PE ELECTRIC POWER INDUSTRY OF SERBIA

Environmental Protection

Electric Power Industry of Serbia

2016 Environmental Report

Belgrade, April 2017

INTRODUCTION

Public Enterprise Electric Power Industry of Serbia (PE EPS) 2016 Environmental Report was prepared on the basis of the recommendations regarding the contents and form - report template provided by the European Bank for Reconstruction and Development (Appendix 1), as well as on the basis of data on environment status monitoring submitted by the responsible persons of PE EPS organizational units.

Hazardous and harmful substances air emission data have been provided on the basis of calculation based on measured mass concentrations, i.e. their flows and units' (boilers) operating hours in 2016.

Outline of Serbian environmental legislation used to evaluate and compare the measured pollutant values and other parameters with the permissible values is provided in Appendix 2.

Abbreviations used in the Report are provided in Appendix 3.

I PUBLIC ENTERPRIZE ELECTRIC POWER INDUSTRY OF SERBIA

Public Enterprize "Electric Power Industry of Serbia" Belgrade is a vertically organized enterprise, 100% state-owned. PE EPS is the founder and sole owner of two subsidiaries as follows:

- Distribution System Operator EPS Distribucija d.o.o. Belgrade, for the performance of activities of electricity distribution and distribution system operation in the Republic of Serbia and
- „EPS Trgovanje" d.o.o. Ljubljana for the performance of activities of electricity trading abroad in order to optimize the use of its own resources.

EPS has founder's rights in three public companies in Kosovo and Metohija. Since June 1999, EPS is unable to manage its capacities in Kosovo.

Until July 2015, PE EPS operated through 13 subsidiaries, and after conducted status changes, acquisition of 11 subsidiaries was made by the parent-controlling company.

Main activity of Public Enterprize Electric Power Industry of Serbia is energy activity: supply of electricity, industry code 35.14 - Trade of electricity.

In addition to the primary activity, Public Enterprize performs activities of electricity distribution and distribution system management and economic entity management.

PE EPS Coal Production

In PE EPS coal is produced by the following organisational units of PE EPS: Kolubara MB Branch, Kostolac TPPs-OCMs Branch and PE Kosovo OCMs**. Amounts of produced raw and dried coal (except Kosovo OCMs**) in 2016 are provided in Table 1.

Table 1

PUBLIC ENTEPRPRISE ELECTRIC POWER INDUSTRY OF SERBIA							
COAL PRODUCTION IN 2016							
Open cast mine		**Coal production (t)**			**Overburden removal (m^3sm)**		
		Planned	**Achieved**	**%**	**Planned**	**Achieved**	**%**
MB KOLUBARA – OPEN CAST MINES							
Field B		2.250.000	2.306.115	102.5	12.500.000	8.700.620	69.6
Field D		12.667.000	11.351.427	89.6	19.900.000	20.235.149	101.7
Veliki Crljeni		0	1.448.974		0	642.657	
Tamnava – West Field		13.938.000	13.435.938	96.4	33.000.000	29.191.505	88.5
TOTAL (RAW COAL*): **KOLUBARA – OPEN CAST MINES**		**28.855.000**	**28.542.454**	**98.9**	**65.400.000**	**58.769.931**	**89.9**
Kolubara Prerada (dried coal)	With dust	550.000	427.992	78			
	Without dust	500.000	399.477	80			
TPPs-OCMs KOSTOLAC – OPEN CAST MINES							
Klenovnik							
Cirikovac							
Drmno		9.286.000	9.110.066	98.1	42.000.000	40.010.946	95.3
TOTAL: KOSTOLAC – OPEN CAST MINES		**9.286.000**	**9.110.066**	**98.1**	**42.000.000**	**40.010.946**	**95.3**
TOTAL: OPEN CAST MINES PE EPS		**38.141.000**	**37.652.520**	**98.7**	**107.400.000**	**98.780.877**	**92.0**

*Total raw coal amount, partially used for dried coal production
**As of June 1999, PE EPS does not operate its Kosovo and Metohija capacities

PE EPS Electricity Generation

In PE EPS electricity is generated by the following thermal power plants (TPPs): Nikola Tesla TPPs, Kostolac TPPs-OCMs, Panonske CHP, PE Kosovo TPPs* and by the following hydropower plants (HPPs): Djerdap HPP and Drinsko – Limske HPPs. Electricity generation data (except for PE Kosovo TPPs) in 2016 are given in Table 2.

Table 2

PUBLIC ENTEPRPRISE ELECTRIC POWER INDUSTRY OF SERBIA			
ELECTRICITY GENERATION IN 2016			
Branch	**Unit**	**Electricity generation (GWh)**	
		at the generator	**at the outlet**
Nikola Tesla TPPs			
NIKOLA TESLA A TPP	A1 - A2	2.542	2.341
	A3 - A5	6.944	6.356
	A6	2.361	2.147
NIKOLA TESLA B TPP	B1 - B2	6.809	6.418
KOLUBARA A TPP	A1 - A4	426	402
	A5	331	304
MORAVA TPP	A	324	294
TOTAL: NIKOLA TESLA TPPs		**19.738**	**18.263**

KOSTOLAC TPPs-OCMs			
KOSTOLAC A TPP	A1	697	616
	A2	1.541	1.426
KOSTOLAC B TPP	B1	2.557	2.321
	B2	2.659	2.390
TOTAL: KOSTOLAC TPPs-OCMs		**7.454**	**6.753**
PANONSKE PPs			
NOVI SAD CHPP		105	90
ZRENJANIN CHPP		0,0	0,0
SREMSKA MITROVICA CHPP		0,0	0,0
TOTAL: PANONSKE PPS		**105**	**90**
TOTAL: TPPs and CHPs		**27.296**	**25.106**
HYDROPOWER PLANTS			
DJERDAP HPPs		7.587	7.548
DRINSKO-LIMSKE HPPs		3.773	3.760
SHPPs		47	47
TOTAL: HPPs		**11.407**	**11.355**
PE ELEKTROKOSMET*	-		
TOTAL: PE EPS (exclusive of K&M)		**38.704**	**36.461**

*As of June 1999, PE EPS does not operate its Kosovo and Metohija capacities

Fuel Consumption and Hazardous and Harmful Substances Air Emission from PE EPS TTPs

Table 3 shows the solid, liquid and gaseous fuel consumption data by PE EPS TPPs and CHPs in 2016.

Table 3

PUBLIC ENTEPRPRISE ELECTRIC POWER INDUSTRY OF SERBIA						
FUEL CONSUMPTION in 2016						
Branch	**Unit**	**Fuel**				
		Coal	**Heavy fuel oil**	**Oil**	**Gas**	**Biomass**
		t	**t**	**t**	**Stm3**	**t**
NIKOLA TESLA TPPs						
NIKOLA TESLA A TPP	**A1**	**1.679.033**	**1.432**			
	A2	**2.055.425**	**1.906**			
	A3	**3.172.858**	**1.473**			
	A4	**3.161.631**	**1.079**			
	A5	**3.313.260**	**1.273**			
	A6	**3.271.859**	**1.542**			
NIKOLA TESLA B TPP	**B1**	**6.430.466**	**11.896**			
	B2	**3.133.117**	**9.604**			
KOLUBARA A TPP	**A1**	**830.992**		**932**		
	A2					
	A3					
	A4					
	A5	**522.284**		**437**		
MORAVA TPP	**A1**	**380.482**	**1.279**	**436**		
TOTAL: NIKOLA TESLA TPPs BRANCH		**27.951.407**	**31.484**	**1.805**		

KOSTOLAC TPPs-OCMs						
KOSTOLAC A TPP	**A1**	**921.864**		**583**		
	A2	**1.990.553**		**702**		
KOSTOLAC B TPP	**B1**	**2.937.407**	**2.972**			
	B2	**3.059.865**	**1.899**			
TOTAL: KOSTOLAC TPPs-OCMs BRANCH		**8.909.689**	**4.871**	**1.285**		
KOLUBARA MB BRANCH – PRERADA BRANCH						
VREOCI HEATING PLANT	**K1 and K2**	**196.968**	**177,5**			
TOTAL: MB KOLUBARA BARNCH		**196.968**	**177,5**			
PANONSKE CHPs						
NOVI SAD CHP	**A1**				**0.225**	
	A2				**36.923**	
ZRENJANIN CHP	**A1**				**91.774**	
	A2					
SREMSKA MITROVICA CHP	**A3**					
	S2400 1-3				**962.073**	
	TE.K - 405				**93,787**	**5,063**
TOTAL: PANONSKE CHPs BRANCH					**1.184,782**	**5,063**
TOTAL: PE EPS		**37.058.064**	**36.896,5**	**3.090**	**1.184,782**	**5,063**

Air emission of hazardous and harmful substances mainly comes from thermal power plants. Total air emission of hazardous and harmful substances in 2016 for PE EPS organisational units (except for PE Kosovo TPPs*) are given in Table 3a.

Table 3a

PUBLIC ENTEPRPRISE ELECTRIC POWER INDUSTRY OF SERBIA				
air emission in 2016 - hazardous and harmful substancEs				
Organisational units	**t/year**			
	Particulate matter	**SO2**	**NOx (NO2)**	**CO2**
NIKOLA TESLA TPPs BRANCH	**9.232,000**	**180.637,000**	**30.804,000**	**20.625.763,000**
KOSTOLAC TPPs-OCMs BRANCH	**3.197,000**	**187.432,000**	**12.974,000**	**7.511.124,000**
PANONSKE CHP BRANCH	**0,188**	**0,000**	**214,788**	**70.675,680**
KOLUBARA MB BRANCH - PRERADA BRANCH	**72,790**	**669,350**	**228,430**	**161.264,430**
TOTAL: PE EPS	**12.501,978**	**368.738,350**	**44.221,218**	**28.368.827,110**

*As of June 1999, PE EPS does not operate its Kosovo and Metohija capacities

PE EPS Work Injuries

Table 4 shows the number of work injuries in 2016 for PE EPS organisational units.

Table 4

PUBLIC ENTEPRPRISE ELECTRIC POWER INDUSTRY OF SERBIA						
WORK INJURIES IN 2016						
Organisational units	**Number of employees**	**Injuries - number of employees ratio**				
		Easy	**Heavy**	**Fatality**	**Total**	**%**
KOLUBARA MB BRANCH	12.416	199	59	3	261	2,10
KOSTOLAC TPPs-OCMs BRANCH	2.258	10	3	1	14	0,62
OPEN CAST MINES:	**14.674**	**209**	**62**	**4**	**275**	**1,87**
NIKOLA TESLA TPPs BRANCH	2.167	21	7	1	29	1,34
KOSTOLAC TPPs-OCMs BRANCH	743	5	1	0	6	0,81
PANONSKE CHPs BRANCH	463	6	3	0	9	1,94
THERMAL POWER PLANTS:	**3.373**	**32**	**11**	**1**	**44**	**1,30**
DJERDAP HPPs BRANCH	848	4	0	0	4	0,47
DRINSKO-LIMSKE HPPs BRANCH	460	2	1	0	3	0,65
HYDROPOWER PLANTS:	**1.308**	**6**	**1**	0	**7**	**0,54**
TC BEOGRAD	812	16	4	0	20	2,46
TC NOVI SAD	1.465	27	4	0	31	2,12
TC KRALjEVO	1.882	35	7	0	42	2,23
TC KRAGUJEVAC	613	19	2	0	21	3,43
TC NIŠ	1.272	19	4	1	24	1,89
TECHNICAL CENTERS:	**6.044**	**116**	**21**	**1**	**138**	**2,28**
DA BEOGRAD	857	5	3	0	8	0,93
DA NOVI SAD	767	5	2	0	7	0,91
DA KRALjEVO	1.013	17	2	0	19	1,87
DA KRAGUJEVAC	330	3	1	0	4	1,21
DA NIŠ	610	5	0	0	5	0,82
EPS DISTRIBUTION:	**3.577**	**35**	**8**	**0**	**43**	**1,20**
TOTAL: PE EPS	**28.976**	**398**	**103**	**6**	**507**	**1,75**

Note: Relevant fatalities data are provided in sections presenting individual organisational units of PE EPS

PE EPS Employees Health

Table 5 shows employee health data including mandatory medical examinations at the start of employment, as well as periodic examinations aimed at assessing the work capability of employees performed in 2016 for the PE EPS organisational units.

Table 5

PUBLIC ENTEPRPRISE ELECTRIC POWER INDUSTRY OF SERBIA											
WORK CAPABILITY IN 2016											
Organisational units	**Number of employees**	**Periodic examinations**				**Work capability**					
		referred to examination		**examined**		**capable**		**limited capability**		**incapable**	
		№	%	№	%	№	%	№	%	№	%
KOLUBARA MB BRANCH	12.416	11.861	95,53	10.907	91,96	7.505	68,81	3.316	30,40	86	0,79
KOSTOLAC TPPs-OCMs BRANCH	2.258	1.593	70,55	1.386	87,01	1.211	87,37	120	8,66	55	3,97
OPEN CAST MINES:	**14.674**	**13.454**	**91,69**	**12.293**	**91,37**	**8.716**	**70,90**	**3.436**	**27,95**	**141**	**1,15**
NIKOLA TESLA TPPs BRANCH	2.167	1.671	77,11	1.649	98,68	1.449	87,87	174	10,55	26	1,58

KOSTOLAC TPPs BRANCH	743	638	85,87	631	98,90	548	86,85	77	12,20	6	0,95
PANONSKE CHPs BRANCH	463	340	73,43	337	99,12	199	59,05	135	40,06	3	0,89
THERMAL POWER PLANTS:	**3.373**	**2.649**	**78,54**	**2.617**	**98,79**	**2.196**	**83,91**	**386**	**14,75**	**35**	**1,34**
DJERDAP HPPs BRANCH	848	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
DRINSKO-LIMSKE HPPs BRANCH	460	460	100,00	434	94,35	427	98,39	5	1,15	2	0,46
HYDROPOWER PLANTS:	**1.308**	**460**	**35,17**	**434**	**94,35**	**427**	**98,39**	**5**	**1,15**	**2**	**0,46**
TC BEOGRAD	812	310	38,18	310	100,00	293	94,52	6	1,94	11	3,55
TC NOVI SAD	1.465	721	49,22	719	99,72	601	83,59	113	15,72	5	0,70
TC KRALjEVO	1.882	862	45,80	862	100,00	782	90,72	72	8,35	8	0,93
TC KRAGUJEVAC	613	308	50,24	308	100,00	236	76,62	17	5,52	55	17,86
TC NIŠ	1.272	636	50,00	634	99,69	561	88,49	68	10,73	5	0,79
TECHNICAL CENTERS:	**6.044**	**2.837**	**46,94**	**2.833**	**99,86**	**2.473**	**87,29**	**276**	**9,74**	**84**	**2,97**
DA BEOGRAD	857	318	37,11	318	100,00	318	100,00	0	0,00	0	0,00
DA NOVI SAD	767	285	37,16	284	99,65	277	97,54	7	2,46	0	0,00
DA KRALjEVO	1.013	576	56,86	568	98,61	438	77,11	122	21,48	8	1,41
DA KRAGUJEVAC	330	122	36,97	122	100,00	107	87,70	15	12,30	0	0,00
DA NIŠ	610	353	57,87	353	100,00	293	83,00	57	16,15	3	0,85
EPS DISTRIBUTION:	**3.577**	**1.654**	**46,24**	**1.645**	**99,46**	**1.433**	**87,11**	**201**	**12,22**	**11**	**0,67**
TOTAL: PE EPS	**28.976**	**21.054**	**72,66**	**19.822**	**94,15**	**15.245**	**76,91**	**4.304**	**21,71**	**273**	**1,38**

1. KOLUBARA MINING BASIN BRANCH

The core activities of the Kolubara Mining Basin Branch comprise mining, processing and transportation of coal. Organisationally it is comprised of the Branch Headquarters and three organizational units:

1. **Open Cast Mines –Barosevac;**
2. **Prerada - Vreoci and**
3. **Projekt.**

Organizational unit Open Cast Mines –Barosevac has four active open cast mines: 1. Fiels B, 2. Field D, 3. Tamnava West Field and 4. Veliki Crljeni Field, taking into account that coal mining on OCM Veliki Crljeni was completed mid-year.

The main task of the Environmental Sector is to prevent, control, mitigate and remediate all forms of environmental pollution. This sector comprises the following divisions: 1. Open Cast Mines – Barosevac organizational unit Environmental Division; 2. Biological Reclamation Division; 3. Waste and Hazardous Substances Division and 4. Prerada– Vreoci organizational unit Environmental Division.

A KOLUBARA MB BRANCH– OPEN CAST MINES - BAROSEVAC BRANCH

1.1 Overview and Status of Permits

Overview and status of permits, licences and other necessary approvals in 2016 is provided in Table 6.

Table 6

KOLUBARA MINING BASIN BRANCH – OPEN CAST MINES – BAROSEVAC BRANCH			
Overview and status of permits in 2016			
Open cast mine	**Permits, licences and other necessary approvals obtained in 2016 Project name and status**	**Applications for new or extension of existing permits**	**Note**
Field B/C	Water approval Water approval compliance report dated 10 May 2013 Detailed Mining Design - Expansion of the Field C open cast mine, Projekt Branch, Lazarevac, 2009, Decision on the execution of mining works under the Detailed Mining Design № 310-02-0397/2010-06 dated 25.08.2010. Valid until 31.12.2014 Decision № 310-02-0397/2010-06 dated 6.06.2014 stipulating the execution of mining works in line with the Detailed Mining Design obtained Supplementary Mining Design - Stone excavation at the Krusevica mine, Projekt Branch, Lazarevac, 2011; Technical audit executed. Mining Design – Field C outside dump and 1st ECS system. Technical audit performed by the Mining Institute Belgrade № 2392 dated 18.6.2014. Decision approving the Krusevica Open Cast Mine Stone Excavation Environmental Impact Assessment Study obtained.	Mining Works approval request submitted under the Supplementary Mining Design 18.08.2015	Necessary documentation preparation in progress for the Krusevica mine expansion

	Decision № 310-03-218/88-02 dated 24.06.2014 approving the Krusevica latite and latite breccia mining field. Balance reserves certificate obtained identifying latite and latite pyroclastics reserves of the Krusevica deposit with the situation 31.12.2011, Decision № 310-02-00494/2012-03 dated 06.03.2014. Preparation of Detailed Mining Design for permanent cancellation of stone excavation at OCM Krusevica in progress. Supplementary Mining Design - Field C OCM. Technical audit conducted by the Tera & Gold Beograd, a company for production, engineering, designing and marketing, March 2015. Water approval decision № VIII-04-325.2-12/2015 dated 21.07.2015.		
Field D	Water approval decision for the Field D Supplementary Mining Design dated 13.12.2013 obtained. Field D Open Cast Mine Supplementary Mining Design, Projekt Branch, Lazarevac, 2009, Decision on the execution of mining works under the Supplementary Mining Design № 310-02-0327/2010-06 dated 7.05.2010. Valid until 31.12.2017. Mining Design for the North-western Area of Field D. Technical audit performed by the Mining Institute Belgrade № 3801 dated 24.10.2014 Mining Design – Overburden Removal and Coal Production at the Southern Slope of Field D. Technical audit conducted by the Institute for Mining and Metallurgy Bor Mining Design – Field D Dewatering in front of the ECS System inside the Field E Zone. Technical audit performed by the Technical audit conducted by the Mining and Metallurgy Institute Bor.		
Veliki Crljeni	Veliki Crljeni Detailed Mining Design, Projekt Branch, Lazarevac, 2006, Decision on the execution of mining works under the Veliki Crljeni Open Cast Mine Detailed Mining Design 310-02-0765/2008-06 dated 03.02.2010. Valid until 31.12.2014. Mining works approval decision under the Detailed Mining Design – Veliki Crljeni OCM № 310-02-0765/2008-06 dated 22.04.2015 Decision approving the use of dewatering structures developed under the Detailed Mining Design – Veliki Crljeni OCM № 310-02-0164/2013-03 dated 16 June 2014	Compliance request – Environmental Impact Assessment Study – Supplementary Mining Design for the Veliki Crljeni OCM Expansion	Documentation collection in progress required for the mining works approval under the Supplementary Mining Design – Veliki Crljeni OCM Expansion

	Water approval №.325-04-976/2009-07 dated 6.8.2009. Crushing Plant: Supplementary Mining Design of the Tamnava Coal Preparation Plant – Phase I, *Delta inzenjering*, Belgrade, 2011. Supplementary Mining Design – Veliki Crljeni OCM Expansion. Technical audit conducted by the Tera & Gold Beograd, a company for production, engineering, designing and marketing. Environmental Impact Assessment Study for the Supplementary Mining Design – Veliki Crljeni OCM Expansion. Approval of the Environmental Impact Assessment Study for the Supplementary Mining Design – Veliki Crljeni OCM Expansion no. 353-02-345-2016-16 dated 16.09.2016. Decision approving works under the Supplementary Mining Design – Tamnava Coal Preparation Plant Phase II, № 310-02-00900/2014-02 dated 23.07.2015. Decision of MME approving works under Supplementary Mining Design for transport, disposal, fine coal landfill, homogenization, taking and transport of fine coal at mining field 321A, at the territory of Lazarevac municipality and Ub municipality no. 310-02-00647/2015-02 datedd 19.08.2016. Water approval application submitted for buildings i.e. works for which water requirements were issued under Supplementary Mining Design - Veliki Crljeni OCM Expansion no.0402-526782/1-16 dated 14.12.2016.		
Tamnava West Field	Tamnava West Field Supplementary Mining Design, Projekt Branch, Lazarevac 2014. Technical audit of the Tamnava West Field Supplementary Mining Design performed by the Mining and Metallurgy Institute Bor. Decision approving the mining works № 310-02-00187587/2014-03 dated 25.08.2014. Mining Design – Veliki Crljeni ECS System Operation at the Tamnava West Field OCM. Technical audit conducted by the Mining Institute Belgrade № 1723 dated 30.04.2014. Decision № 310-02-01473/2013-03 dated 20.02.2014 approving the use of the mobile shifting station and BW. Water approval decision for the Supplementary Mining Design – Tamnava West Field OCM № 325-04-451/2104-07 dated 14.04.2014 Mining Design – Commissioning of the ECS system taken over from the Veliki Crljeni OCM. Technical audit report by Mining Institute Belgrade Mining Design – ECS System Operation on the Tamnava West Field OCM. Technical audit performed by the Tera & Gold Beograd, a		

	company for production, engineering, designing and marketing. Decision on trial operation of excavator SchRs 740x25/6 on Tamnava West Field OCM no. 310-02-01525/2015/2 dated 8.08.2016. Application for use of mining constructions submitted – use permit for bucket wheel excavator SchRs 740 25/6 (G-V) no. 04.02-475291/1-16 dated 17.11.2016.		
Field G	MME Reserves Certificate, Committee for Establishment and Certification of Reserve Mineral Resources no. 310-02-00410/2010-06 dated 28.09.2010. Approval for coal deposit mining – Field G OCM on the expanded mining field number 321A no.310-02-00311/90 dated 21.01.2015. Detailed Mining Design- Feild G OCM, prepared by OC Projekt biro (2012). Technical audit by Mining Institute Belgrade Approval of Environmental Impact Assessment Study – opening and construction of Field G OCM no. 353-02-1150/2012-02 dated 11.12.2012. Decision on water approval under Detailed Mining Design – Field G (Belgrade City Administration, Secretariat for Water) .d. VIII -04-325.2-32/2014 dated 02.03.2015. MME decision approving mining works under Detailed Mining Design – Field G OCM no. 310-02-00639/2015-02 dated 30.06.2015.		

1.2 Monitoring and Environmental Impacts

1.2.1 Air Quality Measurements

Systematic air quality monitoring in the vicinity of open cast mines of MB Kolubara Branch was initiated in March 2016 at six measuring points – three in the vicinity of east and three in the vicinity of west mines (UTM measured at 4 points). In order to obtain more accurate picture during the year, the measuring was performed at each metering point continuously for ten days every two months (for UTM measurements lasted for 30 days). Measurements were performed in September in Baroševac village, instead at Kalenić waterworks at the order of MB Kolubara Branch management. Data on obtained results are given in tables 7, 7a, 7b and 7c.

MB KOLUBARA BRANCH – OCM BAROSEVAC BRANCH Table 7

Air quality in 2016

Air quality indicators	PM 10 (µg/m³)									As (ng/m3)									Cd (ng/m3)									Ni (ng/m3)									Pb (µg/m3)									benzo (a) pyrene (ng/m3)								
Measuring period (per months)	May			July			September			May			July			September			May			July			September			May			July			September			May			July			September			May			July			September		
	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of	LV	Av.month.	No of
MM1- Radljevo building	50	42,92	5	50	38,30	4	50	44,96	4	6**	1,15	/	6**	< 0,5	/	6**	4,66	/	/	0,88	/	/	0,21	/	/	0,21	/	20**	< 6	/	20**	8,09	/	20**	< 2	/	1	0,02	0	1	0,003	0	1	< 0,002	0	/	< 0,3	/	/	< 0,3	/	/	< 0,3	/
MM2- Kalenić Waterworks	50	16,27	0	50	29,12	1	/	/	/	6**	0,67	/	6**	< 0,5	/	/	/	/	/	< 0,4	/	/	< 0,1	/	/	/	/	20**	< 6	/	20**	7,28	/	/	/	/	1	<0,02	0	1	< 0,0058	0	/	/	/	/	< 0,3	/	/	< 0,3	/	/	/	/
MM3- Field G-Kantina	50	25,49	0	50	67,45	8	50	55,39	7	6**	0,77	/	6**	2,87	/	6**	7,24	/	/	< 0,4	/	/	1,41	/	/	0,27	/	20**	< 6	/	20**	8,63	/	20**	< 0,2	/	1	<0,02	0	1	<0,026	0	1	< 0,002	0	/	< 0,3	/	/	< 0,3	/	/	< 0,3	/
MM4- Volujak	50	15,70	0	50	70,03	9	50	42,37	4	6**	< 0,5	/	6**	2,87	/	6**	2,58	/	/	< 0,4	/	/	< 0,1	/	/	0,1892	/	20**	6,17	/	20**	3,70	/	20**	< 0,2	/	1	<0,02	0	1	< 0,0068	0	1	< 0,001	0	/	< 0,3	/	/	< 0,3	/	/	< 0,3	/
MM5- Mali Crljeni	50	21,40	0	50	38,01	0	50	55,38	6	6**	1,43	/	6**	< 0,5	/	6**	7,26	/	/	0,46	/	/	0,21	/	/	0,26	/	20**	< 6	/	20**	3,21	/	20**	< 0,2	/	1	<0,02	0	1	< 0,006	0	1	< 0,002	0	/	< 0,3	/	/	< 0,3	/	/	< 0,3	/

MM6-Medoševac Waterworks	50	21,77	0	50	37,66	1	50	44,31	4	6**	1,18	/	6**	< 0,5	/	6**	4,29	/	/	0,67	/	/	< 0,1	/	/	0,21	/	20**	8,31	/	20**	7,06	/	20**	< 0,2	/	1	<0,02	0	1	< 0,003	0	1	< 0,001	0	/	< 0,3	/	/	< 0,3	/	/	< 0,3	/

Table 7a

MB KOLUBARA BRANCH – OCM BAROŠEVAC BRANCH																															
Air quality in 2016																															
Metering points		**Radljevo building**						**Kalenić Waterworks**						**Mali Crljani**						**Medoševac Waterworks**						**Baroševac**					
Investigated parameters/ Unit of measurement	**Measuring period per months**	May		July		Sept.		May		July		Sept.		May		July		Sept.		May		July		Sept.		May		July		Sept.	
		Measured value	LV	Measured value	LV	Measured value	LV	Measured value	LV	Measured value	LV	Measured value	LV	Measured value	LV	Measured value	LV	Measured value	LV	Measured value	LV	Measured value	LV	Measured value	LV	Measured value	LV	Measured value	LV	Measured value	LV
Precipitation l/m²/day		/	/	1,96	/	/	/	2,24	/	1,52	/	/	/	0,29	/	2,36	/	/	/	1,88	/	1,65	/	/	/	/	/	/	/	1,43	/
Total particulate matter mg/m²/day		/	450	188,54	450	/	450	169,81	450	1921,85	450	/	450	67,89	450	57,87	450	/	450	87,61	450	76,96	450	/	450	/	450	/	450	137,25	450
Soluble particulate matter mg/m²/day		/	/	155,15	/	/	/	31,43	/	194,31	/	/	/	18,12	/	47,24	/	/	/	20,68	/	49,65	/	/	/	/	/	/	/	92,74	/
Insoluble particulate matter mg/m²/day		/	/	33,39	/	/	/	138,39	/	1727,54	/	/	/	49,76	/	10,63	/	/	/	66,93	/	27,31	/	/	/	/	/	/	/	44,51	/

Ash mg/m²/day	/	/	17,68	/	/	/	61,01	/	112,34	/	/	/	2,01	/	27,16	/	/	/	6,02	/	28,13	/	/	/	/	/	/	/	4,79	/
Fluoride mg/m²/day	/	/	4,15	/	/	/	0,11	/	0,14	/	/	/	0,11	/	0,18	/	/	/	0,56	/	0,17	/	/	/	/	/	/	/	3,03	/
Chlorides mg/m²/day	/	/	33,41	/	/	/	0,76	/	12,84	/	/	/	4,21	/	1,13	/	/	/	0,51	/	0,88	/	/	/	/	/	/	/	24,39	/
Sulfates mg/m²/day	/	/	10,04	/	/	/	7,41	/	< 0,008	/	/	/	2,93	/	9,50	/	/	/	3,67	/	10,86	/	/	/	/	/	/	/	7,30	/
Nitrates mg/m²/day	/	/	1,22	/	/	/	0,09	/	0,12	/	/	/	0,01	/	1,15	/	/	/	< 0,00	/	< 0,00	/	/	/	/	/	/	/	0,89	/
Bromides mg/m²/day	/	/	< 0,008	/	/	/	< 0,008	/	< 0,008	/	/	/	< 0,008	/	< 0,008	/	/	/	< 0,008	/	< 0,008	/	/	/	/	/	/	/	< 0,008	/
Orthophosphate mg/m²/day	/	/	< 0,017	/	/	/	0,97	/	43,16	/	/	/	0,18	/	< 0,017	/	/	/	0,60	/	< 0,017	/	/	/	/	/	/	/	< 0,017	/
Nitrites mg/m²/day	/	/	< 0,008	/	/	/	< 0,008	/	< 0,008	/	/	/	< 0,008	/	< 0,008	/	/	/	1,43	/	< 0,008	/	/	/	/	/	/	/	< 0,008	/
Calcium mg/m²/day	/	/	< 15	/	/	/	< 15	/	< 15	/	/	/	< 15	/	< 15	/	/	/	< 15	/	< 15	/	/	/	/	/	/	/	< 15	/
Magnesium mg/m²/day	/	/	< 7	/	/	/	< 7	/	< 7	/	/	/	< 7	/	< 7	/	/	/	< 7	/	< 7	/	/	/	/	/	/	/	< 7	/
Lead µg/m²/day	/	/	< 150	/	/	/	< 150	/	< 150	/	/	/	< 150	/	< 150	/	/	/	< 150	/	< 150	/	/	/	/	/	/	/	< 150	/
Cadmium µg/m²/day	/	/	< 30	/	/	/	< 30	/	< 30	/	/	/	< 30	/	< 30	/	/	/	< 30	/	< 30	/	/	/	/	/	/	/	< 30	/

Zinc µg/m²/day	/	/	< 70	/	/	/	< 70	/	< 70	/	/	/	< 70	/	< 70	/	/	/	< 70	/	< 70	/	/	/	/	/	/	/	< 70	/
Manganese µg/m²/day	/	/	< 15	/	/	/	< 15	/	< 15	/	/	/	< 15	/	< 15	/	/	/	< 15	/	< 15	/	/	/	/	/	/	/	< 15	/

Table 7b

MB KOLUBARA BRANCH –OCM BAROŠEVAC BRANCH																								
Air quality in 2016																								
Measuring period per months	**May**									**July**									**September**					
Air quality indicators	**SO2 (µg/m3)**			**NOx (µg/m3)**			**Soot (µg/m3)**			**SO2 (µg/m3)**			**NOx (µg/m3)**			**Soot (µg/m3)**			**SO2 (µg/m3)**			**NOx (µg/m3)**			**Soot (µg/m)**		
Averaging period	**LV**	**Av.month.co**	**No of davs >**	**LV**	**Av.month.co**	**No of davs >**	**LV**	**Av.month.co**	**No of davs >**	**LV**	**Av.month.co**	**No of davs >**	**LV**	**Av.month.co**	**No of davs >**	**LV**	**Av.month.co**	**No of davs >**	**LV**	**Av.month.co**	**No of davs >**	**LV**	**Av.month.co**	**No of davs >**	**LV**	**Av.month.co**	**No of davs >**
Measuring point																											
MM1-Radljevo building	125	< 0.20	0	85	12.65	0	50	< 6.70	0	125	< 0,20	0	85	15.03	0	50	< 6.70	0	125	< 0.20	0	85	6.97	0	50	6.70	0
MM2- Kalenić Waterworks	125	< 0.20	0	85	5.57	0	50	91.80	10	125	< 0,20	0	85	17.23	0	50	< 6.70	0	125	< 0.20	0	85	31.9	0	50	6.70	0
MM3- Field G-Kantina	125	< 0.20	0	85	7.94	0	50	6.70	0	125	< 0,20	0	85	< 3.0	0	50	< 6.70	0	125	< 0.20	0	85	6.97	0	50	< 6.70	0
MM4- Volujak	125	< 0.20	0	85	11.92	0	50	16.19	0	125	< 0,20	0	85	13.32	0	50	< 6.70	0	125	21.73	0	85	15.5	0	50	< 6.70	0
MM5- Mali Crljani	125	< 0.20	0	85	11.83	0	50	6.70	0	125	< 0,20	0	85	< 3.0	0	50	< 6.70	0	125	< 0.20	0	85	31.9	0	50	8.30	0
MM6- Medoševac Waterworks	125	< 0.20	0	85	9.06	0	50	6.70	0	125	< 0,20	0	85	< 3.0	0	50	< 6.70	0	125	20.16	0	85	7.16	0	50	< 6.70	0
MM7- Baroševac*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125	< 0.20	0	85	13.56	0	50	20.21	1

During 2015 and the first half of 2016 Institute of Public Health of Serbia *Dr Milan Jovanović Batut* was monitoring the status of environmental media, analyzed foods of plant origin, as well as the statistics of state of health of Baroševac residents within the preparation of *Main Report on Health State of Baroševac Residents – phase one: risk assessment*.

Table 7c

MB KOLUBARA BRANCH –OCM BAROŠEVAC BRANCH		
Results of testing the quality of ambient air at the measuring point *Ambulanta* Baroševac		
Measuring point	**15.01.2016. – 14.04.2016.**	
PM_{10}	**µg/m³**	**range**
C_{sred}	86,99	40,34 - 171,35
C_{min}	17,27	17,27 - 126,33
C_{max}	194,45	46,48 - 194,45
$PM_{2,5}$	**µg/m³**	**range**
C_{sred}	68,59	23,45 - 166,12
C_{min}	8,769	8,769 - 125,19
C_{max}	188,404	36,89 - 188,404
CO	**µg/m³**	**range**
C_{sred}	1,179	0,474 – 2,346
C_{min}	0,187	0,187 – 2,003
C_{max}	2,585	0,737 – 2,585
SO_2	**µg/m³**	**range**
C_{sred}	28,29	8,05 - 54,71
C_{min}	4,022	4,022 - 37,568
C_{max}	98,65	22,614 - 98,65
NO_2	**µg/m³**	**range**
C_{sred}	13,125	7,22 - 28,55
C_{min}	4,625	4,625 - 13,36
C_{max}	33,981	9,35 - 33,981
NO	**µg/m³**	**range**
C_{sred}	11,872	5,31 - 23,027
C_{min}	2,199	2,199 - 15,791
C_{max}	30,583	8,429 - 30,583
NO_x	**µg/m³**	**range**
C_{sred}	25,254	17,085 – 45,743
C_{min}	7,082	7,082 – 43,04
C_{max}	65,037	19,814 – 65,037

Analysis of mean values of PM_{10} concentration indicates the following:

- in all 20 samples the mean values of PM_{10} concentration were above limit value for calendar year, i.e. 40 µg/m3;

Analysis of $PM_{2,5}$ concentration values indicates the following:

- during the measuring period 15.01.2016 – 14.04.2016 (20 samplings), all mean values, i.e. 20/20 were above limit value of 20 µg/m3. Only three out of 20 minimum values in the series were below the limit value, while 17/20 (85%) was above 20 µg/m3. All individual maximum values were above limit values for the calendar year.

Measuring period of CO concentrations. There was no numerical value above limit value for annual averaging of 3,0 mg/m3 in any of the three categories of individual values (mean, minimum, maximum) of CO concentrations .

None of NO_2 and NO concentration value exceeded limit values from the applicable regulations.

As the measuring cycle has large number of winter days, the result of increased mean values of PM_{10} and $PM_{2,5}$ concentrations can represent the contribution of individual combustion plants to the air pollution in Baroševac village. Due to increased concentration of fine particulate matter in the ambient air there is a possibility that the residents of Baroševac village are exposed to this pollutant inside their households as well.

1.2.2 Water Emission Measurements

In collaboration with the *Tamnava* laboratory authorised by the ministry responsible for environmental issues to analyse surface water, groundwater, wastewater and drinking water, starting from 2016 systematic water quality monitoring was initiated on 75 measuring points inside the Kolubara MB with the frequency higher than prescribed. Measurements information are available to the Kolubara MB employees over the Kolubara MB website through the GIS database containing the relevant environmental data. A smaller part of the parameters for which *Tamnava* laboratory is not certified is being tested by the external certified laboratory.

- **Dewatering system water**

Water originating from the preliminary dewatering and dewatering systems represents a technological part of the coal production system. Water pumped (wastewater) from these systems is discharged over a sedimentation tank, without treatment into the surrounding watercourses, as follows:

- Veliki Crljeni and Tamnava East Field – into the Kolubara River
- Field B/C, Barosevac - into the Pestan and Turija rivers
- Field D, Medosevac – into the Pestan River
- Tamnava-West Field – into the Kolubara River

Recipient water quality (some 50m upstream and downstream from the wastewater discharge, as well as at the discharge point) is controlled by a certified laboratory four times a year. During 2016, wastewater quality of the Kolubara MB open cast mines was controlled by the Belgrade Public Health Office - microbiological analyses while the physical-chemical characteristics are controlled by the Prerada organizational unit laboratory.

Table 8 shows the pumped water quality results (wastewater) from open cast mines (from the sedimentation tank into the recipient) in 2016.

Table 8

KOLUBARA MB – OPEN CAST MINES – BAROSEVAC BRANCH				
Water quality in 2016				
Parameters	**Veliki Crljeni**	**Field B – Barosevac**	**Field D – Medosevac**	**Tamnava-West Field**
Electrical conductivity (µs/cm)	487-795	1095-1115	734 -839	234-619
pH	7,8-7,95	7,6-7,8	6,69 -7,72	7,52-8,06

- **Sanitary waters**

Open cast mines are supplied with drinking water from five regional water supply systems: Medosevac, Kalenic, Junkovac, Nova Montaza and Tamnava-East Field. Potable water quality is controlled by a certified laboratory of the Belgrade Public Health Institute.

Table 9 shows sanitary wastewater and potable water amounts in 2016. Amounts of created sanitary wastewater may be estimated on the basis of the supplied potable water amounts.

Table 9

KOLUBARA MB – OPEN CAST MINES – BAROSEVAC BRANCH		
Water amounts in 2016 (m^3/y)		
Open cast mine	**Total pumped water amounts (m^3)**	**Supplied potable water (m^3)**
Field B/C	472. 880	/
Field D	3 122 285,00	Junkovac Waterworks 115 026, Medosevac 1 074 872 and Nova Montaza 374 378; Σ 1.564 276
Tamnava-East Field and Veliki Crljeni	6.691.718	Tamnava-East Field Waterworks 215765
Tamnava-West Field	10.326.111	Kalenic Waterworks 1 055 307

1.2.3 Soil Emission Measurements (Hazardous Substances)

- **Overview of reclaimed areas**

Maintenance of reclaimed areas is foreseen by the Branch business plan, together with temporary reclamation measures on new areas. Final reclamation measures will be carried out after mining operations, based on the adopted Kolubara Region Spatial Plan.

Biological Reclamation Division, Forestry Office manages 783.95ha of areas reclaimed by afforestation (Fields A and B – 113.76ha, Field D – 588.69ha, Tamnava East Field - 66ha and Tamnava East Field – 15.50ha). During the period 01.01.2016-31.12.2016, some 8.918ha of expropriated forests was handed over to the Forestry Office to implement further preservation measures.

Biological Reclamation Division, Agriculture Office conducts biological reclamation measures and organises regular agricultural production on a total area of 122.56ha (reclaimed areas 105.90ha and expropriated areas 16.66ha).

Pursuant to Article 21 of the Agricultural Land Act (OG RS № 62/06, 65/08, 41/09 and 112/15), arable land user shall control the arable land fertility levels if necessary, at least every five years. Following this requirement, the Soil Institute – Belgrade carried out soil investigations on 122.56ha of reclaimed areas for the Kolubara MB needs (Report delivered on 15 January 2016).

Kolubara MB registered the expropriated land conclusively with 31 December 2016 for: Field D, Field B, Field E, Field G, South Field, Auxiliary Machinery and (Headquarters) OCM Expert Division.

The register was prepared by aligning the last year's register with the land registry sheets. This was followed by a breakdown of all cadastral lots according to fields, while subsequently the expropriated land for the current year was added. Since there are new fields, by examining the expropriation decisions and based on the polygons of these fields, considerable number of lots already in the land register for Field D and Field B were transferred to these fields. The land register for previous years contained cadastral lots registered as *expropriated outside open cast mines*, while in the 2013 land register such cadastral lots were allocated according to fields.

