113

PANONSKE CHPs BRANCH								
Generated types of waste in 2024								
No.	**Rulebook on categories, testing and classification of waste (Official Gazette of RS No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit**	**Organizational unit**				**Note**
				CHP Novi Sad	**CHP Zrenjanin**	**CHP Sremska Mitrovica**	**Total Panonske CHPs**	
	Name	**Index No.**		**Quantities of generated waste**				
1.	Waste printer cartridges other than those indicated under 08 03 17	08 03 18	t	-	0.020	-	**0.020**	Waste printer cartridges
2.	Boiler slag and dust (other than the boiler dust mentioned in 10 01 04)	10 01 01	t	-	-	50.960	**50.960**	Waste biomass-firing boiler ash
3.	Co-firing boiler slag and dust other than those in 10 01 14	10 01 15	t	-	-	138.700	**138.700**	Waste biomass-firing boiler ash
4.	Mineral-based non-chlorinated engine, gear and lubricating oils	13 02 05*	t	2.180	0.450	-	**2.630**	Turbine oil
5.	Synthetic engine oils, transmission oils and lubrication	13 02 06*	t	1.060	-	-	**1.060**	Gear oil
6.	Other oils for insulation and heat transfer	13 03 10*	t	-	7.800	-	**7.800**	Transformer oils
7.	Other fuels (including mixtures)	13 07 03*	t	1.480	-	-	**1.480**	Waste from heavy fuel oil tank cleaning
8.	Packaging with residue of hazardous substances or contaminated with hazardous substances	15 01 10*	t	0.420	-	-	**0.420**	Oil barrels
9.	Absorbent, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	15 02 02*	t	0.160	-	0.005	**0.165**	Waste oily absorbent materials – sawdust and wiping cloths / oily sand
10.	Absorbents, filter materials, wiping cloths, and protective clothing other than those specified in 15 02 02	15 02 03	t	-	-	1.191	**1.191**	Bags from the bag filter of the biomass boiler
11.	Waste tires	16 01 03	t	0.200	-	-	**0.200**	Automobile tires
12.	Lead batteries	16 06 01*	t	0.480	1.815	-	**2.295**	Lead batteries
13.	Bricks	17 01 02	t	-	-	3.223	**3.223**	Grog
14.	Plastics	17 02 03	t	-	-	0,200	**0,200**	Construction plastic
15.	Iron and steel	17 04 05	t	1.940	0.680	0.025	**2.645**	Parts of decommissioned forklifts, fittings, pipes, metal sheets, valves

PANONSKE CHPs BRANCH								
Generated types of waste in 2024								
No.	**Rulebook on categories, testing and classification of waste (Official Gazette of RS No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit**	**Organizational unit**				**Note**
				CHP Novi Sad	**CHP Zrenjanin**	**CHP Sremska Mitrovica**	**Total Panonske CHPs**	
	Name	**Index No.**		**Quantities of generated waste**				
16.	Cables other than those mentioned in 17 04 10	17 04 11	t	0.100	-	0.021	**0.121**	Copper cables with insulation
17.	Insulation material other than those provided in 17 06 01 and 17 06 03	17 06 04	t	16.790	-	-	**16.790**	Waste mineral wool
18.	Construction materials containing asbestos	17 06 05*	t	-	-	0.680	**0.680**	Corrugated sheets
19.	Sludge from water decarbonization	19 09 03	t	226.48	-	-	**226.48**	-
20.	Spent activated carbon	19 09 04		-	-	1.080	**1.080**	
21.	Saturated or exhausted ion-exchanging resins	19 09 05	t	-	-	2.750	**2.750**	Waste ionic resin
22.	Plastics and rubber	19 12 04	t	0.100	-	-	**0.100**	Plastic pipes
23.	Fluorescent tubes and other waste containing mercury	20 01 21*	t	0.105	-	0.019	**0.124**	Waste fluorescent tubes
24.	Discarded electrical and electronic equipment which contains hazardous components	20 01 35*	t	0.120	-	0.144	**0.264**	-
25.	Discarded electrical and electronic equipment other than that under 20 01 21, 20 01 23 and 20 01 35	20 01 36	t	-	-	0.143	**0.143**	-
26.	Plastics	20 01 39	t	-	-	0.063	**0.063**	Hoses from the sunflower husk suction system
27.	Bulk waste	20 03 07	t	0.160	-	-	**0.160**	-

Note: The stated quantites of waste were determined by free estimation. The actual quantities are determined when handing over the waste to authorized operators by weighing it on a scale verified by authorized organizations
*hazardous waste

Table 114 presents the quantities of delivered waste and the R/D waste management operations conducted by an authorized legal entity, in accordance with the waste handover contract and Annex 6 of the Rulebook on Waste Categories, Testing, and Classification.

Table 114

PANONSKE CHPs BRANCH									
Delivered quantities of waste in 2024									
No.	**The official nomenclature of Rulebook on categories, testing and classification of waste (Official Gazette of RS, No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit of measurement**	**Organizational unit**				**Operation R/D**	**Note**
				CHP Novi Sad	**CHP Zrenjanin**	**CHP Sremska Mitrovica**	**Total Panonske CHPs Branch**		
	Name	**Index No.**		**Quantities of generated waste**					
1.	Waste printer cartridges other than those indicated under 08 03 17	08 03 18	t	-	0.020	-	**0.020**	R13	

2.	Slag and dust from boiler (except the dust from boiler stated in 10 01 04	10 01 01	t	-	-	50.960	**50.960**	D5	Waste biomass-firing boiler ash
3.	Co-firing boiler slag and dust other than those in 10 01 14	10 01 15	t	-	-	175.860	**175.860**	D5	Waste biomass-firing boiler ash
4.	Sandblasting waste other than those mentioned in 12 01 16	12 01 17	t	-	-	0.940	**0.940**	R13	Sand after tank rubberization
5.	Mineral non-chlorinated motor oils, transmission oils and lubricants	13 02 05*	t	2.180	-	-	**2.180**	R13	Turbine oil
6.	Synthetic engine oils, transmission oils and lubrication	13 02 06*	t	1.060	-	-	**1.060**	R13	Gear oil
7.	Other fuels (including mixtures)	13 07 03*	t	1.480	-	-	**1.480**	R13	Waste from heavy fuel oil tank cleaning
8.	Packaging with residue of hazardous substances or contaminated with hazardous substances	15 01 10*	t	0.420	-	-	**0.420**	R13	Oil barrels
9.	Absorbent, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	15 02 02*	t	0.160	0.180	0.160	**0.500**	R13	Waste oily absorbent materials – sawdust and wiping cloths / oily sand
10.	Bricks	17 01 02	t	-	-	18.720	**18.720**	R13	Fireclay brick
11.	Insulation material other than those provided in 17 06 01 and 17 06 03	17 06 04	t	23.100	0.220	-	**23.320**	R13	Mineral wool
12.	Construction materials containing asbestos	17 06 05*	t	-	-	0.680	**0.680**	R13	Corrugated sheets
13.	Sludge from water decarbonization	19 09 03	t	226.480	-	-	**226.480**	R13	-
14.	Saturated or exhausted ion-exchanging resins	19 09 05	t	-	-	4.660	**4.660**	R13	Ion mass
15.	Fluorescent tubes and other waste containing mercury	20 01 21*	t	0.120	0.180	-	**0.300**	R13	-

*hazardous waste

5.3. Working Environment Monitoring, Occupational Health and Safety

Reports on occupational health and safety for 2024 include the following elements:

- **Working Environment Monitoring**
  - measurement of working environment noise
- **Occupational Safety**
  - employee training
  - occupational accidents
- **Health Protection**

5.3.1. Working Environment Monitoring

- **Measurement of Working Environment Noise**

CHP Novi Sad

Measurement of working environmental noise was not done in 2024.

CHP Zrenjanin

Measurement of working environmental noise was not done in 2024.

CHP Sremska Mitrovica

Measurement of working environmental noise was not done in 2024.

Work environment testing was not conducted in 2024. Workplace noise testing in the Panonske CHPs Branch will be carried out in 2025. Testing is currently being organized at CHP Sremska Mitrovica and CHP Novi Sad, while at CHP Zrenjanin, it will be conducted once the plant is operational. In locations where noise levels exceed the permitted limits and cannot be reduced through technological measures, employees implement protective measures during plant inspections by using earmuffs (antiphons).

5.3.2. Occupational Safety

- **Employee Training**

Training for safe and healthy work – internal, general training for OSH in 2024 are provided in Table 115.

Table 115

PANONSKE CHPs BRANCH		
Employee training in 2024		
Organizational unit	**Number of the trained**	**Note-internal training**
Head Office	1	For changing the post or when employed, not high-risk posts
CHP Novi Sad	128	High-risk posts, changing the post or not high-risk posts
CHP Novi Sad	120	Introducing contractors of works and services with hazards and harms, OSH actions and code of conduct and agencies
CHP Novi Sad	2	Introducing students and apprentices with hazards and harms, OSH actions and code of conduct
CHP Zrenjanin	92	High-risk posts, changing the post or not high-risk posts
CHP Zrenjanin	84	Introducing contractors of works and services with hazards and harms, OSH actions and code of conduct and agencies
CHP Zrenjanin	22 students and 2 professors, 5 final-year students (third grade)	Introduction of Students and apprentices during organized visits to CHPs and for students participating in practical training and professional internships, they are introduced to hazards and harmful factors, occupational safety measures, and behavior rules. (Practical training is conducted three days a week throughout the school year.)
CHP Sremska Mitrovica	62	High-risk posts, changing the post or not high-risk posts
CHP Sremska Mitrovica	36	Introducing contractors of works and services with hazards and harms, OSH actions and code of conduct and agencies
CHP Sremska Mitrovica	4	Introducing students and apprentices with hazards and harms, OSH actions and code of conduct

Other training in 2024 – external trainings are given in Table 116.

Table 116

PANONSKE CHPs BRANCH			
Other training in 2024			
Organizational unit	**Type of training**	**No. of persons**	**Note**
CHP Zrenjanin	General training and knowledge assessment in fire protection	93	Internal – Fire Protection Officer
CHP Sremska Mitrovica	Professional training of drivers for tha transport of hazardous loads (ADR)	18	-

- **Occupational Accidents**

Table 117 provides data on the number of occupational accidents in 2024.

Table 117

PANONSKE CHPs BRANCH						
Occupational accidents in 2024						
Organizational unit	Number of employees	Injuries – employees' ratio				
		Mild	Severe	Fatal	Total	%
Head Office	39	1	0	0	1	2.56
CHP Novi Sad	144	6	0	0	6	4.17
CHP Zrenjanin	90	0	1	0	1	1.11
CHP Sremska Mitrovica	62	0	0	0	0	0.00
TOTAL: PANONSKE CHPs BRANCH	**335**	**7**	**1**	**0**	**8**	**2.39**

5.3.3. Health Protection

Medical examinations have been conducted for employees working in high-risk positions, as well as systematic, gynecological, and oncological medical examinations, along with specialist examinations (cardiac ultrasound with a cardiologist's examination and thyroid ultrasound with an endocrinologist's examination, including thyroid enzymes TSH, T3, and T4).
Table 118 provides data on periodic examinations of employees working at workplaces with increased risk in 2024 in the Panonske CHPs Branch.

Table 118

PANONSKE CHPs BRANCH											
Work capability in 2024											
Organizational unit	Number of employees	Perodic examinations				Work capabilty					
		Referred to examination		Examined		Capable		Limited capability		Not capable	
		Број	%	Број	%	Број	%	Број	%	Број	%
Head Office	39	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
CHP Novi Sad	144	117	81,25	117	100,00	37	31,62	79	67,52	1	0,85
CHP Zrenjanin	90	72	80,00	72	100,00	40	55,56	32	44,44	0	0,00
CHP Sremska Mitrovica	62	51	82,26	51	100,00	46	90,20	5	9,80	0	0,00
TOTAL: PANONSKE CHPs BRANCH	**335**	**240**	**71,64**	**240**	**100,00**	**123**	**51,25**	**116**	**48,33**	**1**	**0,42**

5.4. Stakeholders Submissions

There were no stakeholders' submissions regarding environment in 2024.

6. HPPs DJERDAP BRANCH

6.1. Overview and Status of Permits

An overview and status of permits, licenses and other required approvals, as well as new requirements for obtaining or renewing valid licenses and approvals during 2024, is shown in Table 119.

Table 119

HPPs DJERDAP BRANCH			
Overview and status of permits in 2024			
Facility	**Permits and approvals obtained (Number and date)**	**New applications for obtaining or renewing valid permits**	**Note**
VLASINSKE HPPs, SURDILICA	Water permit 325-04-232/2023-07 from 07 August 2023 valid until 7 August 2025	The request is being prepared	-
PRP LISINA	Water permit 325-04-232/2023-07 from 07 August 2023 valid until 7 August 2025	The request is being prepared	-
HPP PIROT	Approval of the Protection and Rescue Plan3501-1203.-140377/2-24 од 19.03.2024	-	-

6.2. Environmental Impact Monitoring

Environmental protection in the HPPs Djerdap in 2024 was carried out in accordance with legal and sublegal regulations and in compliance with the requirements of the certified ISO 14001:2015 Environmental Management System standard.

6.2.1. Identified Adverse Impacts on the Flow and Ecological System Downstream from the Reservoir

In 2024, no negative impacts on the flow and ecological system downstream from the reservoir were registered in the the HPPs Djerdap Branch, except for the HPP Djerdap 1 and the HPP Djerdap 2, where the incidents with no impact to the flow were registered and with no significant and proven impact to the ecological system downstream from the reservoir.

HPP Djerdap 1:

On September 25, 2024, at 23:52h, probes were activated on the middle gates of the ship lock at HPP Djerdap 1 in Kladovo (Geiger counters for radioactivity) as the ship “Rnenus Constanta” passed from the lower chamber to the upper chamber. The measured values on the Geiger counter were:
Probe I - 0.402 and 0.294 µSv/h
Probe II - 0.393 and 0,549 µSv/h.

HPP Djerdap 2:

The following incidents were recorded in 2024.

- Incident Report - HPP Djerdap 2 Intervention Team: Hydraulic oil leakage in the ship lock area, oil spill degradation on the Danube watercourse, and collection of spilled oil from the concrete surface (Report No. 2560500.01.02.-267266/1-2024 dated 25.03.2024).
- Incident Report - HPP Djerdap 2 Intervention Team: Hydraulic oil leakage in the ship lock area, oil spill degradation on the Danube watercourse (Report No. 2560500.01.02.-286417/1-2024 dated 29.03.2024).
- Rescue Intervention Report: Extraction and rescue of trapped fish from section A1 of the siphon gate (Report No. 2560500.01.02.-1443025/1-2024 dated 27.12.2024).

6.2.2. Water

- **Water Quantity**

The use of water for hydroelectric power generation, technical water, and sanitary (wastewater) purposes was carried out within the permitted quantities. The permitted and utilized water quantities for electricity production, as well as the discharged water quantities after electricity generation for the year 2024, are provided in Table 120.

Table 120

HPPs DJERDAP BRANCH							
Water quantities in 2024							
Facility		Number of units	Permitted water quantity (installed discharge per unit) m3/s	Discharged water quantites			
				Water used for electricity generation in 2024 m^3/ year x106	Process water m^3/ year x106	Sanitary water m^3/ year.x10^3	Total discharged water m^3/ year.x10^6
HPP DJERDAP 1		6	800	86,108.000	105,822.86624	191.16	192,197.0574
HPP DJERDAP 2		10	422	78,578x 10^6 m3	40.4x 10^6 m3	126.1	44.8
HPP PIROT		2	22.5	138.77	0.013	2.875	138.783
VLASINSKE HPPs	Vrla 1	4	I and II – 8.1 III and IV – 10	113.12	2.629	7.300	115.756
	Vrla 2	2	I – 8.5 II - 10	136.59	1.427	3.700	138.054
	Vrla 3	2	I – 8.4 II – 10	151.55	2.035	10.300	153.595
	Vrla 4	2	I – 8.4 II – 10	168.91	1.508	3.700	170.422
	PRP Lisina – pump plant	2	I – 3.6 II – 3.6	69.34	0.601	3.500	70.034

- **Water Quality**

Based on contractual obligations related to surface water monitoring, sampling and analysis are carried out by "ANACHEM LABORATORY," Belgrade, according to the contract, while wastewater sampling and analysis are performed by MIPHEM d.o.o. Belgrade under the Contract for Wastewater Sampling, Lot 2, No. 01.01.-596768-32-2023 dated 27.11.2023. They conducted the sampling of wastewater and surface water from all power facilities within EPS JSC, HPP Đerdap Branch, in 2024.

Three samples were taken from the power facilities of the HPPs Djerdap Branch, as follows:

- wastewater sample at the place of discharge
- surface water sample upstream of the facility
- surface water sample downstream of the faciity

which were both chemically and bacteriologically analyzed, and the interpretation of the results was performed in accordance with the Regulation on limit values of pollutants in surface and groundwater and sediment and deadlines for their achievement (Official Gazette of RS, No. 50/2012), Rulebook on parameters of ecological and chemical status of surface waters and parameters of chemical and quantitative status of groundwater (Official Gazette of RS, No. 74/2011), Regulation on limit values of emissions of pollutants into water and deadlines for their achievement (Official Gazette of RS, No. 67/2011 and 48/2012 and 1/16), the Regulation on the Classification of Waters (Official Gazette of SFRY, No. 6/1978), the Regulation on the classification of waters of inter-republican watercourses, interstate waters and coastal waters of Yugoslavia (Official Gazette SFRY, No. 6/78), Decision on maximum permissible concentrations of radionuclides and hazardous substances in inter-republican watercourses, interstate waters and coastal waters of Yugoslavia (Official Gazette of the SFRY, No. 8/78) and the Law on Waters (Official Gazette of RS, No. 30/2010, 93/2012, 101/2016, 95/2018 and 95/2018 -other law). The results obtained by chemical and bacteriological analysis of surface water samples in 2024 are given in Table 121 and of wastewater in Table 122.