All cadastral lots of the Medosevac Cadastral Municipality over which the Kolubara MB no longer had use rights under the Decision № 952-02-1815/2011 dated 23 March 2012 were transferred to the ownership of the Republic of Serbia, Belgrade. On meetings held to discuss the land registration issues, it was decided to stop entering such cadastral lots into the land register. Hence, these cadastral lots were not entered into the 2013 land register.

By comparing the land registry sheets and our records, it was concluded that:

- There is a correction of areas on many cadastral lots,
- All roads registered under the Kolubara MB, for which land use has not been altered, were transferred to the Republic of Serbia or Lazarevac Municipality.
- There are cadastral lots registered in our records as expropriated during the 50s and the 70s still registered to private persons, but without a valid document verifying this. Subsequently, such cadastral lots were taken out of the register.
- There are a few cadastral lots that were expropriated long time ago, but have never been entered into the register. Therefore, two cadastral municipalities were added: Sokolovo (2 lots) and Tulez (1 lot).

It was established that there are quite a few cadastral lots simultaneously recorded in the Kolubara MB register and in registers maintained by other committees. For this reason, it was agreed for the Kolubara MB to stop registering some cadastral lots as its ownership.

LAND REGISTER ISSUES:

In late 2011, within the Medosevac Cadastral Municipality a total of 591.0657 ha was expropriated. A small number of cadastral lots was not registered to Kolubara MB, while all other lots were transferred to the Republic of Serbia. A total of 25.5568ha is in Kolubara MB register, while all other lots registered to the Kolubara MB was registered after the decision to transfer our property to the Republic of Serbia ownership. Therefore, in the case of Field D much less dump sites was indicated (reduced for 352.5499ha), together with coal areas (reduced by 78.0219ha), overburden areas (reduced by 142.3304ha), etc., given that the remaining lots are located on the territory not owned by the Kolubara MB and thus not entered into the land register.

Previous issue results in overlapping of territory expropriated for Field D needs (and registered in land registry under Field D) with overburden, coal and dump site of Field B, resulting in problem during search of each cadastre lot to present it within the following items: coal, overburden, etc.

Total expropriated areas, total land areas whose use has been changed, land containing buildings, land containing dump sites and reclaimed areas in 2015 and 2016 are shown in Table 10 and Table 10a.

Table 10

KOLUBARA MB BRANCH –OPEN CAST MINES BAROSEVAC BRANCH																			
Open cast mine	Total expropriated areas (ha)*	Total land area registered in the land register (ha)		Total land area whose use has been changed (ha)		Land containing buildings (ha)		Land containing dump sites (ha)				Reclaimed areas (ha)							
								Inside state		Outside state		Forests state		Arable land state		Orchards state		Nurseries* state	
		2015 state	2016 state	2015 state	2016 state	2015 state	2016 state	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Field D	2.405,56	2.372,32	2.385.22	1.064,98	1.064,98	27,15	32,24	1.328,99	1.327,83	0	0	0	0	0	0	0	0	0	0
Field B	1.059,89	1.045,19	1.054,41	402,34	402,34	19,31	20,01	432,57	469,11	0	0	14,57	0,70	0	0	0	0	0	0
Auxiliary machinery	10,46	10,46	10,46	0	0	9,69	9,69	0	0	0	0	0	0	0	0	0	0	0	0
Mines HQ	18,65	18,65	18,65	0	0	17,94	17,94	0	0	0	0	0	0	0	0	0	0	0	0
South Field	424,38	323,14	388,12	0	0	17,94	0	0	0	0	0	0	0	0	0	0	0	0	0
Field G	207,93	166,59	199,59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Field E	327,02	259,14	299,22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tamnava East Field	2.145,21	2.042,77	1.947,58	30,32	82,67	173,00	104,23	0	749,36	1.395,51	0	0	0	57,70	0	0	0	0	0
Veliki Crljeni	189,35	176,08	177,88	0	0	0	1,66	0	5,64	148,32	0	0	0	0	0	0	0	0	0
Tamnava West Field	1.750,03	1.697,28	1.743,70	70,13	70,13	48,37	48,37	664,57	693,40	0	0	8,56	0	0	0	0	0	0	0
Radljevo	179,46	129,26	174,54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total:	**8.717,94**	**8.240,88**	**8.399,37**	**1.567,77**	**1.620,12**	**313,40**	**234,23**	**2.426,13**	**3.245,34**	**1.543,83**	**0**	**23,13**	**0,70**	**57,70**	**0**	**0**	**0**	**0**	**0**

Table 10a

KOLUBARA MB BRANCH – OPEN CAST MINES BAROSEVAC BRANCH								
Expropriated areas on active open cast mines of the Kolubara MB in 2016 (ha)								
Year	**Field B/C**	**Field D**	**Veliki Crljeni**	**Tamnava – West Field**	**Vreoci resettlement**	**Field E**	**Radljevo**	**Watercourse and dam repair – Kolubara, Vranicina, Skobaljski Potok rivers and Kladnica Dam**
2012	119,49	103,71	18,99	29,33	/	/	/	/
2013	63,41	65,91	21,87	7,29	/	/	/	/
2014	41,05	/	6,41	11,38	48,03	/	/	/
2015	2,04	5,00	8,96	1,30	45,44	32,11	134,55	37,20
2016	/	/	18,57	120,00	8.779,96	2.883,65	4.240,56	375,07
Total expropriated areas 2014/2015/2016	**225,99**	**174,62**	**74,80**	**169,30**	**8.873,43**	**2.915,76**	**4.375,11**	**412,27**

1.2.4 Living Environment Noise Measurements

Measuring point for environment noise measurement in 2016:

- Measuring point MM1: *Pumpa Horizon* – 09.06.2016, Veliki Crljeni

(measuring point is located next to Ibarska Magistrala road, in the vicinity of Veliki Crljeni OCM),

- Measuring point MM2: Radojica Jovicic's house – 16.06., 18.06., and 01.09.2016 – Barosevac and
- Measuring point MM3: across loading area – 16.06., 18.06., and 01.09.2016 – Barosevac

Noise measurement results are shown in Table 11.

Table 11

KOLUBARA MB BRANCH – OPEN CAST MINES BAROSEVAC BRANCH						
Noise level in 2016 (dB)(A)						
Measuring date	***09.06.2016***					
Measuring point	**Pumpa Horizon – Veliki Crljeni**					
	Equivalent level (dB)			Applicable level (dB)		Permitted level (dB)
Day level	68.5*			68.5		65
Night level	65.9*			70.9		55
Measuring date	***16.06.2016***					
Measuring points	**Radojica Jovicic's house - Barosevac**			**Across loading area - Barosevac**		
	Equivalent level (dB)	Applicable level (dB)	Permitted level (dB)	Equivalent level (dB)	Applicable level (dB)	Permitted level (dB)
Day level	64.6	64.6	65	65.9**	65.9	65
Measuring date	***18.08.2016***					
Measuring points	**Radojica Jovicic's house - Barosevac**					
	Equivalent level (dB)		Applicable level (dB)		Permitted level (dB)	
Day level w/o traffic	42,2		42,2		65	
Day level with traffic	63,2		63,2		65	
Measuring date	***01.09.2016***					
Measuring points	**Radojica Jovicic's house - Barosevac**			**Across loading area - Barosevac**		
	Equivalent level (dB)	Applicable level (dB)	Permitted level (dB)	Equivalent level (dB)	Applicable level (dB)	Permitted level (dB)
Day level w/o traffic	37,1	37,1	65	39,7	39,7	65
Day level with traffic	64,9	64,9	65	65,5***	65,5	65

* Note: Bucket wheel excavator 2, Band Wagen and drive station E-3 were operating during daily measuring; while during night measuring period it was the same except for the dogs barking

**Note: Following mining equipment were operating: fourth ECS system: ET 1.1 drive station, VT 1.2 drive station, VT 1.3 drive station, VT 1.4 drive station, spreader O1 with tripper car, belt system BTS separator: U 2 drive station

***Note: The system was not operating durin measurements, mower was heard in the background

EVALUATION: According to Decree on Noise Indicators, Limit Values, Niose Indicators Review Methods, Disturbung and Detrimental Effects of Noise in the Environment (Official Gazette of RS number 75/2010), for zone 5, along the highways, the applicable noise levels on all measuring points during daily measuring period EXCEED permitted values.

Measurement were carries out with our equipment and by our employees. Environmental Department is preparing documents for laboratory certification for environmental noise measurement.

1.2.5 Waste

In 2016, Waste and Hazardous Substances Division activities involved the establishment of waste management systems, procurement of waste management equipment, signing of contracts with the operators licensed to sell – handle waste, reporting to the competent authorities, elaboration of tender documentation and waste sale contracts implementation.

Waste generated by the Open Cast Mines Barosevac Branch in 2016 is shown in Table 12 in line with the Serbian waste management regulations.

Table 12

KOLUBARA MB BRANCH – OPEN CAST MINES BAROSEVAC BRANCH										
Waste in 2016										
№	**Official nomenclature of the Rules defining waste categories, its testing and classification OG RS № 56/10**		**Unit**	**Branch**						
				Field D	**Field B**	**Tamnava West**	**Tamnava East**	**Auxiliary Machinery**	**Total**	**Note**
	Name	Index number		Created waste amounts						
1.	Used printer cartridges other than those indicated under 08 03 17	08 03 18	t	0,029		0,023	0,013	0,020	**0,085**	Cartridges
2.	Scraping and processing of ferrous metals	12 01 01	t	2,000		0.250			**2,250**	Metal processing scrapings
3.	Scraping and processing of ferrous metals	12 01 03	t	0,510					**0,510**	Ferrous metals processing scrapings
4.	Mineral non-chlorinated motor oils, gearbox and lubricating oils	13 02 05*	t		2,000	2,225	7,230	60,000	**71,455**	Motor oil
5.	Other motor oils, gearbox and lubrication oils	13 02 08*	t						**0,000**	Gearbox oil 13 02 08 * other motor oils, gearbox and lubricating oils
6.	Sludge from oil/water separator	13 05 02*	t						**0,000**	Oily water after floods
7.	Oily water from oil/water separators	13 05 07*	t			12,350			**12,350**	Oily water separator from oil/water
8.	Waste not otherwise specified	13 08 99*	t	0,200					**0,200**	Grease and oils containing impurities, filtration oil residue
9.	Packaging containing residues of substances or contaminated by hazardous substances	15 01 10*	t		0,550			5,000	**5,550**	Waste metal packaging used for oil and lubricants
10.	Absorbent and filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	15 02 02*	t	0,320	2,052	0,110	0,100	5,000	**7,582**	Oil and air filters. Oily wiping cloth
11.	Used tires	16 01 03	t	0,000	0,020			40,000	**40,020**	Tires, waste conveyor belting with steel cord, wipers, idler rubber rings
12.	Brake pads containing asbestos	16 01 11*	t	0,400		0,015			**0,415**	Waste from asbestos packing and brake pads
13.	Lead batteries	16 06 01*	t	0,097		0,480		10,000	**10,577**	Accumulators
14.	Ni-Cd batteries	16 06 02*	t						**0,000**	Ni-Cd batteries
15.	Copper, bronze, brass	17 04 01	t	0,194			2,000		**2,194**	Copper
16.	Aluminium	17 04 02	t					1,500	**1,500**	Aluminium from hydrodynamic couplings
17.	Iron and steel	17 04 05	t	25,000	15,700	7,060	19,000		**66,760**	Alloy steel (crawler platforms, crusher hammers, excavator teeth)
				50,000	1,200				**51,200**	Iron and steel with rubber coating
				10,000		15,940	12,650		**38,590**	Iron over 6 mm

				2,000	0,640	0,400	24,100		**27,140**	Iron and steel sheets up to 3 mm (switching cabinets, vulcanization containers)
				5,000	21,100				**26,100**	Iron and steel over 3 mm
18.	Cables other than those specified under 17 04 10	17 04 11	t	20,000			25,000		**45,000**	High voltage copper cables with insulation
				4,000					**4,000**	Low voltage copper cables with insulation
19.	Insulation materials containing asbestos	17 06 01*	t				12,500		**12,500**	Waste asbestos
20.	Plastics and rubber	19 12 04	t	50,060		16,340	0,300		**66,700**	Plastics and rubber. Conveyer belting, waste conveyer belting with steel cord, rubber idler rings
21.	Fluorescent tubes and other waste containing mercury	20 01 21*	t	0,008			0,282	0,020	**0,310**	Fluorescent tubes, mercury lamps and other mercury-containing waste
22.	Paints, inks, adhesives and resins containing hazardous substances	20 01 27*	t	0,350		3,675			**4,025**	Paint with an expired shelf life
23.	Discarded electrical and electronic equipment other than those indicated under 20 01 21 and 20 01 23 containing hazardous components	20 01 35*	t				3,200		**3,200**	Electrical and electronic equipment
24.	Discarded electrical and electronic equipment other than those indicated under y 20 01 21, 20 01 23 and 20 01 35	20 01 36	t	0,280					**0,280**	Waste electric motors
					0,356	0,050			**0,406**	El. tools and equipment
			t						**0,000**	Electronic waste-computer equipment
25.	Scrap metal contaminated with hazardous substances	17 04 09*	t	14,850					**14,850**	Oiled idler bearings
26.	Plastics	20 01 39	t							Plastics

B KOLUBARA MB BRANCH – PRERADA BRANCH AND KOLUBARA METAL BRANCH

B.1 PRERADA BRANCH

Kolubara MB – *Prerada* Branch performs the processing and valorisation of raw coal from open cast mines Field B/C and Field D. Obtained coal is supplied to power plants and sold at the market or to industrial consumers. Kolubara MB – *Prerada* Branch comprises the following units:

- **Operations Centre**
- **Dry separation –unit**
- **Coal valorisation – unit**
  - Wet separation
  - Drying and classification plant
  - Heating plant

  Maintenance
- **Railway transport –unit**
- **Coal and wastewater testing centre (accredited laboratory)**

All the above units were constructed based on the valid designs and they possess utilisation permits.

1.1 Overview and status of permits

There were no new permits in the Prerada Branch in 2016. Overview and status of permits is given in Table 13.

Table 13

KOLUBARA MB BRANCH – *PRERADA* BRANCH			
Overview and Status of Permits in 2016			
***PRERADA* BRANCH**	**Permits, licences and other necessary approvals obtained in 2015 Project name and status**	**Applications for new or extension of existing permits**	**Note**
Valorisation Unit RJ Toplana	Extension of the period for the Integrated Permit Request Update submission – Ministry of Environment letter № 353-01-02681/2013-05 dated 14.07.2016		120 days
Valorisation Unit RJ Toplana	Extension of the period for the Integrated Permit Request Update submission – Ministry of Environment letter № 353-01-02681/2013-05 од 05.12.2016		120 days

1.2 Monitoring and Environmental Impact

1.2.1 Air Quality Measurements

No air quality measurements and monitoring were performed inside the *Prerada* Branch impact zone in 2016. Air quality in the area covered by the Kolubara MB organisational units is monitored by a system financed and operated by the corresponding organisational units, as well as by the City of Belgrade automatic air quality monitoring network.

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

1.2.2 Air Emission Measurements

Vreoci Heating Plant (2x60MW) is a power facility generating superheated steam used by technological processes, for heating of industrial facilities and the town of Lazarevac. Flue gases are treated by an electrostatic precipitator and discharged into the air through an 80m high stack.

In the course of 2016 individual measurements of air pollutants were conducted by an accredited laboratory of the Occupational Safety Institute Novi Sad. The Monitoring Programme included measurements of flue gas conditions (temperature, pressure and humidity), flow rate, oxygen content, mass concentrations and emission factors for sulphur dioxide (SO_2), nitrogen oxides (NO_x–NO_2), carbon monoxide (CO), hydrogen chloride, hydrogen fluoride and dust.

Legal compliance was evaluated by comparing the measured emissions prescribed by the Regulation stipulating air pollutants emission limit values (OG RS № 71/2010 and 6/11) and the Large Combustion Plants Directive 2001/80/EC.

Table 14 provides an overview of the results of individual air pollutants measurements for the Vreoci Heating Plant conducted in 2016.

Table 14

KOLUBARA MB BRANCH – PRERADA BRANCH					
Individual measurements of air pollutants emission for 2016					
Mass concentrations of pollutants (mg/Nm^3)					
Heat output MWth120 (2 x 60MW)					
Organisational unit	**Vreoci Heating Plant**			**ELV**	
Boiler	**2**	**1**		**ELV**	**ELV[2]**
Date	27.04.2016.	23.11.2016.	23.11.2016..		
SO_2	880,6	738,23	1343,97	1.920	1920
NO_x (NO_2)	204,2	348,09	320,95	600	600
CO	184,3	235,2	99,86	250	-
Dust	40,9	164,81	90,47	100	100
Hydrogen chloride, HCl	3,96	5,89	1,84		
Hydrogen fluoride, HF	2,54	2,11	0,21		

[2]Large Combustion Plants Directive 2001/80/EC

Compliance with legal regulations given in table 15.

Table 15

KOLUBARA MB BRANCH – PRERADA BRANCH				
Harmful substances		Legal compliance in 2016		
		Dust	SO_2	NO_x (NO_2)
		mg/Nm^3		
ELV	Republic of Serbia	100	1.920	600
	European Union	100	1.920	600
Vreoci Heating Plant	Boiler 1	All measured values below ELV except for second measuring on boiler 1	All measured values below ELV	All measured values below ELV
	Boiler 2	All measured values below ELV	All measured values below ELV	All measured values below ELV

Legal compliance was evaluated by comparing the measured air pollutants emission values and emissions limit values, ELV, defined by the Regulation stipulating the air pollutants emission limit values (OG RS № 71/10 and 6/11) and the Large Combustion Plants Directive 2001/80/EC.

Table 16 provides an overview of air pollutants emissions: dust, SO_2, NO_2 and CO_2 for the *Prerada* Branch in 2016. Annual SO_2 and NO_2 emissions were calculated using the measured mass concentrations, flue gas flow rate and unit operating hours, while CO_2 emissions were determined based on fuel consumption data (given in table 16a) and ECF - emission correction factor.

Table 16

KOLUBARA MB BRANCH – *PRERADA* BRANCH				
Individual measurements of air pollutants emission for 2016				
Organisational unit	Vreoci Heating Plant			
	t/year			
	Dust	SO_2	NO_x (NO_2)	CO_2
Boiler 1	54,05	260,23	129,70	
Boiler 2	18,74	409,12	98,73	
TOTAL: KOLUBARA MB BRANCH – *PRERADA* BRANCH	**72,79**	**669,35**	**228,43**	**161.264,43**

Table 16a

KOLUBARA MB BRANCH – *PRERADA* BRANCH		
Fuel consumption in 2016		
Organisational unit	Vreoci Heating Plant	
	t/year	
	Coal	Heavy fuel oil
Boiler 1	196.968	177,5
Boiler 2		
TOTAL: KOLUBARA MB BRANCH – *PRERADA* BRANCH	**196,968**	**177,5**

1.2.3 Water Emission Measurements

Process water used in the technological process and coal valorisation (wet separation, drying plant, heating plant) is captured from the Kolubara River reservoir. The largest process water amounts are used by the *Prerada* Branch to generate superheated steam, ash and slag transport and wet coal separation. *Prerada* Branch also operates the Vreoci waterworks supplying potable water to industrial facilities and the Vreoci village.

Wastewater is generated by lignite processing and valorisation (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, mixing tank, *Emser* filters, secondary sedimentation tanks, lagoons and purified water collectors. The treated water from the wastewater

treatment plant is discharged through the gauge station into a channel and transported to the Kolubara River via a 7km long channel.

The Monitoring Programme covers the following types of water:

- Kolubara River water upstream of the wastewater discharge,
- Wastewater entering the treatment system,
- Wastewater leaving the treatment system,
- Kolubara River water downstream of the wastewater discharge.

Testing included 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, colour, pH, sulphates, conductivity, ammonia, total nitrogen, chloride, $KMnO_4$ demand, COD, BOD_5, iron, manganese, and filtered water vaporisation residue, unfiltered water vaporisation residue, suspended solids, particulate matter, phosphates, phenol, arsenic, mineral oil, and microbiological analysis of water.

Quality control of groundwater was performed in 7 piezometers (around 6 plants and 1 in the vicinity of the Kolubara River).

During 2016 testing was carried out by the authorized and accredited laboratory of the Occupational Safety Institute Novi Sad. Reports presenting the quality control of the wastewater, treated water, Kolubara River water and groundwater within the *Prerada* Branch impact zone are submitted to: the Ministry of Agriculture and Environmental Protection, Public Water Management Company Beogradvode, City Administration-Department for Utilities and Housing Services- Water Division and PE Electric Power Industry of Serbia, Secretariat (City of Belgrade Environmental Division for environmental protection for TPPs and CHPs).

Quality control of groundwater was performed in 7 piezometers (around 6 plants and 1 in the vicinity of the Kolubara River).

Table 17 shows the groundwater quality data analysis in the vicinity of the wastewater treatment plant. Evaluation of legal compliance was done by comparing the hazardous and harmful substances concentrations values measured in piezometers with remediation values of hazardous and harmful substances concentration and values indicating considerable groundwater contamination.

Prerada Branch groundwater quality is given in table 17.

Table 17

KOLUBARA MB BRANCH – *PRERADA* BRANCH		
Groundwater quality in 2016		
Concentration	**PB[1]**	***Prerada* Branch**
Arsenic (µg/l)	0,06	All measured values were below remediation value (<0.003-0.0099)
Phenols (µg/l)	2	All measured values were below remediation value (<0.001)
Mineral oils (mg/l)	0,6	All measured values were below remediation value (<0.01)

RV[1] - remediation values of concentrations of hazardous and harmful substances and values potentially indicating significant groundwater contamination under the Regulation establishing a program of systematic soil quality monitoring, indicators for assessing the risk of soil degradation and remediation programs development methodology (OG RS № 88/2010).

Table 18 provides wastewater quality data analysis at the treatment plant inlet and outlet in 2016.

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

Table 18

KOLUBARA MB BRANCH – *PRERADA* BRANCH		
Wastewater treatment plant operating results in 2016		
Parameter	**Concentration (mg/l)**	
Pollutant	**Plant inlet**	**Plant outlet**
Suspended solids	1520 - 16000	175 – 250
Organic substances COD	1196 - 10775	104,81-507,51
Phenols	2,941 – 8,305	0,04 – 0,42
Arsenic	0,0433 – 0,345	0,0145 - 0,399

1.2.4 Soil Emission Measurements

Throughout 2016 no physical-chemical soil testing at the *Prerada* Branch site was carried out, considering that the analysed soil samples for 2011 and 2012 did not exhibit values requiring remediation measures in accordance with the Regulation establishing a program of systematic soil quality monitoring, indicators for assessing the risk of soil degradation and remediation programs development methodology (OG RS № 88/10).

1.2.5 Environmental Noise Measurements

Noise level measurements and the *Prerada* Branch living environment noise impact assessment in 2016 were carried out by the accredited laboratory of the Mining Institute, Belgrade.
Noise level measurements were conducted on two points:

Measuring point 1 is located on the west side of the complex, in the Heating Plant direction some 200m away from the facility, 50m away from the railway line within an open area not containing any facilities and reflective surfaces in the vicinity.

Measuring point 2 is located on the east side of the complex, in the Heating Plant direction some 200m away from the facility, 50m away from the railway line within an open area not containing any facilities and reflective surfaces in the vicinity.

Table 19 shows the 2016 noise levels for the *Prerada* Branch.

Measured noise levels were evaluated on the basis of the noise indicators limit values for open areas and applicable noise levels (additional noise indicators) prescribed by the Regulation stipulating noise indicators, limit values and noise indicators, disturbance and harmful noise effects assessment methods in living environment (OG RS 75/10).

Table 19

KOLUBARA MB BRANCH - *PRERADA* BRANCH				
Noise levels in 2016 (dB)				
Noise indicators limit values ***Decree stipulating noise indicators, limit values and noise indicators, disturbance and harmful noise effects assessment methods in living environment*** **OG RS 75/10**	***Closed areas**		**Day and evening**	**Night**
			35	30
	Open areas	**Tourist areas, camps and school zones**	50	45
		Purely residential areas	55	45
		Purely residential areas, trading-residential areas and children's playgrounds	60	50
		City centre, trading, crafts, administrative zones containing flats, zone along motorways, state and city roads	65	55
		Industrial, storage and service areas and transport routes without residential buildings	**Noise at the boundary of this zone may not exceed the noise limit values of the other zone**	
Prerada Branch	Measuring point 1		Measuring point 2	
15.09. and 16.09.2016				

Reference measurement time interval (h)	*$L_{Aeq,30min.}$	**$L_{RAeq,30min.}$)	*$L_{Aeq,30min.}$	**$L_{RAeq,30min}$)
12 Day and evening 06 – 18hrs	61	61	50	53
	58	67	55	53
4 Day and evening 18 – 22hrs	62	68	58	57

*Noise level $L_{Aeq, 30min}$ dB(A) day and evening
**Applicable noise level $L_{RAeq, 30min}$ dB(A)

The local self-government of the City Municipality Lazarevac did not acoustically zone the area in accordance with the Environmental Noise Protection Act, OG RS № 36/09 and 88/10. Due to the lack of clearly limited acoustic zones, measuring points cannot be identified accurately, nor the limit values on these measuring points. As a result, no legal compliance of the Kolubara MB – *Prerada* Branch may be provided.

1.2.6 Waste

Waste amounts generated in 2016 in *Prerada* Branch are provided in Table 20 according to Serbian waste management legislation.

Table 20

KOLUBARA MB BRANCH – *PRERADA* BRANCH					
Generated types of waste in 2016					
Official nomenclature of the Rules defining waste categories, its testing and classification OG RS № 56/10 dated 10.08.2010					
№	**Name**	**Index number**	**Unit**	**Waste amount**	**Note**
1.	Waste paint and varnish containing organic solvents or other dangerous substances- Paints and solvents	08 01 11*	t	0,000	Paints, solvents and varnishes
2.	Used printer cartridges other than the one indicated under 08 03 17	08 03 18	t	0,100	Cartridges
3.	Boiler ash, slug and dust (except boiler dust indicated under 10 01 04)	10 01 01	t	0,000	Ash and slag
4.	Chips from ferrous metals processing	12 01 01	t	0,200	Chips from metals processing
5.	Wastes not otherwise specified	12 01 99	t	0,000	Varvin- welding mixture
6.	Other hydraulic oils	13 01 13*	t	1,000	Hydraulic oil
7.	Non-chlorinated mineral engine oils, gearbox oils and lubricating oils	13 02 05*	t	3,400	Motor oil
8.	Other insulation oils	13 03 10*	t	0,600	Transformer oils
9.	Packaging containing residues of substances or contaminated by hazardous substances	15 01 10*	t	0,000	Metal packaging waste from the used oils and lubricants
10.	Absorbent and filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	15 02 02*	t	0,140	Oil and air filters, oily cotton wiping cloth
11.	Used vehicles, containing neither liquids nor other hazardous components	16 01 06	t	0,000	Used vehicles
12.	Lead batteries	16 06 01*	t	5,700	Accumulators
13.	Nickel-cadmium batteries	16 06 02*	t	0,000	Ni-Cd batteries
14.	Copper, bronze, brass	17 04 01	t	1,170	Copper line
15.	Iron and steel	17 04 05	t	141,310	Iron over 6 mm

16.	Aluminium	17 04 02	t	0,280	Waste aluminium sheets
17.	Insulation materials other than those indicated under 170601 and 170603 - Glass wool	17 06 04	t	4,040	Mineral wool
18.	Plastics and rubber	19 12 04	t	6,500	Conveyer belting
19.	Fluorescent tubes and other mercury-containing waste	20 01 21*	t	0,173	Fluorescent tubes and other mercury-containing waste
20.	Plastics	20 01 39	t	6,900	KOTERM panels
21.	Discarded electrical and electronic equipment other than the one indicated under 20 01 21, 20 01 23 and 20 01 35	20 01 36	t	3,400	Sodium lamps

B.2. *KOLUBARA-METAL* BRANCH

Within *Kolubara MB* Branch – *Kolubara-Metal* Branch performs designing, production, assembly and maintenance of mining, energy and processing equipment.

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

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

All the above units were constructed based on the valid designs and they possess utilisation permits.

1.1. Overview and status of permits

There were no new permits for *Kolubara-Metal* Branch in 2016. Overview and status of inspections and decisions is given in the Table 21.

Table 21

***KOLUBARA MB* BRANCH – *KOLUBARA-METAL* BRANCH**		
Overview and status of permits in 2016		
No.	Mark	**Name**
1.	535-03-1459/2014-18 24.02.2016	**Minutes** on inspection **Overview subject** -Decision 353-03-1459/2014-18 execution control

1.2 Monitoring and Environmental Impact

1.2.1. Air Emission Measurements

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

In 2016, according to the Contract no. 02-2210/2 dated 04.05.2016 for provision of the service "Air Quality Analysis", individual air emission measurements were performed by accredited laboratory *Occupational Safety Institute, Novi Sad* (Table 22.). The Monitoring Programme included measurements of flue gas conditions (temperature, pressure and humidity), flow rate, mass concentrations and emission factors for sulphur dioxide (SO2), nitrogen oxides (NOx–NO2), carbon monoxide (CO), and dust.

Measured emission values were compared to emission limit values prescribed by Regulation. Emission measurement results are given in tables 22 and 23, per metering points.

Table 22

***KOLUBARA MB* BRANCH – *KOLUBARA-METAL* BRANCH**						
Air emission measurements in 2016						
Pollutant	**GOSTOL line (E_M) (mg/Nm³)**	**Steel structures-left outlet hall (E_M) (mg/Nm³)**	**Steel structures-right outlet hall (E_M) (mg/Nm³)**	**ELV (mg/Nm³)**	**For mass flow (g/h)**	**Result**
Nitrogen oxides NO_2	2.05	2.05	2.05	350	≥1800	Compliant with legal regulations*
Sulphur oxides SO_2	2.86	2.86	2.86	350	≥1800	Compliant with legal regulations*
Dust	4.1	1.0	0.8	150	≥200	Compliant with legal regulations*

E_M- the highest value of emission measurement results reduced by the value of the measurement uncertainty

Table 23

***KOLUBARA MB* BRANCH – *KOLUBARA-METAL* BRANCH**				
Air emission measurements in 2016				
Pollutant	**Assembly unit coal boiler (E_M) (mg/Nm³)**	**ЕЛМОНТ unit coal boiler (E_M) (mg/Nm³)**	**ELV (mg/Nm³)**	**Result**
CO	3258.5	514.10	300	Not compliant legal regulations*
Nitrogen oxides NO_2	236.38	181.89	650	Compliant with legal regulations*
SO_2	980.98	1190.7	1700	Compliant with legal regulations*
Dust	/	29.5	150	Compliant with legal regulations*

*Legal regulations: Regulation prescribing air emission measurements from stationary sources of pollution (Official Gazette of RS no. 5/2016), Regulation prescribingemission limit values for air emissions from stationary sources of pollution, except for combustion plants (Official Gazette of RS no.111/2015)- ANNEX, GENERAL EMISSION LIMIT VALUES, Emission limit values for total dust and Emission limit values for non-organic gaseous substances;

Analysis results show there is no excess emission according to the Regulation.

1.2.2. Water Emission Measurements

Treated water from 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 collectors of atmospheric wastewaters and is transported from *Kolubara-Metal* Branch with rain sewage into PUTOKS facility and then through the canal into Kolubara River.

According to the Law on Waters, wastewater and treated water, Kolubara River water and ground water quality control is regularly being conducted by the authorized and accredited laboratory four times a year.

In 2016, in accordance with the Contract no. 04.02-1454/21-2016 dated 14.01.2016, testing was conducted by the authorized and accredited laboratory of *Occupational Safety Institute, Novi Sad*. Four series of wastewater and treated water quality testing were performed. Testing included 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, colour, pH, sulphates, conductivity, ammonia, total nitrogen, chloride, $KMnO_4$ demand, COD, BOD_5, iron, manganese, filtered water vaporisation residue, unfiltered water vaporisation residue, suspended solids, particulate matter,

phosphates, phenol, arsenic, mineral oil, and microbiological analysis of water. Results of physical-chemical testing of wastewater for 2016 are given in the following tables: 23a, 23b, 23v и 23g.

Table 23a – Q1

***KOLUBARA MB* BRANCH – *KOLUBARA-METAL* BRANCH**						
Wastewater physical-chemical testing in 2016						
Tested parameter	**Measured value**					**Reference value***
	V031/8	**V031/9**	**V031/10**	**V031/11**	**V031/12**	
Water temperature (˚C)	10.0	9.8	9.7	10.4	10.5	30
Turbidity (NTU)	47	113	292	51	37	-
Conductivity (µS/cm)	602	498	491	490	495	-
Total phosphorus (mg/l)	0.07	0.105	0.161	0.310	0.272	-
Fe (mg/l)	0.562	20.15	9.00	17.20	0.541	-
Mn (mg/l)	0.004	0.110	0.043	0.04	0.035	-
As (mg/l)	0.0002	0.0054	0.0023	0.0003	0.0002	-
Mineral oil (TPH) (mg/l)	2.627	0.882	0.01	771.05	0.229	10
Total number of fecal coliform bacteria (cfu/100ml)	MPN 120 LL 30 UL 480	240 90 640	250 90 660	320 130 770	250 90 660	-

Measurement points:

V031/8 – Washing point in Overhaul Unit (used mining equipment parts washing), INLET
V031/9 – Washing point in Overhaul Unit (cars and buckets), INLET
V031/10 – Washing point in Overhaul Unit (cars and buckets), OUTLET
V031/11 – Washing point in Production Unit (spare parts washing), INLET
V031/12 – Washing point in Production Unit (spare parts washing), OUTLET

Table 23b – Q2

***KOLUBARA MB* BRANCH – *KOLUBARA-METAL* BRANCH**							
Wastewater physical-chemical testing in 2016							
Tested parameter	**Measured value**						**Reference value***
	I	**II**	**III**	**IV**	**V**	**VI**	
Water temperature (˚C)	12.0	14.8	15.0	15.7	14.9	15.3	30
Turbidity (NTU)	269	71	72.4	36	58.6	8.0	-
Conductivity (µS/cm)	376	433	1.1	579	3.9	513	-
Total phosphorus (mg/l)	1.08	0.100	0.064	0.455	0.030	0.085	-
Fe (mg/l)	0.495	0.568	0.114	2.762	0.456	0.141	-
Mn (mg/l)	0.084	0.019	0.01	0.454	0.504	0.096	-
As (mg/l)	0.002	0.0002	0.0002	0.0002	0.0002	0.0006	-
Mineral oil (TPH) (mg/l)	0.372	0.01	0.01	0.882	3.302	0.513	10
Total number of fecal coliform bacteria (cfu/100ml)	$8.1x10^3$	$1.1x10^4$	$6.4x10^3$	$1.1x10^6$	$5.4x10^4$	25	-

Table 23v – Q3

***KOLUBARA MB* BRANCH – *KOLUBARA-METAL* BRANCH**							
Wastewater physical-chemical testing in 2016							
Tested parameter	**Measured value at measurement point**						**Reference value***
	I	**II**	**III**	**IV**	**V**	**VI**	
Water temperature (˚C)	21.6	20.0	21.4	22.0	24.0	21.0	30
Turbidity (NTU)	41	53	35	44	18	12.2	-
Conductivity (µS/cm)	419	314	598	575	214	450	-
Total phosphorus (mg/l)	0.016	0.004	0.030	0.047	0.012	0.004	-
Fe (mg/l)	0.932	0.716	0.319	2.641	0.770	0.331	-
Mn (mg/l)	0.055	0.086	0.059	0.132	0.432	0.024	-

As (mg/l)	0.009	0.0008	0.004	0.005	0.006	0.001	-
Mineral oil (TPH) (mg/l)	5.249	0.036	0.01	8.587	0.316	0.076	10
Total number of fecal coliform bacteria (cfu/100ml)	$3.6x10^4$	$1.5x10^4$	$2.1x10^5$	$1.5x10^5$	$1.4x10^5$	$1x10^4$	-

Table 23g – Q4

***KOLUBARA MB* BRANCH – *KOLUBARA-METAL* BRANCH**							
Wastewater physical-chemical testing in 2016							
Tested parameter	**Measured value at measurement point**						**Reference value***
	I	**II**	**III**	**IV**	**V**	**VI**	
Water temperature (˚C)	9.0	8.0	17.0	6.1	16.4	7.2	30
Turbidity (NTU)	48	20	46	35	381	470	-
Conductivity (µS/cm)	492	378	336	551	506	667	-
Total phosphorus (mg/l)	0.046	0.005	0.033	0.033	0.005	0.052	-
Fe (mg/l)	2.986	0.174	2.985	1.689	3.29	6.299	-
Mn (mg/l)	0.189	0.069	0.812	0.260	0.558	0.783	-
As (mg/l)	0.002	0.0002	0.0043	0.0002	0.080	0.039	-
Mineral oil (TPH) (mg/l)	109.54	0.608	1.700	1250.5	0.01	0.267	10
Total number of fecal coliform bacteria (cfu/100ml)	$1.8x10^4$	$8.9x10^2$	$3.1x10^4$	$6.3x10^4$	$6.3x10^4$	$8x10^3$	-

*Reference value: Regulation prescribing water emission limit values and deadlines for their reaching (Official Gazette of RS, no.67/2011, 48//2012 and 1/2016). Emission limit values for wastewater containing mineral oil, Table 4.1. Emission limit values at surface water discharge point

Measuring points I,II,IV and VI represent outlets from the separator within Production and Regeneration Unit, Overhaul Unit and ELMONT Unit in Lajkovac, and III and V are outlets of rain sewage from Production and Regeneration Unit and Overhaul Unit.

Based on these results it is concluded that treated wastewater at the separator outlet is of satisfactory quality, in terms of reaching values prescribed in the Regulation and that separators are working properly. Also, the concentration of suspended solids, organic matter (COD), iron, phenol and arsenic in wastewaters at the separator outlet is being significantly reduced. For the separator next to washing point in Production Unit (spare parts washing)-sample V305/12 tested parameter mineral oil (TPH) does not meet values prescribed by the Regulation prescribing water emission limit values and deadlines for their reaching (Official Gazette of RS, no.67/2011, 48//2012 and 1/2016). Emission limit values for wastewater containing mineral oil, Table 4.1. Emission limit values at surface water discharge point.

1.2.3 Waste

Waste amounts generated in 2016 in *Kolubara Metal* Branch are provided in Table 24 according to Serbian waste management legislation.

***KOLUBARA MB* BRANCH – *KOLUBARA-METAL* BRANCH** Table 24

Generated types of waste in 2016

Official nomenclature of the Rules defining waste categories, its testing and classification OG RS № 56/10

No.	Name	Index number	Unit	Waste amount	**Note**
1	Used printer cartridges other than the one indicated under 08 03 17	08 03 18	t	0,200	Cartridgers
2	Chips from ferrous metals processing	12 01 01	t	850,000	Chips from metals processing
				150,000	Steel pieces
3	Chips from ferrous metals processing	12 01 03	t	23,000	Chips from ferrous metals processing (copper, bronze, aluminium)
4	Mineral machining oils free of halogens	12 01 07	t	19,000	Mineral machining oils free of halogens
5	Oily water from oil/water separator	13 05 07*	t	40,000	Oily water from oil/water separator
6	Packaging containing residues of substances or contaminated by hazardous substances	15 01 10*	t	1,000	Metal packaging waste from the used oils and lubricants
7	Absorbent and filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	15 02 02*	t	5,000	Oil and air filters, oily cotton wiping cloth
8	Used tires	16 01 03	t	60,000	Tyres, waste conveyor belting with steel cord, wipers, idler rubber rings
9	Used vehicles not containing liquid or other hazardous components	16 01 06	t	100,000	Used vehicles
10	Ferrous metals	16 01 18	t	13,000	Waste enamelled wire and copper wire
11	Ni-Cd batteries	16 06 02*	t	0,400	Ni-Cd batteries
12	Iron and steel	17 04 05	t	450,000	Iron and steel over 3 mm
				17,000	Iron and steel with rubber coating
				5,000	Iron and steel up to 3 mm, sheets (switching cubicles, vulcanization container)
13	Scrap metal contaminated with hazardous substances	17 04 09*	t	5,000	Oily idler bearings
14	Paper and cardboard	20 01 01	t	3,000	Paper and cardboard
15	Fluorescent tubes and other mercury-containing waste	20 01 21*	t	0,500	Fluorescent tubes, mercury light bulbs and other mercury-containing waste
16	Discarded electrical and electronic equipment other than the one indicated under 20 01 21; 20 01 23 and 20 01 35	20 01 36	t	2,000	Electronic waste – computer equipment
				0,100	Electrical tools and equipment

17	Plastics	20 01 39	t	0,500	Plastics, KOTERM panels
18	Metals	20 01 40	t	5,000	Packaging drums

The cumulative amount of waste for the Kolubara MB (*Open Cast Mines Barosevac* Branch, *Prerada* Branch and *Kolubara-Metal* Branch) generated in 2016 is shown in Table 25 in line with the Serbian waste management legislation.

Table 25

***KOLUBARA MB* BRANCH - *OPEN CAST MINES BAROSEVAC* BRANCH, *PRERADA* BRANCH AND *KOLUBARA-METAL* BRANCH**													
	Official nomenclature of the Rules defining waste categories, its testing and classification **OG RS № 56/10**		**Unit**	**Waste in 2016**									
				Open Cast Mines Barosevac,						**Total; Prerada**	**Total: Kolubara Metal**	**Total: Kolubara MB**	**Note**
				Field D	**Field B**	**Tamnava West Field**	**Tamnava East Field**	**Auxiliary mechaniz.,**	**Total: OCM**				
	Name	Index number		Generated waste amount									
1	Waste paint and varnish containing organic solvents or other dangerous substances-Paints and solvents	08 01 11*	t							0,000		**0,000**	Paints, solvents and varnishes
2	Used printer cartridges other than the one indicated under 08 03 17	08 03 18	t	0,029		0,023	0,013	0,020	**0,085**	0,100	0,200	**0,385**	Cartridges
3	Boiler ash, slag and dust (except boiler dust indicated under 10 01 04)	10 01 01	t									**0,000**	Ash and slag
4	Chips from ferrous metals processing	12 01 01	t	2,000		0,250			**2,250**	0,200	850,000	**852,450**	Chips from metals processing
											150,000	**150,000**	Steel pieces
5	Chips from ferrous metals processing	12 01 03	t	0,510					**0,510**		23,000	**24,020**	Chips from ferrous metals processing (copper, bronze, aluminium)

6	Mineral machining oils free of halogens	12 01 07	t								19,000	**19,000**	Mineral machining oils free of halogens
7	Wastes not otherwise specified	12 01 99	t						**0,000**			**0,000**	Varvin – welding mixure
8	Other hydraulic oils	13 01 13*	t							1,000		**1,000**	Hydraulic oil
9	Non-chlorinated mineral engine oils, gearbox oils and lubricating oils	13 02 05*	t		2,000	2,225	7,230	60,000	**71,455**	3,400		**74,855**	Motor oil
10	Silt from oil/water separator	13 05 02*	t						**0,000**			**0,000**	Oily water after flood
11	Other engine oils, gearbox oils and lubricating oils	13 02 08	t						**0,000**			**0,000**	Gearbox oil 13 02 08* other engine oils, gearbox oils and lubricating oils
12	Other insulation oils and heat transmission	13 03 10*	t							0,600		**0,600**	Transformer oils
13	Oily water from oil/water separator	13 05 07*	t			12,350			**12,350**		**40,000**	**52,350**	Oily water from oil/water separator
14	Wastes not otherwise specified	13 08 99*	t	0,200					**0,200**			**0,200**	Fats and oils with impurities, residue from oil filtration
15	Packaging containing residues of substances or contaminated by hazardous substances	15 01 10*	t		0,550			5,000	**5,550**		**1,000**	**6,550**	Metal packaging waste from the used oils and lubricants
16	Absorbent and filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	15 02 02*	t	0,320	2,052	0,110	0,100	5,000	**7,582**	0,140	**5,000**	**12,722**	Oil and air filters, oily cotton wiping cloth
17	Used tires	16 01 03	t		0,020			40,000	**4,020**		60,000	**100,020**	Tyres, waste conveyor belting with steel cord, wipers, idler rubber rings

18	Used vehicles not containing liquid or other hazardous components	16 01 06	t						**0,000**		100,000	**100,00**	Used vehicles
19	Brake pads containing asbestos	16 01 11*	t	0,400		0,015			**0,415**			**0,415**	Waste from asbestos brake linings and packings
20	Ferrous metals	16 01 18	t				2,000		**2,000**		13,000	**15,000**	Waste enamelled wire and copper wire
21	Lead batteries	16 06 01*	t	0,097		0,480		10,000	**10,577**	5,700		**16,277**	Accumulators
22	Ni-Cd batteries	16 06 02	t						**0,000**		0,400	**0,400**	Ni-Cd batteries
23	Copper, bronze, brass	17 04 01	t	0,194			2,000		**2,194**	1,170		**3,364**	Copper line
24	Aluminum and its alloys	17 04 02	t					1,500	**1,500**	0,280		**1,780**	Scrap aluminum sheet
25	Iron and steel	17 04 05	t	25,000	15,700	7,060	19,000		**66,760**			**66,760**	Alloy steel (crawler platforms, crusher hammers, excavator teeth)
				10,000		15,940	12,650		**38,590**	141,310		**141,310**	Iron over 6 mm
				5,000	21,100				**26,100**		450,000	**476,100**	Iron and steel over 3 mm
				50,000	1,200				**51,200**		17,000	**68,200**	Iron and steel with rubber coating
				2,000	0,640	0,400	24,100		**27,140**		5,000	**32,140**	Iron and steel sheets up to 3 mm (switching cabinets, vulcanization containers)
26	Scrap metal contaminated with hazardous substances	17 04 09*	t	14,850					**14,850**		5,000	**19,850**	Oily idler bearings
27	Cables other than those indicated in 17 04 10	17 04 11	t	20,000			25,000		**45,000**			**45,000**	High voltage copper cables with insulation
				4,000					**4,000**			**4,000**	Low voltage copper cables with insulation
28	Insulating materials containing asbestos	17 06 01*	t				12,500		**12,500**			**12,500**	Waste asbestos

29	Insulation materials other than those indicated under 170601 and 170603	17 06 04	t							4,040		**4,040**	Mineral wool
30	Plastics and rubber	19 12 04	t	50,060		16,340	0,300		**66,700**	6,500		**73,200**	Plastics and rubber, conveyer belting with steel cord, wipers, rubber idler rings
31	Paper and cardboard	20 01 01	t								3,000	**3,000**	Paper and cardboard
32	Fluorescent tubes and other mercury-containing waste	20 01 21*	t	0,008			0,282	0,020	**0,310**	0,173	0,500	**0,983**	Fluorescent tubes, mercury light bulbs and other mercury-containing waste
33	Paints, inks, adhesives and resins containing hazardous substances	20 01 27*	t	0,350		3,675			**4,025**			**4,025**	Paint with an expired shelf life
34	Discarded electrical and electronic equipment other than those indicated under 20 01 21 and 20 01 23 containing hazardous components	20 01 35*	t				3,200		**3,200**	**0,130**		**3,330**	Electrical and electronic equipment
35	Discarded electrical and electronic equipment other than those indicated under y 20 01 21, 20 01 23 and 20 01 35	20 01 36	t	0,280					**0,280**	**3,400**		**3,680**	Waste electric motors
										0,000		**0,000**	Sodium bulbs
											2,000	**2,000**	Electronic waste-computer equipment
					0,356	0,050			**0,406**		**0,100**	**0,506**	El. tools and equipment
36	Plastics	20 01 39	t							6,900	**0,500**	**7,400**	Plastics, KOTERM panels
37	Metals	20 01 40	t								**5,000**	**5,000**	Packaging drums

Table 26 shows overview of Waste Sale Contracts execution with the income Kolubara MB Branch realized for the period 01.01.-31.12.2016.

Table 26

***MB KOLUBARA* BRANCH**				
Waste sale overview for 2016				
No.	**Contract name and number**	**Operater**	**Taken amounts (kg)**	**Income, VAT excluded (RSD)**
1.	The sale contract for industrial waste *Paper and Cardboard* and *PET packaging and other types of waste plastics*	*Kolubara Usluge d.o.o.*, 8 Kolubarski trg, 11550 Lazarevac,	80,00	1.240,00
2.	Sale contract for goods (oils and lubes) no.2-01-4-3400 dated 1.12.2011, Kolubara MB	FABRIKA MAZIVA – FAM, 42 Jug Bogdanova, 37000 Kru[evac	43.680,00	0,00
3.	The sale contract for industrial waste (Waste construction machinery, (iron and steel) and parts) no.04.02.11198 / 892-15 dated 30.10.2015 and no.1521 dated 03.11.2015.	*METALPROM d.o.o.*, 14000 Valjevo, Živana Kutišanca b.b.	1.129.360,00	16.892.276,80
4.	Service contract – *Disposal of Transformers and Capacitors Containing PCB* no.12.01.1074/63-15 dated 30.10.2015 and no.2-376 dated 03.11.2015	*MITECO-KNEŽEVAC d.o.o.*, Beograd, 39 Oslobođenja.	30.690,00	0,00
5.	Service Contract – DISPOSAL OF WASTE OIL MIXED WITH WATER, CONTAINING OVER 5% OF WATER, Employer's contract no.E.04.04-1454/202-2016 dated 26.04.2016 and Service Provider's Contract no.263/16 dated 09.05.2016, which PE Electric Power Industry of Serbia, Kolubara MB Branch, Lazarevac, concluded with the operater *EKO 21 d.o.o.* Dobrica, 73 Vuka Karadžića.	*EKO 21 d.o.o.*Dobrica, 73 Vuka Karadžića.	33.770,00	0,00
6.	The sale contract for industrial waste Lot 8: *Paper and Cardboard* and *PET packaging*	Папир сервис ФХБ" д.о.о.11260 Умка, ул.13.октобар бр.1.	27.720,00	278.300,00
7.	The sale contract for industrial waste Lot 2: *Oils and Lubes*, Seller's contract no.04.02-883/867-16 dated 06.06.2016, which PE Electric Power Industry of Serbia, Kolubara MB Branch, Lazarevac, concluded with the operater *Optima forma d.o.o*. 37000 Kruševac, 4a Slobodana Jovanovića,	*Optima forma d.o.o*. 37000 Kruševac, 4a Slobodana Jovanovića,	50.770,00	439.595,00

8.	The sale contract for industrial waste Lot 1: *Ferrous Metals and Cartridges* and Lot 13: *Oily Iron and Steel*, Employer's contract no. 04.02-883/1028-16 dated 20.06.2016 and Purchaser's contract no.UG00066 dated 27.06.2016, which PE Electric Power Industry of Serbia, Kolubara MB Branch, Lazarevac, concluded with the operater *JUGO-IMPEX d.o.o.*,18000 Niš,	*JUGO-IMPEX d.o.o.*,18000 Niš, Vazduhoplovca bb.	299.740,00	50.604.094,00
9.	The sale contract for industrial waste Lot 9: *Iron and Steel-Waste Vehicles, metal sheets up to 3mm*, Lot 11: *Iron and Steel Pieces and Other Iron(FEO)* and Lot 12: *Iron and Steel-Unclassified, Mixed Categories of Iron and Steel, Cutting Tool*, Seller's contract no.04.02-883/1030-16 dated 21.06.2016 and Purchaser's contract no.1369 dated 24.06.2016, which PE Electric Power Industry of Serbia, Kolubara MB Branch, Lazarevac, concluded with the operater *Inos-Napredak d.o.o.*15000 Mišar, Šabac, Savska bb.	*Inos-Napredak d.o.o.*15000 Mišar, Šabac, Savska bb.	958.660,00	23.351.056,00
10.	The sale contract for industrial waste: Lot 7- *Wooden Railway Sleepers*, with Seller no.04.02-883/870 -16 dated 06.06.2016, which PE Electric Power Industry of Serbia, Kolubara MB Branch, Lazarevac, concluded with the operater *Auto-inport d.o.o.*32300 Gornji Milanovac, 33 Karađorđeva	*Auto-inport d.o.o.*32300 Gornji Milanovac, 33 Karađorđeva	96.620,00	96.620,00
11.	The sale contract for industrial waste Lot 4: *Tyres and Rubber Rings*, Seller's contract no.04.02-883/1089-16 dated 01.07.2016 and Purchaser's contract no.294/16 dated 06.08.2016, which PE Electric Power Industry of Serbia, Kolubara MB Branch, Lazarevac, concluded with the operater *Hemigum d.o.o.* Gornji Milanovac, 2 Cara Dušana	*Hemigum d.o.o.* Gornji Milanovac, 2 Cara Dušana	165.320,00	506.222,00
12.	The sale contract for industrial waste Lot 10: *Iron and Steel-Excavator Teeth, Crusher Hammers, Crawler Platforms, Ferrous Metals Shavings*, Seller's contract no.04.02-883/1075-16 dated 05.07.2016 and Purchaser's contract no.987 dated 14.07.2016, which PE Electric Power Industry of Serbia, Kolubara MB Branch, Lazarevac, concluded with the operater *Metalprom d.o.o.* Valjevo, Živana Kutišanca bb.	*Metalprom d.o.o.* 14000 Valjevo, Živana Kutišanca bb.	410.860,00	6.739.956,00
13.	The sale contract for industrial waste Lot 14: *Electrical and Electronic Equipment and Fluorescent Tubes*, Seller's contract no.04.02-883/1078-16 dated 05.07.2016 and Purchaser's contract no.969 dated 11.07.2016, which PE Electric Power Industry of Serbia, Kolubara MB Branch, Lazarevac, concluded with the operater *Metalprom d.o.o.* Valjevo, Živana Kutišanca bb.	*Metalprom d.o.o.* 14000 Valjevo, Živana Kutišanca bb.	21.540,00	706.280,00
14.	The sale contract for industrial waste *Oily Metal Packaging*, Seller's contract no.04.02-883/1234-16 dated 05.08.2016 and Purchaser's contract no.409/16 dated 10.08.2016, which PE Electric Power	*EKO 21 d.o.o.*, 73 Vuka Karadžića, 26354 Dobrica.	24.340,00	255.570,00

	Industry of Serbia, Kolubara MB Branch, Lazarevac, concluded with the operater *EKO 21 d.o.o*., 73 Vuka Karadžića, 26354 Dobrica.			
15.	Sale contract for goods (motor oils) no.12-01-45301/2-16 dated 04.02.2016 and Seller's contract no.357 dated 08.02.2016, which PE Electric Power Industry of Serbia, Kolubara MB Branch, Lazarevac, concluded with *FABRIKA MAZIVA – FAM* 42 Jug Bogdanova, 37000 Kruševac, and Contract for disposal of waste packaging no.1636 dated 02.06.2016 which *FABRIKA MAZIVA – FAM* concluded with operater *Bonaro – metali d.o.o.* Šabac.	*FABRIKA MAZIVA – FAM* 42 Jug Bogdanova, 37000 Kruševac, and *Bonaro – metali d.o.o.* Šabac.	25.620,00	0,00
16.	The sale contract for industrial waste: Lot 5 - *Wooden Railway Sleepers*, with Seller no.04.02-1360/16 -47 dated 10.10.2016, which PE Electric Power Industry of Serbia, Kolubara MB Branch, Lazarevac, concluded with the operater *Auto-inport d.o.o.*32300 Gornji Milanovac, 33 Karađorđeva	*„Auto-inport d.o.o.*32300 Gornji Milanovac, 33 Karađorđeva	104.260,00	115.729,00
17.	The sale contract for industrial waste Lot 1: *Waste not Otherwise Classified, Iron and Steel*: *Partial Returned Construction Mechanization, Generators, Parts and Other Auxiliary Equipment*, no.04.02 - 883/1365-16 dated 10.10.2016 and no.1536 dated 24.10.2016, which PE Electric Power Industry of Serbia, Kolubara MB Branch, Lazarevac, concluded with the operater *Metalprom d.o.o*. 14000 Valjevo, Živana Kutišanca bb.	*Metalprom d.o.o*. 14000 Valjevo, Živana Kutišanca bb.	105.840,00	1.942.164,00
TOTAL: KOLUBARA MB BRANCH			**3.528.870,00**	**101.929.102,80**

Table 27 shows overview of Waste Disposal Contracts execution with *Kolubara MB* Branch cost realized during 01.01-31.12.2016

Table 27

***MB KOLUBARA* BRANCH**				
Waste disposal overview for 2016				
No.	**Contract name and number**	**Service Provider**	**Taken amounts (kg)**	**Cost, VAT excluded (RSD)**
1.	Service contract – *Maintenance of Grease, Oil, Silt and Lagoon Separators at Kolubara OCM*, no.2-01-4-3508 dated 24.12.2014, which Kolubara MB concluded with operater *EKO 21 d.o.o.*, 73 Vuka Karadžića, 26354 Dobrica.	*EKO 21 d.o.o.*, 73 Vuka Karadžića, 26354 Dobrica	126.892,00	165.420,00
2.	Service contract – *Oily Soil Remediation* no.04.02-1454/6-2016 dated 05.01.2016 and no.7/16 dated 19.01.2016	"BREM GROUP" д.о.о., Београд, ул.Ослобођења 39.Б	157.880,00	1.700.000,00
3.	Service contract - *Maintenance of Grease, Oil, Silt and Lagoon Separators at Kolubara OCM*, no.04-04-1454/1547/2016 dated 01.04.2016, which Kolubara MB concluded with operater *EKO 21 d.o.o.*, 73 Vuka Karadžića, 26354 Dobrica	*EKO 21 d.o.o.*, 73 Vuka Karadžića, 26354 Dobrica	33.700,00	435.633,00
4.	Service contract – *Cleaning Existing Washing Points and Disposal of the Silt from the Washing Point* 130802* and 130899* (hazardous waste), Employer's contract no.E.04.04-1454/87-16 dated 22.02.2016 and Service Provider's contract no.12/16 dated 09.03.2016, which PE Electric Power Industry of Serbia, Kolubara MB Branch, Lazarevac, concluded with the operater *Jackob Becker d.o.o.* Ruma, Industrujska bb and *Deconta d.o.o.*Beograd, 112 Generala Mihajla Nedeljkovića, Belgrade.	*Jackob Becker d.o.o.* Ruma, Industrujska bb	23.655,00	591.375,00
5.	Service contract – *Disposal of Waste Emulsion from Waste Coal*, Employer's contract no.E.04.04-1454/200-2016 dated 25.04.2016 and Service Provider's contract no.22/16 dated 06.03.2016	*Jackob Becker d.o.o.* Ruma, Industrujska bb	12.515,00	312.875,00
6.	Service contract - *Disposal of Waste Emulsion with Deposit*, Employer's contract no.E.04.04-1454/204-2016 dated 26.04.2016 and Service Provider's contract no.23/16 dated 06.05.2016	*Jackob Becker d.o.o.* Ruma, Industrujska bb	3.920,00	98.000,00
7.	Service contract – *Oily Wiping Cloth Disposal*, Employer's contract no.E.04.04-1454/198-2016 dated 25.04.2016 and Service Provider's contract no.UG 51/16 dated 10.05.2016	*Kemis d.o.o.* Valjevo, Bulevar palih boraca 91/92 no.5.	9.240,00	423.654,00

8.	Service contract – DISPOSAL OF WASTE OIL FILTERS AND WASTE FUEL FILTERS, Employer's contract no.E.04.04-1454/199-2016 dated 25.04.2016 and Service Provider's contract no.UG 50/16 dated 10.05.2016, which PE Electric Power Industry of Serbia, Kolubara MB Branch, Lazarevac, concluded with the operater *Kemis d.o.o*. Valjevo, Bulevar palih boraca 91/92 no.5.	*Kemis d.o.o*. Valjevo, Bulevar palih boraca 91/92 no.5.	10.980,00	503.433,00
TOTAL: KOLUBARA MB BRANCH			**378.782,00**	**4.230.390,00**

1.3 Working Environment Monitoring, Occupational Health and Safety

The 2016 Occupational Safety and Health Reports include the following elements:

- **Working environment monitoring**
  - working environment noise measurements
- **Safety**
  - training
  - work injuries
- **Health**

1.3.1 Working Environment Monitoring

- **Working Environment Noise Measurements**

Working environment noise levels measurement results are given in Table 28.

Table 28

KOLUBARA MB BRANCH			
Working environment noise in 2016			
Organisational unit	**Unit**	**Registered noise level (dB(A))**	**Permitted noise level (dB(A))**
Open Cast Mines	„Polje D“	On 48 points, higher than 85	85
	„Polje B“	On 19 points, higher than 85	85
	„Tamnava-Zapadno polje“	On 17 points, higher than 85	85
	„Veliki Crljeni“	On 27 points, higher than 85	85
	„Pomoćna mehanizacija“	On 18 points, higher than 85	85
Prerada	No measuring in 2016		
Metal	„Pogon Proizvodnja“	On 32 points, lower than 85	85
	„Sopstveno održavanje“	On 8 points, lower than 85	85
	„Pogon Remont“	On 26 points, lower than 85	85
	„Pogon Elmont“	On 8 points, lower than 85	85
HQ	Measurements planned for 2017		

1.3.2 Safety

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

- **Training**

Health and safety training is conducted when new employees are recruited, when existing employees are transferred to other positions, when new technologies and tools are introduced. Trainings 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 the course of 2016, 2,509 persons (newly recruited employees, those changing their workplace, contractors, students, and pupils engaged through temporary-occasional employment contract) underwent health and safety training in the Kolubara MB Branch.

Pursuant to Mining and Geological Investigations Act, Occupational Health and Safety Act, Fire Protection Act, Health and Safety Rules and Fire Protection Rules, the employer is obliged to carry out testing of employees in the field of health and safety and fire protection.

Training of employees is carried out according to the Health and Safety Training Programmes. Training and testing is carried out for employees working on both high-risk and low-risk workplaces.

All employees from Kolubara MB Branch as well as all the employees working in the Branch regardless of the type of contract (temporary contracts, as well as subcontractors conducting works for Kolubara MB) are tested to check their knowledge of Health and Safety Rules and Fire Protection Rules.

Testing covered 8,300 employees, of which 7,300, took the test, which makes 88% of employees.

- **Work injuries**

Table 29 shows the 2016 work injuries data.

Table 29

KOLUBARA MB BRANCH						
Work injuries in 2016						
Organisational unit	**Number of employees**	**Injuries compared to the number of employees**				
		Easy	**Heavy**	**Fatalities**	**Total**	**%**
Open Cast Mines	6.823	132	43	3	178	2,61
Prerada	1.657	7	5	0	12	0,72
Metal	2.163	45	10	0	55	2,54
Direkcija Projekt	1.773	15	1	0	16	0,90
TOTAL: KOLUBARA MB BRANCH	**12.416**	**199**	**59**	**3**	**261**	**2,10**

There were three fatalities in the Kolubara MB Branch during 2016.

On 11.01.2016 around 03.30 a.m. Nikola Gajić was fataly injured. He worked as a shift belt electrician. Employee was affected by electric shock while working on high voltage motor cell for driving station B-25 motor feeding.

On 11.08.2016 around 09.30 a.m. Zoran Krsmanović was fataly injured. He worked as an assistant worker. While working on pumping station, auxiliary machine counterweight (excavators) hit the employee causing a fatal injury.

On 26.08.2016 around 09.20 a.m. Radiša Ćirić was fataly injured. He worked as a clerk for spare parts in auxiliary machinery. Employee was driving the company car and had an accident on the highway at the turn for Sremcica, when he hit a truck and died.

1.3.3 Health

Medical examinations are performed by the Occupational Health Department of the Lazarevac Medical Centre. Periodic medical examinations are performed annually. Employees working in high-risk workplaces and those operating with screens are referred to examination.

Table 30 provides periodic examinations data for employees working in high-risk workplaces and those operating with screens in 2016.

Table 30

KOLUBARA MB BRANCH											
Work capability in 2016											
Organisational unit	**Number of employees**	**Periodical examinations**				**Work capability**					
		Referred to examination		**Examined**		**Capable**		**Limited capability**		**Not capable**	
		№	%	№	%	№	%	№	%	№	%
Open Cast Mines	**6.823***	6.941**	101,73	6.547	94,32	4.603	70,31	1.882	28,75	62	0,95
Prerada	**1.657**	1.410	85,09	1.261	89,43	410	32,51	832	65,98	19	1,51
Metal	**2.163**	1.756	81,18	1.710	97,38	1.385	80,99	319	18,65	6	0,35
Direkcija Projekt	**1.773**	814	45,91	791	97,17	476	60,18	315	39,82	0	0,00
TOTAL: KOLUBARA MB BRANCH	**12.416**	**10.921**	**87,96**	**10.309**	**94,40**	**6.874**	**66,68**	**3.348**	**32,48**	**87**	**0,84**

Note: * Number of employees as of 31.12.2016

** This number includes the retired employees and who because of retraining (after examination) had to be examined again (231 employee).

1.4 Public complaints

No public complaints in 2016.

2. KOSTOLAC TPPs & OCMs BRANCH - OPEN CAST MINES

Kostolac TPPs and OCMs Branch comprise four organisational units:

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

2.1 Overview and Status of Permits

Overview and status of permits, licences and other necessary approvals in 2016 is given in Table 31.

Table 31

KOSTOLAC TPPs & OCMs BRANCH – OPEN CAST MINES			
Overview and status of permits in 2016			
	Permits, licences and other necessary approvals obtained in 2016 (number and date) Project name and status	**Applications for new or extension of existing permits**	**Note**

2.2 Monitoring and Environmental Impact

2.2.1 Air Quality Measurements

Air quality measurements in the vicinity of mines and Kostolac A and Kostolac B TPPs are conducted under an integral network of measuring points.

2.2.2 Water Emission Measurements

- **Dewatering system waters**

Water from the Drmno OCM dewatering system is mainly transported to the Kostolac B TPP cooling water reservoir, while smaller amounts are discharged into the Mlava River. Water from the Cirikovac OCM dewatering system is accumulated in the mine vicinity. Klenovnik OCM water amounts are low and they are not measured.

Drainage water quality control originating from the Drmno OCM dewatering system in 2016 was carried out by an accredited laboratory of the Jaroslav Cerni Institute on two measuring points.

Table 32 shows the drainage water quality results for Drmno OCM in 2016.

Table 32

KOSTOLAC TPPs & OCMs BRANCH – OPEN CAST MINES					
Drainage water quality in 2016					
Drmno OCm	**Measuring point 1 (TEKO B)**	**Measuring point 2 (Drmno OCM HQ)**	**Draining well shaft Mlava**	**Draining well Drmno OCM LC 12**	**Draining well Drmno OCM LC 8**
Sulfates (mg/l)	86,96 – 402,2	8,95 – 47,93	105,63 – 252,4	29 – 205,86	46,67 – 213,9
Phosphorus (mg/l)	≤ 0,01 – 0,29	≤ 0.01 – 0,15	≤ 0.01 – 0,12	≤ 0.01 – 0,20	≤ 0.01 – 0,32
Electrical conductivity (µs/cm)	712 – 1005	562 – 685	838 - 953	783 - 958	689 - 968
Arsenic (mg/l)	≤ 0.002	≤ 0.002 – 0,0031	≤ 0.002	≤ 0.002	≤ 0.002

- **Sanitary water**

Potable and sanitary water used by the Drmno OCM comes from own sources. Potable water quality is controlled by the Pozarevac Public Health Institute. Water amounts are not recorded. Sanitary wastewater is treated and discharged over a separator into the internal sewage system. Potable water used by the Cirikovac and Klenovnik OCMs comes from the city waterworks system. Quality is controlled by the Pozarevac Public Health Institute. Water amounts are not recorded. Sanitary wastewater is not treated; it is discharged into the internal sewage system.

Table 33 shows the potable and sanitary water data amounts, together with the drainage water amounts for the Drmno OCM in 2016.

Table 33

KOSTOLAC TPPs & OCMs BRANCH – OPEN CAST MINES				
Water amounts (m^3/y) in 2016				
Open cast mine		**Dewatering**	**Sanitary waters used by the mine**	
		Total water amounts	Water supply	Total amount
Klenovnik		58.320	Kostolac measurements 335	58.655
Cirikovac	**Ash landfill dewatering**	207.865	Kostolac measurements 3.216	230.470
	Pit	17.847	Kostolac measurements 1.542	
Drmno	**Surface dewatering**	7.035.000	Bradarac (estimate) 56.271	37.991.271
	Deep dewatering	30.900.000		
TOTAL: KOSTOLAC TPPs & OCMs BRANCH – OPEN CAST MINES		**38.219.032**	**61.364**	**38.280.396**

2.2.3 Soil Emission Measurements

Kostolac TPPs and OCMs Branch monitors the pollutants emission in soil every two years.

In accordance with the Regulation establishing a program of systematic monitoring of soil quality indicators needed to assess the soil degradation risks and remediation programs development methodology (OG RS № 88/2010), soil quality monitoring in vegetative and non-vegetative period. According to the above mentioned, monitoring and sampling of soil in vegetative period was performed in the summer 2014 and sampling and monitoring in non-vegetative period was performed in the winter 2015.

Test results from 2015 show that the average value of the total content of heavy metals in soil of tested areas is common for agricultural land. The total content of most of the heavy metals such as zinc (Zn), mercury (Hg), lead (Pb), cadmium (Cd), copper (Cu), chromium (Cr), does not exceed the maximum allowable concentration (MAC) in any sample. The total content of arsenic (As) in one sample is above MAC while nickel (Ni) in 40% of samples above the MAC. The values are far below the remediation when remedial measures are necessary,

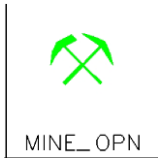
except in one sample where the concentration of As is in the level of remediation values. Analyzing all the results of soil investigation it can be concluded that the investigated area is not polluted with most heavy metals. Nickel (Ni) occurs as a common pollutant whose high content is largely conditioned by the geochemical composition of the native substrate. Also, differences in mean metal values in zones do not clearly identify the impact of pollutants position to the pollutant content, especially due to the large variation in values within the same zone. The results of measurements are not significantly different from the results of tests in 2012.

Note: The plan and program of environmental monitoring for Kostolac TPPs-OCMs Branch foresees the monitoring of the impact of the operation of the Kostolac TPPs-OCMs Branch to take place every two year.

- **Overview of Reclaimed Areas**

Areas expropriated in 2016, as well as the ones whose use has been changed are given in Table 34.

Total expropriated areas until 2016 were 3.873,5 ha. In 2016, 28,4839ha of new areas was purchased. There was no land use change. Land area containing structures remained the same as in 2015. As for the areas under dump sites, area of inside dumps remained 769.2ha. When it comes to the reclaimed area under the forests, they increased by 18,5ha only on Drmno OCM, while the area under the forests on Cirikovac OCM remained the same as in 2016. Re-cultivated areas under arable land in 2016 were 10 ha and the nursery area 2 ha, while there were no reclaimed areas under orchards. All the 2016 data are primarily related to the Drmno OCM.

KOSTOLAC TPPs and OCMs BRANCH – OPEN CAST MINES BRANCH																			Table 34
Reclaimed areas overview in 2016																			
Open cast mine 	Total reclaimed area (ha)	Total land area registered (ha)		Total land area whose use has been changed (ha)		Land area containing structures (ha)		DUMP SITE AREAS (ha)				RECLAIMED AREAS (ha)							
		2015	2016	2015 	2016 	2015 	2016 	Inside 		Outside 		Forests 		Arable land		Orchards 		Nursery 	
								2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Klenovnik	472	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Cirikovac	1.047	/	/	/	/	/	/	/	/	/	/	*3,4*	/	/	/	/	/	/	/
Drmno	2.382,98	/	/	322	/	1,414	/	769,2	/	/	/	21,2	18,5	232,4	10	2	/	5,5	2
TOTAL	**3.901,98**	**181**		**322**	**/**	**1,414**	**/**	**769,2**	**/**	**/**	**/**	**43,1**		**242,4**		**2**		**7,5**	

2.2.4 Living Environment Noise Measurements

Table 67 Chapter 4 contains aggregated data of the measured environmental noise levels for 2016 for the Kostolac TPPs & OCMs Branch.

2.2.5 Waste

Waste created in 2016 is shown in a summary table for the Kostolac TPPs & OCMs Branch Chapter 4 - Table 68 according to the Serbian waste management legislation.

2.3 Working Environment Monitoring, Occupational Health and Safety

The 2016 Occupational Health and Safety Reports include the following elements:

- **Working environment monitoring**
  - working environment noise measurements
- **Safety**
  - training
  - work injuries
- **Health**

2.3.1 Working Environment Monitoring

- **Working environment noise measurements**

There were no working environment noise measurements in 2016.

2.3.2 Safety

- **Training**

Employees are trained according to the Health and Safety Training Programme. Testing of occupational safety competence and knowledge is carried out at least once a year in accordance with Kostolac Branch Risk Assessment Act and in accordance with Mining and Geological Investigation Law.

According to Occupational Health and Safety Act, training within Kostolac Mining Basin is performed whenever new workers are recruited, deployed to new workplaces, during technological process changes and the introduction of new equipment and work tools.

Table 35 shows the number of workers foreseen for training and the number of trained workers in 2016.

Table 35

KOSTOLAC TPPs & OCMs BRANCH – OPEN CAST MINES					
Training in 2016					
Organisational units	Number of employees	For training		Trained	
		№	%	№	%
Drmno OCM	1.624	1.501	92,43	1.061	70,69
Cirikovac OCM	85	83	97,65	83	100,00
HQ	549	92	16,76	31	33,70
TOTAL: KOSTOLAC TPPs & OCMs BRANCH – OPEN CAST MINES	**2.258**	**1.676**	**74,22**	**1.175**	**70,11**

Note: Some workers have passed more than one training, e.g. because they were transferred to other workplaces or they work at height

- **Work injuries**

Table 36 provides the work injuries for 2016.

Table 36

KOSTOLAC TPPs & OCMs BRANCH – OPEN CAST MINES						
Work injuries in 2016						
Organisational unit	**Number of employees**	**Injuries – employee number ratio**				
		Easy	**Heavy**	**Fatalities**	**Total**	**%**
Drmno OCM	1.624	8	2	1	11	0,68
Cirikovac OCM	85	1	1	0	2	2,35
HQ	549	1	0	0	1	0,18
TOTAL: KOSTOLAC TPPs & OCMs BRANCH – OPEN CAST MINES	**2.258**	**10**	**3**	**1**	**14**	**0,62**

In 2016, there was one fatality in Kostolac TPPs-OCMs Branch, within organizational unit open cast mines Kostolac.

On 23.12.2016 around 10.30 a.m., in the organizational unit Cirikovac OCM, Siniša Ilić was fataly injured. He worked as a supervisor for the auxiliary machinera vehicle use office. The employee was driving the company car when he had a car accident on the local road in the area of Drmno village, including two more cars, which ended fataly.

2.3.3 Health

All employees of the Kostolac Mining Basin are subject to medical examinations, while employees working in high-risk workplaces are subject to periodic medical examinations. Medical examinations are annually conducted by the Occupational Health Department of the Pozarevac Health Centre.

Table 37 provides periodic examinations data verifying the work capability for 2016.

Table 37

KOSTOLAC TPPs & OCMs BRANCH – OPEN CAST MINES											
Work capability in 2016											
Organisational unit	**Number of employees**	**Periodical examinations**				**Work capability**					
		Referred to examination		**Examined**		**Capable**		**Limited capability**		**Not capable**	
		№	%	№	%	№	%	№	%	№	%
Drmno OCM	1.624	1.501	92,43	1.300	86,61	1.132	87,08	114	8,77	54	4,15
Cirikovac OCM	85	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
HQ	549	92	16,76	86	93,48	79	91,86	6	6,98	1	1,16
TOTAL: KOSTOLAC TPPs & OCMs BRANCH – OPEN CAST MINES	**2.258**	**1.593**	**70,55**	**1.386**	**87,00**	**1.211**	**87,38**	**120**	**8,66**	**55**	**3,97**

2.4 Public complaints

There were no public complaints in 2016.

3. NIKOLA TESLA TPPs BRANCH

Nikola Tesla TPPs (TENT) comprise of five organisational units:

- **Nikola Tesla A TPP (TENT A)**
- **Nikola Tesla B TPP (TENT B)**
- **Kolubara A TPP (Kolubara A TPP)**
- **Morava TPP (Morava TPP)**
- **Railway transport (RT)**

3.1 Overview and Status of Permits

Table 38 provides an overview of obtained permits and applications for new permits or extension of existing ones in 2016.

Table 38

NIKOLA TESLA TPPs BRANCH			
Overview and status of permits in 2016			
Organisational unit	**Obtained permits and approvals (number and date)**	**Applications for new or extension of existing permits**	**Note**
TENT A TENT B TE KO A (unit A5)	Decision of the Ministry of Agriculture and Environmental Protection, no. 353-01-02635/2016-17 dated 16.01.2017, approving continuous pollutants emission measurements from stationary pollution sources for TENT A (units A1-A6), TENT B (units B1-B2) and TE KO A (unit A5)		
TENT A	Report of the Ministry of Agriculture and Environmental Protection, no. 353-03-1301/3/2016-18 dated 21.09.2016 on the compliance with the environmental protection regulations for the purpose of obtaining energy licence for activity performance for units A1, A2, A5 and A6		
	Decision on water permit issuance VIII-06-325.3-21/2016 dated 28.10.2016	1. Building permit application for the construction of oils and lubricants storage dated 19.11.2013. 2. Building permit application for the construction of a temporary waste storage 31.10.2013.	
	Decision on water permit issuance VIII-06-325.3-5/2016 dated 30.09.2016.	Building permit application for the construction of a temporary waste storage 10.10.2013.	
KOLUBARA A TPP	Water permit approving use of Kolubara surface waters, for the purpose of technical water needs for Kolubara TPP, no. III-07-325-.3-25/2011 dated 29.05.2012	Building permit application for the construction of a temporary waste storage dated 31.10.2013	
	Decision by the Ministry of Agriculture and Environment № 353-02-01271/2015-16 dated 09.02.2016, approving Environmental Impact Assessment Study for the Project of cassette C of ash and slug disposal site construction at Kolubara TPP Veliki Crljeni		

MORAVA TPP	Water permit 325-04-00974/2014-07 dated 24.02.2015.	1. Building permit for the construction of oils and lubricants storage (№ 351-03-01441/2013-04 dated 11.05.2016) 2. Building permit for the construction of a temporary waste storage (№ 351-03-01185/2013-04 dated 20.09.2016)	

3.2 Monitoring and Environmental Impact

3.2.1 Air Quality Measurements

Air quality monitoring in the vicinity of the TENT organizational units is carried out as part of the monitoring financed and organized by individual organizational units. It should be noted that the air quality monitoring is within the competence of the legislator; therefore air quality monitoring is carried out as part of the national automatic air quality monitoring network, comprising measuring points located around the TENT Branch.

During 2016 air quality measurements in the TENT A, TENT B and Kolubara TPP area were performed. Around the Kolubara TPP, measurements were conducted by the company *AD Zasita na radu i zastita zivotne sredine* – Belgrade, while air quality monitoring in the areas of TENT A and TENT B was not executed by an accredited laboratory but internally by the TENT Environmental Division laboratory (not accredited).

TENT A and TENT B

Air quality in the vicinity of TENT A and TENT B has been measured for over thirty years, internally by the Environmental Division authorised for total particulate matter (TPM) and SO_2 measurements. Between 2008 and 2013 such measurements were carried out by authorised laboratories. As of 2013 air quality monitoring has been conducted only internally, by the Environmental Division laboratory. Air quality monitoring results are presented in the Annual Report – Environmental Monitoring, Protection and Improvement of TENT A and TENT B submitted to the local and state authorities.

In 2016, around TENT A and TENT B, measurements of the total particulate matter content (TPM), sulphur dioxide and soot concentrations were performed. Total particulate matter (TPM) was measured on 18 measuring points, AND SO_2 and soot were measured on four measuring points. Due to occasional air samplers failures, data availability for for SO_2 and soot is 87.8%.

During 2016 there were no stormy winds potentially causing ash dispersion from ash landfills. There were no complaints by citizens to air pollution. All existing active cassettes protection systems on TENT A and TENT B ash landfills were in operation, water lens was covering an optimal area in accordance with the technical requirements. In addition, wetting of dry surfaces was also executed.

Kolubara A TPP

Air quality measurements in the Kolubara A TPP surroundings have been performed for over twenty years. Monthly and annual air quality monitoring reports for the Kolubara A TPP surroundings are sent to the local self-government authorities and governmental agencies, upon their request. During 2016 TPM levels were measured on 8 measuring points, while SO_2, soot and total suspended particles PM_{10} were measured on 1 measuring point.

Morava TPP

There was no air quality monitoring in 2016.

Table 39 shows the 2016 air quality data in terms of the TENT organisational units' legal compliance.

Air quality was evaluated based on the measurement results compared with the limit and tolerable values for SO_2, TPM and soot specified by the Regulation stipulating air quality monitoring conditions and requirements (OG RS № 11/2010, 75/2010, 63/2013). The above regulation is aligned with the European Union legislation.

Table 39

NIKOLA TESLA TPPs BRANCH						
Air quality in 2016						
Legal compliance (data or days exceeding legal limits)						
Air quality indicators		**Total particulate matter levels - TPM** (mg/m²/day)			**SO_2 concentration** (μg/m³)	
Averaging period		**Maximum permissible value (MPV)**			**LV**	**TV**	**TL**
One hour					**350**	**380**	**30**
***One day**					**125**		**-**
****One month**		**450**			**-**		
*****Calendar year**		**200**			**50**		**-**
TENT A and TENT B	*	-			No exceedance		
	**	Data exceeding MPV: • 18 measuring points, 2 out of total 213 data (0.94%) • 2 measuring points, TENT A landfill area, no exceedance • 3 measuring points, TENT B landfill area, 1 exceedance, 2.94% out of total data • 4 measuring points – TENT A surroundings, no exceedance • 5 measuring points – TENT B surroundings, 1 exceedance, - 1.67% out of total data • 4 measuring points in Obrenovac and its surroundings, no exceedance • 1 measuring point in Vladimirci, no exceedance			-		
	***	Data exceeding MPV: • 18 measuring points, 1 exceedances, 11.11% out of the mean annual values for all measuring points			-		
KOLUBARA A TPP	*	-			No exceedance		
	**	No exceedance			-		
	***	No exceedance			-		
MORAVA TPP	**	No measurements			No measurements		
	***	No measurements					
Air quality indicators		**Total suspended substances** (μg/m³)			**Soot (μg/m³)**		
Averaging period							
		LV	**TV**	**LT**	**Maximum permissible concentration (MPC)**		
***One day**		**50**	**50**	**0**	**50**		
*****Calendar year**		**40**	**40**	**0**	**50**		
TENT A and TENT B	*	-	-	-	Number of data exceeding MPV - 30, one in Septembre and December and 28 during November, amounting to 2.33% of the total 1285. There were exceedances in all four measuring points. Measurements performed daily.		
	**	-	-	-	-		
	***	-	-	-	-		
KOLUBARA A TPP	*	Number of data exceeding MPV, by analysing 1 measuring point, 61.78% of the total data			Number of data exceeding MPV, by analysing 1 measuring point, 0.81% of the total data		
	***	Above MPC			No exceedance		

LV – Limit value, TV – Tolerance value, TL – Tolerance limit

Following 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 and tolerance values representing not a local but a global issue;
- Air pollution by ash particles is of local significance, mainly the result of ash dispersion by wind from ash landfills during storms.

3.2.2 Air Emission Measurements

Total sulphur content in lignite supplied to the Nikola Tesla TPPs Branches is ca. 0.5%. Flue gases containing sulphur dioxide, nitrogen oxides, carbon dioxide and dust, after treatment and dust separation by electrostatic precipitators, are emitted into the air through stacks of the following heights:

- TENT A - 150m (units A1, A2 and A3) and 220m (units A4, A5 and A6)
- TENT B - 280m (units B1 and B2)
- Kolubara A TPP -105m (unit A1), 105m (units A2 and A3) and 130m (unit A5)
- Morava TPP - 105m

In line with the legal requirements individual pollutants air emission measurements are carried out regularly, while continuous measurements are carried out on the majority of the TENT Branch units.