Table 121

HPPs DJERDAP BRANCH															
Surface waters in 2024															
Facility	**Test parameters (Unit of measure)**	**2024 Surface water quality test results**													
		Q1			**Q2**			**Q3**			**Q4**				**Comment for test results and conclusion (Comment for the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewer system-before discharge	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**Limit values for surface water (class II)**	
HPP DJERDAP 1	MPN coliform. bacteria. cfu/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	In the first quarter, based on the obtained results for surface water upstream and downstream, it can be concluded that the examined parameters predominantly meet class I water quality, except for the following parameters: total nitrogen, $KMnO_4$ consumption, nitrites, and iron, which belong to class II TOC, COD, BOD_5, total phosphorus, which correspond to class III, and orthophosphates, which correspond to class IV upstream and downstream of the facility. These parameters were determined in accordance with the Regulation on Limit Values of Pollutants in Surface and Groundwater and Sediments and Deadlines for Their Achievement (Official Gazette of RS, No. 50/2012)
	Dissolved O2 (mg/l)	-	8.5	8.9	-			-						-	
	Suspended matter (mg/l)	-	32	24	-			-						-	
	COD (mg/l)	-	16	19	-			-						-	
	BOD5 (mg/l)	-	7.0	8.0	-			-						-	
	pH value	-	7.9	8.0	-			-						-	
	Total oils and grease (mg/l)	-	-	-	-			-			-	-	-	-	

HPPs DJERDAP BRANCH															
Surface waters in 2024															
Facility	**Test parameters (Unit of measure)**	**2024 Surface water quality test results**													
		Q1			**Q2**			**Q3**			**Q4**				**Comment for test results and conclusion (Comment for the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewer system-before discharge	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**Limit values for surface water (class II)**	
															Note: Water quality testing was not conducted in the second, third, and fourth quarters.
HPP DJERDAP 2	MPN coliform. bacteria. cfu/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	Surface water upstream of HPP Djerdap 2, near Negotin, predominantly corresponds to class I water quality, except for the parameters total nitrogen, potassium permanganate consumption (KMnO4), nitrates, COD, and BOD5, which correspond to class II water quality; TOC, iron, and total phosphorus, which correspond to class III; while orthophosphates correspond to class IV surface water quality. Microbiological analysis of the surface water sample upstream of HPP Djerdap 2, Negotin (sample 1312060801) shows that total coliforms correspond to class I, fecal coliforms and intestinal enterococci correspond to class II, while
	Dissolved O2 (mg/l)	-	8.9	9.5	-	-	-	-	-	-	-	-	-	-	
	Suspended matter (mg/l)	-	12	10	-	-	-	-	-	-	-	-	-	-	
	COD (mg/l)	-	14	15	-	-	-	-	-	-	-	-	-	-	
	BOD5 (mg/l)	-	4.0	5.0	-	-	-	-	-	-	-	-	-	-	
	pH value	-	7.8	8.1	-	-	-	-	-	-	-	-	-	-	
	Total oils and grease (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	***	

HPPs DJERDAP BRANCH															
Surface waters in 2024															
Facility	**Test parameters (Unit of measure)**	**2024 Surface water quality test results**													
		Q1			**Q2**			**Q3**			**Q4**				**Comment for test results and conclusion (Comment for the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewer system-before discharge	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**Limit values for surface water (class II)**	
															aerobic heterotrophs meet the requirements for class IV surface water. Surface water downstream of HPP Djerdap 2, near Negotin, predominantly corresponds to class I water quality, except for the parameters total nitrogen, potassium permanganate consumption (KMnO4), nitrates, COD, and BOD5, which correspond to class II water quality; TOC, iron, and total phosphorus, which correspond to class III; while orthophosphates correspond to class IV surface water quality. Microbiological analysis of the surface water sample downstream of HPP Djerdap 2, Negotin (sample 1312060802) shows that total coliforms correspond to class I, fecal coliforms and intestinal enterococci correspond to class II, while aerobic heterotrophs

HPPs DJERDAP BRANCH															
Surface waters in 2024															
Facility	**Test parameters (Unit of measure)**	**2024 Surface water quality test results**													
		Q1			**Q2**			**Q3**			**Q4**				**Comment for test results and conclusion (Comment for the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewer system-before discharge	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**Limit values for surface water (class II)**	
															meet the requirements for class IV surface water.
HPP PIROT	MPN coliform. bacteria. (E. coli/1l)	-	6.7	6.0	-	6.8	7.1	-	9.00	9.10	-	5.3	6.0	5 x10^2 -1 x10^4	- Surface water (sample in the first quarter) of the Nišava River downstream of the confluence predominantly corresponds to class I water quality, except for the parameters total nitrogen, TOC, nitrates, BOD5, total phosphorus, and orthophosphates, which correspond to class II surface water quality, while dissolved oxygen corresponds to class III surface water quality. - Surface water - Nišava River downstream of the confluence: predominantly, fecal coliforms and intestinal enterococci correspond to class I, while aerobic heterotrophs meet the requirements for class II surface water.
	Dissolved O2 (mg/l)	-	10.05	10.15	-	9.21	10.3-	-	7.00	8.00-	-	9.1	9.0	7.0	
	Suspended matter (mg/l)	-	4.3	6.0	-	7.1	7.6	-	8.6	9.2	-	6.0	8.2	25	
	COD (mg/l)	-	3.62	5.92	-	‹10	‹10	-	‹10	‹10	-	‹10	‹10	15	
	BOD5 (mg/l)	-	0.8	1.32	-	1.78	0.90	-	2.0	2.10	-	1.0	1.56	5.0	
	pH value	-	7.99	8.18	-	7.88	7.71	-	7.7	7.9	-	7.5	7.9	6.5 - 8.5	
	Total oils and grease (mg/l)	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	***	

HPPs DJERDAP BRANCH															
Surface waters in 2024															
Facility	**Test parameters (Unit of measure)**	**2024 Surface water quality test results**													
		Q1			**Q2**			**Q3**			**Q4**				**Comment for test results and conclusion (Comment for the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewer system-before discharge	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**Limit values for surface water (class II)**	
															- Microbiological analysis of surface water samples downstream of the confluence – HPP Pirot: total coliforms, fecal coliforms, and intestinal enterococci correspond to class I, while aerobic heterotrophs meet the requirements for class II surface water. - Surface water (sample in the fourth quarter) of the Nišava River upstream of the confluence predominantly corresponds to class I water quality, except for the parameter BOD5, which corresponds to class II surface water quality.
VLASINSKE HPPs Intake structure	MPN coliform. bacteria. (E. coli/1l)	-	‹10	‹10	-	-	-	-	-	-	-	-	-	$5x10^2$-$1x10^4$	Based on the measured values, the tested samples meet the values defined by the Regulation on Water Classification (OG of RS, No. 5/68) for class I and meet the values defined by
	Dissolved O2 (mg/l)	-	8.6	8.8	-	-	-	-	-	-	-	-	-	8.5	

HPPs DJERDAP BRANCH															
Surface waters in 2024															
Facility	**Test parameters (Unit of measure)**	**2024 Surface water quality test results**													
		Q1			**Q2**			**Q3**			**Q4**				**Comment for test results and conclusion (Comment for the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewer system-before discharge	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**Limit values for surface water (class II)**	
VLASINSKE HPPs HPP VRLA 1	Suspended matter (mg/l)	-	4.0	10	-	-	-	-	-	-	-	-	-	25	the Rulebook on Hazardous Substances in Waters ("Off. Gazette of SRS", No. 31/82) for class I and II. The values predominantly correspond to class II of ecological potential. Note: Testing in the second, third, and fourth quarters was not conducted.
	COD (mg/l)	-	9.0	9.0	-	-	-	-	-	-	-	-	-	10	
	BOD5 (mg/l)	-	3.0	3.0	-	-	-	-	-	-	-	-	-	1.8	
	pH value	-	7.5	7.5	-	-	-	-	-	-	-	-	-	6.5-8.5	
	Total oils and grease (mg/l)	-	38	48	-	-	-	-	-	-	-	-	-	***	
VLASINSKE HPPs HPP VRLA 2	MPN coliform. bacteria. (E. coli/1l)	-	‹10	‹10	-	-	-	-	-	-	-	-	-	$5x10^2$-$1x10^4$	Based on the measured values, the tested samples meet the values defined by the Regulation on Water Classification (OG of RS, No. 5/68) for class I and meet the values defined by the Rulebook on Hazardous Substances in Waters ("Off. Gazette of SRS", No. 31/82) for class I and II. The values predominantly correspond to class II of ecological potential.
	Dissolved O2 (mg/l)	-	8.8	8.7	-	-	-	-	-	-	-	-	-	8.5	
	Suspended matter (mg/l)	-	10	14	-	-	-	-	-	-	-	-	-	25	
	COD (mg/l)	-	9.0	8.0	-	-	-	-	-	-	-	-	-	10	
	BOD5 (mg/l)	-	3.0	2.0	-	-	-	-	-	-	-	-	-	1.8	
	pH value	-	7.5	7.5	-	-	-	-	-	-	-	-	-	6.5-8.5	

HPPs DJERDAP BRANCH															
Surface waters in 2024															
Facility	**Test parameters (Unit of measure)**	**2024 Surface water quality test results**													
		Q1			**Q2**			**Q3**			**Q4**				**Comment for test results and conclusion (Comment for the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewer system-before discharge	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**Limit values for surface water (class II)**	
	Total oils and grease (mg/l)	-	48	46	-	-	-	-	-	-	-	-	-	***	Note: Testing in the second, third, and fourth quarters was not conducted.
VLASINSKE HPPs HPP VRLA 3	MPN coliform. bacteria. (E. coli/1l)	-	‹10	‹10	-	-	-	-	-	-	-	-	-	$5x10^2$-$1x10^4$	Based on the measured values, the tested samples meet the values defined by the Regulation on Water Classification (OG of RS, No. 5/68) for class I and meet the values defined by the Rulebook on Hazardous Substances in Waters ("Off. Gazette of SRS", No. 31/82) for class I and II. The values predominantly correspond to class II of ecological potential. Note: Testing in the second, third, and fourth quarters was not conducted.
	Dissolved O2 (mg/l)	-	8.7	8.9	-	-	-	-	-	-	-	-	-	8.5	
	Suspended matter (mg/l)	-	10	8.0	-	-	-	-	-	-	-	-	-	25	
	COD (mg/l)	-	9.0	7.0	-	-	-	-	-	-	-	-	-	10	
	BOD5 (mg/l)	-	3.0	2.0	-	-	-	-	-	-	-	-	-	1.8	
	pH value	-	7.5	7.5	-	-	-	-	-	-	-	-	-	6.5-8.5	
	Total oils and grease (mg/l)	-	48	42	-	-	-	-	-	-	-	-	-	***	
VLASINSKE HPPs HPP VRLA 4	MPN coliform. bacteria. (E. coli/1l)	-	‹10	‹10	-	-	-	-	-	-	-	-	-	$5x10^2$-$1x10^4$	Based on the measured values, the tested samples meet the values defined by the Regulation on Water

HPPs DJERDAP BRANCH															
Surface waters in 2024															
Facility	**Test parameters (Unit of measure)**	**2024 Surface water quality test results**													
		Q1			**Q2**			**Q3**			**Q4**				**Comment for test results and conclusion (Comment for the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewer system-before discharge	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**Limit values for surface water (class II)**	
	Dissolved O2 (mg/l)	-	8.9	8.9	-	-	-	-	-	-	-	-	-	8.5	Classification (OG of RS, No. 5/68) for class I and meet the values defined by the Rulebook on Hazardous Substances in Waters ("Off. Gazette of SRS", No. 31/82) for class I and II. The values predominantly correspond to class II of ecological potential. Note: Testing in the second, third, and fourth quarters was not conducted.
	Suspended matter (mg/l)	-	8.0	2.0	-	-	-	-	-	-	-	-	-	25	
	COD (mg/l)	-	7.0	8.0	-	-	-	-	-	-	-	-	-	10	
	BOD5 (mg/l)	-	2.0	2.0	-	-	-	-	-	-	-	-	-	1.8	
	pH value	-	7.5	7.6	-	-	-	-	-	-	-	-	-	6.5-8.5	
	Total oils and grease (mg/l)	-	42	42	-	-	-	-	-	-	-	-	-	***	
VLASINSKE HPPs LISINSKO LAKE PRP LISINA	MPN coliform. bacteria. (E. coli/1l)	-	‹10	‹10	-	-	-	-	-	-	-	-	-	$5x10^2$-$1x10^4$	Based on the measured values, the tested samples meet the values defined by the Regulation on Water Classification (OG of RS, No. 5/68) for class I and meet the values defined by the Rulebook on Hazardous Substances in Waters ("Off. Gazette of SRS", No. 31/82) for class I and II. The
	Dissolved O2 (mg/l)	-	8.5	8.6	-	-	-	-	-	-	-	-	-	8.5	
	Suspended matter (mg/l)	-	6.0	4.0	-	-	-	-	-	-	-	-	-	25	
	COD (mg/l)	-	10	9.0	-	-	-	-	-	-	-	-	-	10	

HPPs DJERDAP BRANCH															
Surface waters in 2024															
Facility	**Test parameters (Unit of measure)**	**2024 Surface water quality test results**													
		Q1			**Q2**			**Q3**			**Q4**				**Comment for test results and conclusion (Comment for the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewer system-before discharge	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system-before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**Limit values for surface water (class II)**	
	BOD5 (mg/l)	-	4.0	3.0	-	-	-	-	-	-	-	-	-	1.8	values predominantly correspond to class II of ecological potential.
	pH value	-	7.6	7.5	-	-	-	-	-	-	-	-	-	6.5-8.5	
	Total oils and grease (mg/l)	-	60	38	-	-	-	-	-	-	-	-	-	***	Note: Testing in the second, third, and fourth quarters was not conducted.

Note: No wastewater testing was performed at the Vlasinske HPPs site in 2024.

Table 122

HPPs DJERDAP BRANCH															
Wastewater in 2024															
Facility	**Test parameters (Unit of measure)**	**2024 Wastewater quality test results**													
		Q1			**Q2**			**Q3**			**Q4**				**Comment for test results and conclusion (Comment for the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewer system- before discharge	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system- before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system- before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system- before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**Reference value for wastewater**	
HPP DJERDAP 1	MPN coliform. bacteria. cfu/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	Wastewater samples from the first two quarters show that the tested parameters COD and BOD5 do not meet the values prescribed by the Regulation on Limit Values of Emission of Pollutants in Water and Deadlines for Their Achievement (OG of RS No. 67/11, 48/12, 1/16). Wastewater samples from the third and fourth quarters show that the tested parameters meet the values prescribed by the Regulation on Limit Values of Emission of Pollutants in Water and Deadlines for Their Achievement (OG of RS No. 67/11, 48/12, 1/16) .
	Dissolved O2 (mg/l)	1.41	-	-	6.44	-	-	6.37	-	-	-	6.51	-	-	
	Suspended matter (mg/l)	41.0	-	-	<10.0	-	-	24.0	-	-	-	17	-	35-60	
	COD (mg/l)	259± 39.4	-	-	24.2	-	-	20.20	-	-	-	17.36	-	125	
	BOD5 (mg/l)	62.43 ±7.85	-	-	5.39	-	-	4.49	-	-	-	3.77	-	25-40	
	pH value	8.27	-	-	8.08	-	-	8.09	-	-	-	8.04	-	-	
	Total oils and grease (mg/l)	<5.0	-	-	<5	-	-	<5	-	-	-	<5	-	-	
HPP DJERDAP 2	MPN coliform. bacteria. cfu/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	For the wastewater sample lab. no. OV24014421-01, the obtained values of the tested parameters COD and total nitrogen are NOT IN COMPLIANCE with the values from Article 13, Annex 2, Chapter III – Municipal Wastewater, Table 2.
	Dissolved O2 (mg/l)	2.25	-	-	0.004	-	-	0.007	-	-	0.008	-	-	-	
	Suspended matter (mg/l)	27	-	-	34.0	-	-	28.0	-	-	19	-	-	35-60	

HPPs DJERDAP BRANCH															
Wastewater in 2024															
Facility	**Test parameters (Unit of measure)**	**2024 Wastewater quality test results**													
		Q1			**Q2**			**Q3**			**Q4**				**Comment for test results and conclusion (Comment for the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewer system- before discharge	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system- before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system- before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system- before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**Reference value for wastewater**	
	COD (mg/l)	27.07	-	-	193.94	-	-	130.21	-	-	125.05	-	-	125	For the wastewater sample lab. no. OV240545122-01, the obtained values of the tested parameter COD are NOT IN COMPLIANCE with the values from Article 13, Annex 2, Chapter III – Municipal Wastewater, Table 2. For the wastewater sample lab. no. OV24092410-01, the obtained values of the tested parameter COD are NOT IN COMPLIANCE with the values from Article 13, Annex 2, Chapter III – Municipal Wastewater, Table 2 . For the wastewater sample lab. no. OV2411533-01, the obtained values of the tested parameter total nitrogen are NOT IN COMPLIANCE, while COD IS IN COMPLIANCE with the values from Article 13, Annex 2, Chapter III – Municipal Wastewater, Table 2.
	BOD5 (mg/l)	5.42	-	-	43.07	-	-	28.94	-	-	33.68	-	-	25-40	
	pH value	7.72	-	-	8.586	-	-	8.72	-	-	8.54	-	-	-	
	Total oils and grease (mg/l)	<5.0	-	-	<5.0	-	-	<5.0	-	-	<5.0	-	-	-	
HPP PIROT	MPN coliform. bacteria. (E. coli/1l)	-	-	-	-	-	-	-	-	-	-	-	-	-	Not conducted in 2024 .
	Dissolved O2 (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	-	

HPPs DJERDAP BRANCH															
Wastewater in 2024															
Facility	**Test parameters (Unit of measure)**	**2024 Wastewater quality test results**													
		Q1			**Q2**			**Q3**			**Q4**				**Comment for test results and conclusion (Comment for the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewer system- before discharge	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system- before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system- before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**From the sewer system- before discharge**	**Surface water upstream from the facility**	**Surface water downstream from the facility**	**Reference value for wastewater**	
	Suspended matter (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	-	
	COD (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	-	
	BOD5 (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	-	
	pH value	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Total oils and grease (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	-	

6.2.3. Waste

Waste management was performed according to defined procedures. The quantities of waste generated during 2024 are shown in Table 123.