- **Individual measurements of pollutants air emission**

During 2016 individual emission measurements of air pollutants were conducted once a year at TENT A, TENT B (unit B1), Stack 2 (A2 and A3) and Unit A5 Kolubara TPP and Morava TPP, and twice a year at Kolubara TPP Unit A1. Monitoring Programme included the flue gas conditions measurements (temperature, pressure, and humidity), flow rate, oxygen content, mass concentrations and emission factors for sulphur dioxide (SO_2), nitrogen oxides (NOx - NO_2), carbon monoxide (CO), chlorine (HCl) and fluorine (HF) compounds and dust. Furthermore, technical and elementary coal analysis was performed. In addition, macro-elements, combustible substances, particle size distribution and electrical resistance of fly ash measurements were also executed.

Air pollutants emissions measurements for 2016 are given for each TENT organisational unit. Measurements were performed by accredited laboratories of the Nuclear Science Institute Vinča and Mining Institute - Belgrade, in line with the Pollutants Air Emissions Individual Measurements Plan.

Table 40 provides the individual measurements results of air pollutants emission for the TENT Brach carried out in 2016.

Table 40

NIKOLA TESLA TPPs BRANCH										
Individual air emission measurements for 2016										
Mass concentrations of pollutants (mg/Nm^3)										
Organisational unit	**TENT A**						**TENT B**		**ELV**	
Unit	**A1**	**A2**	**A3**	**A4**	**A5**	**A6**	**B1**	**B2**	**ELV^1**	**ELV^2**
Capacity MWth	**660**	**660**	**932**	**943**	**934**	**934**	**1809**	**1826**		
SO_2	2,335	1,766	2176	2,059	1,993	2,857	2,137	no measurements	**400**	**400**
NO_x (NO_2)	354	409	298	361	268	451	499		**500**	**500**
CO	41	50	59	66	88	77	37		**250**	**-**
Dust	172	230	31	67	46	25	11		**50**	**50**
Organisational unit	**Kolubara A TPP**							**Morava TPP**	**ELV**	
Unit, boiler	**A1**	**ELV**		**A2,A3**	**ELV**		**A5**			
		ELV^1	**ELV^2**		**ELV^1**	**ELV^2**			**ELV^1**	**ELV^2**
Capacity MWth	**125.6**			**376.8**			**333.5**	**420.0**		
SO_2	1,647 1,543	**1880**	**1800**	2,551	**840**	**840**	1,025	1.864	**1,066**	**720**

NO_x (NO_2)	458 344	**600**	**600**	362	**600**	**600**	561	512	**600**	**600**
CO	44 39	**250**	**-**	54	**250**	**-**	91	36	**250**	**-**
Dust	2,994 724	**1,010***	**100**	1,195	**1,010***	**100**	161	1.468** **63**	**50**	**100**

[1]Regulation stipulating air emission limit values for combustion plants (OG RS 6/2016)
[2]Directive 2001/80/EC – Large Combustion Plants
*Guaranteed projected values
**Prior to electrostatic precipitator reconstruction

Table 40a provides analysis of individual air emission measurements data for 2016 in terms of their legal compliance for different TENT Branch organisational units.

Table 40a

NIKOLA TESLA TPPs BRANCH			
Organisational unit	**Legal compliance – air emissions in 2016**		
	Dust	**SO_2**	**NO_x (NO_2)**
TENT A	Emission (per units): • above ELV (RS and EU) units A1, A2 and A4 • within ELV (RS and EU) units A3, A5 and A6	Emission: • above ELV (RS and EU) all units	Emission: • above ELV (RS and EU) all units
	Emission (per stacks): • for stack units (A1-A2-A3) above ELV (RS and EU) • for stack units (A4-A5-A6) within ELV (RS and EU)	Emission (per stacks): • for stack units (A1-A2-A3) above ELV (RS and EU) • for stack units (A4-A5-A6) above ELV (RS and EU)	Emission (per stacks): • for stack units (A1-A2-A3) within ELV (RS and EU) • for stack units (A4-A5-A6) within ELV (RS and EU)
TENT B	Emission: • within ELV (RS and EU) unit B1	Emission: • above ELV (RS and EU) unit B1	Emission: • within ELV (RS and EU) unit B1
KOLUBARA A TPP	Emission: • above ELV (RS and EU) units A1 (1 measuring), A2, A3 and A5 • below LV (RS) unit A1 (1 measuring)	Emission: • above ELV (RS and EU) units A2, A3 and A5 • below LV (RS) unit A1	Emission: • below ELV (RS and EU) all units
MORAVA TPP	Emission: • above ELV (RS and EU)	Emission: • above ELV (RS and EU)	Emission: • below ELV (RS/EU)

Legal compliance is evaluated by comparing the measured values of air emissions with the emission limit values (ELVs) prescribed by the (new) Regulation stipulating air pollutants emission limit values from combustion plants (OG RS № 6/2016), (new) Regulation stipulating air pollutants emission measurements from stationary pollution sources (OG RS № 5/2016) and the Large Combustion Plants Directive 2001/80/EC.

Dust emission deviations compared to ELVs on units A1 and A2 - TENT A whose ESPs have been reconstructed are associated with the increased flue gas volume and temperature compared to the design values.

During 2016, guarantee testing of dust emissions on the reconstructed electrostatic precipitator of Unit A3 were performed – Test B. Test B results confirmed an output concentration of dust below 50 mg/Nm^3.

On units A3 and A5, burners were reconstructed to reduce nitrogen oxide emissions and increase unit capacity (Unit A3).

During 2016 ESP was reconstructed on unit M1 in Morava TPP. Guarantee measurements of dust emission of reconstructed ESP were carried out.

- **Continuous air emissions measurements**

Between 2004 and late 2014 continuous air emissions measurement equipment was installed on TENT Branch units. In addition to the basic equipment consisting of analysers measuring dust and gases mass concentration, additional measuring equipment was installed for: oxygen (O_2), carbon dioxide (CO_2) and humidity as well as temperature (t), pressure (p) and flue gases flow rate. Data acquisition and processing equipment was also installed.

As part of the project funded through an IPA donation, including 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), dust on:

- 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:

Established CEMS Reports were aligned with the Large Combustion Plants Directive 2001/80/EC and Serbian legislation. The entire system was aligned with EN 14181 (QAL1, QAL2 and QAL3) standard and national legislation.

Pursuant to the Air Protection Act (OG RS № 36/09 and 10/13) and the Regulation stipulating the approval conditions of air quality and/or emissions measurement operators from stationary pollution sources (OG RS № 16/12), TENT A, TENT B and TEK A5 obtained approval for continuous emission measurements from stationary pollution sources.

Table 41 shows the continuous air emissions measurement equipment data (mean annual mass concentration) for TENT Branch in 2016.

Table 41

NIKOLA TESLA TPPs BRANCH										
Continuous air emission measurements for 2016										
Mass concentrations of pollutants (mg/Nm³)										
Organisational part	**TENT A**						**TENT B**		**ELV**	
Unit	**A1**	**A2**	**A3**	**A4**	**A5**	**A6**	**B1**	**B2**	**ELV¹**	**ELV²**
Capacity MWth	**660**	**660**	**932**	**943**	**934**	**934**	**1.809**	**1.826**		
SO_2	2.082	2.240	2.298	2.164	2.322	2.268	2.287	2.280	**400**	**400**
NO_x (NO_2)	395	416	292	360	238	418	475	416	**500**	**500**
CO	42	66	69	86	124	84	43	28	**250**	**-**
Dust	190	264	32	66	43	28	37	53	**50**	**50**
Organisational unit	**Kolubara A TPP**							**Morava TPP**	**ELV**	
Unit,boiler	**A1**	**ELV**		**A2,A3**	**ELV**		**A5**			
		ELV¹	**ELV²**		**ELV¹**	**ELV²**			**ELV¹**	**ELV²**
Capacity MWth	**125,6**			**376,8**			**333,5**	**420,0**		
SO_2	/	**1.880**	**1.800**	2.288	**840**	**840**	983	/	**720**	**720**
NO_x (NO_2)	/	**600**	**600**	389	**600**	**600**	275	/	**600**	**600**

CO	/	**250**	**-**	72	**250**	**-**	53	/	**250**	**-**
Dust	/	**1.010***	**100**	1.306	**1.010***	**100**	200	/	**50*/100**	**100**

[1]Regulation stipulating air emission limit values for combustion plants (OG RS 6/2016)
*Guaranteed projected values
[2]Directive 2001/80/EC – Large Combustion Plants

Table 41a shows the continuous air emissions measurement equipment data for 2016 in terms of compliance with legal requirements, * for TENT Branch organizational parts.

Table 41a

NIKOLA TESLA TPPs BRANCH			
Organisational part	**Legal compliance in 2016 per units**		
	Dust	**SO_2**	**NO_x (NO_2)**
TENT A	Emission: • above ELV (RS and EU) units A1, A2, A4 and A5 • within ELV (RS and EU) units A3 and A6	Emission: • above ELV (RS and EU) all units	Emission: • within ELV (RS and EU) all units
TENT B	Emission: • above ELV (RS and EU) units B1 and B2	Emission: • above ELV (RS and EU) all units	Emission: • above ELV unit B1 • within ELV (RS and EU) units B1 and B2
KOLUBARA A TPP	Emission: • above ELV (RS and EU) units A2, A3 and A5	Emission: • above ELV (RS and EU) units A2 and A3 • below ELV (RS and EU) unit A5	Emission: • below ELV (RS and EU) units A2, A3 and A5 TEK
MORAVA TPP	Emission measurement system not operational		

Compliance assessment was caaried out by comparing measured air emission values with emission limit values, ELV, stipulated by the Regulation stipulating air pollutants emission limit values from combustion plants (OG RS № 6/2016), the Regulation stipulating air pollutants emission measurements from stationary pollution sources (OG RS № 5/2016) and the Large Combustion Plants Directive 2001/80/EC.

Compliance of continuous emission measurements with ELV is carried out according to the new Regulation - Article 43 the Regulation stipulating air pollutants emission measurements from stationary pollution sources (OG RS № 5/2016):

In case of continuous emission measurements from the existing combustion plants, compliance with emission limit values is realized if the measurement results for working hours in one calendar year show that:

*1) None mean monthy exceeds emission limit values
2) 97% of all 48-hour mean values does not exceed 110% ELV for sulfur dioxide and dust;
3) 95% of all 48-hour mean values does not exceed 110% ELV for nitrogen dioxide.

According to CEMS, with regards to **dust per units in TENT A and B**:

- mean monthly values are exceeding ELV on all units except for units A3 and A6.

Mean monthly values of CO were below ELV on all units.

Mean monthly value of nitrogen oxide NOx was exceeded on units A1 (February), A2 (January and February) and B1 (January).

Exceedence of SO2 emission above ELV is constant on all units of TENT A and B.

According to CEMS, compliance per stacks of TENT A and B:

Stack A1-A2-A3: all mean monthly values of dust are above ELV.
all mean monthly values of sulfur oxide are above ELV.
all mean monthly values of nitrogen oxide are within ELV.
all mean monthly values of carbon monoxide are within ELV.

Stack A4-A5-A6 : all mean monthly values of dust are within ELV.
all mean monthly values of sulfur oxide are above ELV.
all mean monthly values of nitrogen oxide are within ELV.
all mean monthly values of carbon monoxide are within ELV.

Stack B1-B2 : two mean monthly values of dust are above ELV.
all mean monthly values of sulfur oxide are above ELV.
all mean monthly values of nitrogen oxide are within ELV.
all mean monthly values of carbon monoxide are within ELV.

According to CEMS, compliance per stacks of Kolubara TPP (during pollution source operation**)**

Stack A2, A3: mean monthly values of dust were below ELV in two months
all mean monthly values of sulfur oxide are above ELV.
all mean monthly values of nitrogen oxide are within ELV.
all mean monthly values of carbon monoxide are within ELV.

Stack A5: all mean monthly values of dust are above ELV.
mean monthly values of sulfur oxide are below ELV in three months.
all mean monthly values of nitrogen oxide are within ELV.
all mean monthly values of carbon monoxide are within ELV.

Table 42 shows data on continuous air emission measurement equipment in the units of TENT branch organizational parts.

Table 42

NIKOLA TESLA TPPs BRANCH										
Continuous air emissions measuring equipment in units in 2016										
Pollutants					**Parameters**					
Organisational units		**Dust**	**Gases**		**Content**			**p**	**t**	**Flow**
			SO_2, $NO_x(NO_2)$, CO	**HCl and HF**	**Humidity**	**CO_2**	**O_2**			
TENT	**A1**	Measuring devices installed on each unit on flue ducts after the left and right ESP, behind ID fan Total: 12 measuring devices	One measuring device installed per unit. Sampling is carried out on flue ducts, continuously, behind the left and right ID fan. Flue gas is mixed and led to measuring devices for gases Total:	-	Humidity adopted Installation of 6 more measuring devices planned	* Total: 6 measuring devices	Measuring devices installed on each unit, on flue ducts after the left and right ESP, ID fan Total: 12 measuring devices			
	A2									
	A3									
	A4									
	A5									
	A6									

			6 sets of measuring devices				
TENT B	B1	Measuring device installed on the flue duct, at the level 55.1m in the inner stack lining.		-	Measuring device installed on the flue duct, at the level 55.1m in the inner stack lining.		
		Platform located at the level 54m, inner stack lining Total: 1 set of measuring devices					
	B2	Measuring devices for gases and dust installed *Dust measured on flue ducts • after left ESP, before ID fan • after right ESP, before ID fan Total: 3 measuring devices (dust) 1 set of measuring devices for gases		-	flue duct - 1 set of measuring devices for O_2, CO_2 t, p, flow rate and humidity		
					flue ducts - t and p devices • after left ESP, before ID fan • after right ESP, before ID fan 2 sets of measuring devices		
		Platform located at the level 55.1m, inner stack lining Platform is located at the level of 54m, inner stack lining					
KOLUBARA A TPP	A1-B1	-		-	-		
	A2-B3 A3-B4 A3-B5	Measuring devices (except HC and HF devices) installed at the level of 46.25m, outer stack lining. Platform is located at the level of 45m, outer stack lining. Control measurements openings at the level of 46.75m. Stack height - 105m.					
	A5-B6	Installed: • behind left ESP after ID fan • behind right ESP after ID fan • stack	Installed on the stack	-	Installed on the stack	Installed: • behind ESP after ID fan left ESP • behind right ESP after ID fan • on the stack	Installed on the stack
			Measuring devices installed at the level of 51m, outer stack lining. Platform is located at the level of 50m, outer stack lining. Measuring plane with measuring opening for control measurements located at the level of 51.5m. Stack height - 130m.				
MORAVA TPP		Measuring devices installed at the level of 48.6 m and 49m/53m, outer stack lining. Platform located at the level of 47m. Stack height - 105m. 1 set of measuring devices					

*Continuous measurement devices for dust delivered during ESP reconstruction were installed on the flue duct after ESP, before ID fan. Mass concentrations data for dust are recalculated for normal conditions and measured oxygen.

Data acquisition and processing equipment (software) is an integral part of the above automatic measuring system (AMS).

Decisions issued by the competent ministries: 02.12.2013 - Ministry of Energy, Development and Environment, 22.12.2014 and 16.01.2017 - Ministry of Agriculture and Environment approved independent continuous stationary pollutant sources measurements by TENT, for the following pollutants: SO_2, NO_x (NO_2), CO and total particulate matter – TENT A, units A1 to A6, TENT B units B1 and B2 and Kolubara A TPP unit A5.

The above devices for units A2 and A3 - Kolubara A TPP were installed on stack № 2 (105m high), at the level of 46.25m. Calibration of devices - QAL2 tests of basic and additional equipment were conducted in November 2014 by an accredited laboratory AEROLAB d.o.o. Beograd. TENT, Kolubara TPP has obtained a decision of the Ministry of Agriculture and Environment, № 353-01-02060/2015-17 of 30.11.2015, approving continuous measurement of pollutant emissions from stationary pollution sources for units A2 and A3 Kolubara TPP.

Devices for the continuous air pollutants emissions measurements at the Morava TPP, mounted on the stack in 2009 were made operational in the course of 2015. However, they are not fully operational given that the analyser needs to be calibrated under QAL2. In December 2015, the procurement procedure for the flue gas analyzer calibration services by an accredited laboratory was initiated.

At the end of 2014, a contract was signed between EPS and TEKON-tehnokonsalting to prepare a Study *Environmental Monitoring (air emissions) at the level of PE EPS and Subsidiaries*, while an annex to the said contract was signed and at the end of 2015. The subject of this study is the development and implementation of an air emissions monitoring system of thermal power plants operated by the subsidiaries of the Public Enterprise Electric Power Industry of Serbia. In addition, the objective is to form a central database with the results of continuous air pollutants emissions measurements, data processing and reporting about the continuous air pollutants emissions measurements in accordance with statutory requirements, with a view to taking appropriate environmental measures.

- **Annual air emissions**

Table 43 provides an overview of air emissions: dust, SO_2, NO_2 and CO_2 for TENT Branch in 2016.

Annual dust, SO_2 and NO_2 emissions were calculated on the basis of mean annual flow rates, mean annual concentration of pollutants obtained from continuous measurements and emission measurements and operating periods (h) of each unit (stack), according to CEMS (there might be correctios regarding emission calculation method.

There is no air emission continuous measurement equipment on stack D1 (unit A1, boiler K1) in Kolubara TPP. For Stack 1 (unit A1, boiler K1) emissions are calculated by multiplying operating periods (h) in 2016 with output pollutant flow rate (Nm3/h) and mean measured mass concentration (mg/Nm3) obtained by periodic emission measurement in 2016.

Table 43

NIKOLA TESLA TPPs BRANCH				
Air emissions in 2016 (t/year)				
Organisational unit	**Dust**	**SO_2**	**NO_x (NO_2)**	**CO_2**
Nikola Tesla A TPP				
A1				1.236.416
A2				1.514.068
A3				2.332.565
A1-A2-A3	2.857	48.181	7.787	5.083.049
A4				2.311.568
A5				2.422.878
A6				2.394.161
A4-A5-A6	1.265	65.536	9.346	7.128.607
Total: TENT A	**4.122**	**113.717**	**17.133**	**12.211.656**
Nikola Tesla B TPP				
B1				4.734.075
B2				2.318.490
Total: TENT B	**1.059**	**59.463**	**11.908**	**7.052.565**
Kolubara A TPP				
A1	701	600	151	629.310
A2,A3	2280	3559	688	
A5 - K6	198	762	227	384.048
Total: Kolubara A TPP	**3179**	**4.921**	**1.066**	**1.013.358**
Morava TPP				
Total: Morava TPP	**872**	**2.536**	**697**	**368.184**
TOTAL: NIKOLA TESLA TPPs BRANCH	**9.232**	**180.637**	**30.804**	**20.625.763**

Table 43a

NIKOLA TESLA TPPs BRANCH								
Fuel consumption in 2016								
Organisational unit	**TENT A**		**TENT b**		**KOLUBARA A TPP**		**MORAVA TPP**	**Total for Branch**
Raw material	**Unit**	**(t/god)**	**Unit**		**Unit**	**(t/year)**	**(t/year)**	**(t/year)**
COAL	A1	1.679.033	B1	6.430.466	A1 - A3	830.992	380.482	**27.951.407**
	A2	2.055.425	B2	3.133.117				
	A3	3.172.858						
	A4	3.161.631			A4	0		
	A5	3.313.260			A5	522.284		
	A6	3.271.859						
	TOTAL	**16.654.066**		**9.563.583**		**1.353.276**	**380.482**	
HEAVY FUEL OIL	A1	1.432	B1	11.896	A1	/	1.279	**31.484**
	A2	1.906	B2	9.604	A2	/		
	A3	1.473			A3	/		
	A4	1.079			A4	/		
	A5	1.273			A5	/		
	A6	1.542						
	TOTAL	**8.705**		**21.500**		**0**	**1.279**	
OIL	A1	/	Б1	/	A1-A3	932	436	**1.805**
	A2	/	Б2	/				
	A3	/						
	A4	/			A4	0		
	A5	/			A5	437		
	A6	/						
	TOTAL	**0**		**0**		**1.369**	**436**	

- **Harmonisation of air emissions with EU legislation**

Dust

Unit A3 electrostatic precipitator was reconstructed in 2014. This means that to date electrostatic precipitators of all the Nikola Tesla A TPP units (A1, A2, A3, A4, A5 and A6) were reconstructed, along with the Nikola Tesla B units (B1 and B2) and unit A5 of the Kolubara A TPP. Outlet dust mass concentration guaranteed by the equipment supplier is ≤ 50mg/Nm^3, which is in line with EU and Serbian legislation.

Individual measurements of air pollutants carried out in 2016 confirmed an outlet dust mass concentration deviation from the values guaranteed by the equipment supplier on units A1, A2 and A4 – Nikola Tesla A TPP.

Electrostatic precipitator of the Morava TPP was reconstructed in order to achieve the output dust concentration of 50 mg/Nm^3, during the 2016 overhaul.

Sulphur dioxide

During the designing and construction of the Nikola Tesla A and B TPPs no sulphur oxides emissions reduction measures were undertaken. To reduce sulphur oxide emissions below 200mg/Nm^3 in line with the Serbian and EU legislation flue gas desulphurization plants should be introduced in the forthcoming period.

In 2011, the Japanese Government extended a loan to introduce the flue gas desulphurisation system at the Nikola Tesla TPPs.

During 2012 a consultant was selected (Japanese company TEPSCO) and the preparation of the tender and pre-qualification documents for the supply, installation and commissioning of the TENT A FGD plant equipment was initiated. TEPSCO conducted preliminary design due diligence TENT A (A3 - A6). After Preliminary Design – A3- A6 Units FGD Plant (Nikola Tesla A TPP) due diligence, TEPSCO prepared a project report used to draft the tender documents in late 2013. In early 2014 call for tenders was published for the potential equipment and works suppliers. Project implementation activities are underway.

Nitrogen oxides

In the previous period, primary measures have been introduced on units A3 and A5 TENT A.

The plan is to introduce primary nitrogen oxide reduction measures in the coming period on units A4 and A6 TENT A, as well as on units B1 and B2 TENT B.

Preparation of Feasibility Study with the Basic Design for the nitrogen oxide (NOx) primary reduction measures on unit A6 TENT A and units B1 and B2 TENT B was initiated at the end of 2016.

3.2.3. Water Emission Measurements

Water used for condenser water vapour cooling has the highest share in the total amount of make-up water used by the Nikola Tesla TPPs. River water is captured, used to cool condensers and subsequently discharged via the return tunnel back into the recipient. TENT A and TENT B use the Sava River water for cooling, while the Morava TPP uses the Morava River water. They have an open cooling system. Kolubara A TPP uses the Kolubara River water and it has a closed cooling system - towers.

Some 2.5% of captured water is used for thin slurry (ash and slag) transport (TENT A, Kolubara A and Morava). Additionally, a small share of the TENT B return cooling water is used for ash and slag transport.

Wastewater originating from the thin slurry transportation system is discharged directly or indirectly into the recipient in the form of overflow and drainage water, where ash water ratio is 1:10 – TENT A, Kolubara A and Morava. 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. This water is stored in winter and used for disposal site wetting in summer.

Demineralized water (demi water) used by boilers and the water-vapour system is produced by a chemical water treatment plant. Demi water is produced by chemical treatment of groundwater in ion exchangers. Kolubara A TPP demi water is obtained by treating decarbonised water in ion exchangers - columns. Raw water is captured from tube wells located are along the riverbank. HCl or NaOH solution is used to regenerate ion masses, resulting in acid and alkaline wastewater used for ash and slag transport.

Wastewater created by washing the coal transportation bridges is after mechanical particle deposition in sedimentation tanks indirectly discharged into the river.

Sanitary wastewater is after mechanical-biological treatment under aerobic conditions (TENT A, TENT B and Morava TPP) discharged directly or indirectly into the river. At the Morava TPP, sanitary water is discharged into the city sewer network.

In September 2015, at the BIODISK device TENT A, a UV lamp for wastewater disinfection was installed, as part of the TENT A wastewater treatment plant project.

Water containing oil and/or fuel oil is 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 discharged back into the recipient.

Nikola Tesla TPPs wastewater quality is monitored and their recipients and groundwater impact analysed by accredited laboratories 4 times a year. Water Quality Monitoring Programme was prepared in cooperation with the Belgrade Water Supply and Sewerage Company. The Monitoring Programme for each TENT branch includes physical, chemical, bacteriological and radiological parameters prescribed by regulations for individual water types. Monitoring includes the following wastewater types:

- wastewater at the source and discharge point into the river (before discharge);
- river water - upstream and downstream from wastewater discharge;
- groundwater around the ash and slag landfills (piezometers and rural wells);

Ash and slag landfills groundwater quality impact is monitored by testing water quality of 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 groundwater impact of ash and slag landfills. 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. On the other hand, arsenic groundwater penetration rate is much slower given that it is adsorbed by the aluminosilicate surface (landfill ash and/or clay forming an integral part of the soil).

TENT B recorded the current state (so-called *initial state*) of groundwater quality prior to the ash landfill site. Groundwater quality data (*initial state*) are of great importance for further monitoring and evaluation of the ash landfill groundwater quality impact.

Annual surface and groundwater quality reports for each TENT unit are made available upon the request of the competent inspector, as well as to the relevant institutions during the permitting process.

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 TENT each year to the Environmental Protection Agency in line with the legal regulations.

Surface and groundwater quality monitoring for TENT needs in 2016 was executed by accredited laboratories - *Anahem Laboratory*, Belgrade (TENT B, Kostolac TPP and Morava TPP) and City Institute of Public Health Belgrade (TENT A).

Table 44 provides the analysis of wastewater, watercourse and recipient quality data for 2016 in terms of their legal compliance.

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

Table 44

NIKOLA TESLA TPPs BRANCH				
Water quality in 2016				
Organisational unit	**TENT A**	**TENT B**	**Kolubara A TPP**	**Morava TPP**
Water type	**Wastewaters and recipients**			
Drainage wastewater from the landfill	▪ suspended solids: <2 - 15 mg/l, no LV exceedance ▪ arsenic: <7 - 63µg/l, LV exceedance of 10µg/l in waste water of new drainage channel ▪ sulphates: 197-393mg/l below LV - 2000mg/l	▪ suspended solids: 1 -5 mg/l, below LV - 35 mg/l ▪ arsenic: 10 - 200µg/l most samples above LV - 10µg/l ▪ sulphates: 98 - 609mg/l below LV - 2000mg/l	-	-

Overflow wastewater from the landfill	▪ suspended solids: 2 - 16 mg/l, no LV exceedance ▪ arsenic: 223 - 407µg/l. above LV - 10µg/l ▪ sulphates: 234 - 293mg/l. below LV - 2000mg/l **Note**: analysed sample is a mixture of overflow and drainage waters with mostly overflow waters	▪ suspended solids: 1 -5 mg/l, below LV - 35 mg/l ▪ arsenic: 130 - 250µg/l Above LV - 10µg/l ▪ sulphates: 261 - 499mg/l below LV - 2000 mg/l	▪ suspended solids: 1-9 mg/l, no LV exceedance (35 mg/l) ▪ arsenic: 100-280 µg/l above LV (10 µg/l) ▪ sulphates: 87-500 mg/l below LV - 2000µg/l	-
Recipient	No changes of the Sava River quality upstream - downstream of TENT A for: ▪ arsenic: not exceeding LV - 10µg/l ▪ sulphates:15 – 24 mg/l, below LV -100 mg/l ▪ mineral oil: not identified Sava River temperature differences (TENT A upstream and downstream) do not exceed 3°C (legal limit) and it amounts to 0.8°C	No changes of the Sava River water quality upstream-downstream of TENT B: ▪ arsenic: not exceeding LV -10µg/l ▪ sulphates:12 - 17mg/l. below LV-100 mg/l ▪ mineral oil: not identified Sava River temperature differences (TENT B upstream and downstream) do not exceed 3°C (legal limit) and it amounts to 0.85°C	Turija: ▪ arsenic: below MPC (10 µg/l) upstream <1 µg/ l and downstream above MPC 20-64 µg/l ▪ sulphates: below MPC (100 mg/l) upstream 41-72mg/l, downstream 53-154 mg/l, above MPC (100mg/l) Kolubara: ▪ arsenic: below MPC (10 µg/l) upstream <1µg/ l and downstream above MPC <1.0-15 µg/l ▪ sulphates: below MPC (100 mg/l) upstream 28-93mg/l, downstream above MPC 61-118mg/l. ▪ Mineral oils in Kolubara upstream and downstream <0.01 mg/l ▪ Kolubara River temperature increase downstream within the legal limit (3°C).	**Velika Morava River upstream wastewater discharge**: ▪ Oxygen saturation 75-97.8 % ▪ BOD_5 4-11 mgO_2/l ▪ COD 8-36 mgO_2/l ▪ Ammonium ion, 0,38 mgN/l ▪ Mineral oils not present ▪ Increased number of fecal coliforms, total coliforms, intestinal enterococci and aerobic heterotofa (Kohl method) in 100ml. **Velika Morava River downstream wastewater discharge**: ▪ Oxygen saturation 71-97.9% ▪ BOD_5 3.5-8 mgO_2/l ▪ COD 11-24 mgO2/l ▪ Mineral oils not present ▪ Increased number of fecal coliforms, total coliforms, intestinal enterococci and aerobic heterotofa (Kohl method) in 100 ml ▪ Velika Morava River temperature increase downstream within the legal limit (3°C). **Velika Morava River during sand filters wastewater discharge:** ▪pH value 7.4 - 9 ▪Oxygen saturation 76 - 95% ▪BOD_5 4,2 - 8 mgO_2/l ▪COD 12-20 mgO_2/ ▪Ammonium ion, 0.33 mgN/l ▪Mineral oils not present.

Table 45 provides the groundwater quality data analysis in the ash and slag landfill site vicinity in 2016 in terms of their legal compliance. Analysis was provided for certain tested parameters of greater importance.

During 2016 groundwater quality monitoring was conducted in the vicinity of the following landfills: TENT A - 10 piezometers and 5 rural wells, TENT B - 9 piezometers and 9 rural wells, Kolubara A TPP - 1 piezometer and 4 rural wells and Morava TPP 1 piezometer and 5 rural wells.

Legal compliance is evaluated by comparing the groundwater measuring values from piezometers, remediation values of hazardous and harmful substances and values indicating serious groundwater contamination in line with the Regulation stipulating the systematic monitoring programme including soil quality indicators, indicators used to assess soil degradation risks and remediation programme development methodology (OG RS № 88/2010), while the rural wells water data are compared with the maximum permissible concentrations (MPCs) stipulated by the Rules defining potable water quality (OG FRY № 42/98 and 44/99).

Table 45

NIKOLA TESLA TPPs BRANCH						
Groundwater quality around ash and slag landfills in 2016						
	Permissible values		**Organisational unit**			
	*	**	**TENT A**	**TENT B**	**Kolubara A TPP**	**Morava TPP**
Sulphates (mg/l)	**250**		Highest in piezometers: P7-3, P24/a и Pp/5 (245mg/l - 1047mg/)l. Above MPC in one sample in well 3 in Krtinska (253 mg/l)	Highest in piezometers: P48, P9/1, P80 and P2: 313mg/l-558mg/l Below MPC in all rural wells except in one sample of well 5 in Grabovac (662 mg/l).	Above MPC in wells: ▪ N2, 264 - 905 mg/l three samples over MPC ▪ N4, 512-833 mg/l two samples over MPC	In controlled piezometer 276 mg/l Above MPC in 4 wells, measured values 296-339 mg/l
Arsenic (µg/l)	**10**	**60**	Below MPC in all piezometers Above MPC in one sample from well 5 in Ratari (0,014mg/l) and one sample from well 2 in Urovci (0.052mg/l)	Below detection limit in all piezometers, except in one sample P8/1 where 5.5µg/l was measure Below detection limit in most samples. The highest measured concentration is 4 mg/l, in one sample of well 4 in Grabovac	Below MPC in all samples	In controlled piezometer below MPC. Below MPC in all rural wells
Lead and cadmium(mg/l)		**Pb 0.075** **Cd 0.006**	Lead above MPC - 75µg/l in piezometer P18 (0.079-0.103mg/l) and one sample P7a (0.138mg/l). Cadmium above MPC - 6µg/l in piezometer P18 (0.01-0.022 mg/l) and one sample P6/3 (0.01 mg/l)	Both lead and cadmium below detection limit in all piezometers	/	In controlled piezometer lead and cadmium below MPC.
Zinc(mg/l)		**0.8**	Above MPC in most samples of piezometer (0.99 – 12.5 mg/l)	Above MPC in piezometers P52, P2 and P35 (0.9 – 2.2 mg/l)		In controlled piezometer zinc below MPC.

Manganese (µg/l)	**0.05**		Above MPC in some samples of rural wells in Urovci and Kratinska. Highest measured value in well 3 in Krtinska – 0.875mg/l	Below MPC in majority of samples from rural wells. Above MPC in samples from wells 7 and 8 in Skela (0.06 – 0.13 mg/l) and well 9 in Ratari (0.08 – 1.10 mg/l)	Above MPC in wells: three samples in wells N2- 1.3-3.7mg/l, N3- 0.25-1.1 mg/l,	In controlled piezometer Manganese <50 µg/l. Above MPC in 1 well, measured value 1.2 mg/l
Ammonia-Nitrites (mg/l)	**0.1 - 0.03**		Ammonia exceeding MPC in some samples from wells. Highest measured value in sample of well 2 – Urovci – 0.54mg/l Nitrites above MPC registered only in samples taken from wells 3, 4 and 5 in Krtinska and Ratari – 0.045mg/l to 0.478mg/l	Ammonia and nitrites below MPC in all rural wells	Above MPC occasionally in wells: N1- 3.3 mg/l N2- 3.2 mg/l, N3- 0,38 mg/ l , N4- below MPC Nitrites below MPC in all rural wells	In controlled piezometer ammonia <0,05 mg/l Nitrites below MPC in all wells.
Nitrates (mg/l)	**50**		Above MPC in some samples of well 2a in Urovci, well 5 in Ratari and all samples of well 4 in Krtinska – up to 272mg/l	Above MPC in some samples of wells 1 and 2 in Dren (52 - 102 mg/l), 7 and 8 in Skela (58 - 173 mg/l) and 9 in Ratari (up to 172 mg/l)	Above MPC in two samples in well: ▪ N2, 74-76 mg/l	In controlled piezometer Nitrates 3.5 mg/l. In wells below MPC

*Potable water maximum permissible concentrations;
**Remediation values of hazardous and harmful substances and values indicating serious groundwater contamination.

As the concentration of manganese in the overflow and drainage waters of ash landfill is low, increased manganese in rural wells water is probably caused by the high level of this element in soil.

Measured high concentration of zinc in piezometers on TENT A and TENT B is the result of dissolution of metal from galvanized pipes piezometers are made of.

Bacteriological analysis of rural wells water indicated the presence of coliform bacteria. Occurrence of the increased ammonia, nitrite and nitrate concentrations is of faecal origin which is caused by the proximity of septic tanks and stables.

Increased concentrations of manganese, and nitrate in the rural wells water, as well as bacteria around the TENT B ash landfill were established by the *initial state* testing; therefore it may safely be concluded that they are caused by the high level of these pollutants in soil (manganese), or owing to the impact of septic tanks and stables located near the rural wells (ammonia, nitrates, bacteria).

Table 46 provides the analysis of sanitary wastewater quality data at the treatment plant inlet and outlet for 2016. Under the Regulation stipulating pollutants limit values in waters and deadlines for their achievement (OG RS № 67/2011, 48/2012 and 1/2016), water discharged into the recipient complies with the regulations, except in the case of bacteria (Putoks and some samples of Biodisk).

Table 46

NIKOLA TESLA TPPs BRANCH			
Sanitary wastewater treatment plant operation in 2016			
Pollutants concentration (mg/l)	**MPC (mg/l)**	***Biodisk* plant TENT A**	***Putoks* plant TENT B**

Suspended solids (mg/l)			
Plant inlet		42 - 158	6 - 27
Plant outlet	75	1 - 2	2 - 9
Biological oxygen demand (BOD_5)			
Plant inlet		61.4 – 69.7	31 - 140
Plant outlet	50	4.2 – 8.3	14 - 31

- **Water amounts**

Table 47 provides an overview of water amounts captured and discharged by TENT Branch organisational units for 2016. TENT A and TENT B calculation of annual amounts of captured surface waters and discharged return cooling water, as well as overflow and drainage water on TENT A is prepared based on the data on capacity and operating time of the pumps for capturing i.e.discharging water. In the case of gravitational wastewater discharges calculations were made based on previous wastewater measurements (overflow and drainage water from the ash and slag landfill). Biodisk and Putoks have flow gauges, but as this gauge hasn't been working for a long time in 2016, the quantity of captured water from Obrenovac water supply used for sanitary purposes is given as the quantity of discharged sanitary wastewater. Veliki Crljeni potable water treatment plant supplies Veliki Crljeni and Kolubara A TPP with potable water. A gauge was installed for the line running towards the Kolubara A TPP, also supplying one part of the settlement and the sports centre. Total water amounts for the Kolubara A TPP line in 2016 is 395,965 m^3. Sanitary wastewater amounts were estimated based on the above amount.

Table 47

NIKOLA TESLA TPPs BRANCH							
Water amounts in 2016 (m^3/year x 10^3)							
Organisational unit	**Reservoir**			**Discharged wastewater**			
	Used amounts		**Permissible amounts**	**Return cooling water**	**Wastewater discharged into Bare Channel**	**Overflow and drainage water – ash disposal site**	**Sanitary wastewater**
	Surface	***Ground**	**Surface**				
TENT A	1.124.869	977	956.407	1.092.926	/	30.498	179
TENT B	848.938	478	1.014	835.996	/	/	41,3
KOLUBARA A TPP	6.228	/	/ **	/	800	274	396
MORAVA TPP	42.449	86	/	41.182	/	/	9
TOTAL: TENT	**2.022.484**	**1.541**		**1.970.104**	**800**	**30.772**	**625,3**

*Technological water preparation

**Water permit for surface water capture from the Kolubara River does not set the permissible amount, it only states, "during water capture from a watercourse, downstream from the water intake minimum sustainable water flow should be ensured".

Total potable water consumption for 2016 for the Kolubara TPP line (TEK and part of Veliki Crljeni) is measured and it amounts to 395 965 m^3 ~ 396 x 10^3 m^3. Sanitary wastewater quantities in 2016 shown for the Kolubara TPP line.

- **Improvements aimed at reducing surface and groundwater wastewater impacts**

One of the conditions to obtain the integrated permit for further operation of TENT A and TENT B and operation after 2016 is to reduce emissions to water in accordance with the Water Act (OG RS № 30/10) and the Regulation stipulating pollutants limit values in waters and deadlines for their achievement (OG RS № 67/2011, 48/2012 and 1/2016).

TENT A

Wastewater treatment plant was constructed in 2016 and it includes treatment plant for coaled, oiled and wastewater from desulphurization (that is not operating since FGD plant is not built yet). Contractor was consortium comprising ESOTECH d.d. Slovenia and JEDINSTVO a.d. Uzice, Srbija.

TENT B

Detailed Design for the TENT B Wastewater Treatment Plant Construction developed. Contractor, consortium comprising KRALOVOPOLSKA RIA Czech Republic and LAD GROUP Serbia. Construction of the plant has not started yet.

Kolubara A TPP

Kolubara TPP does not have a wastewater treatment plant. PE EPS plans the preparation of Pre-Feasibility Study with Conceptual Design for Kolubara TPP wastewater treatment plant.

Morava TPP

Morava TPP does not have a wastewater treatment plant. Pre-Feasibility Study with Conceptual Design for wastewater treatment plant was prepared. The Jaroslav Černi Institute for the Development of Water Resources, 2015. PE EPS plans to prepare Preliminary Design, Feasibility Study with Basic Design, Environmental Impact assessment for wastewater treatment plant in Morava TPP.

3.2.4 Soil Emission Measurements

During 2016 the testing of soil quality and the content of total and available forms of heavy metals and potentially harmful elements in soil was continued, together with the monitoring of chemical composition and water quality in the melioration channels around TENT to identify landfill soil and water impacts. Annual monitoring reports covering ash and slag landfill soil and melioration channels impacts for each of the TENT organisational unit are made available to the inspection upon request. Soil quality measurement results are presented in an Environmental Report prepared by each organisational unit. In addition, they are presented in the National Polluters' Register of Serbia submitted by TENT to the Environmental Agency in line with the legal obligations. Sampling and testing was performed by the *Zastita na radu i zastita zivotne sredine Beograd d.o.o.* once during 2016 on TENT A and B Branch locations, and *institute vatrogas d.o.o.* at Kolubara TPP and Morava TPP branch locations. Samples were analysed for: physical properties of soil, chemical properties of soil, soil reaction, topsoil content, total nitrogen and organic carbon soil content, nitrate and nitrite ions content, available phosphorus and potassium content, heavy metals content and other toxic elements.

The programme included: field and laboratory measurements on representative sampling points entered into the topographic map (GPS identified points), allowing future monitoring of changes of the studied parameters on the same measuring points. The tests are carried out twice a year.

Measuring points are defined depending on their landfill distance:

- Landfill (ash),
- Impact zone: Zone 1 - up to one kilometre from the landfill, Zone 2 - between one and three kilometres from the landfill, Zone 3 - three to five kilometres from the landfill and
- Outside landfill impact zone (control points),

The content of heavy metals and other toxic elements in ash and soil was within normal ranges, below MPC for: chromium (Cr), cadmium (Cd), mercury (Hg), arsenic (As) and iron (Fe).

Data were evaluated based on the Regulation stipulating the systematic monitoring programme including soil quality indicators, indicators used to assess soil degradation risks and remediation programme development methodology (OG RS № 88/2010) and the Regulation stipulating permissible hazardous and harmful substances content in soil and irrigation water and their testing methods (OG RS № 23/94).

TENT A and B

In TENT A, ash is disposed by uniform discharge of a water and ash mixture (slurry) into the storage area (active cassette), while the remaining area is temporarily idle (passive cassette). Uniform ash disposal is achieved by changing the unloading points on the active cassette, as well as by switching from one to another cassette, every 5 to 6 years (transitional period). The landfill occupies a total area of 400ha. The entire area is divided into 3 cassettes. Disposal of ash and slag takes place in cassette III while cassette II has been idled since December 2016.