Table 123

HPPs DJERDAP BRANCH										
Waste generated in 2024										
No.	**Rulebook on Categories, Testing and Classification of Waste (Official Gazette of RS, No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit of measure**	**Facility**					**Total**	**Note**
				HPP Djerdap 1	**HPP Djerdap 2**	**HPP Pirot**	**Vlasinske HPPs**	**SOP Požarevac**		
	Name	**Index No.**		**Quantities**						
1.	Phosphorous and phosphoric acid	06 01 04*	t	0.020	0.000	0.000	0.000	0.000	**0.020**	Waste phosphorous acid
2.	Other organic solvents, washing liquids and mother liquors	07 01 04*	t	0.009	0.000	0.000	0.000	0.000	**0.009**	TOLUENE ISOPROPYL ALCOHOL
3.	Other organic solvents, washing liquids and mother liquors	07 01 04*	t	0.008	0.000	0.000	0.000	0.000	**0.008**	HYDRANAL MACHINERY
4.	Water-based sludge containing organic solvent-based paint or varnish or other hazardous matters	08 01 15*	t	0.000	0.000	0.100	0.000	0.000	**0.100**	Paints and varnish waste material
5.	Waste printer cartridges other than those indicated under 08 03 17	08 03 18	t	0.171	0.000	0.017	0.050	0.000	**0.067**	Printer casettes and cartridges
6.	Waste adhesives and sealers containing organic solvents or other hazardous matters	08 04 09	t	0.000	0.000	0.150	0.000	0.000	**0.150**	Waste glues
7.	Mineral non-chlorinated hydraulic oil	13 01 10*	t	39.294	0.000	0.060	0.000	0.000	**39.354**	Waste hydraulic oil
8.	Non-chlorinated mineral hydraulic oils; waste not otherwise specified	13 01 10* 13 08 99*	t	17.721	3.209	0.600	0.000	0.000	**21.53**	Waste turbine oil
9.	Non-chlorinated mineral oils for insulation and heat transfer	13 03 07*	t	2.000	0.101	0.200	0.000	0.000	**2.301**	Waste transformer oil
10.	Other emulsions	13 08 02*	t	9.086	0.000	0.000	0.000	0.000	**9.086**	Emulsion
11.	Plastic packaging Plastics	15 01 02 16 01 19	t	0.100	0.049	0.054	0.0225	0.000	**0.2255**	Waste plastics

HPPs DJERDAP BRANCH										
Waste generated in 2024										
No.	**Rulebook on Categories, Testing and Classification of Waste (Official Gazette of RS, No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit of measure**	**Facility**					**Total**	**Note**
				HPP Djerdap 1	**HPP Djerdap 2**	**HPP Pirot**	**Vlasinske HPPs**	**SOP Požarevac**		
	Name	**Index No.**		**Quantities**						
12.	Packaging with residue of hazardous substances or contaminated with hazardous substances	15 01 10	t	5.740	0.000	0.000	0.000	0.000	**5.740**	Metal barrels
13.	Absorbents, filter materials (including oil filters not otherwise specified), wipes, protective clothing, contaminated with hazardous substances	15 02 02*	t	1.095	0.000	0.640	1.597	0.000	**3.332**	Cloths, adsorbents and contaminated with hydrocarbons
14.	Waste rubber	16 01 03	t	0.000	1.290	0.670	0.000	0.000	**1.960**	Waste tyres
15.	Waste rubber	16 01 03	t	4.010	0.000	0.000	0.000	0.000	**4.010**	Waste tyres
16.	Discarded equipment containing dangerous components other than those specified in 16 02 09 to 16 02 12	16 02 13*	t	13.274	0.202	0.900	0.147	0.000	**14.523**	Discarded electrical and electronic equipment and parts
	Discarded electrical and electronic equipment which contains dangerous components	20 01 35*								
17.	Lead batteries	16 06 01*	t	1.631	0.000	0.000	0.843	0.000	**2.474**	Waste lead batteries
	Batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries	20 01 33*								

18.	Nickel–cadmium batteries	16 06 02*	t	0.009	0.000	0.000	0.000	0.000	**0.009**	Nickel–cadmium batteries
19.	Spent liquids used as catalysts	16 08 06*	t	0.000	0.000	0.000	0.000	0.000	**0.000**	Catalyst waste material
20.	Copper, bronze, brass	17 04 01	t	0.600	0.015	0.000	0.000	0.000	**0.615**	Copper
				0.000	0.00	0.000	0.000	0.000	**0.000**	Brass
				0.000	0.00	0.000	0.000	0.000	**0.000**	Bronze
21.	Copper	17 04 01	t	0.000	0.00	0.000		0.000	**0.000**	Waste transformers
	Waste iron	17 04 05		0.000					**0.000**	
22.	Aluminium	17 04 02	t	0.000	0.000	0.000	0.000	0.000	**0.000**	Aluminum
	Non-ferrous metals	19 12 03								
23.	Iron and steel	17 04 05	t	6.120	0.000	0.000	0.857	0.000	**6.977**	Steel sheet
				0.450	0.000	0.000	0.000	0.000	**0.450**	Prochrome
				34.428	1,984	2.258	0.4623	0.000	**39.1323**	Waste iron
				0.660	0.320	0.153	0.23	0.000	**1.363**	Metal scraping
24.	Cables other than those mentioned in 17 04 10	17 04 11	t	0.930	0.116	0.000	0.000	0.000	**1.046**	Copper cable
25.	Paper and cardboard	20 01 01	t	0.000	0.000	0.000	0.000	0.000	**0.000**	Paper waste material
26.	Fluorescent tubes and other waste containing mercury	20 01 21*	t	0.153	0.050	0.145	0.041	0.000	**0.389**	Waste fluo lights
27.	Wood other than that specified in 20 01 37	20 01 38	t	0.000	0.000	0.065	0.000	0.000	**0.065**	Waste wood and plywood
				3,266.419	90.000 NOT MEASURED AROUND 120m³	0.000	0.000	0.000	**3,356.419**	Waste wood taken from the Danube

*hazardous waste

HPP Djerdap Bracnh temporarily stores and sells the waste generated during the year within the hydroelectric power plant to authorized operators, in accordance with the Rulebook on storage, packaging and labeling of hazardous waste (Official Gazette of RS, No. 95/2024), Rulebook on categories, testing and classification of waste (Official Gazette of RS, No. 56/10, 93/2019, 39/2021 and 65/2024), Rulebook on conditions and manner of collection, mode of transport, storage and treatment of waste used as a secondary raw material or for energy production (Official Gazette of RS, No. 98/10), Rulebook on conditions, manner and procedure of waste oil management (Official Gazette of RS, No. 71/10) and the Rulebook on the manner and procedures of asbestos-containing waste management (Official Gazette of the RS, No. 74/10 as of 15 October 2010).

Table 124 shows the quantities of delivered waste, and the R/D operations for managing this waste with an authorized legal entity, according to the waste delivery contract and Annex 6 of the Regulation on categories, testing and classification of waste ("Official Gazette of the Republic of Serbia", 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024).

Table 124

HPPs DJERDAP BRANCH											
Submitted waste in 2024											
No.	**Rulebook on Categories, Testing and Classification of Waste (Official Gazette of RS, No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)**		**Unit**	**Facility**					**Total tons**	**Note**	**R/D management**
	Name	**Index No.**		**HPP Djerdap 1**	**HPP Djerdap 2**	**HPP Pirot**	**HPPs Vlasinske**	**SOP Požarevac**			
				К о л и ч и н е							
1.	Wood other than that specified in 20 01 37	20 01 38	t	707,760	-	-	-	-	**707,760**	Waste wood taken from the Danube	R13
2.	Batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries	16 06 01* 20 01 33*	t	11,740	0,039 9,280	9,360	3,550	-	**33,969**	Waste lead accumulators	R13

3.	Discarded electrical and electronic equipment containing hazardous components	20 01 35*	t	146,460	18,380	2,540	2,954	-	**170,334**	Discarded electrical and electronic equipment and parts	R13

6.2.4. Environmental Noise Measurements

6.2.4. Environmental Noise Measurements

Noise in the environment (in the vicinity of electric power facilities that are part of HPP Djerdap) has not been measured, due to the fact that the facilities are dislocated from the settlement and as such do not jeopardize the environment.

HPP Pirot: Microclimate measurements were done in the summer period. The measurements showed that the results of all tested parameters and fleas are within the prescribed limits.

6.2.5. Air Emissions Measurement

Based on the legal regulation within the scope of air protection (Air Protection Law, Official Gazette of RS No. 36/2009, 10/2013 and 26/2021-other law), the emission of polluting substances in the air from a stationary source of pollution (heating plant) inteded for heating the HPP Djerdap 1, was measured. The measurements were carried out by the company Institute for Occupational Safety JSC Novi Sad under the contract No. 01.01.-18669-3-2024 dated 31 January 2024. Measurement results are shown in Tables 125 and 126 – end of heating season and 127 and 128 – start of heating season

Table 125

HPPs DJERDAP BRANCH					
Measurement of emission of air pollutants from a stationary source of pollution - Working boiler 1 – end of heating season					
Tested parameter	**Unit**	**Result**			**ELV**
		I	**II**	**III**	
Waste gas flow rate	m/s	7,4	8,2	7,9	**-**
Volumetric flow rate	Nm^3/h	2.349.03	2.612.73	2.490.99	**-**
Waste gas temperature	^oC	166.3	170.1	171.7	**-**
Oxygen	%	6.51	6.33	6.43	**-**
Carbon monoxide	Mg/Nm^3	12.57 ± 0,31	11.24 ± 0,28	13.86 ± 0,34	**80**
Mass flow rate of carbon monoxide	g/h	29.53	29.37	34.53	**-**
Nitrogen oxides expressed as nitrogen dioxide	mg/Nm^3	397.6 ± 19.40	394.1 ± 19.23	399,0 ± 19,47	**180**
Mass flow rate of nitrogen oxides expressed as nitrogen dioxide	g/h	933.98	1029.68	993.90	**-**
Sulfur oxides expressed as sulfur dioxide	mg/Nm^3	2.024 ± 49.79	2.037 ± 50,12	2.041 ± 50.21	**1300**
Sulfur oxide mass flow rate expressed as sulfur dioxide	g/h	4.754.45	5.322.12	5.084.11	**-**

Table 126

HPPs DJERDAP BRANCH

Measurement of emission of air pollutants from a stationary source of pollution - Working boiler 2 – end of heating season					
Tested parameter	**Unit**	**Result**			**ELV**
		I	**II**	**III**	
Waste gas flow rate	m/s	8,0	7,4	7,8	-
Volumetric flow rate	Nm^3/h	1.398,01	1.316,53	1.344,02	-
Waste gas temperature	^oC	151,6	153,8	156,5	-
Oxygen	%	13,29	13,11	13,31	-
Carbon monoxide	Mg/Nm^3	722,6 ± 17,78	804,3 ± 19,79	797,1 ± 19,61	**80**
Mass flow rate of carbon monoxide	g/h	1.010,20	1.058,88	1.071,32	-
Nitrogen oxides expressed as nitrogen dioxide	mg/Nm^3	383,2 ± 18,70	395,4 ± 19,30	377 ± 18,40	**180**
Mass flow rate of nitrogen oxides expressed as nitrogen dioxide	g/h	535,72	520,56	506,69	-
Sulfur oxides expressed as sulfur dioxide	mg/Nm^3	1.913 ± 47,06	1.845 ± 45,39	1.949 ± 47,95	**1.300**
Sulfur oxide mass flow rate expressed as sulfur dioxide	g/h	4.520,1	4.240,7	4.544,8	-

Table 127

HPPs DJERDAP BRANCH					
Measurement of emission of air pollutants from a stationary source of pollution - Working boiler 1 – start of heating season					
Tested parameter	**Unit**	**Result**			**ELV**
		I	**II**	**III**	
Waste gas flow rate	m/s	8,6	8,4	8,5	-
Volumetric flow rate	Nm^3/h	1.957,56	1.938,81	1.948,54	-
Waste gas temperature	^oC	251,3	252,4	251,8	-
Oxygen	%	2,31	2,47	2,38	-
Carbon monoxide	Mg/Nm^3	2.072 ± 50,97	2.113 ± 51,98	2.099 ± 51,64	**80**
Mass flow rate of carbon monoxide	g/h	4.056,06	4.096,70	4.089,99	-
Nitrogen oxides expressed as nitrogen dioxide	mg/Nm^3	183,7 ± 8,96	181,3 ± 8,85	184,5 ± 9,00	**180**
Mass flow rate of nitrogen oxides expressed as nitrogen dioxide	g/h	2.484,14	3.270,77	2.944,25	-
Sulfur oxides expressed as sulfur dioxide	mg/Nm^3	1.269 ± 31,22	1.687 ± 41,50	1.511 ± 37,17	**850**
Sulfur oxide mass flow rate expressed as sulfur dioxide	g/h	2.484,14	3.270,77	2.944,25	-

Table128

HPPs DJERDAP BRANCH					
Measurement of emission of air pollutants from a stationary source of pollution - Working boiler 2 – start of heating season					
Tested parameter	**Unit**	**Result**			**ELV**
		I	**II**	**III**	
Waste gas flow rate	m/s	8,1	8,0	8,2	-
Volumetric flow rate	Nm^3/h	1.562,06	1.485,43	1.498,88	-

Waste gas temperature	°C	138,7	140,6	142,4	-
Oxygen	%	12,75	13,02	13,11	-
Carbon monoxide	Mg/Nm^3	49,52 ± 1,22	38,87 ± 0,96	40,02 ± 0,98	**80**
Mass flow rate of carbon monoxide	g/h	77,35	57,74	59,99	-
Nitrogen oxides expressed as nitrogen dioxide	mg/Nm^3	378,7 ± 18,48	380,3 ± 18,56	379,1 ± 18,50	**180**
Mass flow rate of nitrogen oxides expressed as nitrogen dioxide	g/h	591,55	564,91	568,22	-
Sulfur oxides expressed as sulfur dioxide	mg/Nm^3	1.235 ± 30,38	1.181 ± 29,05	1.216 ± 29,91	**850**
Sulfur oxide mass flow rate expressed as sulfur dioxide	g/h	1.929,15	1.754,30	1.822,64	-

6.3. Working Environment Monitoring, Occupational Health and Safety

The 2024 Occupational Safety and Health Reports include the following elements:

- **Working Environment Monitoring**
  - working environment noise measurement
- **Occupational Safety**
  - training of employees
  - injuries at work
- **Health Protection**

6.3.1. Working Environment Monitoring

- **Working Environment Noise Measurement**

In the organizational units of HPP Djerdap 1, HPP Djerdap 2, HPP Pirot, HPPs Vlasinske, SOP Požarevac, DMR Beograd in 2024, measurement of physical harms in the working environment was carried out in summer.

6.3.2. Occupational Safety

- **Training of Employees**

Training of employees for safe and healthy work is done according to the Training Program, theoretically and practically. The types of trainings conducted in 2024 were as follows:

Training of employees for safety and health at work	353
Training of visitors	545
Fire fighting training	211
Training of employees at contractor's (procedure O.0.IMS.0.8.5.1.0.2)	817
Training of students and apprentices	3
Tranining for safe work with working equipment	41
IMS training	144

Introducing the hazards and harms, i.e., risk factors in the HPP Djerdap Branch is done in accordance with the Rulebook on occupational safety and health and the Act on risk assessment. A special agreement is concluded with the contractors regarding the application of prescribed safety

and health measures at work during execution of works in the common work space, in accordance with the law.

The number of employees for whom training in the field of health and safety at work was carried out is given in table 129.

Table 129

Đerdap HPP Branch					
Employee training in 2024.					
Organizational part	**Number of employees**	**For training**		**Trained**	
		Number	**%**	**Number**	**%**
HP Đerdap I with Directorate in Kladovo	305	208	68,20	204	98,08
HP Đerdap II	177	18	10,17	18	100,00
HP Pirot	34	15	44,12	15	100,00
Vlasinske HP	88	76	86,36	76	100,00
СОП Požarevac and DMR Belgrade	43	36	83,72	32	88,89
TOTAL: HPP Đerdap Branch	**647**	**353**	**54,56**	**345**	**97,73**

- **Injuries at workplace**

Number of injuries in 2024. is given in Table 130.

Table 130

HPP Đerdap Branch						
Injuries at workplace in 2024.						
Organizational part	**Number of employees**	**Injuries in relation to number of employees**				
		Minor	**Hard**	**Fatal**	**Total**	**%**
HP Đerdap I	305	1	0	0	1	0,33
HP Đerdap II	177	2	1	0	3	1,69
HP Pirot	34	0	0	0	0	0,00
Vlasinske HP	88	0	0	0	0	0,00
SOP POžarevac and DMR Belgrade	43	0	0	0	0	0,00
TOTAL: Đerdap HPP Branch	**647**	**3**	**1**	**0**	**4**	**0,62**

6.3.3. Health care

During 2024, periodic medical examinations were carried out for employees who are assigned to workplaces with increased risk in the Djerdap Branch of HPP "Djerdap". The data are shown in Table 131.