The total area of TENT B landfill is 600ha, out of which the disposal of ash and slag has so far been carried out on 400ha. Ash handling technology has changed from thin to thick slurry (on 4 October 2009, Unit B2 was connected to the new system, while Unit B1 was connected 30 May 2010). Cassette II is currently the active, while cassette I is passive. On TENT A and TENT B locations, ash and 26 soil samples were analysed.

Kolubara TPP

In 1979, the Kolubara TPP introduced a new ash separation system from flue gases, cyclones were replaced by electrostatic precipitators, and instead transporting the ash by a cable car, the hydraulic transport of ash and slag was introduced.

The reconstruction of ash handling system of Unit A5 Kolubara TPP in 2009 is part of a joint project, which also included a reconstruction of an electrostatic precipitator plants aimed at reducing dust emissions to the limit values.

Ash and slag landfill area is 78ha and has four cassettes. Two cassettes (1 and 2) were permanently re-cultivated by foresting in 2009.

At the Kolubara TPP, ash and 18 soil samples were analysed taken from the landfill.

Morava TPP

Retention of ash and slag is achieved by constructing peripheral embankments. In total there are eight bunds (cassettes), of which I, II, III, IV, V and Vi were biologically re-cultivated (grass sowing, planting of fruit and other plants), cassettes VII is the area where ash is used for cement plants needs, and cassette VII is active and ash and slag are disposed there. In 2014 overflow reservoir system is built where drainage water from ash and slag landfill is collected and then returned by pump system into excavator station for further ash and slag transport.

At the Morava TPP, ash and 18 soil samples were analysed taken from the landfill.

Table 48 contains measurement results evaluation in accordance with the above legislation. Data show pollutant content in ash as a potential pollution source, however data were not evaluated since the above mentioned legislation refers to soil not ash.

Table 48

NIKOLA TESLA TPPs BRANCH							
Content (mg/kg)	MPC	LV	RV	Content of pollutants in soil around ash landfill in 2016			
	mg/kg			TENT A	TENT B	Kolubara TPP	Morava TPP
Chromium (Cr)	100	100	380	**Ash:** 52.7 **Soil***:* Out of 30 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 5 samples, none exceeds LV, RV and MPC	**Ash**: 36.0 **Soil:** Out of 30 samples, number above LV - 1, RV - none and MPC - 1 **Soil, control zone:** Out of 4 samples none exceeds LV, RV and MPC **Zone across Sava:** Out of 2 samples, number above LV - 1, RV - none and MPC -1	**Ash**: 56-99 **Soil:** Out of 34 samples, number above LV - 2, RV - none and MPC - none **Control zone :** Out of 4 samples, number above LV - none, RV - none and MPC -none	**Ash**: 24-42 **Soil:** Out of 28 samples, number above LV - 5, RV - none and MPC - none **Control zone:** Out of 4 samples, number above LV - 1, RV - none and MPC - 1
Nickel (Ni)	50	35	*210*	**Ash***:* 69.8 **Soil:** Out of 30 samples, number above LV - 29, RV - none and MPC -29 **Soil, control zone:** Out of 5 samples, number above LV - 5, RV - none and MPC -5	**Ash**: 60.0 **Soil:** Out of 30 samples, number above LV - 26, RV - none and MPC -13 **Soil, control zone:** Out of 4 samples, number above LV - 4, RV - none and MPC - none **Zone across Sava:** Out of 2 samples, number above LV - 2, RV - none and MPC -2	**Ash**: 74; 129 **Soil:** Out of 34 samples, number above LV - 34, RV - 3 and MPC -16 **Soil, control zone:** Out of 4 samples, number above LV - 4, RV - none and MPC - none	**Ash**: 60-97 **Soil***:* Out of 38 samples, number above LV - 23, RV - 6 and MPC - 20 **Soil, control zone:** Out of 4 samples, number above LV - 4, RV - 3 and MPC -3
Lead (Pb)	100	85	530	**Ash**: <8 **Soil:** Out of 30 samples, number above LV - none, RV - none and MPC - none **Soil, control zone:** Out of 5 samples, none exceeds LV, RV and MPC	**Ash**: <8 **Soil***:* Out of 30 samples, none exceeds LV, RV and MPC **Soil, control zone.** Out of 4 samples, none exceeds LV, RV and MPC **Zone across Sava:** Out of 2 samples, none exceeds LV, RV and MPC	**Ash**:<10 **Soil***:* Out of 34 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 4 samples, none exceeds LV, RV and MPC	**Ash**: 0.9-12 **Soil:** Out of 28 samples, number above LV - 5, RV - none and MPC - 1 **Soil, control zone:** Out of 4 samples, number above LV - 1, RV - none and MPC - none

NIKOLA TESLA TPPs BRANCH							
Content (mg/kg)	MPC	LV	RV	Content of pollutants in soil around ash landfill in 2016			
				TENT A	TENT B	Kolubara TPP	Morava TPP
	mg/kg						
Copper (Cu)	100	36	190	**Ash**: 29.4 **Soil:** Out of 30 samples, number above LV - 8, RV - none and MPC - none **Soil, control zone:** Out of 5 samples, number above LV - 2, RV - none and MPC - none	**Ash**: 21.0 **Soil***:* Out of 30 samples, number above LV - 2, RV - none and MPC - none **Soil, control zone**: Out of 4 samples, none exceeds LV, RV and MPC **Zone across Sava:** Out of 2 samples, number above LV - 1, RV - none and MPC - none	**Ash**: 8; 33 **Soil***:* Out of 34 samples, number above LV - 8, RV - none and MPC - none **Soil, control zone:** Out of 4 samples, none exceeds LV, RV and MPC	**Ash**: 38-55. **Soil:** Out of 28 samples, number above LV - 10, RV - none and MPC -none **Soil, control zone:** Out of 4 samples, number above LV - 3, RV - none and MPC - none
Zink (Zn)	300	140	720	**Ash**:12.8 **Soil***:* Out of 30 samples, number above LV - 5, RV - none and MPC - none **Soil, control zone***:* Out of 5 samples, number above LV - 1, RV - none and MPC - none	**Ash**: 8 **Soil***:* Out of 30 samples, number above LV - 2, RV - none and MPC - none **Soil, control zone**: Out of 4 samples, none exceeds LV, RV and MPC **Zone across Sava:** Out of 2 samples, number above LV - 1, RV - none and MPC - none	**Ash:** 42; 47 **Soil:** Out of 34 samples, number above LV - 4, RV - none and MPC - none **Soil, control zone**: Out of 4 samples, none exceeds LV, RV and MPC	**Ash:**58-174 **Soil:** Out of 28 samples, number above LV - 15, RV - none and MPC - none **Soil, control zone:** Out of 4 samples, number above LV - 2, RV - none and MPC –none.
Cadmium (Cd)	3	0.8	12	**Ash** :<0.4 **Soil**: Out of 30 samples, number above LV - 16, RV - none and MPC - none **Soil, control zone**: Out of 5 samples, number above LV - 1, RV - none and MPC - none	**Ash**: <0.4 **Soil:** Out of 30 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 4 samples, none exceeds LV, RV and MPC **Zone across Sava:** Out of 2 samples, none exceeds LV, RV and MPC	**Ash**: <2 **Soil***:* Out of 34 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 4 samples, none exceeds LV, RV and MPC	**Ash**: <0.2 **Soil:** Out of 28 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 4 samples, none exceeds LV, RV and MPC

NIKOLA TESLA TPPs BRANCH							
Content (mg/kg)	MPC	LV	RV	Content of pollutants in soil around ash landfill in 2016			
	mg/kg			TENT A	TENT B	Kolubara TPP	Morava TPP
Mercury (Hg)	2	0.3	10	**Ash:** <0.1 **Soil:** Out of 30 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 5 samples, none exceeds LV, RV and MPC	**Ash** :<0,1 **Soil:** Out of 30 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 4 samples, none exceeds LV, RV and MPC **Zone across Sava:** Out of 2 samples, none exceeds LV, RV and MPC	**Ash**: <0.1;0.1 **Soil**: Out of 34 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 4 samples, none exceeds LV, RV and MPC	**Ash**: <0.2 **Soil:** Out of 28 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 4 samples, none exceeds LV, RV and MPC
Arsenic (As)	25	29	55	**Ash**: 23 **Soil***:* Out of 30 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 5 samples, none exceeds LV, RV and MPC	**Ash**: 22.2 **Soil:** Out of 30 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 4 samples, none exceeds LV, RV and MPC **Zone across Sava:** Out of 2 samples, none exceeds LV, RV and MPC	**Ash:** 3.5 – 36.8 **Soil:** Out of 34 samples, number above LV - 8, RV - 1 and MPC - 3 **Soil, control zone:** Out of 4 samples, none exceeds LV, RV and MPC	**Ash**: 65-181 **Soil***:* Out of 28 samples, number above LV - 4, RV - none and MPC - 3 **Soil, control zone:** Out of 4 samples, none exceeds LV, RV and MPC
Total Boron (B)	50			**Ash:** 0.70 **Soil:** Out of 30 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 5 samples, none exceeds LV, RV and MPC	**Ash**: 0.4 **Soil***:* Out of 30 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 4 samples, none exceeds LV, RV and MPC **Zone across Sava:** Out of 2 samples, none exceeds LV, RV and MPC	**Ash:** < 0.7- 0.7 **Soil***:* Out of 34 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 4 samples, none exceeds LV, RV and MPC	**Ash:** < 0.7 **Soil***:* Out of 28 samples, none exceeds LV, RV and MPC **Soil, control zone:** Out of 4 samples, none exceeds LV, RV and MPC

3.2.5 Environmental Noise Measurements

During 2016 living environment noise levels in the TENT Branch area were measured by the Transportation Institute CIP (TENT A, TENT B and TEK) and Occupational Safety Institute, jsc Novi Sad (TEM).

Noise levels were measured on four measuring points around each plant. Measurement points are distributed in different areas, at different distances from the plants. At the order of the inspection, noise was measured at two points in TENT A and TENT B, the closest one to the residential area (table 45 for TENT A measuring points

3 and 4 and for TENT B measuring points 1 and 2). The remaining to measuring points were at the border of the property, along the inner side of the fence (as all four measuring points on TEK and TEM). Measurements were conducted during the evening and night in line with SRPS ISO 1996-1 and SRPS ISO 1996-2. Ultimate objective of the above measurements was to determine noise levels indicated as the measured equivalent levels.

Annual Environmental Noise Levels Reports for each TENT Branch organisational unit are made available to the relevant inspector upon request. Environmental noise levels are also presented in an Environmental Report prepared each year for every organisational unit.

Noise during thermal energy generation is created by operation of the following plants: mills, turbines, flue gas fan while occasionally during unit operation disturbances (boiler), noise is created by when safety valves are turned on, lasting up to 1` minutes.

Table 49 shows the measured noise levels in 2016 for the Nikola Tesla TPPs Branch.

Local governments of Lazarevac (Belgrade City), Obrenovac and Svilajnac have not carried out acoustic zoning in accordance with the Environmental Noise Protection Act (OG RS № 36/09 and 88/10). Due to the lack of clearly limited acoustic zones it was not possible to accurately determine the measuring points' positions, as well as the limit values for these measuring points. Therefore, TENT's legal compliance cannot be assessed.

Since the monitored locations were not acoustically zoned, Transportation Institute CIP indicated in its Report that for the given measuring points no noise indicators limit values were provided. Acoustic zone for the considered location was identified in line with Regulation stipulating acoustic zones identification methodology (OG RS № 72/2010): Zone 6 – Industrial, storage, service areas and transport terminals without residential buildings bordering Zone 5 – City centre, trading, crafts, administrative zones containing flats, zones along motorways, state and city roads. Noise indicators limit values in open areas for Zone 5 in line with the above Regulation for day and evening is 65 dB (A) and night 55 dB (A).

Results obtained by measurements were compared with the prescribed noise levels for thermal power plants during day, evening and night.

Table 49

NIKOLA TESLA TPPs BRANCH						
Noise Levels in 2016 (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 areas**			**Day and evening**	**Night**
					35	30
		Open areas	Areas for recreation, hospital zones and rehabilitation centres, cultural and historical sites, large parks		50	40
			Tourist areas, camps and school zones		50	45
			Purely residential areas		55	45
			Purely residential areas, trading-residential areas and children's playgrounds		60	50
			City centre, trading, crafts, administrative zones containing flats, zones along motorways, state and city roads		65	55
			Industrial, storage and service areas and transport routes without residential buildings		Noise at the boundary of this zone may not exceed the noise limit values of the other zone	
Measuring points		**TENT A**		**TENT B**	**Kolubara A TPP**	**Morava TPP**
Day	**1**	56,4		67,0	49,55	56,5
	2	59,6		58,4	38,20	61,3
	3	54,0		57,4	45,40	57,0
	4	57,4		58,4	46,05	51,5

Evening	**1**	56,7	64,4	54,70	58,3
	2	58,1	55,7	40,30	64,6
	3	53,9	52,3	49,00	56,8
	4	51,8	47,9	49,00	51,9
Night	**1**	57,4	62,0	51,50	58,3
	2	57,8	57,1	39,95	62,0
	3	53,9	52,2	46,60	56,5
	4	50,9	47,7	50,15	51,4

3.2.6 Waste

Waste created in 2016 is shown in Table 50, while waste quantities given to the authorized operators in 2016 are shown in Table 50a.

Table 50

No.	RULEBOOK ON WASTE CATEGORIES, TESTING AND CLASSIFICATION *"Official Gazette of RS", no. 56/2010 dated 10.8.2010.*	INDEX NUMBER	UNIT	NIKOLA TESLA TPPs BRANCH					NOTE
				TENT A	TENT B	Kolubara TPP	Morava TPP	TOTAL TENT Branch Obrenovac	
				GENERATED WASTE QUANTITIES					
1	Used printer cartridges other than those indicated under 08 03 17	08 03 18	t	0,000	0,100	0,000	0,000	**0,100**	Waste cartridges
2	Coal ash and slag	10 01 02/ 10 01 01	t	2.355.054,17	1.352.618,93	219.382,01	34.247,00	**3.961.302,110**	Coal ash and slag
3	Spent waxes and greases	12 01 12*	t	1,240	0,000	0,000	0,000	**1,240**	Waste greases
4	Waste mixed used oils (hydraulic, motor, for insulation and heat transfer)	13 01 13*/ 13 02 08*/ 13 03 10*	t	34,950	31,040	9,680	9,120	**84,790**	Waste mixed used oils
5	Transformer oil with PCB	13 03 01*	t	0,000	0,000	37,821	3,630	**41,451**	Transformer oil with PCB
6	Other fuels- including mixtures	13 07 03*	t	14,320	0,000	0,000	0,000	**14,320**	Waste sludge and fuel from reservoir
7	Other solvents of solvent mixure	14 06 03*	t	1,960	0,077	0,000	0,000	**2,037**	Waste solvents and solvent mixures
8	Metal packaging	15 01 04	t	0,000	0,000	0,000	2	**2**	Waste FP equipment
9	Packaging with residue of hazardous substances or contaminated with hazardous substances (PVC, metal, etc.)	15 01 10*	t	0,017	0,311	0,000	0,000	**0,328**	Waste contaminated glass packaging
10			t	6,239	0,639	0,117	0,000	**6,995**	Waste chemicals contaminated PVC packaging
11			t	7,095	5,330	1,340	3,500	**17,265**	Waste oil and lubricants metal packaging

12	Metal packaging containing dangerous solid porous matrix (e.g., asbestos), including empty bottles under pressure	15 01 11*	t	0,000	0,000	0,000	4	**4**	Waste gas bottles
13	Absorbent, filter materials, wiping cloths, protective clothing contaminated by hazardous substances	15 02 02*	t	10,565	0,000	0,195	0,200	**10,960**	Waste wiping cloth with oil and fuel oil
14			t	0,000	0,200	0,000	0,330	**0,530**	Waste oily filters
15			t	12,315	1,560	1,020	0,000	**14,895**	Waste dessicants with oil and fuel oil
16	Absorbent, filter materials, wiping cloths, protective clothing other than those indicated under 15 02 02	15 02 03	t	0,000	0,050	0,000	0,000	**0,050**	Waste filters – not dangerous
17	Waste tires	16 01 03	t	8,080	0,860	0,000	2,500	**11,440**	Waste tires
18			t	36,500	38,380	2,500	13,800	**91,180**	Waste rubber conveyor belt
19	Waste vehicles not containing liquids nor other components	16 01 06	t	0,000	0,000	0,000	0,860	**0,860**	Waste vehicles not containing hazardous components
20	Mercury-containing components	16 01 08*	t	0,002	0,000	0,000	0,000	**0,002**	Mercury compound
21			t	0,457	0,000	0,000	0,000	**0,457**	Waste thermometers, fluorescent tubes and other mercury-containing waste
22	PCB-containing transformers and capacitors	16 02 09*	t	0,000	0,000	0,000	9,334	**9,334**	Waste PCB transformers and transformes PCB oil
23	Discarded equipment containing hazardous components other than those indicated under 160209 and 16012	16 02 13*	t	0,000	0,000	0,000	8,780	**8,780**	Waste oil transformers and transformer oil
24			t	18,900	9,720	0,500	6,740	**35,860**	Electrical and electronic devices waste
25	Non-organic waste containing hazardous substance	16 03 03*	t	0,000	0,730	0,000	0,000	**0,730**	Non-organic waste containing hazardous substance-liquid(H8/H14)
26	Organic waste containing hazardous substance	16 03 05*	t	0,000	2,160	0,000	0,000	**2,160**	Organic waste containing hazardous substance -liquid(H4/H14)
27			t	0,000	2,280	0,000	0,000	**2,280**	Organic waste containing hazardous substance -liquid(H15)
28			t	0,000	0,680	0,000	0,000	**0,680**	Organic waste containing hazardous substance -solid(H15)
29			t	0,000	0,060	0,000	0,000	**0,060**	Organic waste containing hazardous substance -solid(H15),(Y40)
30	Laboratory chemicals containing hazardous substances	160506*	t	0,000	4	0,000	0,000	**4**	Waste chemicals

31	Lead batteries	160601*	t	14,200	12,220	0,080	0,730	**27,230**	Waste and residue of lead batteries
32	Nickel-cadmium batteries	160602*	t	0,010	0,310	0,000	0,000	**0,320**	Ni - Cd batteries
33	Wood	170201	t	1,130	700	91,650	180,000	**972,780**	Waste wood
34	Plastic	170203	t	1,340	0,900	0,452	0,000	**2,692**	Waste mixed plastic
35	Copper, bronze, brass	170401	t	3,800	0,740	0,000	0,000	**4,540**	Copper and brass waste and residue
36			t	0,120	60,540	0,430	4,260	**65,350**	Waste copper cables
37			t	3,700	3,240	0,000	17,000	**23,940**	Aluminum sheet
38	Iron and steel	170405	t	811,090	577,790	72,770	270,000	**1.731,650**	Scrap iron over 5mm
39			t	230,170	219,700	47,950	942,820	**1.440,640**	Scrap iron up to 5mm
40			t	0,000	117,580	21,890	0,000	**139,470**	Scrap steel sheet
41			t	102,170	24,560	0,000	3,000	**129,730**	Scrap galvanized and black sheet
42			t	41,040	0,000	0,000	208,780	**249,820**	Waste collecting electrodes
43			t	7,280	46,600	0,000	120,000	**173,880**	Waste Fe cells
44			t	118,400	225,000	28,900	29,200	**401,500**	Waste impact plates
45			t	29,000	49,000	0,000	0,000	**78,000**	Waste steamline tubes
46			t	3,770	0,000	0,000	0,000	**3,770**	Waste boiler tubes
47			t	1,930	0,800	33,140	3,100	**38,970**	Waste cast iron
48			t	454,940	5,000	0,000	0,000	**459,940**	Iron and steel waste and residue
49			t	4,960	0,000	0,000	0,570	**5,530**	Waste railway tracks
50			t	0,000	0,730	0,000	0,000	**0,730**	Empty fire protection equipment
51			t	19,500	0,000	0,000	0,000	**19,500**	Waste rail accessories
52			t	0,000	0,000	0,000	2,800	**2,800**	Scrap steel sheet with traces of wool
53			t	0,000	0,000	0,000	5,240	**5,240**	Scrap steel sheet with traces of concrete
54			t	0,000	0,000	0,000	2,100	**2,100**	Scrap steel sheet with traces of slag
55			t	0,000	0,000	0,000	24,100	**24,100**	Scrap steel casting (Parts of the turbine)
56	Mixed metals	170407	t	0,000	0,000	5	0,000	**5**	Scrap metal shaving
57			t	0,000	0,000	0,000	2	**2**	Waste mixed metals (dry transformers)
58			t	20,740	184,200	22,000	1,000	**227,940**	Waste mixed metals

59	Metal waste contaminated with hazardous substances	170409*	t	1,380	0,000	0,000	0,000	**1,380**	Fuel oil contaminated sheet
60			t	0,000	0,000	0,000	27,880	**27,880**	Steel tanks contaminated with hazardous substances
61	Soil and rock containing hazardous substances	170503*	t	0,000	0,000	0,000	0,000	**0,000**	Soil with crude oil
62			t	0,000	0,100	0,000	0,000	**0,100**	Soil and rock containing hazardous substances (H15)
63			t	0,000	0,000	0,000	0,000	**0,000**	Oil contaminated crushed oil
64	Asbestos-containing insulation materials	170601*	t	0,000	1,550	0,000	33,700	**35,250**	Waste asbestos
65	Insulating materials other than those indicated under 170601 and 170603	170604	t	0,000	1,000	2,000	0,000	**3,000**	Insulating braids
66			t	510,420	528,780	46,260	108,000	**1.193,460**	Waste mineral rock wool
67	Mixed construction and demolition waste	170904	t	30.000,000	0,000	0,000	0,000	**30.000,000**	Mixed construction waste
68	Saturated or spent ion-exchange resins	190905	t	22,000	21,100	3,000	0,000	**46,100**	Waste regenerated ion mass
69	Minerals (e.g. sand and rock)	191209	t	0,000	0,000	150,000	0,000	**150,000**	Waste white sand
70	Other waste (including mixed materials)	191212	t	0,000	0,000	0,000	0,400	**0,400**	Waste fire hose
71	Fluorescent tubes and other mercury-containing waste	200121*	t	0,210	0,200	0,100	0,180	**0,690**	Waste fluorescent tubes
72			t	0,020	0,100	0,050	0,000	**0,170**	Waste mercury lamps and thermometers
TOTAL: NIKOLA TESLA TPP BRANCH			t	**2.387.610,130**	**1.355.498,847**	**219.960,855**	**36.298,654**	**3.999.368,486**	

Table 50a

No.	RULEBOOK ON WASTE CATEGORIES, TESTING AND CLASSIFICATION *Rulebook published in "Official Gazette of RS", no. 56/2010 dated 10.8.2010.*	INDEX NUMBER	UNIT	NIKOLA TESLA TPPs BRANCH					NOTE
				TENT A	TENT B	Kolubara TPP	Morava TPP	TOTAL TENT Branch Obrenovac	
				WASTE QUANTITIES GIVEN TO OPERATORS					
1	Coal ash and slag	100102/ 100101	t	0,000	115.395,74	19.884,89	25.265,22	**160.545.85**	Coal ash and slag
2	Waste mixed used oils (hydraulic, motor, for insulation and heat transfer)	130113*/ 130208*/ 130310*	t	34,950	31,960	9,680	9,120	**85,710**	Waste mixed used oils
3	Transformer oil with PCB	130301*	t	0,000	0,000	37,821	3,630	**41,451**	Waste transformer oil with PCB
4	Other fuels- including mixtures	130703*	t	14,320	0,000	0,000	0,000	**14,320**	Waste sludge and fuel from reservoir
5			t	0,000	0,000	0,000	0,000	**0,000**	Fuel oil contaminated soil and branches
6	Waste not otherwise specified - oils	130899*	t	0,000	0,000	0,165	0,000	**0,165**	Waste fuel oil
7			t	0,000	0,000	0,000	0,000	**0,000**	Lubrication and regulation oil
8	Other solvents of solvent mixure	140603*	t	1,960	0,085	0,000	0,000	**2,045**	Waste solvents and solvent mixures
9	Metal packaging	150104	t	0,000	0,000	0,000	2,000	**2,000**	Waste FP equipment
10	Packaging with residue of hazardous substances or contaminated with hazardous substances (PVC, metal, etc.)	150110*	t	0,020	0,380	0,000	0,000	**0,400**	Waste contaminated glass packaging
13			t	7,109	0,897	0,000	0,000	**8,006**	Waste chemicals contaminated PVC packaging
14			t	8,095	5,250	0,540	0,000	**13,885**	Waste oil and lubricants metal packaging

15	Metal packaging containing dangerous solid porous matrix (e.g., asbestos), including empty bottles under pressure	150111*	t	0,000	0,000	0,000	4	**4**	Waste gas bottles
16	Absorbent, filter materials, wiping cloths, protective clothing contaminated by hazardous substances	150202*	t	10,045	0,100	0,195	0,000	**10,340**	Waste wiping cloth with oil and fuel oil
18			t	14,865	1,560	1,020	0,000	**17,445**	Waste dessicants with oil and fuel oil
20	Waste tires	160103	t	10,700	1,200	0,000	2,500	**14,400**	Waste tires
21			t	54,300	51,120	5,700	13,420	**124,540**	Waste rubber conveyor belt
22	Waste vehicles not containing liquids nor other components	160106	t	0,000	0,000	0,000	2,160	**2,160**	Waste vehicles not containing hazardous components
23	Mercury-containing components	160108*	t	0,005	0,000	0,000	0,000	**0,005**	Mercury compound
24			t	0,657	0,000	0,000	0,000	**0,657**	Waste thermometers, fluorescent tubes and other mercury-containing waste
25	PCB-containing transformers and capacitors	160209*	t	0,000	0,000	0,000	9,334	**9,334**	Waste PCB transformers and transformes PCB oil
27	Discarded equipment containing hazardous components other than those indicated under 160209 and 16012	16 02 13*	t	18,900	5,060	0,500	8,080	**32,540**	Electrical and electronic devices waste
33	Laboratory chemicals containing hazardous substances	160506*	t	0,012	0,000	0,000	0,000	**0,012**	Waste chemicals
34	Lead batteries	160601*	t	14,300	11,900	0,280	0,520	**27,000**	Waste and residue of lead batteries
38	Plastic	170203	t	5,480	4,680	0,840	0,000	**11,000**	Waste mixed plastic
39	Copper, bronze, brass	170401	t	0,620	0,000	0,000	0,000	**0,620**	Copper and brass waste and residue
40			t	0,000	60,540	1,360	6,260	**68,160**	Waste copper cables
42			t	3,700	0,000	0,260	17,400	**21,360**	Aluminum sheet
43	Iron and steel	170405	t	1.157,280	577,380	97,500	307,440	**2.139,600**	Scrap iron over 5mm
44			t	219,940	116,720	42,420	833,540	**1.212,620**	Scrap iron up to 5mm
45			t	1,520	112,200	16,740	0,000	**130,460**	Scrap steel sheet
46			t	110,540	4,500	0,000	2,100	**117,140**	Scrap galvanized and black sheet
47			t	81,700	0,000	0,000	208,780	**290,480**	Waste collecting electrodes
48			t	7,320	495,370	0,000	118,200	**620,890**	Waste Fe cells
49			t	123,500	201,620	28,700	67,560	**421,380**	Waste impact plates
50			t	32,140	48,640	0,000	0,000	**80,780**	Waste steamline tubes

51			t	181,380	0,000	0,000	0,000	**181,380**	Waste boiler tubes
52			t	2,480	0,000	42,980	3,100	**48,560**	Waste cast iron
53			t	454,940	0,000	0,000	0,000	**454,940**	Iron and steel waste and residue
54			t	0,000	0,000	0,000	5,040	**5,040**	Waste railway tracks
56			t	13,760	0,000	0,000	0,000	**13,760**	Waste rail accessories
57			t	0,000	0,000	0,000	2,800	**2,800**	Scrap steel sheet with traces of wool
58			t	0,000	0,000	0,000	5,240	**5,240**	Scrap steel sheet with traces of concrete
59			t	0,000	0,000	0,000	2,100	**2,100**	Scrap steel sheet with traces of slag
60			t	0,000	0,000	0,000	24,100	**24,100**	Scrap steel casting (Parts of the turbine)
63			t	16,120	124,100	0,000	0,000	**140,220**	Waste mixed metals
64	Metal waste contaminated with hazardous substances	170409*	t	1,380	0,000	0,000	0,000	**1,380**	Fuel oil contaminated sheet
65			t	0,000	0,000	0,000	27,880	**27,880**	Steel tanks contaminated with hazardous substances
66	Soil and rock containing hazardous substances	170503*	t	0,000	0,000	1,070	0,000	**1,070**	Soil with crude oil
67			t	0,000	0,100	0,000	0,000	**0,100**	Soil and rock containing hazardous substances (H15)
68			t	0,000	0,500	0,000	0,000	**0,500**	Oil contaminated crushed oil
69	Asbestos-containing insulation materials	170601*	t	0,000	1,240	0,000	59,560	**60,800**	Waste asbestos
71	Insulating materials other than those indicated under 170601 and 170603	170604	t	643,000	530,440	226,820	96,730	**1.496,990**	Waste mineral rock wool
72	Mixed construction and demolition waste	170904	t	33.000,000	0,000	0,000	0,000	**33.000,000**	Mixed construction waste
73	Saturated or spent ion-exchange resins	190905	t	48,170	17,280	0,000	0,000	**65,450**	Waste ion mass
74	Minerals (e.g. sand and rock)	191209	t	0,000	0,000	0,000	0,000	**0,000**	Waste white sand
75	Other waste (including mixed materials)	191212	t	0,000	0,000	0,000	0,000	**0,000**	Waste fire hose
76	Fluorescent tubes and other mercury-containing waste	200121*	t	0,210	0,260	0,000	0,000	**0,470**	Waste fluorescent tubes
77			t	0,020	0,080	0,000	0,000	**0,100**	Waste mercury lamps and thermometers
TOTAL			t	**36.295,438**	**117.800,902**	**20.399,481**	**27.107,814**	**201.603,635**	

3.3 Working Environment Monitoring, Safety and Health

Occupational Safety and Health Reports for 2016 include the following elements:

- **Working environment monitoring**
  - working environment noise measurements
- **Safety**
  - training
  - work injuries
- **Health**

3.3.1 Working Environment Monitoring

- **Working Environment Noise Measurements**

Working environment noise measurements are shown in Table 51.

Table 51

NIKOLA TESLA TPPs BRANCH			
Working environment noise in 2016			
Organisational unit	**Operating unit**	**Registered noise level (dB(A))**	**Permissible noise level (dB(A))**
Nikola Tesla A TPP	Boiler room	96	85
	Turbine hall	100.50	85
	Outside facilities (slurry station)	97.40	85
Nikola Tesla B TPP	Boiler room (level 0m, mill 18)	93.30	85
	Turbine hall (small turbine, level 9 m)	92.70	85
	Outside facilities (locksmith shop)	101.50	85
Railway transport	Storage areas and workshops (compressor station)	104	85
Kolubara TPP	Boiler room and main power facility (Unit A5, mills and generator)	87.00	85
	Outside facilities (mechanical – locksmith workshop)	103.30	85
	Supply (slurry station 161MW and 110MW)	91.70	85
Morava TPP	Boiler room	98.00	85
	Turbine hall (vehicle fleet, garage)	82.20	85
	Outside facilities (coal unloading)	77.90	85

3.3.2 Safety

- **Training**

Training of employees was carried out according to the Health, Safety and Fire Protection Training Programmes by organising lectures and exercises from the field of technical gases handling. Testing of professional competence and knowledge from the field of safety is carried out every three years.

Health, safety, environmental protection and emergency response training (according to Emergency Response Plans) and in force majeure cases - earthquakes, floods, uncontrolled wildfires, etc. were also carried out.

Table 52 shows the number of employees foreseen for training and the number of trained employees in 2016.

Table 52

NIKOLA TESLA TPPs BRANCH					
Training in 2016					
Organisational unit	**Number of employees**	**Foreseen for training**		**Trained**	
		№	**%**	**№**	**%**
Joint services	389	80	20,57	45	56,25
Nikola Tesla A TPP	634	160	25,24	661	413,13
Nikola Tesla B TPP	308	65	21,10	176	271,77
Kolubara TPP	304	145	47,70	315	217,24
Morava TPP	119	45	37,82	63	140,00
Railway transport	413	115	27,85	469	407,83
TOTAL: NIKOLA TESLA TPPs BRANCH	**2.167**	**610**	**28,15**	**1.729**	**283,44**

Note: Number of trained employees is higher than the number of employees who were sent to trainings because the same employees attend several different trainings.

- **Work injuries**

Table 53 provides work injuries data for 2016.

Table 53

NIKOLA TESLA TPPs BRANCH						
Work injuries in 2016						
Organisational unit	**Number of employees**	**Injuries – Number of employees ratio**				
		Easy	**Heavy**	**Fatalities**	**Total**	**%**
Joint services	389	2	1	1	4	1,03
Nikola Tesla A TPP	634	5	2	0	7	1,10
Nikola Tesla B TPP	308	3	0	0	3	0,97
Kolubara TPP	304	0	0	0	0	0,00
Morava TPP	119	2	1	0	3	2,52
Railway transport	413	9	3	0	12	2,91
TOTAL: NIKOLA TESLA TPPs BRANCH	**2.167**	**21**	**7**	**1**	**29**	**1,34**

3.3.3 Health

Medical examinations of employees working in high-risk workplaces is carried out once a year or once in two years in accordance with assessed risks.

Table 54 provides periodic examinations data verifying the work capability for 2016.

Table 54

NIKOLA TESLA TPPs BRANCH											
Work capability in 2016											
Organisational unit	**Number of employees**	**Periodical examinations**				**Work capability**					
		Referred to examination		**Examined**		**Capable**		**Limited capability**		**Not capable**	
		№	**%**	**№**	**%**	**№**	**%**	**№**	**%**	**№**	**%**
Common services	389	127	32.65	127	100.00	115	90.55	9	7.09	3	2.36
TPP Nikola Tesla A	634	550	86.75	546	99.27	474	86.81	56	10.26	16	2.93
TPP Nikola Tesla B	308	265	86.04	260	98.11	223	85.77	36	13.85	1	0.38

TPP Kolubara	304	240	78.95	228	95.00	181	79.39	44	19.30	3	1.32
TPP Morava	119	104	87.39	104	100.00	83	79.81	19	18.27	2	1.92
Rail transport	413	385	93.22	384	99.74	373	97.14	10	2.60	1	0.26
TOTAL: NIKOLA TESLA TPPs BRANCH	**2,167**	**1,671**	**77.11**	**1,649**	**98.68**	**1,449**	**87.87**	**174**	**10.55**	**26**	**1.58**

In 2016, there was one fatality in TENT branch.

On 15th January 2016, at 18.40, Aleksandar Maksimovic, employed as: Security guard 1, was fatally injured. The accident occurred at his way to work, when a car hit the employee who was walking over the overpass and caused fatal injury.

3.4 Public complaints

There were no public complaints in 2016.

4. KOSTOLAC TPPs & OCMs BRANCH

Kostolac TPPs & OCMs branch comprise the following organisational units:

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

4.1 Overview and Status of Permits

Table 55 provides an overview of obtained permits and applications for new permits or extension of existing ones in 2016 – Kostolac TPPs & OCMs Branch.

Table 55

KOSTOLAC TPPs & OCMs BRANCH			
Overview and status of permits in 2016			
Organisational unit	**Obtained permits and approvals (number and date)**	**Applications for new or extension of existing permits**	**Note**
TPP KOSTOLAC A			
TPP KOSTOLAC B	1. Building permit for the reconstruction and extension of 110 kV RP Drmno. № 351-02-00079/2016-07 dated 2.5.2016. 2. Building permit for the construction of Kostolac dock. № 351-02-00174/2016-07 dated 25.11.2016.		

4.2 Monitoring and Environmental Impact

4.2.1 Air Quality Measurements

Air quality monitoring in the vicinity of the Kostolac TPPs & OCMs Branch organisational units is carried out as part of the monitoring financed and organized by the relevant organizational units. It should be noted that the air quality monitoring is within the competence of the legislator; therefore air quality monitoring is carried out as part of the national automatic air quality monitoring network, comprising measuring points located around the Kostolac TPPs & OCMs Branch.

The national automatic air quality monitoring network also includes a measuring point in the Kostolac town centre. Depending on the measuring point forming the national network, SO_2, NO_2, NO, NO_x CO and weather parameters (wind speed and direction, temperature, relative air humidity, atmospheric pressure) are measured.

Air quality measurements in the area of the Kostolac TPPs & OCMs Branch have been performed internally for over 30 years by the Environmental Department not authorised for total particulate matter and SO_2 measurements (Environmental Management Division Laboratory accreditation activities are in progress). Since 2008 air quality measurements in the area of the Kostolac TPPs & OCMs Branch have been performed by accredited laboratories.

During 2016, air quality measurements in the Kostolac TPPs & OCMs Branch area were performed by City Institute of Public Health, Belgrade (from January to April) and Pozarevac Public Health Institute (from April to December). Total particulate matter (TPM), sulphur oxides (SO_2), suspended particulate matter (PM_{10}), soot and heavy metals (Pb, Cd, As and Ni) were identified by analysing samples collected within one month for TPM, while SO_2 concentrations were determined by analysing 24-hour air samples.

SO_2 and soot content was measured on 4 measuring points, as follows:

1. Klenovnik – Klenovnik Local Community
2. Stari Kostolac – Primary school
3. Drmno – Medical centre
4. Cirikovac – Cirikovac OCM

TPM content was measured on 4 measuring points, as follows:

1. Klenovnik - Klenovnik Local Community
2. Stari Kostolac - Primary school
3. -1. Drmno – Georad company
4. Cirikovac – Cirikovac OCM

Suspended particulate matter - PM_{10} on the following measuring points:

I Cirikovac – Cirikovac OCM administrative building
II Drmno – Georad company
III Kostolac – Prim company
IV Klenovnik – Kostolac Usluge Klenovnik

Kostolac TPPs & OCMs Branch air quality report financed by the company analyses the monitoring data.

Table 56 shows the 2016 air quality data analysis, in terms of their compliance with legal requirements, for Kostolac TPPs & OCMs Branch organisational units.

Table 56

<table>
<tr><td colspan="8">Kostolac TPPs and OCMs Branch</td></tr>
<tr><td colspan="8">Air quality in 2016</td></tr>
<tr><td colspan="8">Legal compliance (number of data or days exceeding the defined values)</td></tr>
<tr><td colspan="2" rowspan="2">Air quality indicators</td><td colspan="2">TPM content (mg/m²/day)</td><td colspan="2">Soot (μg/m³)</td><td colspan="2">SO₂ concentration (μg/m³)</td></tr>
<tr><td colspan="2">Maximum permissible value (MPV)</td><td colspan="2">Maximum permissible concentration (MPC)</td><td>LV</td><td>TV</td><td>LT</td></tr>
<tr><td colspan="2">Averaging period</td><td colspan="2"></td><td colspan="2"></td><td>350</td><td>350</td><td>0</td></tr>
<tr><td colspan="2">*One day</td><td colspan="2"></td><td colspan="2">50</td><td colspan="2">125</td><td>-</td></tr>
<tr><td colspan="2">**One month</td><td colspan="2">450</td><td colspan="2"></td><td colspan="3"></td></tr>
<tr><td colspan="2">***Calendar year</td><td colspan="2">200</td><td colspan="2">50</td><td colspan="2">50</td><td>-</td></tr>
<tr><td colspan="2"></td><td colspan="2">-</td><td colspan="2"></td><td colspan="3">No measurements</td></tr>
<tr><td>*</td><td></td><td colspan="2">-</td><td colspan="2">No exceedance</td><td colspan="3">1 day on measuring point Klenovnik

1 day on measuring point Drmno</td></tr>
<tr><td rowspan="4">**</td><td>1</td><td colspan="2">1 month June</td><td colspan="2" rowspan="4">-</td><td colspan="3" rowspan="4">No exceedance</td></tr>
<tr><td>2</td><td colspan="2">No exceedance</td></tr>
<tr><td>3</td><td colspan="2">No exceedance</td></tr>
<tr><td>4</td><td colspan="2">2 months June and July</td></tr>
<tr><td rowspan="4">***</td><td>1</td><td colspan="2">No exceedance</td><td colspan="2" rowspan="4">No exceedance</td><td colspan="3" rowspan="4">No exceedance</td></tr>
<tr><td>2</td><td colspan="2">No exceedance</td></tr>
<tr><td>3</td><td colspan="2">No exceedance</td></tr>
<tr><td>4</td><td colspan="2">No exceedance</td></tr>
<tr><td colspan="2">Air quality indicators</td><td colspan="6">Particulate matter PM₁₀ (μg/m³)</td></tr>
<tr><td colspan="2">Averaging period</td><td colspan="2">LV</td><td colspan="2">TV</td><td colspan="3">LT</td></tr>
<tr><td colspan="2">*One day</td><td colspan="2">50</td><td colspan="2">50</td><td colspan="3">0</td></tr>
</table>

***Calendar year		40	40	0
*	I	10 days out of 90 days	9 days out of 90 days	
	II	16 days out of 92 days	16 days out of 92 days	
	III	11 days out of 93 days	10 days out of 93 days	
	IV	8 days out of 63 days	8 days out of 63 days	

LV – limit value; TV – tolerance value; LT – limit tolerance

4.2.2 Air Emission Measurements

Total sulphur content of the Kostolac lignite used for combustion in the Kostolac TPPs and OCMs Branch is around 1.3%.