Table 131

Đerdap HPP Branch											
Work ability in 2024.											
Organizational unit	**Number of employees**	**Periodic review**				**For work**					
		Directed to examination		**Examined**		**Able**		**With limited ability**		**Unable**	
		number	**%**	**number**	**%**	**number**	**%**	**number**	**%**	**number**	**%**
HP Đerdap	305	188	61,64	188	100,00	167	88,83	21	11,17	0	0,00
HP Đerdap 2	177	144	81,36	141	97,92	138	97,87	3	2,13	0	0,00
HP Pirot	34	15	44,12	15	100,00	13	86,67	2	13,33	0	0,00
Vlasinske HP	88	52	59,09	52	100,00	47	90,38	4	7,69	1	1,92
SOP Požarevac and DMR Belgrade	43	36	83,72	23	63,89	23	100,00	0	0,00	0	0,00
TOTAL: HPP Đerdap Branch	**647**	**435**	**67,23**	**419**	**96,32**	**388**	**92,60**	**30**	**7,16**	**1**	**0,24**

6.4. Stakeholders Submissions

There were no stakeholders submission regarding environment in 2024.

7. DRINSKO-LIMSKE HPP BRANCH

Within the Drinsko-Limska HPP Branch there are the following power plants:

Bajina Bašta HPP:

- **HP ,,Bajina Bašta''**
- **RHPP„Bajina Bašta“**
- **MHE „Vrelo“**

HPP Zvornik:

- **HP „Zvornik“**
- **MHE „Radaljska Banja“**

HPP Elektromorava:

- **HP „Međuvršje“**
- **HP „Ovčar Banja“**

Limske HPP:

- **HPP „Uvac“**
- **HPP „Kokin Brod“**
- **HPP „Bistrica“**
- **HPP „Potpeć“**

7.1. Overview and Status of Permits

An overview and status of permits, licenses and other required approvals, as well as new requests for obtaining or extending valid permits and approvals during 2024, is shown in Table 132.

Table 132

Drinsko-Limske HPP			
Overview and status of permits in 2024			
Facility	**Permits and approvals obtained (Number and date)**	**New requirements for obtaining or extending valid permits for the BAJINA BAŠTA HYDROPOWER PLANT**	**Note**
HPP Bajina Bašta	Decision on approving the implementation of works on the rehabilitation of the left bank of the HPP Bajina Bašta dam. ROP-MSGI-2514-ISAWHA-4/2024 dated 29.03.2024.	No new requests have been submitted.	-
PSHPP Bajina Bašta	Decision approving the execution of works for the construction of the water supply network at the "Sekulić-Nagramak" site. ROP-BBA-4854-ISAWHA-4/2024 dated 17.10.2024. Decision on approval of the execution of works on the construction of the water supply network at the site "Krnja Jela".	Request for issuing a decision approving the execution of works on the construction of a water supply network at the "Mitrovac" site on cadastral plots 1009/23,1015/8,1015/1, K.O. Perućac.	-

Drinsko-Limske HPP			
Overview and status of permits in 2024			
Facility	**Permits and approvals obtained (Number and date)**	**New requirements for obtaining or extending valid permits for the BAJINA BAŠTA HYDROPOWER PLANT**	**Note**
	ROP-BBA-2946-ISAW-2/2024 of 29.11.2024. Decision on approval of the execution of works on the construction of the water supply network at the site "Sumbulića brdo". ROP-BBA-24467-ISAW-2/2024 of 29.11.2024. Decision on approval of the execution of works on the construction of the water supply network at the site "Krnja Jela". ROP-BBA-24466-ISAW-2/2024 of 22.04.2024. Decision on approval of the execution of works on the construction of the water supply network at the "Osluše" site. ROP-BBA-23965-ISAW-2/2024 dated 09.05.2024. Decision on approval of the execution of works on the construction of the water supply network at the "Sokolina" site. ROP-BBA-6085-ISAWHA-3/2024 dated 12.02.2024. Decision on approval of the execution of works on the construction of the water supply network at the “Popovići” site. ROP-BBA-4547-ISAW-2/2024 dated 23.01.2024. Decision on approval of the execution of works on the construction of the water supply network at the “Kaluđerske Bare” site. ROP-BBA-1385-ISAW-2/2023 dated 07.02.2024.		
SHPP Vrelo	No new permits were obtained in 2024.	No new requests have been submitted.	-
HPP Elektromorava			
HPP Ovčar Banja	No new permits were obtained in 2024.	No new requests have been submitted.	-
HPP Međuvršje	No new permits were obtained in 2024.	No new requests have been submitted..	-
HPP Zvornik			
HPP Zvornik	No new permits were obtained in 2024.	No new requests have been submitted.	-
SHPP Radaljska Banja	No new permits were obtained in 2024.	No new permits were obtained in 2024.	-
Limske HPP			

Drinsko-Limske HPP			
Overview and status of permits in 2024			
Facility	**Permits and approvals obtained (Number and date)**	**New requirements for obtaining or extending valid permits for the BAJINA BAŠTA HYDROPOWER PLANT**	**Note**
HPP Kokin Brod	No new permits were obtained in 2024.	No new permits were obtained.	-
HPP Uvac	Decision on approval for the execution of works on investment maintenance of the injection curtain of the Uvac Dam, number 001066469 2024 14810 005 001 000 001 (ROP-MSGI-8001-ISAWHA-2/2024) dated 12.04.2024. issued by the Ministry of Construction, Transport and Infrastructure Decision on the correction of a technical error in the Decision on approval for the performance of works on investment maintenance of the injection curtain of the Uvac Dam, number 001066469 2024 14810 005 001 000 001 (ROP-MSGI-8001-TECCORA-3/2024) dated 25.04.2024. issued by the Ministry of Construction, Transport and Infrastructure.	No new permits were obtained.	-
HPP Bistrica	No new permits were obtained in 2024.	No new permits were obtained.	-
HPP Potpeć	No new permits were obtained in 2024.	No new permits were obtained.	-

7.2. Environmental Impact Monitoring

In 2024, the Drinsko-Limske HPP Branch underwent a recertification audit in accordance with the requirements of the ISO 14001:2015 standard. The audit was carried out on 10-11.12.2024. The audit findings showed that the Drinsko-Limske HPP Branch continuously maintains and improves its integrated management system in accordance with the requirements of the ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 standards.

Successfully completed audit, conducted by JUQS Belgrade.

In the period from 06.12.2024. the second surveillance audit EnMS – energy management ISO 50001:2018 (energy efficiency) was performed.

Successfully completed audit, conducted by Bureau Veritas France.

7.2.1. Identified negative impact on the flow and ecological system below the reservoir

Described in the previous point 7.2.

7.2.2. Water

- **Water quantities**

The use of water for hydro power generation, technical water and sanitary water was carried out in permitted quantities. The quantities of permitted and used water for electricity generation, as well as the quantities of water discharged after electricity generation, for 2024, are given in Table 133

Table 133

Drinsko-Limske HPP Branch							
Water quantities in 2024.							
Facility		**Number of units**	**Permitted water quantity (Installed flow per unit) m3/ s**	**Amounts of water discharged**			
				Water used for electricity production in 2024. m3/yearx106	**Technical Water m3/year x106**	**Sanitary water m3/year x103**	**Total water discharged m3/yearx106**
HPP Bajina Bašta		4	175	7.366	-	21,937	7.630
PSHPP Bajina Bašta		2	55	264	-	-	-
SHPP Vrelo		1	0,74	-	-	-	-
HPP Zvornik		4	170	7879	0,152	1,16	7.879,15
SHPP Radaljska Banja		1	0,400	/	/	/	/
HPP Elektromorava	**HPP Međuvršje**	3	I-19,5 II-30 III-3,75	441,098	0,0079	0,000	441,105
	HPP Ovčar Banja	2	I-19,5 II-30	426,816	0,0041	0,000	426,820
Limske HPP	**HPP Uvac**	1	43	187,009	0,191	0,2	187, 200
	HPP Kokin Brod	2	18,7	278,799	1,097	0,2	279,896
	HPP Bistrica	2	18	296,344	1,728	0,37	298,072
	HPP Potpeć	3	55	1.608,153	3,829	0,3	1.611,982

- **Water quality**

Based on contractual obligations related to the control of wastewater and surface water from watercourses and reservoirs, the Institute for Occupational Safety JSC carried out sampling of wastewater and surface water from all power plants within the Drinsko-Limske HPP Branch in 2024.

Water sampling was carried out for four quarters of 2024. The following number of samples were taken from power plants: HPP "Bajina Bašta" 11 samples were taken, HPP "Limske" 12 samples were taken, HPP "Elektromorava" 6 samples were taken, HPP "Zvornik" 2 samples were taken and HPP "Zvornik" 2 samples were taken, SHPP Radaljska Banja 2 samples were taken, as follows:

- wastewater sample;
- surface water sample upstream of the facility;
- surface water sample downstream of the facility;
- drainage water at the discharge of drainage pumps.

Water samples were chemically and biologically analyzed, and the interpretation of the results was carried out in accordance with the Regulation on limit values of pollutants in surface and groundwater and sediment and deadlines for their achievement ("Official Gazette of the Republic of Serbia", No. 50/2012), the Regulation on hazardous substances in water ("Official Gazette of the Republic of Serbia", No. 31/1982) and the Regulation on water classification and the Regulation on watercourse categorization ("Official Gazette of the Republic of Serbia", No. 5/1968). The results of wastewater and surface water quality testing are shown in Table 134.

Table 134

Drinsko-Limske HPP														
Water quality in 2024.														
Facility	**Test parameters (unit of measurement)**	**Results of wastewater and surface water quality testing in 2024.**											**Ref.value**	**Commentary on the test results and conclusion (commentary on the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		1. quarter			**2. quarter**			**3. quarter**			**4. quarter**			
		From the sewage system before the inflow	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	
HPP Bajina Bašta	MPN colifor. bacteria. (E.coli/100 ml)	-	$1,2x10^2$	91	-	$1x10^3$	$6,9x10^3$	-	$9,1x10^2$	$9,6x10^2$	-	51	62	-	
	Dissolved O2 (mg/l)	4,01	8,84	9,83	4,06	8,05	8,63	4,03	7,16	7,73	3,22	11,51	13,04	min. 7,0	
	Suspended matter (mg/l)	1,2	<1	<1	10	<1	<1	22,4	<1	<1	23,8	<1	<1	25	
	HPK (mg/l)	80	<4,0	<4,0	74	<4,0	<4,0	55	<4,0	4,4	48	4,2	<4,0	15	
	BPK5 (mg/l)	40	0,77	0,80	30	0,80	0,82	22	0,86	1,2	17	0,98	0,87	5	
	pH value	7,42	7,55	7,76	7,65	7,98	8,02	6,95	7,34	7,72	7,86	7,85	7,89	6,8-8,5	
	Total oils and fats (mg/l)	-	-	-	-	-	-	-	-	-		-	-	-	

Drinsko-Limske HPP															
Water quality in 2024.															
Facility	**Test parameters (unit of measurement)**	**Results of wastewater and surface water quality testing in 2024.**													
		1. quarter			**2. quarter**			**3. quarter**			**4. quarter**			**Ref.value**	**Commentary on the test results and conclusion (commentary on the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewage system before the inflow	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**		
HPP Zvornik	MPN colifor.bacteria (E.coli/100 ml)	-	$3,7x10^2$	$1,4x10^3$	-	$2,9x10^4$	$2,1x10^3$	-	$2,2x10^3$	$1,9x10^3$	-	$4,3x10^3$	$4,7x10^4$	-	
	Dissolved O2 (mg/l)	-	10,48	10,34	-	9,47	8,76	-	8,83	9,95	-	10,04	11,54	min. 7,0	
	Suspended substances (mg/l)	-	<1	<1	-	4,4	5,6	-	1,2	<1	-	6,4	6,8	25	
	HPK (mg/l)	-	<4	<4	-	<4	<4	-	<4	<4	-	<4	<4	15	
	BPK5 (mg/l)	-	0,87	0,88	-	0,95	0,96	-	0,97	0,92	-	0,93	0,90	5	
	pH value	-	7,77	7,69	-	8,46	8,27	-	8,41	8,12	-	7,79	7,84	6,8-8,5	
	Oil and fat total (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	-	

Drinsko-Limske HPP															
Water quality in 2024.															
Facility	**Test parameters (unit of measurement)**	**Results of wastewater and surface water quality testing in 2024.**													
		1. quarter			**2. quarter**			**3. quarter**			**4. quarter**			**Ref.value**	**Commentary on the test results and conclusion (commentary on the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewage system before the inflow	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**		
HPP Ovčar Banja	MPN colifor. bacteria. (E.coli/100 ml)	-	$4x10^3$	$2,4x10^3$	-	$7,2x10^4$	$1,3x10^4$	-	$1,1x10^3$	$1,7x10^3$	-	$3,3x10^4$	$3,7x10^3$	-	
	Dissolved O2 (mg/l)	-	0,83	7,40	-	7,89	7,78	-	7,07	7,37	-	11,58	11,61	min. 7,0	
	Suspended substances (mg/l)	-	1,2	1,2	-	18	19,2	-	11,2	2,4	-	6	7,2	25	
	HPK (mg/l)	-	4,1	4,0	-	4,7	5,2	-	4,9	5,2	-	4,7	4,8	15	
	BPK5 (mg/l)	-	0,93	0,90	-	1,1	1,22	-	1	1,3	-	1	1,2	5	
	pH value	-	7,48	7,30	-	7,92	8,02	-	8,31	8,47	-	7,81	7,65	6,8-8,5	
	Oil and fat total (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	-	

Drinsko-Limske HPP														
Water quality in 2024.														
Facility	**Test parameters (unit of measurement)**	**Results of wastewater and surface water quality testing in 2024.**												
		1. quarter			**2. quarter**			**3. quarter**			**4. quarter**			**Ref.value**	**Commentary on the test results and conclusion (commentary on the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewage system before the inflow	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**		
HPP Međuvršje	MPN Colifor.bacteria (E.coli/100 ml)	-	1,2 x10^3	2,5 x10^3	-	1,5 x10^6	9,6x10^2	-	1x10^3	1,2 x10^3		1,9 x10^4	2,1 x10^4	-	
	Dissolved O2 (mg/l)	-	8,33	7,40	-	7,89	7,78	-	7,07	7,37	-	10,72	11,99	min. 7,0	
	Suspended substances (mg/l)	-	1,2	1,2	-	3,2	4	-	11,2	2,4	-	<1	7,2	25	
	HPK (mg/l)	-	4,1	4,0	-	4,8	4,5	-	4,9	5,2	-	5,2	5,6	15	
	BPK5 (mg/l)	-	0,93	0,90	-	1,0	0,99	-	1	1,3	-	1,1	1,4	5	
	pH value	-	7,48	7,30	-	8,24	8,37	-	8,31	8,47	-	8,3	8,17	6,8-8,5	
	Oil and fat total (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	-	

Drinsko-Limske HPP														
Water quality in 2024.														
Facility	**Test parameters (unit of measurement)**	**Results of wastewater and surface water quality testing in 2024.**												
		1. quarter			**2. quarter**			**3. quarter**			**4. quarter**			**Ref.value**	**Commentary on the test results and conclusion (commentary on the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewage system before the inflow	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**		
HPP Uvac	MPN Colifor bacteria. (E.coli/100 ml)	-	72	$1x10^2$	-	$1x10^4$	$1,8x10^3$	-	68	88	-	$4,1x10^2$	$5,1x10^2$	-	.
	Dissolved O2 (mg/l)	-	9,2	8,62	-	7,76	8,6	-	7,97	8,03	-	8,17	9,12	min. 7,0	
	Suspended substances (mg/l)	-	<1	<1	-	<1	16	-	<1	20,8	-	<1	23,6	25	
	HPK (mg/l)	-	<4,0	<4,0	-	<4,0	<4,0	-	<4,0	<4,0	-	<4,0	<4,0	15	
	BPK5 (mg/l)	-	0,92	0,97	-	0,6	0,88	-	0,72	0,92	-	0,78	0,93	5	
	pH value	-	8,07	8,18	-	8,46	9,03	-	7,57	8,01	-	8,32	8,39	6,8-8,5	
	Oil and fat total (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	-	

Drinsko-Limske HPP															
Water quality in 2024.															
Facility	**Test parameters (unit of measurement)**	**Results of wastewater and surface water quality testing in 2024.**													
		1. quarter			**2. quarter**			**3. quarter**			**4. quarter**			**Ref.value**	**Commentary on the test results and conclusion (commentary on the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewage system before the inflow	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**		
HPP Kokin Brod	MPN colifor. Bacteria. (E.coli/100 ml)	-	50	85	-	$7,6x10^2$	$2,9x10^3$	-	88	91	-	63	75	-	
	Dissolved O2 (mg/l)	-	9,53	7,54	-	7,05	10,4	-	7,5	7,48	-	9,52	9,26	min. 7,0	
	Suspended substances (mg/l)	-	<1	<1	-	<1	1,6	-	<1	<1	-	<1	<1	25	
	HPK (mg/l)	-	4,2	4,5	-	<4,0	4,2	-	<4	4	-	<4	<4	15	
	BPK5 (mg/l)	-	0,87	0,94	-	0,91	0,95	-	0,87	0,89	-	0,83	0,87	5	
	pH value	-	7,68	7,87	-	8,42	8,4	-	7,96	8,45	-	8,37	8,44	6,8-8,5	
	Oil and fat total (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	-	

Drinsko-Limske HPP															
Water quality in 2024.															
Facility	**Test parameters (unit of measurement)**	**Results of wastewater and surface water quality testing in 2024.**													
		1. quarter			**2. quarter**			**3. quarter**			**4. quarter**			**Ref.value**	**Commentary on the test results and conclusion (commentary on the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewage system before the inflow	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**		
HPP Bistrica	MPN colifor.bacteria (E.coli/100 ml)	-	$1,4x10^3$	$6,4x10^3$	**-**	$7,2x10^3$	$1,3x10^3$	**-**	$6,2x10^2$	$1,9x10^3$	-	84	$1,1x10^4$	-	
	Dissolved O2 (mg/l)	-	8,71	9,66	-	8,05	7,13	-	8,94	7,9	-	9,96	10,14	min. 7,0	
	Suspended substances (mg/l)	-	<1	4	-	3,2	8	-	<1	<1	-	<1	1,2	25	
	HPK (mg/l)	-	<4	<4	-	<4	<4	-	<4,0	<4,0	-	<4	4,2	15	
	BPK5 (mg/l)	-	0,82	0,87	-	0,88	0,95	-	0,82	0,91	-	0,8	0,95	5	
	pH value	-	7,76	8,04	-	7,93	7,91	-	7,77	7,95	-	8,31	8,15	6,8-8,5	
	Oil and fat total (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	-	

Drinsko-Limske HPP															
Water quality in 2024.															
Facility	**Test parameters (unit of measurement)**	**Results of wastewater and surface water quality testing in 2024.**													
		1. quarter			**2. quarter**			**3. quarter**			**4. quarter**			**Ref.value**	**Commentary on the test results and conclusion (commentary on the chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and their impact on the water class according to the Regulation on Water Classification)**
		From the sewage system before the inflow	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**	**From the sewage system before the inflow**	**Surface water upstream of the object**	**Surface water Downstream-bottom of the facility**		
HPP Potpeć	MPN colifor. bacteria (E.coli/100 ml)	**-**	$9,2x10^3$	$1x10^4$	**-**	$2x10^3$	$4x10^3$	**-**	$1,6x10^3$	$2,2x10^3$		$1,7x10^4$	$1,4x10^4$	-	
	Dissolved O2 (mg/l)	-	9,05	8,98	-	9,55	8,43	-	8,98	7,24		11,49	11,42	min. 7,0	
	Suspended substances (mg/l)	-	3,2	2,8	-	1,6	7,2	-	<1	1,2	-	<1	<1	25	
	HPK (mg/l)	-	4,2	5,3	-	4,4	4,5	-	4,2	4,4	-	4,5	4,2	15	
	BPK5 (mg/l)	-	1	1,4	-	1	1,22	-	0,98	1,1	-	1,1	1	5	
	pH value	-	8,07	7,8	-	7,91	7,96	-	7,87	7,7	-	8,21	8,15	6,8-8,5	
	Oil and fat value (mg/l)	-	-	-	-			-	-	-	-	-	-	-	

In the Branch "Drinsko - Limske HPP", water quality control was not performed for the SHPP "Vrelo", which due to its size and construction does not produce wastewater.

Wastewater was tested at the SHPP "Radaljska Banja". The tested parameters meet the values defined by the Regulation.

7.2.3. Waste

Waste in the Drinsko-Limske HPP Branch is mainly generated in the process of maintaining hydro power plants. The types of waste generated in 2024 are shown in Table 135.

Table 135

Drinsko-limske HPP									
Waste types generated in 2024									
No.	Regulation on categories, testing and classification of waste ("Official Gazette of the Republic of Serbia" No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)		Measurement unit	Facility				Total	Note
				HPP and PSHPP Bajina Bašta	Limske HPP	HPP Elektromorava	HPP Zvornik		
	Name	Index number		QUANTITIES					
1.	Lead batteries	16 06 01*	t	18,474	0,000	0,000	0,000	**18,474**	Waste lead-acid batteries

Waste management was done according to waste management procedures and in accordance with the following legal regulations: Regulation on the method of storage, packaging and labeling of hazardous waste "Official Gazette of the Republic of Serbia", No. 92/10 of 05.12.2010; 95/2024-69, Regulation on categories, testing and classification of waste ("Official Gazette of the Republic of Serbia", No. 56/10 of 10.08.2010, 93/2019 and 39/2021); Regulation on the conditions and methods of collection, transport, storage and treatment of waste used as secondary raw materials or for energy production ("Official Gazette of the Republic of Serbia", No. 98/10 of 24.12.2010, 98/2010-23); Regulation on waste oil management ("Official Gazette of the Republic of Serbia", No. 71/10 of 04.10.2010) and REGULATION on the treatment of waste containing asbestos "Official Gazette of the Republic of Serbia", No. 75 of 20 October 2010.

Table 136 shows the quantities of delivered waste, and the R/D operations for managing this waste with an authorized legal entity, according to the waste delivery contract and Appendix 6 of the Regulation on categories, testing and classification of waste

Table 136

Drinsko-limske Branch										
Waste quantities disposed of in 2024										
No.	Regulation on categories, testing and classification of waste ("Official Gazette of the Republic of Serbia" No. 56 as of 10 August 2010, 93 as of 26 December 2019, 39 as of 21 April 2021 and 65 as of 2 August 2024)		Measurement unit	Facility				Total	R/D	Note
				HPP and PSHPP Bajina Bašta	Limske HPP	HPP Elektromorava	HPP Zvornik			
	Name	Index number		Quantities						
1.	Lead batteries	16 06 01*	t	18,474	0,000	0,000	0,000	**18,474**	R13	Waste lead-acid batteries

7.2.4. Environmental noise measurement

Measurements of environmental noise levels around power plants were carried out in 2024. The measurements were carried out by the authorized company Miphem d.o.o. Belgrade.

The measurements were carried out during the day, evening and night. The results of the measured environmental noise levels are given in Table 137.

Table 137

Drinsko-Limske HPP				
ENVIRONMENTAL NOISE MEASUREMENT IN 2024				
Measurement place	**Measurement noise level (dB(A))**		**Noise indicator threshold value**	**Assessment of the relevant level of total noise**
HPP Bajina Bašta	day	52,3	/*	/*
	evening	51,5	/*	/*
	night	48,0	/*	/*
HPP Zvornik	day	55,4	65	Does not exceed the limit value
	evening	55,3	65	Does not exceed the limit value
	night	53,9	55	Does not exceed the limit value
HPP Bistrica	day	57,6	65	Does not exceed the limit value
	evening	56,5	65	Does not exceed the limit value
	night	46,6	55	Does not exceed the limit value
HPP Potpeć	day	50,7	65	Does not exceed the limit value
	evening	50,1	65	Does not exceed the limit value
	night	45,7	55	Does not exceed the limit value
HPP Uvac	day	38,6	/*	Does not exceed the limit value
	evening	50,8	/*	Does not exceed the limit value
	night	36,9	/*	Does not exceed the limit value
HPP Kokin Brod	day	42,2	65	Does not exceed the limit value
	evening	41,8	65	Does not exceed the limit value
	night	40,3	55	Does not exceed the limit value
HPP Međuvršje	day	53,5	65	Does not exceed the limit value
	evening	52,7	65	Does not exceed the limit value
	night	48,9	55	Does not exceed the limit value
HPP Ovčar Banja	day	52,3	65	Does not exceed the limit value
	evening	51,7	65	Does not exceed the limit value
	night	45,7	55	Does not exceed the limit value

By comparing the measurement results with the noise limit values for open spaces in acoustic zone 5, defined in the Regulation on Noise Indicators, Limit Values, Methods for Assessing Noise Indicators, Disturbance and Harmful Effects of Noise in the Environment (Official Gazette of the Republic of Serbia, No. 75/2010), it is concluded that they do not exceed the limit value.

* The measurement location in question is not acoustically zoned, within the meaning of the Regulation on Noise Indicators, Limit Values, Methods for Assessing Noise Indicators, Disturbance and Harmful Effects of Noise in the Environment, Official Gazette of the Republic of Serbia, No. 75/2010, which is why the limit values of noise indicators in open spaces are not listed, i.e. no assessment of the relevant level of total noise in relation to the limit values is given.

7.3. Monitoring of the working environment, occupational safety and health protection

The reports on occupational safety and health protection for 2024 also include the following elements:

- **Working Environment Monitoring**
  - measurement of working environment noise
- **Occupational Safety**
  - employee training
  - occupational accidents
- **Health Protection**

7.3.1. Working Environment Monitoring

- **Measurement of working environment noise**

As part of the examination of working environment conditions, physical and microclimatic parameters, noise measurement in the working environment was also carried out in all facilities of the "Drinsko - Limske" hydro power plants, during regular periodic inspections in the winter period of 2024.

HPP "Bajina Bašta" Perućac: Out of a total of 76 locations where noise measurements were performed, at 10 measurement locations the measured noise values exceed the limit values defined by the Regulation on Preventive Measures for Safe and Healthy Work During Exposure ("Official Gazette of the Republic of Serbia", No. 96/2011, 78/2015 and 93/2019).

HPP "Zvornik" Mali Zvornik: Out of a total of 25 locations where noise measurements were performed, at 2 measurement locations the measured noise values exceed the limit values defined by the Regulation on Preventive Measures for Safe and Healthy Work When Exposing People to Noise ("Official Gazette of the Republic of Serbia", No. 96/2011, 78/2015 and 93/2019).

HPP "ELEKTROMORAVA" Čačak (HPP "Ovčar Banja" and HPP "Međuvršje"): Out of a total of 20 locations where noise measurements were performed, at 2 measurement locations the measured noise values exceed the limit values defined in the statement ("Official Gazette of the Republic of Serbia", No. 96/2011, 78/2015 and 93/2019).

"**LIMSKE HPP" Nova Varoš (HPP "Kokin Brod", HPP "Uvac", HPP "Bistrica" and HPP "Potpeć"):** Out of a total of 35 locations where noise measurements were performed, at 12 measuring locations the measured noise values exceed the limit values defined in the statement ("Official Gazette of the Republic of Serbia", No. 96/2011, 78/2015 and 93/2019).

Measuring locations where the measured values exceed the limit values are given in Table.

Table 138

Drinsko-Limske HPP Branch				
Noise in the working environment for 2024				
Branch of a company		**Operation**	**Registered noise level (dB(A))**	**Permitted noise level (dB(A))**
Facility				
Drinske HPP	HPP Bajina Bašta	Power house	86	85
		Turbine Space Turbine 1	94	85
		Mechanical workshop	91	85
	PSHPP Bajina Bašta	FP Tara Filtri	87	85
		PP Đurići– pump plant	97	85

Drinsko-Limske HPP Branch					
Noise in the working environment for 2024					
Branch of a company			Operation	Registered noise level (dB(A))	Permitted noise level (dB(A))
Facility					
			Engine room	88	85
			Turbine Space Turbine 2	98	85
			Generator space between units 1 and 2	89	85
			Carpentry workshop	91	85
			Vehicle fleet	86	85
	HPP Zvornik		Turbine space - unit A2	106	86
			Turbine space - cooling system	105	84
	HPPEM	HPP Ovčar Banja	Command room	64	55
		HPP Međuvršje	Command room	64	55
Limske HPP	HPP Kokin Brod		Turbine space	95	85
	HPP Uvac		Turbine space	96	85
			Generator barrel	92	85
			Power house	86	85
	HPP Bistrica		Power house	87	85
			Bus-bar distribution	92	85
			Turbine space	93	85
			Compressor station	89	85
			Locksmith-welding workshop	95	85
	HPP Potpeć		Turbine space	95	85
			Bus-bar distribution	89	85
			Technician's office	66	60

In places where the registered noise level is higher than the permitted level, employees do not spend much time there and protective measures are applied, including the use of earplugs and earmuffs.

7.3.2. Occupational Safety

- **Employee training**

Employee training is carried out according to the Program for training and updating employees' knowledge in occupational safety and is carried out periodically depending on the workplace where the employee works, which is in accordance with the applicable legal regulations. The number of employees scheduled for training as well as the number of employees who have undergone training is shown in Table 139.

Table 139

Drinsko-limska HPP				
Employee training in 2024				
Facility	Number of employees	For training		Trained
		Number	%	Number	%
HPP Bajina Bašta PSHPP Bajina Bašta	243	100	41,15	100	100,00
HPP Elektromorava	43	5	11,63	5	100,00
HPP Zvornik	63	28	44,44	28	100,00
Limske HPP	123	120	97,56	120	100,00
TOTAL: Drinsko-Limske HPP	**472**	**253**	**53,60**	**253**	**100,00**

Table 140 provides an overview of the number of people sent to other trainings.

Table 140

Drinsko-Limske HPP			
Other trainings in 2024			
Ordinal number	**Type of training**	**Number of people**	**Note**
1.	Informing contractors + visitors about hazards and hazards, OSH measures and rules of conduct	HPPBB/505+162+26 LIHPP/95 HPP ZV/31 XEMM/108 Total ДЛХЕ:927	
2.	Internal training and OSH knowledge testing for employees in high-risk jobs	HPPBB/78 LIHPP/45 HPP ZV/16 XEEM/5 TOTAL ДЛХЕ:144	
3.	Internal training and OSH knowledge testing for employees in other jobs	HPPBB/0 LIHPP/75 HPP ZV/20 HPP EM/3 Total ДЛХЕ: 93	
4.	External training for work equipment operators - crane operators	HPPBB/6 LIHPP/8 HPP ZV/0 HPP EM/0 Total ДЛХЕ: 14	
5.	External training for safe work for aerial platform operators	HPPBB/10 HPP EM/4 HPP EM/0 Total ДЛХЕ: 14	
6.	OSH training for "PRO TENT" workers engaged in auxiliary repair work	HPPBB/42 LIHPP/21 HPP ZV/10 HPP EM/1 Total ДЛХЕ: 74	
7.	Introducing students and pupils in practical classes to OSH measures and rules of conduct	HPPBB/0 LIHPP/3 HPP EM/60 Total DLHPP: 63	
8.	Training of employees operating EE plants and equipment and others in the event of job changes	HPP ZV/12 HPP EM/8 HPPBB/5 Total DLHPP: 25	
9.	Training of employees operating EE plants and equipment and others in the event of job changes	HPPBB/0 LIHPP/120 HPP ZV/38 HPP EM/3 Total DLHPP: 161	

- **Injuries at work**

Table 141 provides data on the number of injuries at work in 2024.

Table 141

Drinsko-Limske HPP Branch						
Injuries at work in 2024						
Facility	**Number of employees**	**Injuries compared to the number of employees**				
		Mild	**Severe**	**Fatal**	**Total**	**%**
HPP Bajina Bašta **SPP Bajina Bašta**	243	2	0	0	2	0,82
HPP Elektromorava	43	1	0	0	1	2,32
HPP Zvornik	63	0	0	0	0	0,00
Limske HPP	123	1	0	0	1	0,81
TOTAL: **Drinsko-Limske HPP Branch**	**472**	**4**	**0**	**0**	**4**	**0,85**

7.3.3. Health protection

The results of the medical examinations are given in Table 142.

Table 142

Drinsko-limske branch											
Working ability of employees in 2024.											
Facility	Number of employees	Periodical overview				For job					
		Direcetd to examination		Examined		Capable of working		With limited ability		Unable	
		Number	%	Number	%	Number	%	Number	%	Number	%
HPP Bajina Bašta PSHPP Bajina Bašta	243	100	41,15	100	100,00	74	74,00	26	26,00	0	0,00
HPP Elektromorava	43	6	13,95	6	100,00	6	100,00	0	0,00	0	0,00
HPP Zvornik	63	11	17,46	11	100,00	11	100,00	0	0,00	0	0,00
Limske HPP	123	45	36,59	45	100,00	38	84,44	7	15,56	0	0,00
TOTAL: DRINSKO-LIMSKE HPP BRANCH	**472**	**162**	**34,32**	**162**	**100,00**	**129**	**79,63**	**33**	**20,37**	**0**	**0,00**

7.4. Stakeholders Submissions

There were no stakeholders submission related to the environment in 2024.

8. RENEWABLE ENERGY SOURCES BRANCH

The Renewable Energy Sources (RES) Branch comprises the following small hydropower plants, some are in operation, whilst the most of them are under reconstruction.

Small hydropower plants in operation in 2024:

- HPP Sicevo
- HPP Sokolovica
- HPP Gamzigrad
- HPP Prvonek
- HPP Raška
- HPP Turica

Small hydropower plants out of operation in 2024:

- HPP Seljašnica
- HPP Sveta Petka
- HPP Moravica
- HPP Pod Gradom
- HPP Kratovska Reka
- HPP Temac
- HPP Vučje
- HPP Jelašnica

According to the plans of EPS JSC, SHPP Gamzigrad is exempt from reconstruction (restitution proceedings initiated), small hydropower plants that are out of service, are at different stages of reconstruction or rehabilitation.

Small HPPs under construction:

- HPP Rovni, construction has begun, works in progress.
- HPP Ćelije, works have not begun, Building Permit obtained and Notice on Commencement of Works placed, Execution Design prepared, coordination with the contractor.

8.1. Overview and Status of Permits

SHPP Prvonek has a Use Permit No. 351-398/2012-07, issued on June 13, 2013, by the competent Secretariat of the City of Vranje.

SHPP Turica has a Use Permit No. 351-597/20-02, issued on November 13, 2020, by the Department for implementation of plans and construction of Užice.

SHPP Seljašnica has a Use Permit No. 353-172/20, issued on October 20, 2020, by Municipal Administration of Prijepolje.

8.2. Environmental Impact Monitoring

8.2.1. Identified Negative Impacts on the Flow and Ecological System downstream from the Reservoir

The identified negative impacts in streams downstream from the dams are mainly double: with very low water level (low disharge), caused by considerably changed, annual climate and meteorological conditions and otherwise, when there are very large inflows, there is a tendency to realize transfer of hydro power with as higher as possible efficiency through the planning of electricity generation.