Flue gases containing sulphur dioxide, nitrogen oxides, carbon dioxide and dust, after treatment, i.e. dust separation by electrostatic precipitators are emitted into the air over stacks:

Kostolac A TPP

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

Kostolac B TPP

- 250m Units B1 (1 ESP) and B2 (1 ESP)

- **Individual air emissions measurements**

During 2016 individual air pollutants emission measurements were carried out on the Kostolac A1 TPP (boilers 1 and 2), Kostolac A2 TPP, Kostolac B1 TPP and Kostolac B2 TPP units. The Monitoring Programme included flue gas conditions measurement (temperature, pressure and humidity), flow rate, oxygen content and mass concentrations, as well as emission factors for sulphur dioxide (SO_2), nitrogen oxides (NO_x (NO_2)), carbon monoxide (CO), chlorine compounds (HCl) fluorine compounds (HF) and dust. In addition, technical and elementary coal analysis as well as ash chemical analysis were conducted at the same time.

Measurements results with regard to the Kostolac B1 TPP Unit:

NO_x emission ranged from 225 to 290 mg/Nm^3 which is below ELV (500 mg/Nm^3) under current legal requirements.

Dust emission measurements are given in Table 57. They are above ELV (50 mg/Nm^3) under current legal requirements.

Table 57

Kostolac TPPs and OCMs Branch							
Dust emission measurements in 2016							
Kostolac B1 TPP							
Dust (mg/Nm^3)	Left ESP	72.37	74.50	67.81	70.93	74.15	73.05
	Right ESP	86.08	94.60	87.80	89.39	81.37	85.41

Table 58 provides an overview of individual pollutants air emission measurements for the Kostolac TPPs and OCMs Branch - Kostolac A TPP and Kostolac B TPP for 2016.

Table 58

Kostolac TPPs and OCMs Branch			
Individual Air Pollutants Emission Measurements for 2016			
Mass concentrations of pollutants (mg/Nm^3)			
Organisational unit	**Kostolac A TPP**	**Kostolac B TPP**	**ELV**

	A1		A2	B1	B2		
Heat capacity MWt	358		689	1,077.5	1,077.5		
Boiler	B1	B2				**ELV[1]**	**ELV[2]**
SO_2	5,835	5,774	5,685	5,675	5,404	400	400
NO_x (NO_2)	322	238	437	248	521	500	500
CO	46	1,618	13	217	41	250	-
Dust	41	70	93	80	125	50	50

[1]Regulation stipulating limit values of air pollutants emission from Large Combustion Plants (OG RS № 6/2016)
[2]Directive 2001/80/EC – limitation of emissions of certain pollutants into the air from Large Combustion Plants

Table 59 contains the analysis of individual air pollutants measurements data for 2016 in terms of their legal compliance related to Kostolac TPPs and OCMs Branch organisational units.

Table 59

Kostolac TPPs and OCMs Branch			
Legal compliance in 2016 – Air Pollutants Emission			
Organisational units	**Dust**	**SO_2**	**NO_x (NO_2)**
KOSTOLAC A TPP	Emission is above ELV (RS and EU) on TEKO A1 and TEKO A2 units	Emission is above ELV (RS and EU) on all units	Emission is below ELV (RS and EU) on TEKO A1 and TEKO A2 units
KOSTOLAC B TPP	- Emission is above ELV on B1 unit (RS and EU) - above ELV on B2 unit (RS and EU)		- emission is below ELV for unit B1 (RS and EU) - above ELV for unit B2 (RS and EU)

NOTE: pursuant to the Regulation stipulating air pollutants emission limit values, as per the Article 5 they do not need to comply with individual ELV if covered by preliminary application for National plan for reduction of emissions from old large combustion plants (Kostolac A TPP units are covered by this plan) as of the day of effectiveness of the mentioned regulation.

Legal compliance is evaluated by comparing the measured values of air pollutants emissions with the emission limit values, ELVs, prescribed by the Regulation stipulating limit values of air pollutants emission from Large Combustion Plants (OG RS № 6/2011) and the Large Combustion Plants Directive 2001/80/EC.

- **Continuous air emissions measurements**

Between 2006 and 2014 devices for continuous measurement of air pollutants emissions (SO_2, NO_x, CO and dust) were installed at the Kostolac TPPs and OCMs Branch – Kostolac B TPP units and (SO_2, NO_x and dust) at the Kostolac TPPs and OCMs Branch – Kostolac A 2 unit, while at the Kostolac TPPs and OCMs Branch – Kostolac A 1 unit, only equipment for continuous measurement of particles was installed. Procurement of equipment for continuous measurement of emission of CO gases for Kostolac A 2 TPP unit and (SO_2, NO_X, CO) for Kostolac A 1 TPP is envisaged. In addition to these basic devices, data acquisition and processing equipment was also installed and additional measurement devices: oxygen (O_2) content and humidity as well as temperature, pressure and flue gases flow volume.

Kostolac A TPP

During the 2015 overhaul, flue gas flow measurement was installed, together with the wet O_2 measurement, while the damaged dust emission measurement device was replaced. In addition, a new measurement data acquisition and reporting (daily, monthly and annual level) software was installed in cooperation with the Mihajlo Pupin Institute.

The 2016 procurements include the certification of the entire system according to QAL 2 and QAL 3 procedures. Contractors has been selected. The start of works has been planned for the first quarter of 2017. After obtaining these certificates, the plan is to obtain approval for independent emissions measurements from stationary sources.

Kostolac B TPP

Kostolac B TPP comprises two identical units, each of 350 MW. Each unit has its own electrostatic precipitator with two branches. Continuous emission measurement devices for SO_2, NO_X, CO and dust, as well as O_2 content and flue gas flow rate were installed on the flue duct behind the electrostatic precipitator, before ID fan.

New equipment for flue gas and dust emissions measurement has been installed in newly constructed desulphurization plant in Kostolac B (B1 and B2) TPP units downstream of stack desulphurization plant. Trial run of the plant has been foreseen for the end of February or beginning of March 2017. After the trial run, guarantee measurements will be done. Once the guarantee measurements have been completed, QAL 2 and QAL 3 measurements will be done and request for continuous measurements approval will be submitted to the Ministry of Agriculture and Environmental Protection.

Table 60 summarises continuous air emissions measurement equipment of different units according to the Kostolac TPPs and OCMs Branch organisational units in 2016.

Table 60

Kostolac TPPs & OCMs Branch									
Equipment level in 2016 – Continuous air emissions measurement									
Analysers		**Dust**	**Pollutants**		**Parameters**				
			Gases		**Content**			**p and t**	**Flow rate**
			SO_2, NO_x(NO_2), CO	**HCl and HF**	**Humidity**	**CO_2**	**O_2**		
KOSTOLAC A TPP	**A1**	On flue ducts behind every ESP, after ID fan, A1: boiler 1 (ESP1) and boiler 2 (ESP2) Total:2 devices	Planned	-	-	-	Planned		Planned
	A2	A2: ESP left and right side (branch), on the stack, at the level of 63 m, external stack lining. Platform is located on the level of around 61m. Stack height – 110m. Total: 3 measuring devices	One measuring device installed (except for CO)	-	-	-	Devices installed on the stack, Total: 1 device In 2015, wet O2 measurement devices installed, including flue gas flow rate on the stack.		Measuring of this unit exists
KOSTOLAC B TPP	**B1**	Measuring devices installed on each unit along flue ducts behind each ESP, before ID fan. Total: 2 measuring devices: B1: ESP1 and B2: ESP2	Devices installed on *each* unit after ESP, before ID fan. Total: 2 sets	-	-	-	Measuring devices installed on *each* unit after ESP, before ID fan. Total: 2 sets		2 measuring devices on each of the units
	B2			-	-	-			

Data acquisition and processing equipment is an integral part of this equipment. HF and HCl continuous measurement equipment has not been installed on any of the Kostolac TPP units.

Software performing statistical analysis of continuous measurements data (SO_2, NO_x (NO_2), CO and dust) is in operation on Kostolac B TPP units. New flue gas and dust emission monitoring equipment has been installed on the stack after the FGD plant and new data processing software package has been installed, as well.

Continuous measurements will allow the use of the Gaussian Distribution Model to monitor the transport of pollutants in space and time. Integrated system will enable the systematic monitoring of Kostolac TPP air quality impacts, objective and timely notification of the public on air quality in the surrounding area, which is a prerequisite for taking appropriate mitigation measures.

- **Annual air emissions**

Table 61 provides an overview of emissions of air pollutants: dust, SO_2, NO_2 and CO_2 for the Kostolac TPP Branch in 2016.

Calculation of annual emissions of dust, SO_2 and NO_2 was performed based on measured mass concentrations data, flue gas volume flow rate and unit operating hours, while in the case of CO_2 (shown in Table 61a) based on fuel consumption data and CEF - correction emission factor.

Table 61

Kostolac TPPs and OCMs Branch					
Air emissions (t/year) **in 2016**					
Organisational unit	**Dust**	**SO_2**	**NO_x (NO_2)**	**CO**	**CO_2**
Kostolac A TPP					
A1	121	15.108	726	2.221	771.485
A2	734	44.683	3.428	104	1.663.650
TOTAL: Kostolac A	**855**	**59.791**	**4.154**	**2.325**	**2.435.135**
Kostolac B TPP					
Б1	932	66.441	2.930	2.123	2.491.501
Б2	1.410	61.200	5.890	461	2.584.488
TOTAL: Kostolac B	**2.342**	**127.641**	**8.820**	**2.584**	**5.075.989**
TOTAL: Kostolac TPPs and OCMs Branch	**3.197**	**187.432**	**12.974**	**4.909**	**7.511.124**

Table 61a

Kostolac TPPs and OCMs Branch		
Fuel consumption in 2016		
Fuel	**Unit**	**Fuel consumption (t/year)**
KOSTOLAC A TPP		
COAL	A1 - K1	
	A1 - K2	
	A1	921.864
	A2	1.990.553
	TOTAL	**2.912.417**
OIL	A1 - K1	
	A1 - K2	
	A1	583
	A2	702
	TOTAL	**1.285**
KOSTOLAC B TPP		
COAL	B1	2.937.407
	B2	3.059.865
	TOTAL	**5.997.272**
HEAVY FUEL OIL	B1	2.972
	B2	1.899
	TOTAL	**4.871**

- **Harmonisation of air emissions with EU legislation**

Dust

To date electrostatic precipitators were reconstructed on all Kostolac TPP units: on units A1 and A2 - Kostolac A TPP, units B1 and B2 - Kostolac B TPP. Guaranteed mass concentration for dust defined by the equipment supplier at the electrostatic precipitator outlet is ≤50mg/Nm^3 which is in line with the EU and Serbian legislation.

Individual measurements of air pollutants carried out in 2016 confirmed the deviation of mass concentrations for dust at the electrostatic precipitator outlet compared to the levels guaranteed by the equipment supplier on units A1 and A2 – Kostolac A TPP. In addition, increased flue gas temperature at the electrostatic precipitator inlet was also identified compared to the design values. All ESP efficiency parameters will be examined in the coming period to undertake appropriate efficiency improvement measures at the Kostolac A TPP.

During 2016, measurements of the air pollutants emissions on the Kostolac TPP B1 and B2 units were performed. These measurements showed a certain deviation compared to the values guaranteed by the equipment suppliers. Reasons for exceeding the limit values is currently being investigated.

Sulphur dioxide

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

Mass concentration of SO_2 in the flue gas are well above ELVs prescribed by Serbian and EU regulations. In order to reduce sulphur oxide emissions below 200mg/Nm^3 in accordance with EU legislation, construction of flue gas desulphurization plants is planned. Chinese Government loan was approved for the Kostolac B TPP flue gas desulphurisation plant construction. Preliminary and Basic Designs for the Kostolac B TPP desulphurisation plants were drafted, together with an environmental impact assessment study. Detailed Design was also finalised, while preliminary works were initiated in mid-2013. At the end of December 2016, desulphurization plant construction was finished, as well as new stack with two pipes (each unit, B1 and B2, has its own pipe). Test run is foreseen for January 2017, but due to the weather conditions (low temperatures, snow and impossible downtime of units because of connecting facility to the new plant) trial run term is postponed for the end of February of beginning of March 2017.

Nitrogen oxides

In 2012 a study analysing optimal nitrogen oxide emissions reduction directions from coal-fired power plants of EPS was developed. Based on current status in terms of nitrogen oxides air emissions and ELVs requirements, optimal technical solutions were selected to reduce mass concentration nitrogen oxides emissions to the level of 200mg/Nm3.

According to plans, the above measures should be implemented on units A1 and A2 – Kostolac A TPP and unit B2, while new burners were installed on unit B1 – Kostolac B TPP during unit revitalisation. Measurement results indicate considerable nitrogen oxides emission reduction. Emissions prior to reconstruction ranged from 450 to 600 mg/Nm^3, while after burner reconstruction they are between 225 and 290 mg/Nm^3.

At the end of 2016, preparation of Feasibility Study with Basic Design for nitrogen oxide (NO_x) emissions reduction through primary measures on the Kostolac B TPP - unit B2 started. The works were to be financed from own sources and executed during the 2018 overhaul.

4.2.3 Water Emission Measurements

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 (Danube - Kostolac A or Mlava - Kostolac B) via the return channel.

A small share, about 2.5% of water is used for hydraulic transport of ash and slag (thin slurry transport). By replacing, i.e. connecting the Kostolac B TPP units to the thick slurry transport system (solids: water ratio - 1:1) water consumption will be reduced. Wastewater from the hydraulic transport of ash and slag is in the form of overflow and drainage water discharged into the recipient, in the case of old technology – thin slurry transport of ash and water (1:10), in operation at Kostolac A TPP. 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.

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

Demineralised water (demi water) used by the boiler water-vapour system is produced by chemical water treatment plants. Demi water is produced by chemical purification of groundwater - Kostolac B TPP or by purification of river water (Danube) - Kostolac A TPP in ion exchangers. Raw water is captured from 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 Kostolac B TPP, while in the case of Kostolac A TPP 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 (Kostolac B TPP). Sanitary wastewater of Kostolac A TPP is discharged into the municipal sewage subsequently discharged into the Kostolac A TPP hot 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 Kostolac A TPP hot water channel while waters containing heavy fuel oil are transported to the slurry station and subsequently to the Kostolac B TPP ash landfill.

The Kostolac OCMs and TPPs Branch Wastewater Management Programme includes physical, chemical, bacteriological and radiological measurements of the following parameters: air and water temperature, water turbidity, pH, electrical conductivity, soluble O_2, % of O_2 saturation, COD, BOD_5, 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, α and β activity, microbiological analysis.

Monitoring also includes:

- Wastewater at the source and/or at the point of discharge into the river and/or at the point of discharge of hot water into the channel;
- River water - water recipient on profiles upstream and downstream of wastewater discharge;
- Groundwater around the ash and slag landfill and coal landfills – Kostolac B TPP (piezometers and wells).

Long-term studies have shown that concentrations of sulphate and arsenic are essential parameters used to monitor the groundwater impact of ash. Sulphate ions originating from the landfill migrates fastest, and is 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). Drmno OCM dewatering water quality is also monitored. Drmno OCM dewatering water is discharged to the Mlava and/or Danube rivers, and partly used as cooling water by the Kostolac B TPP.

Kostolac B TPP has recorded the current state, the so-called “initial state”, of groundwater quality of the inside ash landfill of the Cirikovac OCM. Groundwater quality data (“initial state”) are essential in further monitoring and evaluation of groundwater quality impacts of the ash landfill.

Kostolac OCMs and TPPs wastewater quality and its impact on surface and groundwater is controlled 12 times a year – surface water and 4 times a year - groundwater.

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

Water quality measurement results are presented in the Environmental Report prepared every year for each organisational unit. In addition, results are presented in the National Pollution Sources Register of Serbia sent by the Kostolac OCMs and TPPs Branch each year in accordance with the legal obligations to the Ministry of Agriculture and Environment, i.e. to the Environmental Protection Agency.

Kostolac OCMs and TPPs Branch surface and ground water quality was controlled in 2016 by the accredited laboratory of the Jaroslav Cerni Water Resources Management Institute, Belgrade.

Table 62 provides the analysis of wastewater and recipient watercourse quality data in 2016 in terms of their legal compliance.

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

Table 62

Kostolac TPPs & OCMs Branch		
Wastewater and watercourses-recipients quality in 2016		
Organisational unit **Water type**	**Kostolac A TPP**	**Kostolac B TPP**
Drainage wastewater from the ash landfill	• Electrical conductivity: 830 – 1.118 µs/cm • Arsenic: 20 µg/l • Sulphates: 328- 625,76 mg/l	Drainage and overflow waters are reused
Overflow wastewater from the ash landfill	• Electrical conductivity: 536 – 1.195 µs/cm • Arsenic: 20 – 192 µg/l, above MPC – 50µg/ • Sulphates: 192 – 717 mg/l	Drainage and overflow waters are reused
Watercourse (recipient)	There were no significant changes in the Danube River quality upstream – downstream from Kostolac A TPP: • Arsenic: <20 µg /l, below MPC - 50µg/l upstream and downstream from the discharge point • Sulphates: 24,8 – 41,2 mg/l upstream and 24,3 – 43,0 mg/l downstream Mineral oil, upstream: <50, downstream: <50µg/l, not exceeding MPC - 50µg/l. No temperature increase of the Danube River water	There were no significant changes in the Mlava River quality downstream - upstream from Kostolac B TPP: • Arsenic: 20 µg/l, below MPC - 50µg/l upstream and downstream from the discharge point • Sulphates: 26,2 – 64,9 mg/l upstream and 32,6 – 59,0 mg/l downstream Mineral oil in the Mlava River upstream: <50µg/l and downstream: <50µg/l, not exceeding MPC - 50µg/l. Mlava River water temperature increase downstream was within 3°C, which is in line with EU regulations.

Table 63 provides the analysis of groundwater quality data in piezometers in the vicinity of ash and slag landfill in 2016 for the Kostolac TPPs and OCMs Branch in terms of their legal compliance. During 2016, groundwater quality was controlled in 9 piezometers.

Table 63

Kostolac TPPs and OCMs Branch Groundwater quality in 2016			
Concentration	**Permitted values**		**Organisational unit**
	MPC	**RV**	**Kostolac A and Kostolac B**
Sulphates (mg/l)	**250**		Variable in piezometers around cassette B ranging from 281.1 to 627.7 in piezometers around the cassette C ranging from 239.3 to 482.6 in piezometers around the Cirikovac ash landfill: 6.3 to 1084.7 piezometers away from the SKO landfill: 389.07 to 1212.5 around the coal yard D5: 56.9 to 306.8
Arsenic (µg/l)	**10**	**60**	in piezometers around cassette B ranging <20 in piezometers around the cassette C ranging from <20 to 186.1 in piezometers around the Cirikovac ash landfill:<20 piezometers away from the SKO landfill: <20 around the coal yard D5: <20 Concentrations below RV
Zink (mg/l)	**3**	0.8	in piezometers around cassette B ranging from 5.7 to 298.8 in piezometers around the cassette C ranging from 10.8 to 185.8 in piezometers around the Cirikovac ash landfill: 2 to 367.8 piezometers away from the SKO landfill: 663 to 4842.6 around the coal yard D5: 283.1 to 4842.6 Concentrations above RV
Manganese (mg/l)	**50**		Variable: in piezometers around cassette B ranging from <0.006 to 0.705 in piezometers around the cassette C ranging from 0.034 to 0.05 in piezometers around the Cirikovac ash landfill: <0.005 to 0.52 piezometers away from the SKO landfill: 0.028 to 1.1167 around the coal yard D5: 0.083 to 0.179
Ammonia (mg/l)	**0.1**		Variable: in piezometers around cassette B ranging from <0.02 to 0.09 in piezometers around the cassette C ranging from <0.002 in piezometers around the Cirikovac ash landfill: <0.02 to 0.5 piezometers away from the SKO landfill: <0.02 to 0.33 around the coal yard D5: <0.02
Nitrites (mg/l)	**0.03**		In all piezometers the most common value was <0.005mg/l ; except one value from piezometer PSK 55 – 0.016
Iron (mg/l)	**0.3**		Variable: in piezometers around cassette B ranging from 0.04 to 2.91 in piezometers around the cassette C ranging from 0.02 to 0.51 in piezometers around the Cirikovac ash landfill: 0.02 to 1.02 piezometers away from the SKO landfill: 0.04 to 0.38 around the coal yard D5: 0.07 to 1.22

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

Legal compliance is evaluated by comparing the groundwater 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 defining the soil quality systematic monitoring programme, indicators used to assess soil degradation risks and remediation programme development methodology. Attachment 2. Remediation values of hazardous and harmful substances concentration and values indicating severe groundwater contamination (OG RS № 88/2010).

Iron concentration for certain months of the year, in the majority of piezometers, exceeded MPC, i.e. it was higher than 0.05 mg/l. Increased zinc concentration is interpreted by dissolved metal coming from galvanized pipes forming the body of piezometers.

Table 64 provides analysis of data related to sanitary waste water quality at the inlet and outlet of the plant for treatment (BIODISK) for 2016.

Compliance was evaluated by comparing the measured values with the ones guaranteed by the equipment supplier for suspended particulate matter content and 5-day biological oxygen demand at the outlet (after treatment).

Table 64

Kostolac TPPs and OCMs Branch	
Sanitary wastewater treatment plant operation in 2016	
Pollutants concentration (mg/l)	***BIODISK* plant Kostolac B TPP**
Suspended solids (mg/l)	
Plant inlet	48.6 – 76.7
Plant outlet	6.3 – 19.5 no ELV exceedance
5-day biological oxygen demand (BOD_5)	
Plant inlet	11.62 – 75.6
Plant outlet	5.8 – 12.04 no ELV exceedance
Operation efficiency evaluation	Meeting guaranteed values for suspended solids for all measurements except for the last sampling (December) and **BOD_5**

Suspended particulate matter and 5-day biological oxygen demand (BOD_5) at the *BIODISK* plant outlet do not exceed value guaranteed by the equipment supplier.

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

- **Water amounts**

Table 65 provides an overview of water amounts captured and discharged by the organizational units of Kostolac OCMs and TPPs Branch for 2016.

Table 65

Kostolac TPPs and OCMs Branch						
Water amounts in 2016 (m^3/year x10^3)						
Organisational unit	**Waterintake**			**Discharged wastewater**		
	Used amounts		**Permitted amounts**	**Return cooling water**	**Overflow and drainage water from the ash landfill**	**Sanitary wastewater**
	Surface	**Ground***	**Surface**			
KOSTOLAC A TPP	370.896	0	370.896	350.798	19.094	0
KOSTOLAC B TPP	783.007	938	783.007	771.992	10.464	260
TOTAL: Kostolac OCMs and TPPs Branch	**1.153.903**	**938**	**1.153.903**	**1.122.789**	**29.558**	**260**

*Annual amount is calculated on the basis of data on the capacity and water capture and discharge pumps operating time. In cases of gravitational wastewater discharge calculations are made on the basis of previously measured wastewater amounts

- **Improvements aimed at reducing wastewater impacts on surface and groundwater**

Activities aimed at replacing the existing and introducing a new ash and slag handling system on the Kostolac A TPP were completed. New ash and slag handling system was put in operation mid 2016. Upon system commissioning, new system performances were under proof.

Ash and slag were disposed to the Srednje Kostolacko Ostrvo landfill. Commissioning of the new system (thick slurry transportation) Kostolac A TPP moved to ash and slag disposal to ash and slag landfill of Cirikovac OCM.

Kostolac B TPP units were connected to the new thick slurry transportation and disposal system. Ash and slag are disposed to the Cirikovac OCM.

Under the IPA 2013 (Instrument for Pre Assistance), the preparation of tender documents necessary to initiate the construction of a wastewater treatment plant in Kostolac B TPP is accomplished. Tenders for the FIDIC Engineer were invited, while the tender evaluation procedure is underway. Tenders for the contractor were also invited.

4.2.4 Soil Emission Measurements

During 2015, testing of soil quality and content of the total and available forms of heavy metal pollutants in soil were carried out, as well as the chemical composition control in the vicinity of the Kostolac thermal power plants aimed at monitoring the ash and slag landfill impact. Kostolac TPPs and OCMs Branch monitors the content of pollutants in soil every two years.

Annual reports about the ash and slag landfill impacts on soil are made available to inspection upon request. Soil quality measurement results are presented in the environmental report for the relevant year for each organizational unit. They are also presented in the National Cadastre of Polluters of the Republic of Serbia, delivered by JP EPS each year in accordance with the legal obligation to the Environmental Protection Agency.

Sampling and testing was carried out in 2015 by the Soil Institute from Belgrade for the Kostolac TPPs and OCMs Branch. Testing includes the following characteristics: physical soil properties, chemical soil properties, soil reaction, humus content, total nitrogen and organic carbon content, nitrate and nitrite ions content, available phosphorus and potassium content, content of heavy metals and other toxic elements.

Soil control program covered: field and laboratory measurements on representative measuring points shown on the topographic map (GPS identified points), allowing the monitoring of parameter changes on these measuring points in the future. Testing is carried out 2 times a year. Measuring points are defined depending on the distance from the landfill.

- landfill (ash)
- inside the impact zone as follows: Zone 1 - up to 1km from the landfill, Zone 2 - from 1km to 3km from the landfill and Zone 3 - from 3km to 5km from landfill
- outside the landfill zone (checkpoints)

The content of heavy metals and other toxic elements in ash and soil ranged in usual concentrations and below remediation values for: chromium (Cr), cadmium (Cd), mercury (Hg), arsenic (As) and iron (Fe). Data evaluation was carried out in accordance with:

Regulation establishing a program of systematic monitoring of soil quality indicators needed to assess the soil degradation risks and remediation programs development methodology (OG RS № 88/2010), and the Regulation identifying the permitted amounts of hazardous and harmful substances in soil and irrigation water and their testing methods (OG RS № 23/94).

Ash coming from the Kostolac A TPP is disposed to the Cirikovac OCM. Putting in operation new system (thick slurry transportation) Kostolac A TPP started to dispose ash and slag to the ash and slag disposal site Cirikovac OCM, in mid 2016.

Ash coming from the Kostolac B TPP has from 1987/1991 until 2010 been disposed to the Srednje Kostolacko Ostrvo site. However, since 2010, after the new thick slurry technology was introduced, ash has been disposed to the Cirikovac OCM. Ash disposal area inside the Cirikovac OCM was developed in line with the environmental requirements and other legislation.

Data evaluation was performed in accordance with: Regulation establishing a program of systematic monitoring of soil quality indicators needed to assess the soil degradation risks and remediation programs development methodology (OG RS № 88/2010), and the Regulation identifying the permitted amounts of hazardous and harmful substances in soil and irrigation water and their testing methods (OG RS № 23/94).

Table 66 shows measurement results evaluation in accordance with the above legislation. Data about the pollutants content in ash, as the potential pollution source, are also presented; however, these data were not evaluated, given that the above legislation is related to soil not ash.

Table 66

KOSTOLAC TPPs and OCMs BRANCH					
Content of hazardous and harmful substances in soil in 2015					
Content of hazardous and harmful substances (mg/kg)	**MPC**	**LV**	**RV**	**Content of hazardous and harmful substances in soil in 2015 – Kostolac A and B TPPs**	
	mg/kg			**Srednje Kostolacko Ostrvo landfill**	**Cirikovac OCM landfill**
Chromium (Cr)	**100**	**100**	**380**	Ash: 0,03 Soil: Not exceeding MPC LV and RV not exceeded in any of 58 samples	Ash: 0,06 Soil: Not exceeding MPC LV and RV not exceeded in any of 58 samples
Nickel (Ni)	**50**	**35**	**210**	Ash:0,58 Soil: of 58 samples -25 samples exceed MPC	Ash 0,55 Soil: of 58 samples -25 samples exceed MPC
Lead (Pb)	**100**	**85**	**530**	Ash: 0,10 Soil: of 58 samples -2 samples exceed MPC	Ash: 1.13 Soil: of 58 samples -2 samples exceed MPC
Copper (Cu)	**100**	**36**	**190**	Ash: 1.56 Soil: Not exceeding MPC LV and RV not exceeded in any of 58 samples	Ash: 1.07 Soil: Not exceeding MPC LV and RV not exceeded in any of 58 samples
Zinc (Zn)	**300**	**140**	**720**	Ash:0,37 Soil: Not exceeding MPC LV and RV not exceeded in any of 58 samples	Ash: 0,53 Soil: Not exceeding MPC LV and RV not exceeded in any of 58 samples
Cadmium (Cd)	**3**	**0.8**	**12**	Ash:0,01 Soil: Not exceeding MPC LV and RV not exceeded in any of 58 samples	Ash: 0,01 Soil: Not exceeding MPC LV and RV not exceeded in any of 58 samples
Arsenic (As)	**25**	**29**	**55**	Ash: 0,23 Soil: Not exceeding MPC LV and RV not exceeded in any of 58 samples	Ash: 0,81 Soil: Not exceeding MPC LV and RV not exceeded in any of 58 samples

Note: Kostolac TPP and OCM environmental monitoring plan and program foresees monitoring of Kostolac TPP and OCM Branch operation impact every second year.

4.2.5 Environmental Noise Measurements

Noise measurements were performed in 2016 on six measurement points in accordance with the Noise Protection Act (OG RS № 36/2009 and OG RS № 88/2010), Rules stipulating noise measurement methodology, the content and form of noise measurement reports (OG RS № 72/2010) and the Rules stipulating noise indicators, limits, methods for evaluating noise indicators, disturbance and harmful environmental noise effects. Measurements were carried out in winter during the day and night on the following measuring points:

1. TEKO A – River police
2. TEKO A – FIO Minel
3. TEKO B – Viminacijum
4. TEKO B – Mlava River ship lock
5. Drmno OCM – Lookout point
6. Drmno OCM – Road to Klicevac village

Table 67 shows the measured environmental noise levels in 2016 for the Kostolac TPPs and OCMs Branch (both open cast mines and thermal power plants).

Local government of city municipalities of Kostolac and Pozarevac did not perform acoustic zoning in accordance with the Noise Protection Act (OG RS № 36/09 and 88/10). Due to the lack of clearly limited acoustic zones, measuring points cannot be precisely determined, as well as the limits for these measuring points. For this reason legal compliance of the Kostolac OCMs and TPPs Branch in this respect cannot be assessed.

Table 67

Kostolac TPPs and OCMs Branch						
Noise levels in 2016 (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 № 75/10)	***Closed premises**				**Day and evening**	**Night**
					35	30
	Open areas	**Areas for relaxation and recreation, hospital and rehabilitation zones, cultural and historical sites, large parks**			50	40
		Tourist areas, camps and school zones			50	45
		Purely residential areas			55	45
		Business-residential areas, trading-residential areas and children's playgrounds			60	50
		City centre, trading, crafts, administrative zones with flats, zone along motorways, state and city roads			65	55
		Industrial, storage and service areas and transport terminals without residential buildings			**Noise at the boundary of this zone may not exceed the noise limit values of the other zone**	
Measuring points	**TEKO A**		**TEKO B**		**Drmno OCM**	
	River police	FIO Minel	Viminacijum	Mlava River ship lock	Lookout point	Road to Klicevac village
Day and evening summer	50, 50, 51	42, 43, 48	43, 44, 46	47, 46, 54	56, 59, 55	61, 62, 62
Night summer	50, 52	46, 47	46, 44	54, 55	49, 48	46, 47
Day and evening winter	54, 56, 57	45, 47, 50	53, 50, 53	57, 53, 56	63, 59, 59	52, 51, 50
Night winter	57, 58	49, 49	47, 65	55, 55	60, 55	53, 52

4.2.6 Waste

Waste created in 2016 is shown for the Kostolac TPPs and OCMs Branch (parts of both open cast mines and thermal power plants); in Table 68 in line with the Serbian waste management regulations.

Table 68a shows quantities of waste from Kostolac TPPs and OCMs Branch sold in 2016.

Table 68

Kostolac TPPs and OCMs Branch												
Waste in 2016												
№	**Official nomenclature of the Rules defining waste categories, its testing and classification OG RS № 56/10**	**Index number**	**Unit**	**KOSTOLAC TPPs & OCMs Branch**							Note
				TPPs			**OCMs**			**Total Branch level**	
	Name			**TEKO A**	**TEKO B**	**Total**	**Drmno OCM**	**Cirikovac OCM**	**Total**		
1.	Waste printer cartridges other than the ones indicated under 08 03 17	08 03 18	t	0,010	0,060	**0,070**	0,079	0,041	**0,120**	**0,190**	Used printer cartridges
2.	Fly ash from coal	10 01 02	t	633.839	1.281.213	**1.915.052**				**1,915,052**	Fly ash from coal
3.	Used waxes and greases	12 01 12	t				0,840			**0,840**	Lubrication grease
4.	Other fuels including mixtures	12 01 12	t				0,125			**0,125**	Fuel mixture
5.	Mineral non-chlorinated hydraulic oil	13 01 10*	t	3,000	6,005	**9,005**	23,840		**23,840**	**32,845**	Hydraulic mineral oils
6.	Synthetic non-chlorinated hydraulic oil	13 01 11*	t				1,800		**1,800**	**1,800**	Synthetic hydraulic oils
7.	Mineral non-chlorinated motor oils, gearbox oils and lubrication oils	13 02 05*	t		0,580	**0,580**	16,770		**16,770**	**17,350**	Mineral motor oil
8.	Oil filter, other motor oils for gearbox and lubrication	13 02 08* 16 01 07*	t				2,040		**2,040**	**2,040**	Oil filter
9.	Other emulsions	13 08 02* 19 18 03*	t		2,082	2,082	5,435		**5,435**	**7,517**	Oil, water, soil and sand emulsion
10.	Packaging containing residues of hazardous substances or contaminated by hazardous substances	15 01 10*	t	0,200	0,810	1,010				**1,010**	Chemicals packaging
							2,760		**2,760**	**2,760**	Metal oil drums
11.	Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing, contaminated with hazardous substances	15 02 02*	t	0,215	0,344	**0,559**	1,480		**1,480**	**2,039**	Cotton waste
12.	Absorbents, filter materials, wiping cloths and protective clothing other than those indicated under 15 02 02	15 02 03	t				3,730		**3,730**	**3,730**	Air filters
13.	Absorbents, filter materials, wiping cloths and protective clothing other than those indicated under 15 02 02t	15 02 03	t				0,200		**0,200**	**0,200**	Protective equipment footwear
14.	Used tires	16 01 03	t				3,000		**3,000**	**3,000**	Car tires
15.	Used vehicles, neither containing liquids nor other hazardous components	16 01 06	t				3,000		**3,000**	**3,000**	Used vehicles
16.	Discarded equipment different from the one indicated under 16 02 09 to 16 02 13	16 02 13*	t				10,000		**10,000**	**10,000**	Discarded equipment
17.	Lead batteries	16 06 01*	t	7,615	0,248	**7,863**	3,995		**3,995**	**11,858**	Accumulator batteries

18.	Plastics	17 02 03	t				0,271		**0,271**	**0,271**	Plastic hardhats
19.	Copper bronze brass	17 04 01	t	1,400		**1,400**				**1,400**	Cables
20.	Aluminium	17 04 02	t	1,380	11,230	**12,610**	0,200		**0,200**	**12,810**	Aluminium
21.	Iron	17 04 05	t	674,634	2782,09	**3456,724**	135,230		**135,230**	**3.591,954**	Different thickness
				100,000	344,140	**444,140**				**444,140**	Impact plates and billets
22.	Cables other than those indicated under 17 04 10	17 04 11	t		1,450	**1,450**	20,099		**20,099**	**21,549**	Copper cables
23.	Oily soil sand	17 05 03* 15 02 02*	t				0,350		**0,350**	**0,350**	Oily soil sand
24.	Insulation materials other than those indicated under 17 06 01 and 17 06 03	17 06 04	t	117,380	95,960	**213,340**				**213,34**	Mineral wool
25.	Plastics and rubber	19 12 04	t		0,300	**0,300**	527,650		**527,650**	**527,960**	Rubber bands
26.	Fluorescent tubes and other waste containing mercury	20 01 21*	t	0,129	0,360	**0,489**	0,075		**0,075**	**0,564**	Fluorescent tubes containing mercury
27.	Discarded electrical and electronic equipment other than the one indicated under 20 01 21 and 20 01 23 containing hazardous components	20 01 35*	t	0,245	4,781	**5,026**	2,706		**2,706**	**7,732**	Electronic and electrical waste
28.	Discarded electrical and electronic equipment other than the one indicated under 20 01 21, 20 01 23 and 20 01 35	20 01 36	t				0,030		**0,030**	**0,030**	Sodium lamps

Tabel 68a

Kostolac TPPs and OCMs Branch

Waste quantities sold in 2016

No.	Name	Index No.	Unit	KOSTOLAC TPPs & OCMs Branch							Note
				TPPs			OCMs			Total Branch level	
				TEKO A	TEKO B	Total	Drmno OCM	Cirikovac OCM	Total		
1.	Fly ash from coal	10 01 02	t		11.999,260	**11.999,260**					
2.	Lead batteries accumulators	16 06 01	t	15,500	5,680	**21,180**	13,250		**13,250**	**34,430**	
3.	Copper bronze brass	17 04 01	t	1,400		**1,400**				**1,400**	
4.	Aluminium	17 04 02	t	2,550	11,330	**13,880**				**13,880**	
5.	Iron and steel – different thickness	17 04 05	t	1.149,550	3.962,860	**5.112,410**				**5.112,410**	

6.	Iron and steel – Impact plates and billets	17 04 05	t	66,100	344,140	**410,240**				**410,240**	
7.	Cables other than those indicated under 17 04 10	17 04 11	T		2,000	2,000	39,980		**39,980**	**41,980**	
8.	Plastics and rubber – rubber bands	19 12 04	tt				122,450		**122,450**	**122,450**	

4.3 Working Environment Monitoring, Safety and Health

Occupational Safety and Health Reports for 2016 include the following elements:

- **Working environment monitoring**
  - working environment noise measurements
- **Safety**
  - training
  - work injuries
- **Health**

4.3.1 Working Environment Monitoring

- **Working environment noise measurements**

Working environment noise measurements for the Kostolac B TPP were performed by the licenced legal entity – Occupational safety and environmental protection Belgrade.

Table 69 contains the names of measuring points where the noise level exceeded the permissible values.

Table 69

Kostolac TPPs and OCMs Branch		
Working environment noise in 2016		
Permissible noise level (dB(A))	**TEKO B measuring points**	**TEKO A measuring points**
85	Pump area B-1,	
	Slurry station, level 0.00 m,	
	Ash and slag transport, level -8.0m	
	ESP, level 0.00 m	
	Slag extractor, level 11.00 m	
	KPZ – 4 belt area 5.6.1 and 5.6.2. coal area	
	Unloading building, belt T-7.2 4.9.5. area	
	Area next to belts T8.1 and T8.2, level 57 m 4.14.1. Feed pumps area B-I, level 0.0 m	
	Slurry condensation area, V-1, level 4.00 m	
	Slurry condensation area, V – 2, boiler, level 4.00 m	
	Feed pumps area, V-2, level 0.00 m	
	Turbine area V-1, level 12.00 m 4.16.7.	

	Turbine area B2	
	Area between V 1 and V2, level 12.00 m	
	Platform along the mill 3 channel, level 35.0 m	
	Platform along the mill 1 channel, level 35.0 m	
	Area between mills 6 and 7 dozers	
	Area between mills 4 and 5 feeders, level 25.0 m	
	Burners 5 and 6 area, level 17.0 m	
	Mill 4 area, level 0.00 m	
	Crusher area, level 0.00 m	
	Area between ID fans	
	Area between mills 6 and 7 dozers	
	Area between mills 2 and 3 dozers	
	Post-combustion grate platform, level 1.00 m	
	Turbine-generator plant maintenance area	
	Reinforced piping maintenance area	

Table 70 provides working environment conditions testing data.

Table 70

Kostolac TPPs and OCMs				
Working environment conditions in 2016				
№	**Organisational unit**	**Testing parameter**	**Above ELV**	**Undertaken measures**
1	**Kostolac B TPP**	In winter, the following working environment conditions were tested, on 71 measuring points: - Micro-climate - Temperature - Relative humidity - Flow speed	-7 measuring points	Some personal protective equipment is given for use and the places where the workers are constantly located as well as where it is physically practicable, individual air conditioning units were installed.
2	**Kostolac A TPP**	No testing	/	/

4.3.2 Safety

- **Training**

Employees are trained according to the Health and Safety Training Programme. Testing of occupational safety competence and knowledge is carried out every three or five years depending on the workplace in compliance with the Act on Kostolac TPPPs and OCMs Branch risk assessment. According to Occupational Health and Safety Act, training within Kostolac TPP 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.

Table 71 shows the number of employees foreseen for training and the number of trained employees in 2016.

Table 71

Kostolac TPPs and OCMs Branch					
Training in 2016					
Organisational unit	Number of employees	Foreseen for training		Trained	
		№	%	№	%
KOSTOLAC A TPP	358	331	92,46	76	22,96
KOSTOLAC B TPP	385	307	79,74	307	100,00
TOTAL: Kostolac OCMs and TPPs Branch	**743**	**638**	**85,87**	**383**	**60,03**

- **Work injuries**

Table 72 provides work injuries data for 2016.

Table 72

Kostolac TPPs and OCMs Branch						
Work injuries in 2016						
Organisational unit	Number of employees	Injuries – Number of employees ratio				
		Light	Serious	Fatalities	Total	%
KOSTOLAC A TPP	358	5	0	0	5	1,40
KOSTOLAC B TPP	385	0	1	0	1	0,26
TOTAL: Kostolac OCMs and TPPs Branch	**743**	**5**	**1**	**0**	**6**	**0,81**

4.3.3 Health

Table 73 provides periodic examinations data verifying the work capability of employees in 2016.

Table 73

Kostolac TPPs and OCMs Branch											
Work capability in 2016											
Organisational unit	Number of employees	Periodical examinations				Work capability					
		Referred to examination		Examined		Capable		Limited capability		Not capable	
		№	%	№	%	№	%	№	%	№	%
KOSTOLAC A TPP	358	331	92,46	324	97,89	289	89,20	33	10,19	2	0,62
KOSTOLAC B TPP	385	307	79,74	307	100	259	84,36	44	14,33	4	1,30
TOTAL: Kostolac OCMs and TPPs Branch	**743**	**638**	**85,87**	**631**	**98,90**	**548**	**86,85**	**77**	**12,20**	**6**	**0,95**

4.4 Public complaints

No public complaints in 2016.

5. PANONSKE CHPPs BRANCH

Panonske CHPPs Branch comprises the following organisational units:

- **Novi Sad CHPP,**
- **Zrenjanin CHPP and**
- **Sremska Mitrovica CHPP.**

5.1 Overview and Status of Permits

Table 74 provides an overview and status of obtained permits, as well as applications for new and extension of existing permits in 2016 for the Panonske CHPPs Branch.

Table 74

PANONSKE CHPPs BRANCH			
Overview and Status of Permits in 2016			
Organisational units	**Obtained permits and approvals (number and date)**	**Applications for new or extension of existing permits**	**Note**
Novi Sad CHPP	Water permit № 104-325-687/2015-04 dated 10.08.2015		Permit valid until 10.08.2020.
Zrenjanin CHPP	Decision on Water permit № 104-325-423/2016-04 dated 23.12.2016		Permit valid until 23.12.2018.
Sremska Mitrovica CHPP	Preparation of documents necessary to apply for water permit is ongoing in parallel with issuance of use permits.		Request for oily water separator technical inspection and reconstruction of the existing fluid outlet treatment system submitted on 28.04.2016. JP DIREKCIJA ZA IZGRADNjU GRADA, No.06.04.-167037/1-16

5.2 Monitoring and Environmental Impact

5.2.1 Air Quality Measurements

Air quality monitoring in the vicinity of the Panonske CHPPs Branch organizational units is carried out as part of the monitoring financed and organized by individual organizational units (as requested by inspection). It should be noted that the air quality monitoring is within the competence of the legislator; therefore air quality monitoring is carried out as part of the national automatic air quality monitoring network, comprising measuring points located around the Panonske CHPPs Branch.

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

Novi Sad CHPP

Measuring the air quality impacts of the Novi Sad CHPPs began after the first unit was commissioned in 1982. By 1998 measurements were performed around the plant by authorized institutions. The following parameters were measured: SO_2, NO_x, soot and dust, continuously for a period of one or two months. Between 1999 and 2004 there were no air quality measurements, but only measurements of hazardous and harmful substances air emissions (individual measurements).

By order of the inspector, from 2005 air quality measurements have been conducted on certain measuring points, in Novi Sad, by the authorized institutions. Air quality monitoring is conducted by an accredited laboratory, the *Institut zastite na radu a.d. Novi Sad*.

In 2016, air quality measurements in Novi Sad were carried out on three measuring points in the period from 1st to 15th January 2016 and from 13th September to 31st December 2016, as follows:

1. measuring point № 1 - building close to the water source at the Petrovoradinska Ada;
2. measuring point № 2 - Sonja Marinkovic local community premises, Kej zrtava racije 4, Novi Sad;
3. measuring point № 3 – *Radosno Detinjstvo* and *Duga* preschools premises, Sangaj district.

The following parameters were measured:

1. SO_2, NO_2, soot – every day on all three measuring points in the period from 1st to 15th January 2016 and from 13th September to 31st December 2016;
2. PM_{10} and Cr^{6+}, 30 days, 30 days, on all 3 measuring points in November 2016;
3. Heavy metals in particulate matter PM_{10} - Zn, Mn and Pb, once a week on the measuring point No. 1 in the period from 1st to 15th January 2016 and from 13th September to 31st December 2016, a total of 18 measurements;
4. PAH - 14 days on all 3 measuring points, in November 2016.

Monthly air quality reports were delivered to the Provincial Secretariat for Urban Planning, Construction and Environmental Protection in Novi Sad.

Zrenjanin CHPP

No air quality measurements have been carried out in Zrenjanin CHPP from 2011. From the mentioned period, there is no statutory obligation of air quality measurement, unless by order of the competent authority.

Sremska Mitrovica CHPP

No air quality measurements in 2016.

Table 75 shows the analysis of air quality data for 2016 in terms of their legal compliance for individual Panonske CHPPs Branch organisational units.

Air quality was evaluated based on the measurement results compared with the values specified by the Regulation stipulating air quality monitoring conditions and requirements (OG RS № 11/2010) and the Regulation amending the Regulation stipulating air quality monitoring conditions and requirements (OG RS № 75/2010 and 63/2013). The above regulations were harmonised with the European Union legislation.

Annual values data for the parameters that were not measured throughout the entire year were not statistically processed and evaluated.

Table 75

PANONSKE CHPPs BRANCH										
Air quality in 2016										
Legal compliance (number of data or days exceeding legal limits)										
Air quality indicator	**Averaging period**	**TPM** (mg/m²/day)	***Total suspended particles – PM-10 measured** (µg/m³)			**Carcinogens (µg/m³)**				
		Maximum permissible value - MPV				**Maximum permissible value - MPV Target value - TgV**				
						Cr⁺⁶ MPV	**Cd TgV**	**As MPV, TgV**	**Ni MPV, TgV**	
Averaging period			**LV**	**TV**	**TL**					
***One day**			**50**	**50**	**0**					
****One month**		**450**			**-**					
*****Calendar year**		**200**	**50**	**40**	**0**	**0,3**	**5**	**6**	**20**	
NOVI SAD CHPP	1	No air quality measurements	no exceedance			No exceedance	No air quality measurements			
	2		no exceedance							

	3		no exceedance									
ZRENJANIN CHPP	1	No air quality measurements										
	2											
SREMSKA MITROVICA CHPP	1	No air quality measurements										
	2											
Air quality indicator	**Averaging period**	**Soot (µg/m³)**	**NO_2 (µg/m³)**			**SO_2 (µg/m³)**			**Pb (µg/m³)**			
		Maximum permissible value - MPV	**LV**	**TV**	**TL**	**LV**	**TV**	**TL**	**LV**	**TV**	**TL**	
One hour			**150**	**187,5**	**37,5**	**350**	**350**	**0**	-			
***One day**		**50**	**85**	**105**	**20**	**125**		**-**	**1**	**1**	**-**	
****Calendar year**		**50**	**40**	**50**	**10**	**50**		**-**	**0,5**	**0,5**	**0**	
NOVI SAD CHPP	1	* No exceedances	*No exceedances			**1 exceedance (15.12.2016.) – plant operation was based on natural gas when this exceedance was identified, so that the exceedance was not from Novi Sad CHPP			*No exceedances			
	2	* No exceedanceS				* No exceedances			*No exceedances			
	3	* No exceedances				* No exceedances						
ZRENJANIN CHPP	1	No air quality measurements										
	2											
SREMSKA MITROVICA CHPP	1	No air quality measurements										
	2											

LV – Limit value, TL – Tolerance limit, TV – Tolerance value TgV – Target value

Note:

*PM -10 measured

**Measuring points defined by the inspector are located in the vicinity of other pollution sources, such as traffic (exhaust gases) and other facilities emitting harmful substances into air

***Air quality measurements in 2016, were performed in the period from 1st to 15th January 2016 and from 13th September to 31st December 2016. During this period, the plant operated from 1st to 8th January 2016, from 16th to 26th January 2017 and from 2nd to 31 December 2016.

5.2.2 Air Emission Measurements

Flue gases containing sulphur dioxide, nitrogen oxides and dust are emitted through stacks:

- 160m – Novi Sad CHPP
- 160m - Zrenjanin CHPP
- 105m/77.5m - Sremska Mitrovica CHPP
  - 105m – concrete stack
  - 77.5 – brick stack

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

- 2 metal stacks – 7m
- 1 metal stack – 4.7m

In accordance with the legislation individual measurements of air pollutants are performed regularly, while continuous measurements are carried out on boilers of Panonske CHPPs Branch organizational units only for

the purpose of internal monitoring since no conditions to obtain consent to carry out continuous measurements have been met.

- **Individual air emission measurements**

Emissions of air pollutants for 2016 are given for each plant individually based on measurements performed by an accredited laboratory of the Novi Sad Occupational Safety Institute in line with the Individual Air Emission Measurement Programme. The programme included flue gases (temperature, pressure and humidity), flow rate, oxygen content, as well as mass concentrations and emission factors for sulphur dioxide (SO_2), nitrogen oxides (NO_x - NO_2), carbon monoxide (CO), and dust.

Table 76 summarises the results of individual measurements of air pollutants for the Panonske CHPPs Branch conducted in 2016.

Table 76

PANONSKE CHPPs BRANCH												
Individual air emission measurements in 2016												
Mass concentrations of pollutants (mg/Nm^3)												
Novi Sad CHPP												
Unit	**A1 (B1 and B2)**						**A2 (B3)**					
Heat output	**2x279 MWth**						**320 MWth**					
Fuel	**Gas**			**25% heavy fuel oil: 75% gas**			**Gas**			**25% heavy fuel oil: 75% gas**		
ELV		**ELV[1]**	**ELV[2]**		**ELV[1]**	**ELV[2]**		**ELV[1]**	**ELV[2]**		**ELV[1]**	**ELV[2]**
SO_2	0*	35	35	-	n.d.	n.d.	0**	35	35	-	n.d.	n.d.
NO_x(NO_2)	826*	300	300	-	n.d.	n.d.	537,2**	300	300	-	n.d.	n.d.
CO	0*	100	-	-	n.d.	n.d.	0**	100	-	-	n.d.	n.d.
Dust	0,12*	5	5	-	n.d.	n.d.	0,27**	5	5	-	n.d.	n.d.
Zrenjanin CHPP												
Unit	**A1[1] (B1 and B2)**						**A2 – out of operation**					
Heat output	**2x250 MWth**											
Fuel	**Gas**						**-**					
ELV		**ELV[1]**	**ELV[2]**					**ELV[1]**	**ELV[2]**			
SO_2	-	35	35				-					
NO_x(NO_2)	-	300	300				-					
CO	-	100	-				-					
Dust	-	5	5				-					
Sremska Mitrovica CHPP												
Unit	**A3 (B3 and B4)**						**Auxiliary boiler room**			**Biomass boiler - TE.K 405**		
Heat output	**2x80 MWth**						**3x15 MWth**			**18 MWth**		
Fuel	**Gas**			**Heavy fuel oil**			**Gas**			**Sunflower husk**		
ELV		**ELV[1]**	**ELV[2]**		**ELV[1]**	**ELV[2]**		**ELV[1]**	**ELV[2]**		**ELV[1]**	**ELV[3]**
SO_2	-	35	35	-	1.700	1.700	0	35	35	0	1.700	200
CO	-	100	-	-	175	-	0	100	-	103	300	
NO_x(NO_2)	-	300	300-	-	450	450	134	200	300	334	650	650
Dust	-	5	5	-	50	50	-	-	-	2,3	50	30

[1]Decree stipulating air emission limit values of pollutants from combustion plants (OG RS № 6/2016)
[2]Directive 2001/80/EC – Large Combustion Plants
[3] In November 2015, EC adopted the Medium Combustion Plants Directive 2193/2015, setting a deadline for 2025 and 2030 for the existing medium combustion plants to comply with ELV depending on their capacity
*Air emission for Novi Sad CHPP boiler 2 is calculated using the data for 2013.
**Air emission measurement for Novi Sad CHHP boiler 3 is carried out twice and middle value is presented.

Boilers 2 and 3 of the Novi Sad CHPP fired natural gas during the entire 2016.

In 2016 no air pollutant emissions measurements were performed in Zrenjanin CHPP since generation unit was not in operation. Unit A2 has not been in operation nor in function since 1st November 2010.

The last emission measurement was conducted on boiler B1, heat output of 250 MW, Unit A1, in 2012. Since 2012, Unit A1 was not in operation. For heating purposes of the Zrenjanin CHPP facilities, boiler T110 is used, heat output of 8.5 MW, which was in operation during the heating season of 2016. The average heat output used to heat own facilities is approximately 500 kW. Emissions were measured by an internal TESTO device, however due to the low boiler generation, the TESTO device was unable to register any pollutants. This means that emissions of pollutants were below the detection limit of the device.

During 2016 in the Sremska Mitrovica CHPP, one boiler fired biomass, while auxiliary boilers operated exclusively on natural gas. Unit A3 was not in operation.

Table 77 shows the analysis of individual air pollutants emissions measurements for 2016 in terms of their legal compliance, for the Panonske CHPPs Branch.

Table 77

PANONSKE CHPPs BRANCH			
Legal compliance – air emissions in 2016			
Organisational unit	**Dust**	**SO_2**	**NO_x (NO_2)**
Novi Sad CHPP	Emission below ELV (RS and EU)	Emission below ELV (RS and EU)	Emission above ELV (RS and EU)
Zrenjanin CHPP	No measurements		
Sremska Mitrovica CHPP	MPB not in operation Auxiliary boiler room emission and Biomass boiler emission below ELV (RS and EU)	MPB not in operation Auxiliary boiler room emission and Biomass boiler emission below ELV (RS and EU)	MPB not in operation Auxiliary boiler room emission and Biomass boiler emission below ELV (RS and EU)

Legal compliance is evaluated by comparing the measured values of air emissions with the emission limit values (ELVs) defined by the Regulation stipulating air pollutants emission limit values from large combustion plants (OG RS № 6/2011) and the Large Combustion Plants Directive 2001/80/EC.

- **Continuous air emission measurements**

In addition to the basic equipment consisting of analysers measuring mass concentrations of dust and gases, additional equipment was 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, HCl, HF. Data acquisition and processing equipment was also installed.

Table 78 shows the continuous air emissions measurement equipment data for all the Panonske CHPPs Branch organisational units.

Table 78

PANONSKE CHPPs BRANCH									
Continuous air emissions measuring equipment in 2016									
Organisational unit	**Dust**	**Pollutants**		**Parameters**					
		Gases		**Content**			**p**	**t**	**Flow rate**
		SO_2, NO_x (NO_2), CO	**HCl & HF**	**Humidity**	**CO_2**	**O_2**			
Novi Sad CHPP	1 analyser	1 analyser	1 analyser each				1 device each		
	Equipment installed at the level of 41.8 m, external stack lining. Platform located at the level of 40.0 m, external stack lining. Stack height - 160 m.								
Zrenjanin CHPP	1 analyser	1 analyser	1 analyser each				1 device each		
	Equipment installed at the level of 38 m, external stack lining. Platform located at the level of 37.0 m, external stack lining. Stack height - 160 m.								
Sremska Mitrovica CHPP	1 device each						1 device each		
	Equipment installed on the horizontal rectilinear flue gas duct of the biomass boiler TE.K – 405, connected to the brick stack (77.5 m height).								

Continuous measurements are aligned with the EN 14181_QAL1 standard. Statistical continuous measurements data analysis software prepares daily, monthly and annual reports.

- **Annual air emissions**

Table 79 summarises air pollutants emissions: dust, SO_2, NO_2 and CO_2 for the Panonske CHPPs Branch in 2016.

Annual SO_2 and NO_2 emissions were calculated on the basis of the measured mass concentrations, flue gas flow rate and operating time of each unit, while CO_2 emissions were calculated based on the fuel consumption data shown in Table 79a and ECF – emission correction factor.

Table 79

PANONSKE CHPPs BRANCH				
Air emissions in 2016 (t/year)				
Organisational units	**Dust**	**SO_2**	**NO_x(NO_2)**	**CO_2**
NOVI SAD CHPP				
Unit A1, b-1 and b-2	0,00045	0,0	3,069	419,13
Unit A2, b-3	0,1005	0,0	200,075	68.291,69
Total: Novi Sad CHPP	**0,10095**	**0,0**	**203,144**	**68.710,82**
ZRENJANIN CHPP				
Unit A1	0,0	0,0	0,0	0,0
				0,0
Unit A2	0,0	0,0	0,0	0,0
Total: Zrenjanin CHPP	0,0	0,0	0,0	0,0
SREMSKA MITROVICA CHPP				
Unit A3, B3/B4	0,0	0,0	0,0	0,00
S-2400/1	0,0	0,0	0,0	0,00
S-2400/2	0,0	0,0	1,274	1.964,86
S-2400/3	0,0	0,0	0,0	0,00
Biomass-fired boiler	0,087	0,00	10,370	0,00
Total: Sremska Mitrovica CHPP	**0,087**	**0,00**	**11,644**	**1.964,86**
TOTAL: PANONSKE CHPPs	**0,18795**	**0,00**	**214,788**	**70.675,68**

Table 79a

PANONSKE CHPPs BRANCH			
Fuel consumption in 2016			
Organisational unit	**Fuel type**		
NOVI SAD CHPP			
	Gas ($kStm^3/y$)	**Heavy fuel oil (kt/y)**	**Biomass (kt/y)**
Unit A1, b-1 and b-2	0,225	0,0	/
Unit A2, b-3	36,923	0,0	/
Total: Novi Sad CHPP	**37,148**	**0,0**	**/**
ZRENJANIN CHPP			
Unit A1	91,774	0,0	/
Unit A2	/	0,0	/
Total: Zrenjanin CHPP	**91,774**	**0,0**	/
SREMSKA MITROVICA CHPP			
Unit A3, B3/B4	0,000	0,0	/
S-2400/1	17,292	0,0	/
S-2400/2	937,661	0,0	/
S-2400/3	7,120	0,0	/
Auxiliary boiler room (total)	**962,073**		
Biomass-fired boiler	93,787	0,00	5,063
Total: Sremska Mitrovica CHPP	**1.055,860**	**0,00**	**5,063**
TOTAL: PANONSKE CHPPs	**1.184,782**	**0,00**	**5,063**

*Fuel consumption for heating own facilities in Zrenjanin CHPP.

- **Harmonisation of air emissions with EU legislation**

Sulphur dioxide

To reduce the Panonske CHPPs 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.

Novi Sad CHPP

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 legislation.

Zrenjanin CHPP

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 legislation.

Sremska Mitrovica CHPP

Heat output of the boiler and auxiliary boiler are 2x80MW and 3x15MW 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 18MW biomass-fired boiler not exhibiting SO_2 emission during its operation.

Nitrogen oxides

Novi Sad CHPP, Zrenjanin CHPP and Sremska Mitrovica CHPP

A study was envisaged: "Optimal directions targeting nitrogen oxide emissions reduction from PE EPS TPPs and CHPPs firing liquid and gaseous fuels". Optimal technical solutions will be selected based on the current nitrogen oxides air emissions and ELVs. To reduce nitrogen oxides mass concentrations, an upgrade of boiler burners was scheduled.

The procurement related to preparation of the above mentioned study was not launched during 2016.

5.2.3 Water Emission Measurements

Novi Sad CHPP

Water used for condenser water vapour cooling has the highest share in the total amount of process water used by Novi Sad CHPP. In addition a circulating cooling system is also installed, while water is supplied from the Danube. Return cooling water and all other industrial wastewater is after treatment discharged into the Danube. A small share of water is used to produce demineralized and soft water.

Sanitary-sewage water is from November 2012 discharged into the city wastewater collector. Storm drainage is from November 2012 discharged into the city wastewater collector. The Danube water belongs to Class II.

Wastewater quality and its Danube impact is controlled 4 times a year. The Novi Sad CHPP wastewater is discharged over three outlets:

- Storm drainage;
- Sanitary-sewage water system. From 2013, quality of this water is not controlled, given that it is discharged into the city wastewater collector;
- Cooling water channel.

Monitoring programme includes the following physical-chemical parameters: temperature, pH, turbidity, ammonia, inorganic nitrogen, cyanides, suspended substances, 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 Novi Sad CHPP grounds;
2. Return cooling and process water – Danube discharge point
3. Danube water - 100m downstream from the cooling water discharge;
4. Danube water - 100m 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 2016 wastewater quality was controlled on 4 occasions.

Zrenjanin CHPP

Water used for condenser water vapour cooling has the highest share in the total amount of process water used by the Zrenjanin CHPP. Zrenjanin CHPP cooling water system is of the recirculation type including a turbine condenser, cooling towers, cooling water pumps, pipes and valves. Decarbonised water is used as an operating fluid by the cooling water system. Begej River water is used to produce demineralized and decarbonised 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 cake 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 PUTOKS plant discharged over a special channel into the Aleksandrovac channel.

Zrenjanin CHPP wastewater quality and its water recipient impact is controlled 4 times a year. Wastewater is sampled on 5 measuring points, as follows:

- Sanitary-sewage water;
- Neutralization pit;
- Aleksandrovac channel before discharge;
- Aleksandrovac channel after discharge;
- Oily water.

Monitoring programme includes the following physical-chemical parameters: temperature, pH, 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 and Begej River. In 2016 wastewater quality was controlled on four occasions.

Sremska Mitrovica CHPP

Water used for T/G 32 MW turbine condenser cooling has the highest share in the total amount of process water used by the Sremska Mitrovica CHPP. Sremska Mitrovica CHPP 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 Sremska Mitrovica CHPP. Water from this well acquires quality of drinking water upon deferrization process.

Major part of wastewater is not discharged directly into the recipient but through a control-gauging manhole connected to the city industrial-sewage collector.

Sanitary wastewater, after transportation into a common collector of the ISTEP Company is discharged into the Sava River.

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

- Cooling water into recipient,
- Wastewater (sanitary and sludgy) joined with the wastewater from ISTEP Company and subsequently discharged into the recipient,
- Wastewater (from the HPV plant, from boilers desludging, water from oil-containing water separators) is discharged trhough control-gauging manhole into the city industrial-sewage collector.

Monitoring programme includes the following physical-chemical parameters: temperature, pH, ammonia, total inorganic nitrogen, cyanides, suspended solids, dissolved oxygen, COD, BOD_5, total phosphorus, mineral oils, Pb, Cu, Ni, Zn, Hg.

Wastewater sampling was carried out at 4 measuring points:

1. Wastewater 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. Oily water at the inlet of the plant for oily water treatment,
4. Oily water after being processed in the plant for oily water treatment.

Recipient, Sava River, sampling was carried out at 2 measuring points:

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

Wastewater quality in 2016 was controlled on four occasions.

Table 80 shows analysis of wastewater, watercourse - recipient water quality data for 2016 in terms of their legal compliance.

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

Table 80

PANONSKE CHPPs BRANCH			
Wastewater and water recipient quality in 2016			
Water type	**Organizational unit**		
	Novi Sad CHPP	**Zrenjanin CHPP**	**Sremska Mitrovica CHPP**
Wastewater	No exceedance in 2016	Neutralisation basin: ELV exceedance (total inorganic nitrogen 8.15 mg/l) Oily waters: ELV exceedance (total inorganic nitrogen 6.76 mg/l) Sanitary – sewage water Putoks: ELV exceedance Ammonia: 19.86 – 32.29 mg/l.	**Q1** no exceedance **Q2** exceedance occurred as result of the Sava River water poor quality: -last manhole before pouring into the Sava River Total inorganic nitrogen: 10.92 mg/l Suspended solids: 146.0 mg/l

		Total inorganic nitrogen: 9.66-33.27 Suspended solids: 59-157.6 mg/l COD:149.7-280 mg/l BOD_5: 70-130 mg/l Total phosphorous: 2,21-6.62 mg/l	-water at the inlet of the plant for oily water treatment Ammonia: 12.44 mg/l Total inorganic nitrogen: 12.66 mg/l Suspended solids: 134.0 mg/l -water from control-gauging manhole Ammonia: 10.95 mg/l Total inorganic nitrogen: 11.63 mg/l Suspended solids: 255.5 mg/l **Q3 and Q4** no exceedance
Recipient	No exceedance in 2016	Aleksandrovac Channel **prior to discharge**, ELV exceedance: Ammonia: 12.37-15.11 mg/l Total inorganic nitrogen: 12.37-15.33 mg/l COD:151-163 mg/l BOD5: 55-60 mg/l Aleksandrovac Channel **after discharge,** ELV exceedance: Ammonia: 12.76 - 20.58 mg/l. Total inorganic nitrogen: 12.76 - 20.77 mg/l COD_5: 146 - 182 mg/l BOD_5: 50 - 65 mg/l	**Q2** exceedance occurred in the Sava River water quality and in water sample at the discharge point into water intake as well as in the sample after discharge of wastewater into recipient. -at inlate of water intake Ammonia: 12.16 mg/l Total inorganic nitrogen: 13.41 mg/l Suspended solids: 169.2 mg/l Fe: 0.82 mg/l -after water discharge into recipient Ammonia: 12.64 mg/l Total inorganic nitrogen: 13.78 mg/l Suspended solids: 172.4 mg/l Fe: 1.31 mg/l **Q3 and Q4** no ELV exceedance

- **Water amounts**

Table 81 summarises the amount of water captured and discharged by organizational units of Panonske CHPPs Branch in 2016. Annual amounts are calculated on the basis of the capacity, water capture and discharge pumps' operating time and flow gauges data.

Table 81

PANONSKE CHPPs BRANCH						
Captured and discharged water amounts in 2016 (m^3/year x10^3)						
Organizational unit	**Waterintake**		**Discharged wastewater**			
	Used amounts	**Permitted amounts**	**Return cooling water**	**Oily water**	**Sanitary wastewater**	**Other water (neutralisation pit and luvo washing)**
	Surface	**Surface**				
Novi Sad CHPP	10.179,764	12.349,793	9.943,720	2,378	12,444	16,920
Zrenjanin CHPP	84,794	/	/	5,329	1,745	4,889
Sremska Mitrovica CHPP	21,6	/	/	/	13,8	3,5
TOTAL: Panonske CHPPs Branch	**10.286,158**	**12.349,793**	**9.943,720**	**7,707**	**27,989**	**25,309**

- **Improvements aimed at reducing surface and groundwater wastewater impacts**

Novi Sad CHPP

In 2016, "Pre-feasibility Study with Novi Sad CHPP Wastewater Treatment General Design" was prepared. Preparation of Preliminary Design, Feasibility Study with Basic Design and Study on estimation of environmental impact of the Novi Sad CHPP wastewater treatment plant is envisaged.

Zrenjanin CHPP

To overview wastewater treatment methods, a study preparation by PE EPS is envisaged: "Pre-feasibility Study with Zrenjanin CHPP Wastewater Treatment Preliminary Design" setting out variant wastewater treatment solutions and proposing the most optimal solution.

Sremska Mitrovica CHPP

Commissioning of oily water separator. Works on decarbonisation process water treatment plant (silty water) completed – commissioning and designed parameters proving to be done.

5.2.4 Soil Emission Measurements

No measurements of emission of pollutants into the soil around the Panonske CHPP Branch consisting of Novi Sad CHPP, Zrenjanin CHPP and Sremska Mitrovica CHPP have been performed so far. Since 2014, for the purpose of the study Monitoring of soil contamination around the reservoirs and unloading liquid fuel stations in PE EPS and Monitoring system of the oil bunds and pits at the PE EPS facilities - Phase I, soil tests are performed by accredited MOL Institute d.o.o. laboratory. Testing will last for 5 years. More detailed information will be available upon preparation and adoption of the above mentioned study.

5.2.5 Environmental Noise Measurements

Environmental noise measurements at the Panonske CHPPs Branch (Novi Sad CHPP, Zrenjanin CHPP and Sremska Mitrovica CHPP) were carried out by an accredited laboratory of the Novi Sad Occupational Safety Institute. Local governments of the city municipalities of Novi Sad, Zrenjanin and Sremska Mitrovica did not perform acoustic zoning in accordance with the Noise Protection Act (OG RS № 36/09 and 88/10). Due to the lack of clearly limited acoustic zones measuring points cannot be precisely determined, as well as the limits on these measuring points. For this reason legal compliance of the Panonske CHPPs Branch in this respect cannot be evaluated.

Novi Sad CHPP

Novi Sad CHPP environmental noise levels were not measured in 2016. The last measurement was carried out on 30th December 2008.

Noise measurements were carried out in the area surrounding the Novi Sad CHPP. Since it is located near the Sangaj quarter, measuring points are concentrated in this area. The closest measuring points are some 500m away from the CHPP. Measurements were performed on 4 measuring points in the Sangaj quarter and 1 measuring point on the Danube bank. All devices representing noise sources are stationary. During noise measurements Boilers 2 and 3 and two turbines were in operation.

The legislation does not prescribe any definite noise measurement periods, unless the relevant authority orders otherwise, as deemed necessary.

Zrenjanin CHPP

Zrenjanin CHPP environmental noise levels were not measured in 2016. The last measurement was carried out on 11th March 2009. Noise measurements were conducted in the area surrounding the Zrenjanin CHPP.
The legislation does not prescribe any definite noise measurement periods, unless the competent authority prescribes otherwise, if necessary.

Sremska Mitrovica CHPP

Sremska Mitrovica CHPP environmental noise levels were not measured in 2016. The last measurement was carried out on 27th February 2009.

Noise measurements were performed within Sremska Mitrovica CHPP area. All devices representing noise sources are stationary. Auxiliary boiler was in operation during noise measurements. The most important noise source is the fresh air fan used by the boiler. Device operation was monitored during the day, while on each of the measuring points two measurements were made during the day and one during the night.

The legislation does not prescribe any definite noise measurement periods, unless the competent authority prescribes otherwise, if necessary.

There were no environmental noise level measurements in Panonske CHPPs Branch organizational units in 2016. Table 82 shows 2008/2009 noise levels (results below have been taken over from the 2014 EBRD Report) as an indication of possible noise levels together with comments regarding the legal compliance of the Panonske CHPPs Branch.

Table 82

PANONSKE CHPPs BRANCH				
Noise levels (dB**) in 2008/2009**				
Noise indicators limit values, Regulation stipulating noise indicators, limit values, methods assessing noise indicators, disturbance levels and harmful living environment noise effects (OG RS № 75/10)	**Closed premises**		**Day and evening**	**Night**
			35	**30**
	Open areas	**Purely residential areas**	**55**	**45**
		Purely residential areas, trading-residential areas and children's playgrounds	**60**	**50**
		City centre, trading, crafts, administrative zones with flats, zones along motorways, state and city roads	**65**	**55**
		Industrial, storage and service areas and transport routes without residential buildings	**Noise at the boundary of this zone may not exceed the noise limit values of the neighbouring zone**	
Organisational unit	**Novi Sad CHPP**	**Zrenjanin CHPP**	**Sremska Mitrovica CHPP**	
Day	Applicable noise levels			
	from 38 dB (A) to 45 dB (A)	On measuring points inside the industrial zone ranging from 51 dB (A) to 63 dB (A)	From 34 to 52 dB (A). Measuring point M2, 1700m away from residential areas - 86 dB (A). Measured noise levels range from 34 to 51 dB (A) measured on control points.	
Night	From 37 dB (A) to 42 dB (A)	On measuring points inside the industrial zone ranging from 50 dB (A) to 64 dB (A)	From 34 to 50 dB (A). Measured noise level was 33.3 – 50.3 dB (A), night, measured on control points	

5.2.6 Waste

Waste produced in 2016 is shown in Table 83 in line with the Serbian waste management regulations.

Table 83

PANONSKE CHPPs BRANCH								
Waste in 2016								
№	**Official nomenclature of the Rules defining waste categories, its testing and classification OG RS № 56/10 (PE EPS Waste List)**		**Unit**	**Panonske CHPPs Branch**				**Note**
				Novi Sad CHPP	**Zrenjanin CHPP**	**Sremska Mitrovica CHPP**	**Total**	
	Name	**Index number**		**Created waste amounts**				
1.	Used printer cartridges containing hazardous substances	08 03 17*	t					Waste printer cartridges
2.	Used printer cartridges other than indicated under 08 03 17	08 03 18		0,056		0,021	**0,077**	Waste printer cartridges
3.	Waste not otherwise specified	08 03 99	t	0,021			**0,021**	Waste printer cartridges
4.	Ash, slag and boiler dust (excluding boiler dust indicated under 10 01 04)	10 01 01	t	50			**50**	Waste ash
5.	Ash	10 01 04*	t					
6.	Slag and boiler dust from co-combustion other than those indicated under 10 01 14	10 01 15	t			170,200	**170,200**	Waste ash from biomass boiler
7.	Waste not otherwise specified	13 01 99*	t	0,600			**0,600**	Drainage pits cleaning sludge
8.	Hydraulic oils	13 01 10*	t					
9.	Other hydraulic oils	13 01 13	t					
10.	Mineral non-chlorinated motor oils, gear oils and lubricants	13 02 05*	t			0,042	**0,042**	
11.	Other motor oils, gear oils and lubricants	13 02 08*	t	0,100			**0,100**	Gearbox oil
12	Mineral non-chlorinated insulation and heat transfer oils	13 03 07*	t					Turbine oil
13.	Other non-chlorinated insulation and heat transfer oils	13 03 10*	t					Transformer oil
14.	Plastic packing	15 01 02	t					Plastic reservoirs
15.	Packaging containing residues of hazardous substances or contaminated by hazardous substances	15 01 10*		0,300		0,048	**0,348**	Oily drums
16.	Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing, contaminated by hazardous substances	15 02 02	t					Oily gravel
17.	Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing, contaminated by hazardous substances	15 02 02*	t	0,050		0,017	**0,067**	Waste oily absorbent means – sawdust and wiping cloths
18.	Used tires	16 01 03	t					
19.	Transformers and condensers conataining PCB	16 02 09*/ 13 03 01*	t		0,929		**0,929**	
20.	Lead batteries	16 06 01*	t			0,037	**0,037**	Lead batteries
21.	Iron and steel	17 04 05	t		2,036	10,830	**12,866**	Reinforcement, pipes, valves
22.	Cables other than those indicated under 17 04 10	17 04 11	t			0,147	**0,147**	Copper insulated cables

23.	Insulation materials other than those indicated under 17 06 01 and 17 06 03	17 06 04	t	24,580	0,520	3,96	**29,060**	Waste mineral wool
31.	Construction materials containing asbestos (asbestos panels)	17 06 05*	t	0,540		8,380	**8,920**	Mixed building material containing asbestos
36.	Paper and cardboard	20 01 01	t			0,676	**0,676**	
37.	Fluorescent tubes and mercury-containing waste	20 01 21*	t	0,160	0,340	0,039	**0,539**	Waste fluorescent tubes
38.	Discarded electrical and electronic equipment other than the one indicated under 20 01 21, 20 01 23 containing hazardous components	20 01 35*	t	0,550	0,0015		**0,551**	Discarded electronic and electrical equipment containing hazardous components, TV sets
39.	Discarded electrical and electronic equipment other than the one indicated under 20 01 21, 20 01 23 and 20 01 35	20 01 36	t			0,140	**0,140**	
40.	Plastics	20 01 39	t			0,068	**0,068**	Plastic nozzles

Note: Waste amounts are indicative. Actual amounts are identified during the sale when waste is measured by a scale certified by the competent organisation.
* - hazardous waste

In 2016, there was no waste sale in the Panonske CHPP Branch.

5.3 Working Environment Monitoring, Safety and Health

Safety and health reports for 2016 include the following elements:

- **Working environment monitoring**
  - working environment noise measurements
- **Safety**
  - training
  - work injuries
- **Health**

5.3.1 Working Environment Monitoring

- **Working environment noise**

Novi Sad CHPP

Working environment noise measurements in 2016 are given in Table 80.

Zrenjanin CHPP

There were not working environment noise measurements in 2016.

Sremska Mitrovica CHPP

Working environment noise measurements in 2016 are given in Table 84.

Table 84

PANONSKE CHPPs BRANCH			
Working environment noise in 2016			
Branch	**Operating unit**	**Registered noise level (dB(A))**	**Permissible noise level (dB(A))**
Novi Sad CHPP	HPV	66,30	85
	HPV - regeneration	60,70	85
	Machine-locksmith room	79,00	85
Sremska Mitrovica CHPP	Biomass boiler control room	70,10	75
	Auxiliary boiler room C2400	87,10	85
	Engine room next to the grinder	92,30	85

5.3.2 Safety

- **Training**

Novi Sad CHPP

The following trainings were conducted in 2016:

1. General health and safety training – 209 employees – internal training conducted by the HSE expert (high-risk workplaces Novi Sad CHPP, HQ - workplaces not purporting high risk)

Other trainings:

1. Periodical examination of system engineers knowledge – 5 employees
2. Hazardous matter transportation driver training – 2 employees

Zrenjanin CHPP

The following trainings were conducted in 2016:

1. General health and safety training – 125 employees – internal training conducted by the HSE expert (high-risk workplaces)

Other trainings:

1. Taking the professional exam – requirement for licence obtaining and performance of work – 2 employees
2. Hazardous matter transportation driver training – 1 employee

Sremska Mitrovica CHPP

The following trainings were conducted in 2016:

1. General health and safety training – 91 employees – internal training conducted by the HSE expert (all employees)

Other trainings:

1. Training for safe handling – 2 employees
2. Training for safe forklift handling – 2 employees
3. Safe work training related to HV and LV switchyards – 1 employee
4. Safe work training related to pumps – 5 employees
5. Safe work training related to operating machine – SHANTUI SL20W light cargo loader – 18 employees
6. Seminar "Law on Planning and Construction" – 1 employee

- **Work injuries**

Table 85 provides work injuries data for 2016.

Table 85

PANONSKE CHPPs BRANCH						
Work injuries in 2016						
Branch	Number of employees	Injuries – Number of employees ratio				
		Light	Serious	Fatalities	Total	%
Novi Sad CHPP and HQ	224	2	0	0	2	0,89
Zrenjanin CHPP	148	1	2	0	3	2,03
Sremska Mitrovica CHPP	91	3	1	0	4	4,40
TOTAL: PANONSKE CHPPs BRANCH	**463**	**6**	**3**	**0**	**9**	**1,94**

5.3.3 Health

Table 86 provides periodical examinations data for high-risk workplaces in Panonske CHPP in 2016.

Table 86

PANONSKE CHPPs BRANCH											
Work capability in 2016											
Branch	Number of employees	Periodical examinations				Work capability					
		Referred to examination		Referred/Examined		Capable		Limited capability		Not capable	
		№	%	№	%	№	%	№	%	№	%
Novi Sad CHPP	224	152	67,86	150	98,68	92	61,33	55	36,67	3	2,00
Zrenjanin CHPP	148	116	78,38	116	100,00	67	57,76	49	42,24	0	0,00
Sremska Mitrovica CHPP	91	72	79,12	71	98,61	40	56,34	31	43,66	0	0,00
TOTAL: PANONSKE CHPPs BRANCH	**463**	**340**	**73,43**	**337**	**99,12**	**199**	**59,05**	**135**	**40,06**	**3**	**0,89**

5.4 Public complaints

There were no public complaints in 2016.

6. DJERDAP HPPs BRANCH

6.1 Overview and Status of Permits

Overview and status of permits, licences and other necessary approvals as well as applications for new or extension of existing permits and approvals in 2016 are shown in Table 87.

Table 87

DJERDAP HPPs BRANCH			
Overview and Status of Permits in 2016			
Organisational unit	**Obtained permits and approvals (number and date)**	**Applications for new or extension of existing permits**	**Note**
DJERDAP 1 HPP	-	-	-
DJERDAP 2 HPP	Velesnica sewage waste water treatment plant building permit, issued by the Kladovo Municipality, № 351-36/2016-III-04 dated 02.03.2016. Velesnica village, catchment areas "100" and "200", sewage network building permit, issued by the Kladovo Municipality, № 351-37/2016-III-04 dated 17.03.2016. Velesnica sewage pumping station building permit, issued by the Kladovo Municipality, № 351-38/2016-III-04 dated 06.04.2016.	-	-
PIROT HPP	Location conditions for Zavoj SHPP, No. 350-02-02286/2016-14 dated 14.11.2016	Application submitted for location conditions related to continuation of Toplodol tunnel works, information on location No. 350-01-04951/2016-14 dated 10.11.2016. Application submitted for location conditions related to torrential water drainage in Berilovac village and arrangement of public areas, information on location No. 03-350/639-15 од 27.10.1016.	-
VLASINSKE HPPs	-	Permit extension documentation collection in progress.	

6.2 Monitoring and Environmental Impact

Environmental protection of the Djerdap HPPs Branch during 2016 followed the defined procedures and other documents of the environmental management system (EMS).

6.2.1 Identified negative impacts on the flow and ecological system below the reservoir

During 2016 there were no registered negative impacts of the Djerdap HPPs Branch on the flow and ecological system below the reservoir.

6.2.2 Water

- **Water amounts**

Water used for hydropower generation, process and sanitary (waste) water did not exceed the permitted amounts. Amounts of allowed water and water used to generate electricity, along with water amounts discharged after electricity generation in 2016 are provided in Table 88.

Table 88

DJERDAP HPPs BRANCH							
Water amounts in 2016							
Organisational unit		Number of units	Permitted water amounts (installed discharge per unit) m^3/s	Water used for electricity generation in 2016 $m^3/y \times 10^6$	Discharged water amounts		
					Process water $m^3/y \times 10^6$	Sanitary water $m^3/y \times 10^3$	Total discharged water $m^3/y \times 10^6$
DJERDAP 1 HPP		5	800	82.503,00	48,86	238,72	82.813,10
DJERDAP 2 HPP		10	422	79.007,00	75,50	67,48	79.082,57
PIROT HPP		2	22,5	247,4	0,2	3.141	247,603
VLASINSKE HPPs	Vrla 1	4	I и II – 4 III и IV - 5	154,562	0,986	7,3	154,563
	Vrla 2	2	I – 8,5 II - 10	185,769	0,812	3,7	185,770
	Vrla 3	2	I – 8,4 II - 10	204,632	0,829	10,3	204,642
	Vrla	2	I – 8,4 II - 10	222,671	0,837	3,7	222,672
	Lisina – pumping plant	2	I – 3,6 II – 3,6	92,094	0,682	3,5	92,094

- **Wastewater**

Following contractual obligations regarding wastewater management, the Institute Vatrogas d.o.o. Novi Sad executed sampling of wastewater from all PE EPS Djerdap HPPs Branch Kladovo facilities in 3rd and 4th quarter of 2016. Due to delay in public procurement procedure implementation and contract conclusion, in 2016, wastewater and surface water quality sampling and testing were not performed in 1st and 2nd quarter of 2016.

3 samples were taken from each of the Djerdap HPP Branch facilities from the following points:

- wastewater sample at the discharge point
- surface water sample upstream from the facility
- surface water sample downstream from the facility

chemically and biologically analysed, while the results were interpreted in accordance with Regulation stipulating pollutants limit values in surface and ground waters and sediments, and the deadlines for their achievement (OG RS № 50/2012), Regulation setting the parameters of the ecological and chemical status of surface waters and the parameters of chemical and quantitative status of groundwater (OG RS № 74/ 2011), Regulation stipulating water emissions limit values and deadlines for their achievement (OG RS № 67/2011 and 48/2012) and Water Classification Regulation (OG SFRY № 6/1978), Regulation classifying water of inter-republic watercourses, international waters and coastal waters of Yugoslavia (OG SFRY № 6/78), Decision defining maximum permissible concentrations of radionuclides and hazardous substances in inter-republic watercourses, international waters and coastal waters of Yugoslavia (OG SFRY № 8/78) and the Water Law (OG RS № 30/2010).