8.2.2. Water

- **Water Quantity**

Water for electricity generation, process water and sanitary water were used in accordance with requirements and technical specifications of the units. Quantities of used water are calculated on an approximative basis according to the energy generation, per power plants, for 2024, and are provided in Table 143.

The data which are not indicated in the table are unavailable due to non-existence of relevant diagrams for calculation, of each unit individually, as well as due to impossibility of measurement or lack of measuring equipment in the listed power plants**.**

Table 143

RENEWABLE ENERGY SOURCES BRANCH						
Water quantities in 2024						
Organizational unit	**Installed output kW**	**Permitted water amount (installed flow per unit) m^3/ s**	**Discharged water quantities**			
			Water used for electricity generation in 2023 m^3/ year x10^6	**Process water m^3/ year x10^6**	**Sanitary water m^3/ year x10^3**	**Total discharged water m^3/ year x10^6**
Organizational unit	4.600	4,50	55,2			
SHPP Seljašnica	1.040	0,80	0	Under reconstruction		
SHPP Raška	750	2,50	0	Under reconstruction		
SHPP Seljašnica	376	3,20	17,1			
SHPP Moravica	270	2,30	0	Under reconstruction		
SHPP Turica	760	1,16	0	Under reconstruction		
SHPP Pod Gradom	744	-	0	Under reconstruction		
SHPP Kratovska Reka	1.348	20,60	245,8			
SHPP Sveta Petka	904	6,10	0	Under reconstruction		
SHPP Sićevo	3.724	40,00	305			
SHPP Temac	224	4,20	0			
SHPP Sokolovica	1.986	1,25	0	Under reconstruction		
SHPP Gamzigrad	540	0,42	0	Under reconstruction		
SHPP Vučje	932	1,45	7,8			

- **Water Quality**

In 2024, water quality was not checked in the Renewable Energy Sources Branch. Small hydropower plants in the RES Branch for their size and structure are not able to produce wastewater. Testing of technical and sanitary waters is not performed at our HPPs.

8.2.3. Waste

In 2024, the works on the reconstruction and revitalization of some power plants that were previously mentioned, continued. Generated waste, as a result of rehabilitation works, is listed and properly sorted (hazardous / non-hazardous) and stored at available locations. After the procedure, part of the stored waste will be handed over to the competent services of EPS JSC, for further use by institutions interested in using this equipment for teaching or museum purposes, while the rest of the waste will be disposed of according to the Serbian Waste Management regulations.

8.2.4. Environmental Noise Measurement

Noise level in the environment in vicinity of the power facilities operated by the RES Branch was not measured in 2024, because the facilities are dislocated from the settlement.

Environmental Impact Assessment Studies

In the Renewable Energy Sources Branch, within the scope of revitalization and modernization projects of the SHPP, Environmental Impact Assessment Sstudies were prepared, according to the requirements of the competent Ministry of Environmental Protection, for the following facilities:
- SHPP Ćelije
- SHPP Moravica
- SHPP Raška
- SHPP Rovni
- SHPP Seljašnica
- SHPP Sićevo
- SHPP Sokolovica
- SHPP Temac
- SHPP Turica
- SHPP Vučje

All studies obtained approval from Ministry of Environmental Protection.

For the other facilities that are not listed, the decision were passed that it is not necessary to prepare Environmental Impact Assessment Studies.

8.3. Working Environment Monitoring, Occupational Health and Safety

The 2024 Occupational Safety and Health Reports include the following elements:

- **Working Environment Monitoring**
  - working environment noise measurement
- **Occupational Safety**
  - training of employees
  - injuries at work
- **Health Protection**

8.3.1. Working Environment Monitoring

- **Working Environment Noise Measurement**

There were no measurements in 2024.

8.3.2. Occupational Safety

- **Training of Employees**

The implemented training of employees, is the training of employees for safe and healthy work, and is done according to the Training Program, both theoretically and practically.

  - Training of employees for safe and healthy work – 35 employees.
  - Training for fire-fighting – 35 employees

- **Injuries at Work**

Table 144 provides data on number of injuries at work in 2024.

Table 144

RENEWABLE ENERGY SOURCES BRANCH						
Injuries at work in 2024						
Organizational unit	**Number of employees**	**Injuries – Number of employees' ratio**				
		mild	**severe**	**fatal**	**total**	**%**
Renewable Energy Sources	53	0	0	0	0	0,00
TOTAL: RENEWABLE ENERGY SOURCES BRANCH	**53**	**0**	**0**	**0**	**0**	**0,00**

8.3.3. Health Protection

Medical examination findings are provided in Table 145.

Table 145

RENEWABLE ENERGY SOURCES BRANCH											
Employees' work capability in 2024											
Branch	**Number of employees**	**Periodical examinations**				**Work capability**					
		Referred to examination		**Examined**		**Capable**		**Limited Capability**		**Incapable**	
		n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Branch Head Office	14	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
SHPP Istok	25	24	96,00	24	100,00	18	75,00	6	25,00	0	0,00
SHPP Zapad	14	11	78,57	11	100,00	11	100,00	0	0,00	0	0,00
TOTAL: RENEWABLE ENERGY SOURCES BRANCH	**53**	**35**	**66,04**	**35**	**100,00**	**29**	**82,86**	**6**	**17,14**	**0**	**0,00**

8.4. Stakeholders Submissions

There were no stakeholders' submissions related to environment in 2024.

9. EPS JSC HEAD OFFICE

9.1. Working Environment Monitoring, Occupational Health and Safety

The 2024 Occupational Safety and Health Reports include the following elements:

- **Working Environment Monitoring**
  - working environment noise measurement
- **Occupational Safety**
  - training of employees
  - injuries at work
- **Health Protection**

9.1.1. Working Environment Monitoring

- **Microclimate and lighting measurements**

In 2024, microclimate and lighting tests were done for all facilities in the EPS JSC Head Office.

The measured values are within the permitted limits in accordance with regulations.

9.1.2. Occupational Safety

- **Training of Employees**

The implemented training of employees, is the training of employees for safe and healthy work, and is done according to the Training Program, both theoretically and practically.

- Training of employees for safe and healthy work – 60 employees.
- Training for fire-fighting – 60 emloyees

- **Injuries at Work**

The number of injuries at work in 2024 is provided in Table 146.

Table 146

EPS JSC HEAD OFFICE						
Injuries at work in 2024						
Organizational unit	**Number of employees**	**Injuries – Number of employees' ratio**				
		mild	**severe**	**fatal**	**total**	**%**
EPS JSC Head Office	989	5	0	0	5	0,51
TOTAL: EPS JSC HEAD OFFICE	**989**	**5**	**0**	**0**	**5**	**0,51**

9.1.3. Health Protection

There are no employees in EPS JSC Head Office working in high-risk workplaces.

Systematic examinations of employees and mandatory eyes examinations were carried out in 2024.

Health care includes implementation of measures and activities to preserve and improve the health of employees, prevention, suppression and early detection of diseases, injuries and other health disorders and timely, effective and efficient treatment, health care and rehabilitation.
Activities to preserve and improve the health of employees in 2024 are shown in Table 147.

Table 147

EPS JSC HEAD OFFICE				
Activities to preserve and improve the health of employees in 2024				
Activities	**Number of employees**	**Examined**	**Not examined**	**%**
Basic systematic check-ups	**989**	**623**	**366**	**62,99**
Additional systematic examinations as per the opinion of a specialist	**989**	**253**	**736**	**25,58**
Mandatory eye examinations of employees who use a screen for more than 4 hours at work	**989**	**0**	**989**	**0,00**
Referring to rehabilitation and prevention of work disability of employees, according to the opinion of a specialist	**989**	**176**	**813**	**17,80**

9.2. Stakeholders Submissions

Stakeholders submissions related to the environment in 2024 at the level of EPS JSC are provided in Table 148.

Table 148

EPS JSC HEAD OFFICE				
Stakeholders submissions for 2024				
1.	**Organizational unit**	**Complaint (number and date) and by whom it was submitted**	**Object of complaint**	**Actions taken**
2.	Jobs directly managed by the CEO of EPS JSC, System Support Tasks, Legal Affairs Department, Communication Service with stakeholders	No. 12.01.1245981/1-24, dated 08.11.2024. Association "Environmental Law Clinic"	Environmental protection (data on stationary sources of pollution, air emissions)	The response was made by Notification No. 12.02.1387456/2-24, which provided the requested data.
3.	Jobs directly managed by the CEO of EPS JSC, System Support Tasks, Legal Affairs Department, Communication Service with stakeholders	No. 12.01.1238540/1-24, dated 07.11.2024. Association "Environmental Law Clinic"	Environmental protection (air pollution, air emissions, fuels, measures)	The response was made by Notification No. 12.02.1387456/2-24, which provided the requested data

4.	Jobs directly managed by the CEO of EPS JSC, System Support Tasks, Legal Affairs Department, Communication Service with stakeholders	No. 12.01.1238629/1-24, dated 07.11.2024. Association "Environmental Law Clinic"	Environmental protection (permits for air quality measurement)	The response was made by Notification No. 12.02.1387456/2-24, which provided the requested data
5.	Jobs directly managed by the CEO of EPS JSC, System Support Tasks, Legal Affairs Department, Communication Service with stakeholders	No. 12.01.1238585/1-24, dated 07.11.2024. Association "Environmental Law Clinic"	Environmental protection (periodic and continuous emission measurement))	The response was made by Notification No. 12.02.1387456/2-24, which provided the requested data
6.	Jobs directly managed by the CEO of EPS JSC, System Support Tasks, Legal Affairs Department, Communication Service with stakeholders	No. 12.01.1238585/1-24, dated 07.11.2024. Association "Environmental Law Clinic"	Environmental protection (periodic and continuous emission measurement))	The response was made by Notification No. 12.02.1387456/2-24, which provided the requested data
7.	Jobs directly managed by the CEO of EPS JSC, System Support Tasks, Legal Affairs Department, Communication Service with stakeholders	No. 12.01.1246004/1-24, dated 08.11.2024. Association "Environmental Law Clinic"	Environmental protection (periodic and continuous emission measurement))	The response was made by Notification No. 12.02.1387456/2-24, which provided the requested data
8.	Jobs directly managed by the CEO of EPS JSC, System Support Tasks, Legal Affairs Department, Communication Service with stakeholders	No. 12.01.1245942/1-24, dated 08.11.2024. Association "Environmental Law Clinic"“	Environmental protection (valid permits for mining waste management, plans, approval for the use of mining facilities)	The response was made by Notification No. 12.02.1387456/2-24, which provided the requested data
9.	Jobs directly managed by the CEO of EPS JSC, System Support Tasks, Legal Affairs Department, Communication Service with stakeholders	No. 12.01.1238653/1-24, dated 07.11.2024. Association "Environmental Law Clinic"“	Environmental protection (mining license and waste management)	The response was made by Notification No. 12.02.1387456/2-24, which provided the requested data

10.	Jobs directly managed by the CEO of EPS JSC, System Support Tasks, Legal Affairs Department, Communication Service with stakeholders	No. 12.01.1238585/1-24, dated 07.11.2024. Association "Environmental Law Clinic"“	Environmental protection (integrated permits)	The response was made by Notification No. 12.02.1387456/2-24, which provided the requested data
11.	Jobs directly managed by the CEO of EPS JSC, System Support Tasks, Legal Affairs Department, Communication Service with stakeholders	No. 12.01.1238585/1-24, dated 07.11.2024. Association "Environmental Law Clinic"“	Environmental protection (integrated permits)	The response was made by Notification No. 12.02.1387456/2-24, which provided the requested data
12.	Jobs directly managed by the CEO of EPS JSC, System Support Tasks, Legal Affairs Department, Communication Service with stakeholders	No. 12.01.214/1-24 dated 20.12.2023, applicant A.M.	Environmental protection (electricity consumption)	The response was made by Notification No. 12.02.1387456/2-24, which provided the requested data
13.	Jobs directly managed by the CEO of EPS JSC, System Support Tasks, Legal Affairs Department, Communication Service with stakeholders	No. 12.02.1419725/1-24 dated 23.12.2024. Applicant Attorney P.D.,	Operating hours of the Kolubara TPP plant, in accordance with Art. 6 of the Regulation on GVE air pollutants ("Official Gazette of the Republic of Serbia", No. 6/2016 and	The response was made by Notification No. 12.02.1387456/2-24, which provided the requested data
14.	Nikola Tesla TPP Branch	31.3.2024. citizen K.K. from Progara.	The complaint concerns the spreading of ash from the TENT A landfill over the village.	The inspection report 001636175 2024 14850 007 013 042 002 ordered that in the zone of influence of the ash and slag landfill TENT A, where ash and slag are transported and deposited, regular measurements of the level of pollutants in the air by measuring the concentrations of total sedimentary substances and total suspended particles be carried out by an authorized person, and in accordance with the Regulation on Monitoring Conditions and Air Quality Requirements (Official Gazette of the Republic of Serbia No. 11/2010, 75/2010 and 63/13) *Ordered measurements are regularly carried out by an

15.	Nikola Tesla Thermal Power Plant Branch	05.04.2024 D.M. and other	Impact of the Kolubara TPP on air, water and soil pollution in the vicinity of the Kolubara TPP	A statement was responded with contributions regarding air, water and soil protection measures and the environmental impact of the Kolubara TPP.
16.	Kolubara Branch	E.04.01-243251/1-24 from 19.03.2024. N.P. Baroševac	The impact of RB Kolubara's activities on living conditions	Regular monitoring of the state of the environment in part of the Baroševac settlement has not determined the predominant impact of mining activities compared to the impact of the Vreoci - Aranđelovac regional road with high-frequency traffic throughout the year.
17.	Kolubara Branch	12.01.1102690/1-24 from 10.10.2024.. P.C. from Rudovaca	Impact of dam construction work on living conditions	Measure - activities aimed at determining the possibility of implementing or amending the Spatial Plan, as a basis for determining the public interest in expropriation.
18	Kolubara Branch	12.01-1379868/1-2024 from 11.12.2024. M3 Medoševac	Environmental condition in the settlement of Medoševac, measures to prevent damage to the property of residents of the settlement of Medoševac due to overflowing wastewater canals in this settlement, i.e. the presence of mining machinery	On October 29, 2024, a proposal was submitted to determine the public interest for part of the Medošavac settlement, due to difficult living conditions due to environmental and infrastructure problems; The MB Kolubara branch is continuously working to suppress spontaneous combustion and improve the living conditions of the residents of Medoševac. Potential spontaneous combustion zones are covered with inert material to cut off the flow of oxygen, measures are being implemented to prevent the sliding of applied masses, and regular monitoring of the effects of fire extinguishing and preventive actions is also being carried out.

10. EPS SNABDEVANJE BRANCH

10.1. Working Environment Monitoring, Occupational Health and Safety

The 2024 Occupational Safety and Health Reports include the following elements:

- **Working Environment Monitoring**
  - working environment noise measurement
  - microclimate measurement
  - lighting masurement
- **Occupational Safety**
  - training of employees
  - injuries at work
- **Health Protection**

10.1.1. Monitoring the work environment

In 2024, the working environment was monitored.

In 2024, the working environment conditions were tested in the summer and winter periods, for the needs of the EPS Snabdevanje Branch for facilities and offices used by the EPS Snabdevanje Branch employees, at 162 locations on the territory of the Republic of Serbia. The working environment monitoring is given in Tables 149 and 150.

Table 149

EPS SNABDEVANJE BRANCH							
Working environment monitoring in 2024 - winter testing							
No.	**TERRITORY OF THE REPUBLIC OF SERBIA**	**Type of test - Winter**					
		Microclimate (temperature, air flow rate and relative humidity)	Illumination	Physical harm - noise	Physical hazards - vibrations	Physical hazards - harmful radiation	Chemical hazards - dust
		Total number of offices surveyed	Total number of offices surveyed	Total number of offices surveyed	Total number of offices surveyed	Total number of offices surveyed	Total number of offices surveyed
1.	**NIŠ**	208	208	16	0	10	19
2.	**BELGRADE**	102	102	26	0	10	26
3.	**KRALJEVO**	107	107	16	15	15	15
4.	**KRAGUJEVAC**	69	69	9	0	3	5
5.	**NOVI SAD**	234	234	5	0	3	5
TOTAL NUMBER BY REGION		**720**	**720**	**72**	**15**	**41**	**70**

Table 150

EPS SNABDEVANJE BRANCH							
Working environment monitoring in 2024 - summer testing							
No.	**TERRITORY OF THE REPUBLIC OF SERBIA**	**Type of test - summer**					
		Microclimate (temperature, air flow rate and relative humidity)	Illumination	Physical harm - noise	Physical hazards - vibrations	Physical hazards - harmful radiation	Chemical hazards - dust
		Total number of offices surveyed	Total number of offices surveyed	Total number of offices surveyed	Total number of offices surveyed	Total number of offices surveyed	Total number of offices surveyed
1	**NIŠ**	203	203	17	0	4	18
2	**BELGRADE**	98	0	24	0	10	24
3	**KRALJEVO**	122	122	22	0	19	22
4	**KRAGUJEVAC**	58	58	10	0	18	6
5	**NOVI SAD**	234	230	7	0	7	7
TOTAL NUMBER BY REGION		**715**	**613**	**80**	**0**	**58**	**77**

Of the total of 152 locations where noise measurements were performed, no noise values exceeding the limit values defined by the Regulation on Preventive Measures for Safe and Healthy Work During Exposure ("Official Gazette of the Republic of Serbia", No. 96/2011, 78/2015 and 93/2019) were measured).

10.1.2. Occupational Safety

- **Training of Employees**

Specific Occupational Health and Safety training of employees is carried out according to the Training Program, both theoretically and practically. The following trainings were carried out in 2024:

- In the EPS Supply Branch, 197 training sessions for employees on safe and healthy work were held out of a total of 1304 employees. The aforementioned training sessions were conducted for newly hired employees and employees who were granted their employment contracts.
- In the EPS Supply Branch, 197 training sessions were held for employees in the field of fire protection out of a total of 1304 employees. The aforementioned training sessions were conducted for newly hired employees and employees who received annexes to their employment contracts (according to the adopted Training Plan and Program approved by the Ministry of Internal Affairs).

- **Injuries at Work**

The number of injuries at work in 2024 is provided in Table 151.

Table 151

EPS SNABDEVANJE BRANCH						
Injuries at work in 2024						
Organizational unit	**Number of employees**	**Injuries – Number of employees' ratio**				
		mild	**severe**	**fatal**	**total**	**%**
TOTAL: EPS SNABDEVANJE BRANCH	**1.304**	**8**	**2**	**0**	**10**	**0,77**

10.1.3. Health Protection

There are no employees in EPS Snabdevanje working in high-risk workplaces.

Health care includes implementation of measures and activities to preserve and improve the health of employees, prevention, suppression and early detection of diseases, injuries and other health disorders and timely, effective and efficient treatment, health care and rehabilitation.

Activities to preserve and improve the health of employees in 2024 are shown in Table 152.

Table 152

EPS SNABDEVANJE BRANCH				
Activities to preserve and improve the health of employees in 2024				
Activities	**Number of employees**	**Examined**	**Not examined**	**%**
Basic systematic check-ups	**1.304**	**876**	**428**	**67,18**
Additional systematic examinations as per the opinion of a specialist	**1.304**	**500**	**804**	**38,34**
Mandatory eye examinations of employees who use a screen for more than 4 hours at work	**1.304**	**490**	**814**	**37,58**
Referring to rehabilitation and prevention of work disability of employees, according to the opinion of a specialist	**1.304**	**194**	**1,110**	**14,88**

10.2. Stakeholders Submissions

There were no stakeholders' submissions related to environment in 2024.

APPENDIX 1. MODEL REPORT ON ENVIRONMENTAL PROTECTION OF THE EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT

Coal Production, Processing, and Transport Plants.

For each mining company:

- Summarize the status of permits, licenses, and other necessary approvals for each capital plant (such as coal mines). Indicate each case of non-compliance with applicable national environmental, health and safety requirements.
- Identify any new permit required during the reported year or a permit that will expire in less than a year and request a renewal accordingly.

Provide data for the following parameters for each plant.

- Emissions (key emissions, MPC, current emissions)
- Solid waste (type and quantity of waste)
- Water use (quantity of water used, permitted values)
- Wastewater (key wastewater, MPC, current wastewater quantities)
- Noise
- Summarize the health and safety report, including the accident rate and each initiative implemented and planned during the period, including the training program report
- Summarize public complaints, if any, related to the project and take steps to respond to them.

Electricity Generation Plant

To be provided for each power plant:

- Summarize the status of permits, licenses and other necessary approvals for each power plant. Indicate each case of non-compliance with applicable national environmental, health and safety requirements.
- Identify any new permit that will expire in less than a year and request a renewal accordingly.

Please provide data for the following parameters for each power plant:

Emissions

	Current emission	Limit values
Particle content		
CO_2		
NO_x (NO_2)		

Identified negative impacts to the flow and ecological system downstram from the reservoir

- Solid waste (type and quantity of waste)
- Water use (quantity of water used, permitted values)
- Wastewater (key wastewater, MPC, current wastewater quantities)
- Noise
- Summarize the health and safety report, including the accident rate and each initiative implemented and planned during the period, including the training program report
- Summarize public complaints, if any, related to the project and take steps to respond to them.

APPENDIX2. LEGISLATION OF THE REPUBLIC OF SERBIA ON ENVIRONMENTAL PROTECTION

Constitution of the Republic of Serbia ("Official Gazette of RS", No. 98/2006 and 115/2021)

LAWS

1. Law on Environmental Protection "Official Gazette of RS", No. 135/2004, 36/2009, 36/2009-other law, 72/2009 - other law, 43/2011 - US decision, 14/2016, 76/2018, 95/2018 - other law and 95/2018 - other law)
2. Law on Nature Protection ("Official Gazette of RS", No. 36/2009, 88/2010, 91/2010 - amended, 14/2016 and 95/2018 - other law and 71/2021)
3. Law on Energy ("Official Gazette of RS", No. 145/2014, 95/2018 – other law and 40/2021, 62/2023, 94/2024)
4. Law on Environmental Impact Assessment ("Official Gazette of RS", No. 94/2024)
5. Law on Strategic Environmental Assessment ("Official Gazette of RS", No. 94/2024)
6. Law on Integrated Prevention and Control of Environmental Pollution ("Official Gazette of RS", No. 135/2004 and 25/2015 and 109/2021)
7. Law on Air Protection ("Official Gazette of RS", No. 36/2009 and 10/2013 and 26/2021 and other law)
8. Law on Environmental Noise Protection ("Official Gazette of RS", No. 96/2021)
9. Law on Protection against Non-Ionizing Radiation ("Official Gazette of RS", No. 36/2009)
10. Law on Land Protection ("Official Gazette of RS", No. 112/2015)
11. Law on Packaging and Packaging Waste ("Official Gazette of RS", No. 36/2009 and 95/2018 - other law)
12. Law on Climate Changes ("Official Gazette of RS", No 26/2021)
13. Law on Biocidal Products ("Official Gazette of RS", No. 109/2021)
14. Law on Chemicals ("Official Gazette of RS", No. 36/2009, 88/2010, 92/2011 and 93/2012 and 25/2015)
15. Law on Waste Management ("Official Gazette of RS", No. 36/2009, 88/2010, 14/2016 and 95/2018 - other law, 35/2023)
16. Law on Waters ("Official Gazette of RS", No. 30/2010, 93/2012, 101/2016, 95/2018 and 95/2018 - other law)
17. Law on Meteorology ("Official Gazette of RS", No. 15/2016)
18. Law on Meteorological and Hydrological Activities ("Official Gazette of RS", No. 88/2010)
19. Law on Protection and Sustainable Use of Fish Stock ("Official Gazette of RS", No. 128/2014 and 95/2018 - other law)
20. Закон о рударству и геолошким истраживањима („Службени гласник РС“, број 101/2015 и 95/2018 – др.закон. 40/2021)
21. Law on Planning and Construction ("Official Gazette of RS", No. 72/2009, 81/2009 - corrigendum, 64/2010 - US decision, 24/2011, 121/2012, 42/2013 - US decision, 50 / 2013 - CC decision, 98/2013 - CC decision, 132/2014, 145/2014, 83/2018, 31/2019, 37/2019 - other law and 9/2020, 52/2021, 62/2023)
22. Law on Agricultural Land ("Official Gazette of RS", No. 62/2006, 65/2008 - other law, 41/2009, 112/2015, 80/2017 and 95/2018 - other law)
23. Law on Forests ("Official Gazette of RS", No. 30/2010, 93/2012, 89/2015 and 95/2018 - other law)
24. Law on Fees for the Use of Public Goods ("Official Gazette of RS", No. 95/2018, 49/2019, 86/2019 - aligned din. Amounts, 156/2020 – aligned din. Amounts 15/2021 – Amendment of aligned din. Amounts, 15/2023 – aligned dinar amounts 92/2023 and 120/2023 – aligned dinar amounts)
25. Law on Standardization ("Official Gazette of RS", No. 36/2009 and 46/2015)
26. Law on Environmental Impact Assessment ("Official Gazette of the Republic of Serbia", No. 94/2024)
27. Law on Strategic Environmental Impact Assessment ("Official Gazette of the Republic of Serbia", No. 94/2024)

28. Law on Protection against Ionizing Radiation and Nuclear Safety ("Official Gazette of the Republic of Serbia", No. 36/09)
29. Law on the Planning System of the Republic of Serbia ("Official Gazette of the Republic of Serbia", No. 30/18)

REGULATIONS

1. Regulation on determining the List of projects for which an impact assessment is required and the List of projects for which an environmental impact assessment may be required ("Official Gazette of RS", No. 114/2008)
2. Regulation on determining activities which have impact to environment (("Official Gazette of RS", No. 109/2009 and 8/2010)
3. Regulation on determining criteria for assessment of jeopardized environment status and priorities for repair and remedy ("Official Gazette of RS", No. 22/2010)
4. Regulation on putting under control use and trading of wild flora and fauna (("Official Gazette of RS", No. 31/2005, 45/2005. – correction, 22/2007, 38/2008, 9/2010, 69/2011, 95/2018 – other regulation)
5. Regulation on contents and recording of environmental information system, methodology, structure, mutual basis, categories and levels of data collecting, as well as contents of information which shall be regularly and mandatory presented to public ("Official Gazette of RS", No. 112/2009)
6. Regulation on terms which shall be fulfilled by users of funds, terms and manner of funds allocation, manner of funds use supervision and contract rights and obligations, as well as other issues which are important for awarding and use of Green fund ("Official Gazette of RS", No. 25/2018)
7. Regulation on conditions for monitoring and air quality requirements ("Official Gazette of RS", No. 11/2010, 75/2010 and 63/2013)
8. Regulation on limit values of emissions of pollutants into the air from combustion plants ("Official Gazette of RS, No. 6/2016 and 67/2021)
9. Regulation on limit values of emissions of pollutants into the air from stationary sources of pollution, except for combustion plants ("Official Gazette of RS", No. 111/2015 and 83/2021)
10. Regulation on measurements of emissions of pollutants into the air from stationary sources of pollution ("Official Gazette of RS", No. 5/2016, 10/2024)
11. Regulation on the methodology for the preparation of the inventory of emissions and projections of air pollutants ("Official Gazette of RS", No. 3/2016)
12. Regulation on the methodology of data collection for the National Inventory of Unintentionally Released Long-Term Organic Pollutants (Official Gazette of RS, No. 76/2010)
13. Regulation on Determining the Air Quality Control Program in the State Network ("Official Gazette of RS", No. 58/2011)
14. Regulation on types of activities and plants for which integrated permit is issued ("Official Gazette of RS", No. 84/2005)
15. Regulation on contents of Program of measures for adjusting existing plant operation or activities to stipulated terms ("Official Gazette of RS", No. 84/2005)
16. Regulation on Criteria for Determining the Best Available Techniques, for Applying Quality Standards, as well as for Determining Emission Limits in the Integrated Permit ("Official Gazette of RS", No. 84/2005)
17. Regulation on Determining the Program of Dynamics of Submission of Applications for Issuance of Integrated Permit ("Official Gazette of RS", No. 108/2008)
18. Regulation on the list of industrial plants and activities in which the emission of volatile organic compounds is controlled, on the values of emission of volatile organic compounds at a certain solvent consumption and total allowable emissions, as well as emission reduction schemes ("Official Gazette of RS", No. 100/2011)
19. Regulation on conditions for monitoring and air quality requirements ("Official Gazette of RS", No. 11/2010, 75/2010 and 63/2013)
20. Regulation on the methodology for the preparation of the inventory of emissions and projections of air pollutants ("Official Gazette of RS", No. 3/2016)
21. Regulation on determining zones and agglomeration ("Official Gazette of RS", No. 58/2011 and 98/2012)
22. Regulation on types of activities with green house effect (Official Gazette of RS", No. 13/2022)

23. Regulation on the treatment of ozone-depleting substances, as well as on the conditions for issuing permits for import and export of these substances ("Official Gazette of RS", No. 114/2013, 23/2018, 44/2018 - other law, 95 / 2018 - other law)
24. Regulation on Criteria and Manner of Approval of Programs and Projects Implemented under the Clean Development Mechanism ("Official Gazette of RS", No. 44/2010)
25. Regulation on the treatment of fluorinated gases with a greenhouse effect as well as the conditions for issuing permits for import and export of these gases ("Official Gazette of RS", No. 120/2013, 44/2018 - other regulation)
26. Regulation on limit values of priority and priority hazardous substances polluting surface waters and deadlines for their achievement ("Official Gazette of RS", No. 24/2014)
27. Regulation on Water Classification ("Official Gazette of SRS", No. 5/1968-64)
28. Regulation on the categorization of watercourses ("Official Gazette of the SRS", No. 5/1968-61)
29. Regulation on limit values for emissions of pollutants into water and deadlines for their achievement ("Official Gazette of RS", No. 67/2011, 48/2012 and 1/2016)
30. Regulation on limit values of pollutants in surface and groundwater and sediment and deadlines for their achievement ("Official Gazette of RS", No. 50/2012)
31. Regulation on systematic monitoring of the condition and quality of land ("Official Gazette of RS", No. 88/2020)
32. Regulation on Limit Values of Pollutants, Harmful and Dangerous Substances in Soil ("Official Gazette of RS", No. 30/2018 and 64/2019)
33. Regulation on terms and procedure of permit issuing for waste management, as well as criteria, categorization, classification and reporting on mining waste ("Official Gazette of RS", No. 53/2017)
34. Regulation on Lists of Waste for transportation over border, contents and layout of documents which follow waste transportation over border with instruction for their filling in ("Official Gazette of RS", No. 34/2022)
35. Regulation on technical and technological conditions for the design, construction, equipment and operation of plants and types of waste for the thermal treatment of waste, emission limit values and their monitoring ("Official Gazette of the Republic of Serbia", No. 103/2023)
36. Regulation on waste disposal in landfills ("Official Gazette of RS", No. 92/2010)
37. Regulation on Lists of waste for transportation over border, contents and layout of documents which follow waste transportation over border with instruction for their filling in ("Official Gazette of RS", No. 34/2022)
38. Regulation on products that after use become special waste streams, form of daily records on the quantity and type of produced and imported products and annual report, manner and deadlines for submission of annual report, payers, criteria for calculation, amount and manner of calculation and payment of fees ("Official Gazette of RS", No. 54/2010, 86/2011, 15/2012, 3/2014, 31/2015 - other regulations, 44/2016 - other regulations, 43/2017 - other regulations, 45 / 2018 - other regulations, 67/2018 - other regulations, 95/2018 - other regulations and 77/2021)
39. Regulation of types of Plan for reduction of package waste for period from 2020 to 2024 ("Official Gazette of RS" No. 81/2020)
40. Regulation on noise indicators, limit values, methods for assessment of noise indicators, disturbance and harmful effects of noise in the environment ("Official Gazette of RS", No. 75/2010)
41. Regulation on terms and manner of performing subsidized purchase of new vehicles which have only electrical drive, as well as vehicles which are driven by motor with internal combustion and electrical drive (hybrid drive) ("Official Gazette of RS", No. 18/2023).
42. Regulation on types of activities and greenhouse gases ("Official Gazette of the Republic of Serbia", No. 13/2022)

RULEBOOKS

1. Rulebook on emission limit values, manner and deadlines for measurement and recording of data ("Official Gazette of RS", No. 30/1997 and 35/1997 - correction)
2. Rulebook on the content, appearance and manner of keeping the public book on implemented procedures and adopted decisions on environmental impact assessment ("Official Gazette of RS", No. 69/2005)
3. Rulebook on the procedure of public insight, presentation and public debate on the study on environmental impact assessment ("Official Gazette of RS", No. 69/2005)
4. Rulebook on the work of the technical commission for the evaluation of the study on environmental impact assessment ("Official Gazette of RS", No. 69/2005)
5. Rulebook on the content of the request on the need for impact assessment and the content of the request for determining the scope and content of the study on environmental impact assessment ("Official Gazette of RS", No. 69/2005)
6. Rulebook on the content of the study on environmental impact assessment ("Official Gazette of RS", No. 69/2005)
7. Rulebook on the content of the project of protection and rehabilitation of the environment during and after the use of natural resources, procedure and conditions of giving consent to the project ("Official Gazette of RS", 35/2019)
8. Rulebook on the methodology for the preparation of the national and local register of pollution sources, as well as the methodology for the types, methods and deadlines of data collection ("Official Gazette of RS", No. 91/2010, 10/2013, 98/2016, 72/2023, 53/2024)
   Rulebook on the content and manner of keeping the register of issued integrated permits ("Official Gazette of RS", No. 69/2005)
9. Rulebook on the content, appearance and manner of filling in the application for the issuance of an integrated permit ("Official Gazette of RS", No. 30/2006, 32/2016 and 44/2018 - other regulations, 4/2024)
10. Rulebook on the manner of exchange of information on metering points in the state and local network, measurement techniques, as well as the manner of exchange of data obtained by monitoring air quality in state and local networks ("Official Gazette of RS", No. 84/2010)
11. Rulebook on the content of air quality plans ("Official Gazette of RS", No. 21/2010)
12. Rulebook on the content of short-term action plans ("Official Gazette of RS", No. 65/2010)
13. Rulebook on content and layout of Integrated Permit ("Official Gazette of RS", No. 30/2006, 4/2024)
14. Rulebook on parameters of ecological and chemical status of surface water and parameters of chemical and quantitative status of ground water ("Official Gazette of RS", No. 74/2011)
15. Rulebook on manner and terms for measuring amount and testing of wastewater quality and content of Report on performed measurements ("Official Gazette of RS", No. 33/2016)
16. Rulebook on the content and form of requests for issuing water acts and the content of opinions in the procedure of issuing water conditions and the content of reports in the procedure of issuing water permits ("Official Gazette of RS", No. 72/2017, 44/2018 - other regulations and 12 / 2022)
17. Rulebook on the content and manner of keeping the cadaster of water information system, methodology, structure, categories and levels of data collection, as well as on the content of data communicated to the public ("Official Gazette of RS", No. 54/2011)
18. Rulebook on the content and manner of keeping the cadaster of water bodies ("Official Gazette of RS", No. 34/2011)
19. Rulebook on methodology for preparation of Projects of repair and remedy ("Official Gazette of RS", No. 74/2015)
20. Rulebook on content of the Projects of remedy and rehabilitation ("Official Gazette of RS", No. 35/2019)
21. Rulebook on content and form of Reports on land monitoring ("Official Gazette of RS", No. 126/2021)
22. Rulebook on content and manner of keeping cadaster of contaminated locations, type, content, forms, manner and deadlines for data submission ("Official Gazette of RS", No. 58/2019)

23. Rulebook on terms which shall be fulfilled by legal entity for performing land monitoring, as well as documentation which shall be submitted together with application for obtaining authorization for land monitoring ("Official Gazette of RS", No. 58/2019)
24. Rulebook on categories, testing and classification of waste ("Official Gazette of RS", No. 56/2010, 93/2019, 39/2021, 65/2024)
25. Rulebook on form of request for issuing permit for treatment, i.e. storage, repeated use and disposal of waste ("Official Gazette of RS", No. 38/18)
26. Rulebook on content, manner of keeping and appearance of Register of issued permits for waste management ("Official Gazette of RS", No. 95/2010)
27. Rulebook on the content of the certificate on exemption from the obligation to obtain a permit for storage of inert non-hazardous waste ("Official Gazette of RS", No. 73/2010)
28. Rulebook on the form of daily records and annual report on waste with instructions for its completion ("Official Gazette of RS", No. 7/2020 and 79/2021)
29. Rulebook on the manner of storage, packaging and marking of hazardous waste ("Official Gazette of RS", No. 92/2010 and 77/2021, 95/2024)
30. Rulebook on conditions, manner and procedure of waste oil management ("Official Gazette of RS", No. 71/2010)
31. Rulebook on the manner and procedure of managing spent batteries and accumulators ("Official Gazette of RS", No. 86/2010)
32. Rulebook on the manner and procedure of waste tire management ("Official Gazette of RS", No. 104/2009 and 81/2010)
33. Rulebook on the manner and procedure of waste vehicle management ("Official Gazette of RS", No. 98/2010)
34. Rulebook on the manner and procedure for the management of waste fluorescent tubes containing mercury ("Official Gazette of RS", No. 97/2010)
35. Rulebook on the treatment of waste containing asbestos ("Official Gazette of RS", No. 75/2010)
36. Rulebook on conditions and manner of collection, transport, storage and treatment of waste used as a secondary raw material or for energy production ("Official Gazette of RS", No. 98/2010)
37. Rulebook on treatment of devices and waste containing PCBs ("Official Gazette of RS", No. 37/2011)
38. Rulebook on the content of the safety data sheet ("Official Gazette of RS", No. 11/2024)
39. Rulebook on the Register of Chemicals ("Official Gazette of RS", No. 16/2016, 6/2017, 117/2017, 44/2018 - other law, 7/2019, 93/2019, 6/2021, 126/2021 and 20/2023)
40. Rulebook on Restrictions and Prohibitions on Production, Marketing and Use of Chemicals ("Official Gazette of RS", No. 90/2013, 25/2015, 2/2016 and 44/2017, 36/2018, 9/2020 and 57/2022, 29/2024)
41. Rulebook on criteria for identification of a substance as PBT or VPVB ("Official Gazette of RS", No. 23/2010)
42. Rulebook on licenses for trade activities, ie licenses for the use of particularly dangerous chemicals ("Official Gazette of RS", No. 6/2017, 29/2018, 88/2023)
43. Rulebook on the manner of keeping records on chemicals ("Official Gazette of RS", No. 31/2011)
44. Rulebook on exposure limits to non-ionizing radiation and measurements to assess the level of exposure to ionizing radiation ("Official Gazette of RS", No. 86/2011, 50/2018)
45. Rulebook on sources of non-ionizing radiation of special interest, types of sources, manner and period of their examination ("Official Gazette of RS", No. 104/2009)
46. Rulebook on the content of records on sources of non-ionizing radiation of special interest ("Official Gazette of RS", No. 104/2009)
47. Rulebook on the content and layout of the form of the report on systematic inspection of the level of non-ionizing radiation in the environment ("Official Gazette of RS", No. 104/2009)
48. Rulebook on the conditions that must be met by legal entities that perform activities of testing the radiation levels of non-ionizing radiation sources of special interest in the environment ("Official Gazette of RS", No. 104/2009, 89/2024)

49. Rulebook on conditions that must be met by legal entities that perform systematic testing of non-ionizing radiation levels, as well as the manner and methods of systematic testing in the environment ("Official Gazette of RS", No. 104/2009, 89/2024)
50. Rulebook on methodology for determining acoustic zones ("Official Gazette of RS", No. 72/2010)
51. Rulebook on expenses of rights award for use of ecological sign ("Official Gazette of RS", No. 81/2010)
52. Rulebook on Monitoring and Reporting on Greenhouse Gas Emissions ("Official Gazette of the Republic of Serbia", No. 118/2023)

STRATEGIES

1. National Strategy for Approximation in the Field of Environmental Protection for the Republic of Serbia ("Official Gazette of RS", No. 80/2011)
2. Strategy for the introduction of cleaner production in the Republic of Serbia ("Official Gazette of RS", No. 17/2009)
3. Strategy for the implementation of the Convention on Access to Information, Public Participation in Decision-Making and the Right to Legal Protection in Environmental Matters - Aarhus Convention ("Official Gazette of RS", No. 103/2011)
4. National Strategy for Sustainable Development ("Official Gazette of RS", No. 57/2008)
5. Strategy of Mineral Resources Management of the Republic of Serbia until 2030 ("Official Gazette of RS", No. 09/2010)
6. Energy Development Strategy of the Republic of Serbia until 2025 with a projection until 2030 ("Official Gazette of RS", No. 101/2015).
7. Energy Development Strategy of the Republic of Serbia until 2040 with projections until 2050 ("Official Gazette of the Republic of Serbia", No. 94/2024

DECISIONS, PROGRAMS AND NATIONAL PLANS

1. Decision on the preparation of the Strategic Environmental Assessment of the Spatial Plan of the Special Purpose Area of the Regional Kolubara Water Supply System on the Environment ("Official Gazette of RS", No. 7/2020 and 65/2020)
2. Decision on non-accession to the preparation of the Strategic Environmental Assessment for the Nature Protection Program of the Republic of Serbia for the period from 2020 to 2022 ("Official Gazette of RS", No. 93/2019)
3. Decision on the preparation of the Strategic Environmental Assessment of the Regional Waste Management Plan for 11 cities and municipalities of the Kolubara region for the period from 2019 to 2029 ("Official Gazette of RS", No. 81/2019)
4. Decision on the preparation of the Strategic Impact Assessment Amendments to the Spatial Plan of the Kolubara Lignite Basin Exploitation Area ("Official Gazette of RS", No. 48/2019)
5. Decision on preparation of the Strategic Impact Assessment of the Spatial Plan of the Special Purpose Area for the construction of the Thermal Power Plant "Kolubara B" ("Official Gazette of RS", No. 46/2019)
6. Decision on the preparation of the Strategic Assessment of the Environmental Impact of the Spatial Plan of the Republic of Serbia from 2021 to 2035 ("Official Gazette of the RS", No. 41/2019)
7. Decision on the preparation of the Strategic Impact Assessment of the Waste Management Program ("Official Gazette of RS", No. 30/2019)
8. Decision on the preparation of the Strategic Environmental Assessment of the Low Carbon Development Strategy with an action plan ("Official Gazette of RS", No. 62/2018, 26/2019)
9. Decision on the preparation of the Strategic Impact Assessment of the National Emission Reduction Plan (NERP) ("Official Gazette of RS", No. 57/2018)
10. Decision on the preparation of the Strategic Assessment of the Environmental Impact of the Action Plan for the Implementation of the Water Management Strategy on the Territory of the Republic of Serbia until 2034 ("Official Gazette of RS", No. 56/2018)

11. Decision on preparation of the Strategic Assessment of the Environmental Impact of the Revised Regional Waste Management Plan for 11 cities and municipalities of the Kolubara region ("Official Gazette of RS", No. 46/2017)
12. Decision on the preparation of the Strategic Environmental Assessment of the Plan for the Protection of Waters from Pollution on the Environment ("Official Gazette of RS", No. 48/2016)
13. Decision on the preparation of the Strategic Assessment of the Impact of Amendments to the Spatial Plan of the Special Purpose Area of the Kostolac Coal Basin on the Environment ("Official Gazette of RS", No. 108/2015)
14. Decision on the preparation of the Strategic Assessment of the Impact and Amendments to the Spatial Plan of the Exploitation Area of the Kostolac Coal Basin on the Environment ("Official Gazette of RS", No. 48/2019)
15. Decision on the preparation of the Strategic Assessment of the Impact of the Energy Development Strategy of the Republic of Serbia until 2025 with projections until 2030 on the environment ("Official Gazette of RS", No. 56/2016)
16. Decision on the preparation of the Strategic Environmental Assessment (Water Management Strategy on the territory of the Republic of Serbia) ("Official Gazette of RS", No. 30/2013)
17. Decision on preparation of the Strategic Environmental Assessment of the Regional Spatial Plan for the area of the Danube and Braničevo administrative districts on the environment ("Official Gazette of RS", No. 34/2010)
18. Program of Circular Economy Development in the Republic of Serbia for time period from year 2022 to 2024 ("Official Gazette of RS", No. 137/2022)
19. NATIONAL PLAN for the reduction of emissions of major pollutants originating from old large combustion plants ("Official Gazette of the Republic of Serbia", No. 10/2020).
20. INTEGRATED NATIONAL ENERGY AND CLIMATE PLAN of the Republic of Serbia for the period until 2030 with a vision until 2050 ("Official Gazette of the Republic of Serbia", No. 70/2024).

REGULATIONS FROM OTHER AREAS APPLICABLE IN THE AREA OF ENVIRONMENTAL PROTECTION

Ratified international agreements of importance for the Republic of Serbia

1. Law on Ratification of the Kyoto Protocol to the United Nations Framework Convention on Climate Change ("Official Gazette of RS - International Agreements", No. 88/2007)
2. Law on Ratification of the Amendment to Annex B of the Kyoto Protocol to the United Nations Framework Convention on Climate Change ("Official Gazette of RS - International Agreements", No. 38/2009)
3. Law on Ratification of the Doha Amendment to the Kyoto Protocol to the United Nations Framework Convention on Climate Change ("Official Gazette of RS - International Agreements", No. 2/2017)
4. Law on Ratification of the Convention on Environmental Impact Assessment in a Transboundary Context ("Official Gazette of RS", No. 102/2007)
5. Law on Ratification of Amendments to the Convention on Environmental Impact Assessment in a Transboundary Context ("Official Gazette of RS - International Agreements", No. 4/2016)
6. Law on Ratification of the Stockholm Convention on Persistent Organic Pollutants ("Official Gazette of RS", No. 42/2009)
7. Law on Ratification of the Convention on Biological Diversity ("Official Gazette of the FRY - International Agreements", No. 11/2001)
8. Law on Ratification of the Convention on International Trade in Endangered Species of Wild Fauna and Flora ("Official Gazette of the FRY - International Agreements", No. 11/2001)
9. Law on Ratification of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal ("Official Gazette of the FRY - International Agreements", No. 2/1999)

10. Law on Ratification of the United Nations Framework Convention on Climate Change, with annexes ("Official Gazette of the FRY - International Agreements", No. 2/1997)
11. Law on Ratification of the Vienna Convention for the Protection of the Ozone Layer, with Annexes I and II ("Official Gazette of the SFRY - International Agreements", No. 1/1990)
12. Law on Ratification of the International Convention for the Protection of Birds ("Official Gazette of the SFRY", No. 6/73)
13. Regulation on Ratification of the Convention on Wetlands of International Importance, Especially as a Residence for Wetland Birds ("Official Gazette of the SFRY - International Agreements", No. 9/77)
14. Law on Ratification of the European Convention for the Protection of Animals in International Transport and the Protocol as an Addendum to the Convention for the Protection of Animals in International Transport ("Official Gazette of the FRY - International Agreements", No. 1/92)
15. Law on Ratification of the Convention on Cooperation for the Protection and Sustainable Use of the Danube River ("Official Gazette of the FRY - International Agreements", No. 2/2003)
16. Law on Ratification of the Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer ("Official Gazette of Serbia and Montenegro - International Agreements", No. 24/2004)
17. Law on Ratification of the Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer ("Official Gazette of RS - International Agreements", No. 17/2021)
18. Regulation on the Agreement on Fisheries on the Danube Waters between the Government of the FPRY, the People's Republic of Bulgaria, the Romanian People's Republic and the Union of Soviet Republics ("Official Gazette of the FPRY", No. 8/58)
19. Law on Ratification of the Convention Concerning the Protection of the World Cultural and Natural Heritage ("Official Gazette of the SFRY - International Agreements", No. 56/74)
20. Law on Ratification of the Convention for the Protection of Cultural Property in the Event of Armed Conflict ("Official Gazette of the FPRY - International Agreements", No. 4/56, “Official Gazette of FRY – International Agreements, NO. 7/02 – other regulations)
21. Law on Ratification of the Convention on Measures to Prohibit and Prevent Illicit Imports. export and transfer of ownership of cultural property ("Official Gazette of the SFRY-International Agreements", No. 50/73)
22. Law on Ratification of the Vienna Convention on Civil Liability for Nuclear Damage ("Official Gazette of the SFRY-International Agreements", No. 5/77)
23. Regulation on Ratification of the Convention Establishing the European Plant Protection Organization ("Official Gazette of the FPRY - International Agreements", No. 12/57)
24. Regulation on Ratification of the International Plant Protection Convention ("Official Gazette of the FPRY - International Agreements", No. 7/55)
25. Law on Ratification of the Agreement on Protection of Waters of the Tisa River and its Tributaries from Pollution ("Official Gazette of the SFRY - International Agreements", No. 1/90)
26. Law on Ratification of the Convention on Long-range Transboundary Air Pollution ("Official Gazette of the SFRY - International Agreements", No. 11/86)
27. Law Ratifying the Protocol with the Convention on Long-range Trans-boundary Air Pollution from 1979, on Long-term Financing of the Cooperative Program for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) ("Official Journal of SFRY" - International Treaties, No. 2/87)
28. Law Ratifying the Montreal Protocol on Substances that Deplete the Ozone Layer ("Official Gazette of the SFRY - International Agreements", No. 16/90, “Official Gazette of S&M – International Agreements, No. 24/2004 – other law)
29. Law on Ratification of Amendments to the Convention on the Physical Protection of Nuclear Material ("Official Gazette of RS - International Agreements", No. 04/2016)
30. Regulation on Ratification of the Convention for the Protection against the Dangers of Benzene Poisoning ("Official Gazette of the SFRY - International Agreements", No. 16/76)
31. Law on Ratification of the Convention on the Prevention and Control of Occupational Risks Caused by Carcinogenic Substances and Agents ("Official Gazette of the SFRY - International Agreements", No. 3/77)

32. Law on prohibition of experiments with nuclear weapons into the atmosphere, cosmos and under water ("Official Journal of SFRY" - International Treaties, No. 11/63)
33. Law Ratifying the Convention for prohibition of development, production and stockpiling of bacteriological (biological and toxic) weapons and their destruction ("Official Journal of SFRY" - International Treaties, No. 43/74)
34. Law Ratifying the Convention for protection of workers from professional risks in working environment caused by air pollution, noise and vibration ("Official Journal of SFRY" - International Treaties, No. 14/82)
35. Law Ratifying the Convention for occupational health, medical protection and working environment ("Official Journal of SFRY" - International Treaties, No. 7/87)
36. Law Ratifying the Convention International Labor Organization No. 162 on Safety in the Use of Asbestos "Official Journal SFRY" - International Treaties, No. 4/89)
37. Law Ratifying the European Convention for the Protection of the Archaeological Heritage (revised) ("Official Gazette od RS" - International Agreements, No. 42/2009)
38. Law Ratifying the Agreement between the Federal Government of the Federal Republic of Yugoslavia and the Government of the Russian Federation on cooperation in the field of environment protection and improvement "Official Gazette SRJ" - International Treaties, No. 6/96)
39. Law on confirming Protocols of registers on discharge and transport of pollutants with Convention on availability of information, public participation in decision making and right to legal protection regarding environmental issues (''Official Gazette of RS – International Contracts'', No. 8/2011)
40. Law on confirming Convention on availability of information, public participation in decision making and right to legal protection regarding environmental issues (''Official Gazette of RS – International Contracts'', No. 38/2009)
41. Law on confirming Protocol of heavy metals with Convention on Long-range Transboundary Air Pollution from 1979 (''Official Gazette of RS – International Contracts'', No. 22/2012)
42. Law on confirming Protocol of long-term organic pollutant substances with Convention on Long-range Transboundary Air Pollution from 1979 (''Official Gazette of RS – International Contracts'', No. 21/2012)
43. Law on confirming Convention on Transboundary effects of industrial accidents (''Official Gazette of RS – International Contracts'', N. 42/2009).

APPENDIX 3. ABBREVIATIONS

BOD	Biological Oxygen Demand
ELV	Emission Limit Value
MPC	Maximum Permissible Concentration
MP	Measuring Point
FGD	Flue Gas Desulphurization
OCM	Open Cast Mine
MB	Mining Basin
PSHPP	Pumped Storage Hydro Power Plant
TPP	Thermal Power Plant
TPPs- OCMs	Thermal Power Plants – Open Cast Mines
CHP	Thermal Power Plant – Heating Plant
TS	Transformer Substation
TPM	Total Particulate Matters
HPP	Hydro Power Plant
COD	Chemical Oxygen Demand
BC	Business Company
OU	Organization Unit
CP	Cadastral Plot
MME	Ministry of Mining and Energy
PS	Powder Substances
RV	Referential Value
IPH	Institute for Public Health
PPE	Personal Protective Equipment
MCTI	Ministry of Construction, Transport and Infrastructure
SKO	Srednje Kostolačko Ostrvo
SMP	Supplement to the Mining Project
LV	Limit Value
ELV	Emission Limit Value