As far as wastewater treatment in Djerdap HPPs Branch is concerned, a contract on research works and preparation of project for treatment of wastewater generated in Djerdap 2 HPP was concluded with “Jaroslav Cerni” Institute from Belgrade, in November 2016. Total contract value of this contract is 11,800,000.00 RSD (VAT exclusive).

Results obtained by chemical and microbiological analysis of wastewater samples in 2016 are summarised in Table 89.

Table 89

DJERDAP HPPs BRANCH															
Wastewater in 2016															
Organisational unit	**Testing parameters** (unit)	**Wastewater and surface water quality testing results for 2016**													**Test results comment and conclusion**
		1 quarter			**2 quarter**			**3 quarter**			**4 quarter**				
		From the sewage system	Surface water upstream	Surface water downstrea	From the sewage system	Surface water upstream	Surface water downstrea	From the sewage system	Surface water upstream	Surface water downstrea	From the sewage system	Surface water upstream	Surface water downstrea		(Review of chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and its impact on water class defined by Water Classification Regulation)
DJERDAP 1 HPP	MPN coliform bacteria (E. coli/1l)	-	-	-	-	-	-	-	170	80	-	380	2 400		In 3rd quarter, measured values of tested physical and chemical parameters of surface water samples taken from the Danube River 100m upstream and 300m downstream of the Djerdap 1 HPP facilities generally correspond to the class I, except BOD_5, TOC, TN, as well as content of sulphate, iron and chrome belonging to class II of surface water, while dissolved oxygen, phosphates, nitrites and copper belong to class III. In 4th quarter, measured values of tested physical and chemical parameters of surface water samples taken from the Danube River 100m upstream and 300m downstream of the Djerdap 1 HPP facilities generally correspond to the class I, except BOD_5, TOC, TN, as well as content of ammonia, total phosphorus and dissolved oxygen belonging to class II of surface water, while phosphates and nitrites belong to class III. Suspended substances belong to class III and lower class.
	Dissolved O_2 (mg/l)	-	-	-	-	-	-	-	6.42	6.42	-	8.32	8.15		
	Suspended substances (mg/l)	-	-	-	-	-	-	102	62	79	74	60	79		
	COD(mg/l)	-	-	-	-	-	-	s55	<10	<10	98	8	6		
	BOD_5(mg/l)	-	-	-	-	-	-	24.3	4.5	3.1	59	3	3		
	pH value	-	-	-	-	-	-	6.62	8.29	8.32	6.12	7.83	7.73		
	Total oil and grease (mg/l)	-	-	-	-	-	-	0.23	3.05	2.49	0.22	4.17	2.25		
DJERDAP 2 HPP	MPN coliform bacteria (E. coli/1l)	-	-	-	-	-	-	-	170	230	-	3000	3000		The results of wastewater testing could not have been compared, since the Regulation stipulating water emissions limit values and deadlines for their achievement (OG RS № 67/11, 48/12 and 1/16) does not define the limit values for wastewater emissions from hydropower plants. Measured values of tested physical and chemical parameters of surface water samples taken from the Danube River downstream of the Djerdap 2 HPP facilities generally correspond to class I, except BOD_5, TOC, as well as content of dissolved oxygen, ammonia and chrome belonging to class II, while nitrites and phosphates belong to class III of surface water. Suspended substances belong to class III and lower
	Dissolved O_2 (mg/l)	-	-	-	-	-	-	-	6,62	6,64	-	8,31	8,31		
	Suspended substances (mg/l)	-	-	-	-	-	-	76082	68	84	176	74	52		
	COD(mg/l)	-	-	-	-	-	-	18480	<10	<10	432	4	6		
	BOD_5(mg/l)	-	-	-	-	-	-	7728,6	3,3	3,6	194	3	3		
	pH value	-	-	-	-	-	-	7,08	7,95	7,98	6,98	7,75	7,88		

	Total oil and grease (mg/l)	-	-	-	-	-	-	0,39	2,28	2,06	0,23	3,01	2,13	class. At the same location measured values of microbiological parameters correspond to class I of surface water, except content of total coliform bacteria and aerobic heterophilic bacteria belonging to class II and content of fecal coliform bacteria belonging to class III.
PIROT HPP	MPN coliform bacteria (E. coli/1l)	-	-	-	-	-	-	-	2400	2400	/	3000	3000	Measured values of tested physical and chemical parameters of surface water samples taken from the Nisava River downstream of the discharge point of wastewater from Pirot HPP generally correspond to class I, except dissolved oxygen, BOD_5, TN, TOC, content of phosphates, ammonia and chrome belonging to class II of surface water. Suspended substances belong to class III and lower class. At the same location measured values of microbiological parameters correspond to class I of surface water, except content of total coliform bacteria and aerobic heterophilic bacteria belonging to class II and content of fecal coliform bacteria belonging to class III.
	Dissolved O_2 (mg/l)	-	-	-	-	-	-	-	7,88	8,16	/	7,88	8,31	
	Suspended substances (mg/l)	-	-	-	-	-	-	-	66	96	/	66	56	
	COD(mg/l)	-	-	-	-	-	-	-	< 10	< 10	/	8	6	
	BOD_5(mg/l)	-	-	-	-	-	-	-	3,1	5,6	/	4	3	
	pH value	-	-	-	-	-	-	-	8,22	8,48	/	7,98	8,16	
	Total oil and grease (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	
VLASINSKE HPPs **VRLA 1 HPP**	MPN coliform bacteria (E. coli/1l)	-	-	-	-	-	-	*	950	2400	*	120	3000	Sample analysis established that the tested samples in third and fourth quarter **comply with the values stipulated** by the Watercourses Categorization Regulation, Water Classification Regulation (OG SRS № 5/68) and the Hazardous Substances Regulation (OG SRS № 31/82). Tested samples predominantly correspond to classes I and II.
	Dissolved O_2 (mg/l)	-	-	-	-	-	-	-	8,3	7,3	*	8,3	8,5	
	Suspended substances (mg/l)	-	-	-	-	-	-	-	80	64	*	60	68	
	COD(mg/l)	-	-	-	-	-	-	-	<10	<10	*	8	8	
	BOD_5(mg/l)	-	-	-	-	-	-	-	3,2	3,3	*	4	4	
	pH value	-	-	-	-	-	-	-	8,5	8,8	*	7,8	7,9	
	Total oil and grease (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	
VLASINSKE HPPs	MPN coliform bacteria (E. coli/1l)	-	-	-	-	-	-	-	2400	380	*	3000	210	Sample analysis established that the tested samples in third and fourth quarter **were in compliance with the values stipulated** by the Watercourses Categorization Regulation, Water Classification Regulation (OG SRS № 5/68) and the Hazardous Substances Regulation (OG
	Dissolved O_2 (mg/l)	-	-	-	-	-	-	-	7,3	7,8	*	8,5	8,6	

VRLA 2 HPP	Suspended substances (mg/l)	-	-	-	-	-	-	-	64	68	*	68	56	SRS № 31/82). Tested samples predominantly correspond to classes I and II.
	COD(mg/l)	-	-	-	-	-	-	-	<10	<10	*	8	10	
	BOD_5(mg/l)	-	-	-	-	-	-	-	3,3	3,2	*	4	5	
	pH value	-	-	-	-	-	-	-	8,8	8,6	*	7,9	7,7	
	Total oil and grease (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	
VLASINSKE HPPs **VRLA 3 HPPs**	MPN coliform bacteria (E. coli/1l)	-	-	-	-	-	-	-	380	2400	*	210	2400	Sample analysis established that the tested samples in third and fourth quarter were in compliance with the values stipulated by the Watercourses Categorization Regulation, Water Classification Regulation (OG SRS № 5/68) and the Hazardous Substances Regulation (OG SRS № 31/82). Tested samples predominantly correspond to classes I and II.
	Dissolved O_2 (mg/l)	-	-	-	-	-	-	-	7,8	7,6	*	8,6	8,6	
	Suspended substances (mg/l)	-	-	-	-	-	-	-	68	94	*	56	70	
	COD(mg/l)	-	-	-	-	-	-	-	<10	<10	*	10	8	
	BOD_5(mg/l)	-	-	-	-	-	-	-	3,2	3,1	*	5	3	
	pH value	-	-	-	-	-	-	-	8,6	8,1	*	7,7	8	
	Total oil and grease (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	
VLASINSKE HPPs **VRLA 4 HPPs**	MPN coliform bacteria (E. coli/1l)	-	-	-	-	-	-	-	2400	380	*	2400	210	Sample analysis established that the tested samples in third and fourth quarter were in compliance with the values stipulated by the Watercourses Categorization Regulation, Water Classification Regulation (OG SRS № 5/68) and the Hazardous Substances Regulation (OG SRS № 31/82). Tested samples predominantly correspond to classes I and II.
	Dissolved O_2 (mg/l)	-	-	-	-	-	-	-	7,6	7,8	*	8,6	9,5	
	Suspended substances (mg/l)	-	-	-	-	-	-	-	94	89	*	70	64	
	COD(mg/l)	-	-	-	-	-	-	-	<10	<10	*	8	8	
	BOD_5(mg/l)	-	-	-	-	-	-	-	3,1	3,1	*	3	4	
	pH value	-	-	-	-	-	-	-	8,1	8,4	*	8	7,5	
	Total oil and grease (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	

VLASINSKE HPPs **LISINA PSP**	MPN coliform bacteria (E. coli/1l)	-	-	-	-	-	-	-	150	-	-	2400	-	Sample analysis established that the tested samples in third and fourth quarter were in compliance with the values stipulated by the Watercourses Categorization Regulation, Water Classification Regulation (OG SRS № 5/68) and the Hazardous Substances Regulation (OG SRS № 31/82). Tested samples predominantly correspond to classes I and II.
	Dissolved O_2 (mg/l)	-	-	-	-	-	-	-	6,4	-	-	7,3	-	
	Suspended substances (mg/l)	-	-	-	-	-	-	-	50	-	-	74	-	
	COD(mg/l)	-	-	-	-	-	-	-	<10	-	-	6	-	
	BOD_5(mg/l)	-	-	-	-	-	-	-	3,4	-	-	4	-	
	pH value	-	-	-	-	-	-	-	8,3	-	-	7,9	-	
	Total oil and grease (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	

6.2.3 Waste

Waste management followed the defined procedures. Waste amounts generated in 2016 are shown in Table 90.

Table 90

DJERDAP HPPs BRANCH									
Waste in 2016									
№	**Official nomenclature of the Rules defining waste categories, its testing and classification (OG RS № 56/10 Dated 10.08.2010)**		**Unit**	**Organisational unit**				**Total**	**Note**
				Djerdap 1 HPP	**Djerdap 2 HPP**	**Pirot HPP**	**Vlasinske HPPs**		
	Name	**Code**		**Amounts**					
1.	Waste paint and varnish containing organic solvents or other hazardous substances	08 01 11*	t	0,4415	1,182	0	0	**1,6235**	Waste paint in solid state (expired)
2.	Waste printer cartridges other than those indicated under 08 03 17	08 03 18	t	0,09125	0,001	0,062	0,05	**0,2042**	Cartridges
3.	Used wax and grease	12 01 12*	t	0,831	0	0	0	**0,831**	Waste lubricating grease
4.	Mineral chlorinated hydraulic oils	13 01 10*	t	0,639	0	0	0	**0,639**	Waste hydraulic oil
5.	Mineral chlorinated motor oils, gear oils and lubricants	13 02 04*	t	0	1,04	0,13	0	**1,17**	Motor oil
				0	0	0	0	**0**	Gearbox oil
6.	Other motor oils, gear oils and lubricants	13 02 08*	t	0	0,09	0	0	**0,09**	Compressor oil
7.	Mineral non-chlorinated oils used for insulation and heat transfer	13 03 07*	t	10,264	0,135	0,26	0	**10,659**	Waste transformer oil
8.	Other emulsions	13 08 02* 13 05 07	t	3,487	57,647	0	0,23	**61,364**	Oil emulsions (mixed with adsorbents and other impurities)
				0	10	0	0,87	**10,87**	Oily water
9.	Other motor oils, gear oils and lubricants	13 08 99	t	7,797	0	0,03	0	**7,827**	Waste turbine oil
		13 01 10*	t	0	0	0	0	**0**	Waste grease
10.	Wooden packaging	15 01 03	t	0	0	1,571	0	**1,571**	Waste wooden packaging
11.	Packaging containing residues of hazardous substances or contaminated by hazardous substances	15 01 10*	t	0,32	0,017	0,98	0	**1,317**	Chemicals packaging
12.	Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	15 02 02*	t	0,136	5,645	1,430	3,325	**10,536**	Cloths, adsorbents contaminated by hydrocarbons
13.	Used tires	16 01 03	t	1,728	6,802	0,750	1,308	**10,588**	Used tires

14.	Waste not otherwise specified	16 01 99	t	0	0,09	0	0	**0,09**	Disposed belt slings
15.	Organic wastes containing hazardous substances	16 03 05*	t	0	0	0	0,148	**0,148**	Waste construction additives
16.	Mixtures or particular fractions of concrete, bricks, tiles and ceramics other than those indicated under 17 01 06	17 01 07	t	0	18,4	0	0	**18,4**	Waste building material
17.	Copper, bronze, brass	17 04 01	t	0,306	0	0,5	0	**0,806**	Copper
			t	2,564	0	0.071	0	**2,635**	Brass
			t	0,348	0,014	0	0	**0,362**	Bronze
18.	Cables other than those indicated under 17 04 10	17 04 11	t	6,163	0,001	0	0,55	**6,687**	Copper cable
19.	Aluminium	17 04 02	t	2,402	0	0,047	0	**2,449**	Aluminium
			t	0	1,373	0	0	**1,373**	Aluminium cable
20.	Iron and steel	17 04 05	t	1,621	0	0	0	**1,621**	Steel cables
				0,3765	0,23	0.02	0	**0,25**	Steel sheets
				0,11	1,55	0	0	**1,66**	Prochrome
				60,203	133,006	1.84	3,71	**198,759**	Scrap iron
				1,424	0,912	0.09	0	**2,426**	Metal scrapings
				0	0,544	0	0	**0,544**	Tools – waste material
				0	0,14	0	0	**0,14**	Electrodes – waste material
21.	Building materials containing asbestos	17 06 05*	t	0	2,5	0	0	**2,5**	Asbestos pipes, asbestos and asbestos cloth
22.	Plastics	16 01 19	t	0,35	0,686	0,428	0	**1,464**	Waste plastics
23.	Paper and cardboard	20 01 01	t	0,516	0	0,3	0	**0,816**	Waste paper material
24.	Glass	20 01 02	t	0	0	0,04	0	**0,04**	Waste glass
25.	Fluorescent tubes and other mercury-containing waste	20 01 21*	t	0,355	0,369	0,039	0,0033	**0,7663**	Waste fluorescent lamps
26.	Batteries and accumulators included under 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing such batteries	20 01 33*	t	0,239	0,01	0,104	0,287	**0,64**	Waste lead accumulators
27.	Discarded electrical and electronic equipment other than the one indicated under 20 01 21 and 20 01 23 containing hazardous components	20 01 35*	t	9,323	3,048	0,197	73,3	**85,868**	Disposed electrical and electronic equipment and parts
28.	Wood other than the one indicated under 20 01 37	20 01 38	t	15,09	0,15	0	0	**15,24**	Waste wood and plywood
29.	Other organic solvents, washing liquids and mother liquids	07 01 04	t	0,0315	0,59	0	0	**0,6215**	Waste chemicals

30.	Sodium hydroxide and potassium hydroxide	06 02 04	t	0,001	0	0	0	**0,001**	Waste categorized chemicals
31.	Depleted liquids used as catalysts	16 08 06	t	0,055	0	0	0	**0,055**	Waste categorized chemicals
32.	Phosporus acids	06 01 04*	t	0,0155	0	0	0	**0,0155**	Waste categorized chemicals

Waste created by the Djerdap HPPs operation throughout the year is stored and sold to authorised institutions in accordance with the Regulation stipulating storage, packaging and labelling methods of hazardous waste (OG RS № 92/10 dated 05.12.2010), Regulation stipulating categories, testing and classification of waste (OG RS № 56/10 dated 10.08.2010), Regulation stipulating the conditions and manner of collection, transportation, storage and treatment of waste used as secondary raw material or for energy generation (OG RS № 98/10 dated 24.12.2010), Regulation stipulating the conditions, manner and procedure for waste oil management (OG RS № 71/10 dated 04.10.2010) and the Regulation stipulating the methods and procedures for waste management containing asbestos (OG RS № 74/10 dated 15.10.2010).

Waste amounts delivered to authorized operators in 2016 are as follows in table 90a.

Table 90a

HPPs Djerdap Branch									
Waste delivered in 2016									
No.	**Official nomenclature of the Rules related to waste categories, testing and classification (OG RS № 56/10 Dated 10.08.2010)**		**Unit**	**Organizational unit**				**Total**	**Note**
				Djerdap 1 HPP	**Djerdap 2 HPP**	**Pirot HPP**	**Vlasinske HPPs**		
	Name	**Code**		**Amounts**					
1.	Other emulsions (oily liquid waste)	13 08 02* 13 05 07	t	0	29,978	0	0	**29,978**	Waste overtaken by BREM GROUP d.o.o. Beograd

6.2.4 Environmental Noise Measurements

Environmental noise (around power plants operated by the Djerdap HPPs) was not measured, given that the facilities are not located close to settlements and as such do not affect the living environment.

6.3 Working Environment Monitoring, Safety and Health

Occupational Safety and Health Reports in 2016 include the following elements:

- **Working environment monitoring**
  - working environment noise measurements
- **Safety**
  - training
  - work injuries
- **Health**

6.3.1 Working Environment Monitoring

- **Working environment noise measurements**

In 2016, noise in working environment was measured in all power facilities of Djerdap HPP Branch, within periodical measurements and testings of working environment conditions. The measurements were performed during winter period, in November and December 2016, by Institute for Occupational Safety AD, Novi Sad. All measured values of noise in working environment were under or at the level of regulatory permitted values prescribed by the Rules on Occupational Safety Measures and Normatives Related to Noise in Work Premises (Official Gazette of the Republic of Serbia, No. 96/2011 and 78/2015.

6.3.2 Safety

- **Training**

Specific health and safety training of employees has been conducted under the training program, including both theoretical and practical classes. During 2016, a total of 599 employees was trained in the field of health and safety. Other types of training include the following:

- Training for safe work with the equipment 377
- Contractors' employees training (EHSP 0.06 procedure) 560
- Visitors training 191
- Fire protection training 681
- IMS training 53

All Djerdap HPPs employees have undergone the hazards and risks training in accordance with the Rules on Occupational Safety and Health and the Risk Assessment Act. The same applies to the contractors with whom a special agreement is signed regarding the implementation of safety and health measures during the performance of contractual works in accordance with the law.

Number of employees trained in the field of occupational health and safety is given in Table 91.

Table 91

DJERDAP HPPs BRANCH					
Training in 2016					
Organisational unit	Number of employees	Foreseen for training		Trained	
		№	%	№	%
Djerdap 1 HPP	386	386	100,00	171	44,30
Djerdap 2 HPP	220	220	100,00	220	100,00
Pirot HPP	41	41	100,00	41	100,00
Vlasinske HPPs	133	133	100,00	133	100,00
SOP Pozarevac	21	21	100,00	10	47,62
DMR Belgrade	47	47	100,00	24	51,06
TOTAL: DJERDAP HPPs BRANCH	**848**	**848**	**100,00**	**599**	**70,64**

- **Work injuries**

Table 92 provides work injuries in 2016.

Table 92

DJERDAP HPPs BRANCH						
Work injuries in 2016						
Organisational unit	Number of employees	Injuries - Number of employees ratio				
		Light	Serious	Fatalities	Total	%
Djerdap 1 HPP	386	4	0	0	4	100,00
Djerdap 2 HPP	220	0	0	0	0	0,00
Pirot HPP	41	0	0	0	0	0,00
Vlasinske HPPs	133	0	0	0	0	0,00
SOP Pozarevac	21	0	0	0	0	0,00
DMR Belgrade	47	0	0	0	0	0,00
TOTAL: DJERDAP HPPs BRANCH	**848**	**4**	**0**	**0**	**4**	**100,00**

6.3.3 Health

In 2016, there were no medical examinations due to delay in realization of the public procurement that had been launched. The public procurement procedure, launched on 25th May 2016 was accomplished on 15th December 2016 and the contract signing with the selected tenderer (Institute of Occupational Health "Dr. Dragomir

Karajovic" – Belgrade) is in progress so that the medical examination planned to be done in 2016 will start in February 2017, for all employees in Djerdap HPP Branch.

Table 93 shows the periodic medical examinations data for the Djerdap HPPs Branch.

Table 93

DJERDAP HPPs BRANCH											
Health in 2016											
Organisational unit	Number of employees	Periodical examination				Work capability					
		Referred to examination		Examined		Capable		Limited capability		Not capable	
		№	%	№	%	№	%	№	%	№	%
Djerdap 1 HPP	386	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
Djerdap 2 HPP	220	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
Pirot HPP	41	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
Vlasinske HPPs	133	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
SOP Pozarevac	21	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
DMR Belgrade	47	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
TOTAL: DJERDAP HPPs BRANCH	**848**	**0**	**0,00**	**0**	**0,00**	**0**	**0,00**	**0**	**0,00**	**0**	**0,00**

6.4 Public complaints

No public complaints in 2016.

7. DRINSKO-LIMSKE HPPs BRANCH

DRINSKE HPPs

Drinske HPPs comprise:

- **Bajina Basta HPP**
- **Bajina Basta PSHPP**
- **Zvornik HPP**
- **Elektromorava HPP**
- **(Medjuvrsje HPP and Ovcar Banja HPP)**

LIMSKE HPPs

Limske HPPs comprise:

- **Uvac HPP**
- **Kokin Brod HPP**
- **Bistrica HPP**
- **Potpec HPP**

7.1 Overview and Status of Permits

Overview and status of permits, licences and other necessary approvals as well as applications for new or extension of existing permits and approvals in 2016 are shown in Table 94.

Table 94

DRINSKO-LIMSKE HPPs BRANCH			
Overview and Status of Permits in 2016			
Organisational unit	**Obtained permits and approvals (number and date)**	**Applications for new or extension of existing permits**	**Note**
DRINSKE HPPs			
Bajina Basta HPP	- Water permit for generation of electric energy from the system of Bajina Basta HPP and PSHPP accumulations, No. 325-04-01298/2016-07 dated 15.11.2016. - Water permit for needs of Vrelo SHPP operation, No. 325-04-00537/2016-07 dated 26.09.2016.		
Bajina Basta PSHPP	-Decision on legalization of photovoltaic power plant Brana Lazici PVPP, No. 354-00-00164/2016-09 dated 28.09.2016. -Building permit for construction of local water supply system, 2.2 km long, with two reservoirs, No. ROP-BBA-14097-CPIH-3/2016 dated 24.11.2016.	-submission of the Basic Design "Rehabilitation and Reconstruction of the Wall under Bajina Basta PSHPP Switchyard" to revision committee within the process of building permit issuance. Location conditions obtained, No. 350-01-01537/2015-14 dated 08.02.2016. Application sent on 01.03.2016.	
Elektromorava HPP			
Ovcar Banja HPP	No new permits in 2016	No new applications	
Medjuvrsje HPP	No new permits in 2016	No new applications	
Zvornik HPP	No new permits in 2016	No new applications	
LIMSKE HPPs			
Kokin Brod HPP	Decision on legalization – core and electrical material storage on cadastral lot No. 645/1 CM Buradja No: 351-118/2014-06 dated 05.02.2016.	Application sent for opinion issuance in the process of extension of water permit for exploitation of water from Kokin	

		Brod accumulation for hydro power purposes.	
Uvac HPP	No new permits in 2016	Application sent for opinion issuance in the process of extension of water permit for exploitation of water from Uvac accumulation for hydro power purposes.	
Bistrica HPP	Decision on legalization – oil and mechanical parts storage CL 1473 CM Bistrica, No: 351-2209/2003-06 dated 05.02.2016.	Application sent for opinion issuance in the process of extension of water permit for exploitation of water from Radoinja accumulation for hydro power purposes.	
Potpec HPP	No new permits in 2016	Application sent for opinion issuance in the process of extension of water permit for exploitation of water from Potpec accumulation for hydro power purposes.	

7.2 Monitoring and Environmental Impact

In 2016 Drinsko - Limske HPPs had first audit after third IMS recertification. Control audit was performed on 5th December 2016. The results have shown that Drinsko – Limske HPPs continuously maintain and improve their integrated management system in accordance with the ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 standards' requirements.

In the period 7th - 8th December 2016, Drinsko – Limske HPPs successfully performed second control audit after second recertification of the information security management system in accordance with the requirements of ISO/IEC 27001:2013.

Successful control audit was performed by SGS (*Systems & Services Certification Zurich - Switzerland*).

7.2.1 Identified negative impacts on the flow and ecological system below the reservoir

Identified adverse watercourse impacts below dams are mainly twofold: very low water levels (low flow) conditioned by the annual climate - meteorological conditions or during very large inflows when higher efficiency is achieved by hydropower transfer through electricity generation planning.

7.2.2 Water

- **Water amounts**

Water used for hydropower generation, make-up water and sanitary water did not exceed the permitted amounts. Amounts of permitted and used water for electricity generation, as well as discharged water amounts after electricity generation in 2016 are provided in Table 95.

Table 95

DRINSKO – LIMSKE HPPs BRANCH							
Water amounts in 2016							
Organisational unit		**Number of units**	**Permitted water amounts (installed discharge per unit) m³/s**	**Water used for electricity generation in 2014 m³/y x 10⁶**	**Discharged water amounts**		
					Process water m3/y x 106	**Sanitary water m3/y x 103**	**Total discharged water m³/y x10⁶**
BAJINA BASTA HPP		4	175	10.649	/	51,505	11.197,609
BAJINA BASTA PSHPP		4	55	548	/	/	/
ZVORNIK HPP		4	150	10.300	1,5	2	10.301,502
ELEKTROMORAVA HPP	**Medjuvrsje HPP**	3	I-19,5 II-30 III-3,75	887,02	0,00757	9,752	887,037
	Ovcar Banja HPP	2	I-19,5 II-30	846,44	0,00700	5,585	846,452
LIMSKE HPPs	**Uvac HPP**	1	43	353	0,358	0,1	353,359
	Kokin Brdo HPP	2	18,7	415	1,512	0,1	416,513
	Bistrica HPP	2	18	473	2,836	0,1+2.192,08 (drinking water for Priboj)	2.668,016
	Potpec HPP	3	55	2.430	4.957,697	0,1	7.387,797

- **Water quality**

On the basis of contractual obligations regarding the management of wastewater/surface water from rivers and reservoirs, Occupational Safety Institute in 2016 conducted quarterly sampling of waste/surface water from all power plants operated by the Drinsko – Limske HPPs. Sampling was conducted in the fourth quarter of 2016.

The following number of samples was taken: Bajina Basta HPP 7 samples, Limske HPPs 8 samples, Elektromorava HPP 4 samples and Zvornik HPP 3 samples as follows:

- wastewater sample
- surface water sample upstream from the facility
- surface water sample downstream from the facility

Water samples were chemically and biologically analysed, while the results were interpreted in accordance with Regulation stipulating pollutants limit values in surface and ground waters and sediments, and the deadlines for their achievement (OG RS № 50/2012), Regulation stipulating hazardous substances in water (OG RS № 31/1982), Water Classification Regulation and Watercourse Categorisation Regulation (OG SFRY № 5/1968).

Wastewater and surface water quality test results are presented in Table 96. Furthermore, as far as Drinsko – Limske HPPs Branch wastewater treatment is concerned, preparation of the study "Prefeasibility Study with Preliminary Design on treatment of wastewater generated in Drinsko – Limske HPPs" is in progress.

Table 96

Drinsko – Limske HPPs Branch														
Water quality in 2016														
Organisational unit	**Testing parameters** (unit)	**Wastewater and surface water quality testing results for 2015**												
		1 quarter			**2 quarter**			**3 quarter**			**4 quarter**			**Test results comment and conclusion**
		From the sewage system before discharge	Surface water upstream from the facility	Surface water downstream from the facility	From the sewage system before discharge	Surface water upstream from the facility	Surface water downstream from the facility	From the sewage system before discharge	Surface water upstream from the facility	Surface water downstream from the facility	From the sewage system before discharge	Surface water upstream from the facility	Surface water downstream from the facility	(**Review of chemical and bacteriological analysis of samples from the sewage system and surface water upstream and downstream of the facility and its impact on water class defined by Water Classification Regulation)**
BAJINA BASTA HPP	MPN coliform bacteria (E. coli/1l)	*	1x10²	3x10²	*	1,1x10²	30	*	7,9x10²	2,1x10²	*	1,5x10²	1x10³	Novi Sad Occupational Safety Institute sampled the Bajina Basta HPP surface waters to identify their quality and recipient (river) impact. Following the Decree setting limit values of pollutants in surface and groundwater and sediment and deadlines for their achievement (OG RS № 50/2012) and Regulation stipulating hazardous substances in waters (OG SRS № 31/82), as well as the Water Classification Regulation and Watercourse Categorisation Regulation (OG RS № 5/68) Drina River belongs to Class II. Tested parameter of **COD does not meet** the values defined by the Decree.
	Dissolved O_2 (mg/l)	4,05	9,32	8,19	9,50	9,32	8,19	6,29	8,86	7,69	8,65	10,1	9,11	
	Suspended substances (mg/l)	8	>1	3,1	10,5	>1	3,1	7,6	>1	>1	1,8	15,6	13,4	
	COD(mg/l)	58	14,8	13,2	15	14,8	13,2	22,5	19	15,4	24,1	15,2	14,8	
	BOD_5(mg/l)	16	0,97	0,35	3	0,97	0,35	12	1,68	1,05	5,0	0,9	>0,5	
	pH value	8,21	8,26	7,91	7,78	8,26	7.,91	7,71	8,51	7,91	8,04	8,16	8,11	
	Total oil and grease (mg/l)	*	*	*	*	*	*	*	*	*	*	*	*	

ZVORNIK HPP	MPN coliform bacteria (E. coli/1l)	*	$1x10^3$	$1,8x10^3$	*	$1,4x10^3$	$9x10^3$	*	$1,3x10^3$	$4,3\ x10^3$	*	$9,1x10^3$	$1,3x10^4$	Novi Sad Occupational Safety Institute sampled the Zvornik HPP surface waters to identify their quality and recipient (river) impact. Following the Decree setting limit values of pollutants in surface and groundwater and sediment and deadlines for their achievement (OG RS № 50/2012) and Regulation stipulating hazardous substances in waters (OG SRS № 31/82), as well as the Water Classification Regulation and Watercourse Categorisation Regulation (OG RS № 5/68) Drina River belongs to Class II. Tested parameter of **COD does not meet** the values defined by the Decree.
	Dissolved O_2 (mg/l)	*	8,55	8,68	*	8,46	8,74	*	9,24	8,67	*	10,06	10,23	
	Suspended substances (mg/l)	*	6	5	*	10,1	11,4	*	>1	>1	*	17,8	20,6	
	COD(mg/l)	*	10,8	14,9	*	18,8	20,4	*	16	18,9	*	15,5	15,7	
	BOD_5(mg/l)	*	0,9	1,6	*	0,6	0,69	*	2,13	1,62	*	1,6	1,1	
	pH value	*	8,27	8,27	*	8,18	8,17	*	8,11	6,87	*	8,13	8,16	
	Total oil and grease (mg/l)	*	*	*	*	*	*	*	*	*	*	*	*	
OVCAR BANJA HPP	MPN coliform bacteria (E. coli/1l)	*	$3\ x10^2$	$2,9\ x10^2$	*	$9x10^3$	$3,5x10^4$	*	$4,2x10^3$	$4,8x10^3$	*	$1,6x10^4$	$3,5x10^4$	Novi Sad Occupational Safety Institute sampled the Elektromorava HPP surface waters to identify their quality and recipient (river) impact. Following the Decree setting limit values of pollutants in surface and groundwater and sediment and deadlines for their achievement (OG RS № 50/2012) and Regulation stipulating hazardous substances in waters (OG SRS № 31/82), as well as the Water Classification Regulation and Watercourse Categorisation Regulation (OG RS № 5/68) Zapadna Morava River belongs to Class II. Tested parameter of **COD does not meet** the values defined by the Decree.
	Dissolved O_2 (mg/l)	*	8,34	8,40	*	8,09	8,05	*	8,33	8,15	*	9,44	9,45	
	Suspended substances (mg/l)	*	11	9	*	7,4	7,8	*	<1	<1	*	6,,0	2,6	
	COD(mg/l)	*	14,7	14,2	*	22,6	22,9	*	18,3	16,1	*	19,3	19	
	BOD_5(mg/l)	*	1,7	1,7	*	1,37	1,37	*	1,81	1,99	*	1,3	1,9	
	pH value	*	8,11	8,06	*	8,04	8	*	7,98	7,64	*	7,98	7,92	
	Total oil and grease (mg/l)	*	*	*	*	*	*	*	*	*	*	*	*	

MEDJUVRSJE HPP	MPN coliform bacteria (E. coli/1l)	*	3,3 x10^2	5,8 x10^2	*	5,5x10^3	1,6x10^4	*	1,2x10^3	5,8x10^3	*	6,9x10^3	1,3x10^4	Novi Sad Occupational Safety Institute sampled the Elektromorava HPP surface waters to identify their quality and recipient (river) impact. Following the Decree setting limit values of pollutants in surface and groundwater and sediment and deadlines for their achievement (OG RS № 50/2012) and Regulation stipulating hazardous substances in waters (OG SRS № 31/82), as well as the Water Classification Regulation and Watercourse Categorisation Regulation (OG RS № 5/68) Zapadna Morava River belongs to Class II. Tested parameter of **COD does not meet** the values defined by the Decree.
	Dissolved O_2 (mg/l)	*	8,30	8,35	*	7,87	7,80	*	7,66	7,86	*	9,43	9,36	
	Suspended substances (mg/l)	*	8	10	*	9,5	10,2	*	<1	<1	*	1,6	2	
	COD(mg/l)	*	22,6	16,3	*	30	28,10	*	19,3	18,4	*	16,3	20,3	
	BOD_5(mg/l)	*	2	1,5	*	1,27	1,79	*	2,14	1,62	*	1,7	1,3	
	pH value	*	8,3	8,02	*	7,99	7,84	*	7,87	7,89	*	7,91	7,91	
	Total oil and grease (mg/l)	*	*	*	*	*	*	*	*	*	*	*	*	
UVAC HPP	MPN coliform bacteria (E. coli/1l)	*	80	1x10^2	*	2x10^2	2,4x10^2	*	2,7x10^2	3,1x10^2	*	1,6x10^2	2,4x10^2	Novi Sad Occupational Safety Institute sampled Limske HPPs surface water to identify its quality and recipient (river) impact. Uvac reservoir, upstream and downstream, was sampled. Following the Decree setting limit values of pollutants in surface and groundwater and sediment and deadlines for their achievement (OG RS № 50/2012) and Regulation stipulating hazardous substances in waters (OG SRS № 31/82), as well as the Water Classification Regulation and Watercourse Categorisation Regulation (OG RS № 5/68). Tested parameter of **COD does not meet** the values defined by the Decree.
	Dissolved O_2 (mg/l)	*	8,34	8,88	*	8,23	9,65	*	8,30	7,22	*	7,75	9,67	
	Suspended substances (mg/l)	*	3	24	*	>1	4,5	*	>1	>1	*	1,6	>1	
	COD(mg/l)	*	12,2	13,4	*	18,4	17,4	*	20	17,1	*	20,6	18,9	
	BOD_5(mg/l)	*	0,7	0,9	*	0,57	1,59	*	1,4	>0,5	*	>0,5	>0,5	
	pH value	*	7,96	7,92	*	8,44	7,79	*	8,32	7,64	*	7,84	7,85	
	Total oil and grease (mg/l)	*	*	*	*	*	*	*	*	*	*	*	*	
KOKIN BROD HPP	MPN coliform bacteria (E. coli/1l)	*	90	3x10^2	*	1,1x10^2	4,7x10^2	*	5,2x10^2	7x10^2	*	1,7x10^2	1,9x10^2	Novi Sad Occupational Safety Institute sampled Limske HPPs surface water to identify its quality and recipient (river) impact. Kokin Brod reservoir and Uvac River were sampled. Following the Decree setting limit values of pollutants in surface and groundwater and sediment and deadlines for their achievement (OG RS № 50/2012) and Regulation stipulating hazardous substances in waters (OG SRS № 31/82), as well as the Water Classification Regulation and Watercourse Categorisation Regulation (OG RS № 5/68). Tested parameter of **COD does not meet** the values defined by the Decree.
	Dissolved O_2 (mg/l)	*	9,04	9,71	*	8,74	8,51	*	7,94	7,46	*	8,53	8,08	
	Suspended substances (mg/l)	*	11	4	*	2,2	3,8	*	>1	>1	*	>1	>1	
	COD(mg/l)	*	14,4	14	*	14,1	14,3	*	19,5	16,5	*	18,9	16,7	
	BOD_5(mg/l)	*	1	1	*	0,73	0,47	*	1,57	1,14	*	0,7	0,7	
	pH value	*	8,13	8,11	*	8,27	8,12	*	8,25	7,57	*	7,89	7,86	

	Total oil and grease (mg/l)	*	*	*	*	*	*	*	*	*	*	*	*	
BISTRICA HPP	MPN coliform bacteria (E. coli/1l)	*	$2x10^2$	$1,2x10^2$	*	$1.1x10^3$	$1.2x10^3$	*	$9,2x10^2$	$1x10^3$	*	$1x10^3$	$3,5x10^3$	Novi Sad Occupational Safety Institute sampled Limske HPPs surface water to identify its quality and recipient (river) impact. Radoinja reservoir and Lim River were sampled. Following the Decree setting limit values of pollutants in surface and groundwater and sediment and deadlines for their achievement (OG RS № 50/2012) and Regulation stipulating hazardous substances in waters (OG SRS № 31/82), as well as the Water Classification Regulation and Watercourse Categorisation Regulation (OG RS № 5/68) Lim River belongs to Class II. Tested parameter of **COD does not meet** the values defined by the Decree.
	Dissolved O_2 (mg/l)	*	8,8	9,23	*	9,43	8,59	*	10,79	9,72	*	8,60	8,27	
	Suspended substances (mg/l)	*	4	5	*	>1	4,4	*	>1	>1	*	1,4	2,4	
	COD(mg/l)	*	12,6	12,1	*	14,8	14,2	*	20,1	15	*	17	17,9	
	BOD_5(mg/l)	*	1,1	1	*	1,11	0,64	*	3,15	2,41	*	>0,5	0,7	
	pH value	*	8,13	8,12	*	8,31	8,42	*	8,37	8,39	*	7,81	7,77	
	Total oil and grease (mg/l)	*	*	*	*	*	*	*	*	*	*	*	*	
POTPEC HPP	MPN coliform bacteria (E. coli/1l)	*	$7x10^3$	$9,2x10^3$	*	$2,8x10^4$	$5x10^3$	*	$9,8x10^2$	$1.6x10^3$	*	$8,1x10^3$	$9,5x10^3$	Novi Sad Occupational Safety Institute sampled Limske HPPs surface water to identify its quality and recipient (river) impact. Surface water samples from the Potpec reservoir and Lim River were taken. Following the Decree setting limit values of pollutants in surface and groundwater and sediment and deadlines for their achievement (OG RS № 50/2012) and Regulation stipulating hazardous substances in waters (OG SRS № 31/82), as well as the Water Classification Regulation and Watercourse Categorisation Regulation (OG RS № 5/68) Lim River belongs to Class II. Tested parameter of **COD does not meet** the values defined by the Decree.
	Dissolved O_2 (mg/l)	*	8,8	8,76	*	10,14	7,75	*	10,34	8,68	*	9,55	9,83	
	Suspended substances (mg/l)	*	3	4	*	5,9	6,8	*	>1	>1	*	3,6	4,4	
	COD(mg/l)	*	12,4	13,2	*	24,4	20,9	*	22,8	17,7	*	13,7	15,8	
	BOD_5(mg/l)	*	1,4	1,5	*	3,29	0,72	*	5,28	2,23	*	1,1	1,3	
	pH value	*	8,27	8,22	*	8,48	7,87	*	8,53	7,89	*	8,08	8,02	
	Total oil and grease (mg/l)	*	*	*	*	*	*	*	*	*	*	*	*	

7.2.3 Waste

Waste at the Drinsko – Limske HPPs Branch is mostly produced in the process of power plant maintenance. In 2016, Zvornik HPP rehabilitation started and large amount of waste was generated.

Through the Project IPA-2008 "Support to Environmental Protection in Energy Sector – Solving the Problem of Electrical devices filled by PCB – oils in EPS", Drinsko –Limske HPPs Branch solved the issue of twelve PCB transformers and carried out decontamination of two PCB transformers.

Waste management was performed following the waste management procedures defining waste handling according to the waste management legislation, in accordance with the Regulation stipulating the hazardous waste storage, packaging and labelling method, Regulation stipulating waste categories, testing and classification, Regulation stipulating the conditions and manner of collection, transport, storage and treatment of wastes used as secondary raw material or energy generation and Regulation stipulating waste oils management methods. All the waste was sold/delivered to authorized companies registered for such activity.

Waste generated in Drinsko – Limske HPP Branch is tested – its categorization is done. Generated waste in 2016 is shown in the Table 97. Alienated waste (sold/delivered) in 2016 is shown in the Table 97a.

DRINSKO – LIMSKE HPPs BRANCH Table 97

Generated waste in 2016

No.	Official nomenclature of the Rules defining waste categories, its testing and classification OG RS № 56/10 dated 10.08.2010.		Unit (t)	Organizational unit				Total	Note
				Bajina Basta HPP and PSHPP	Limske HPPs	Elektromorava HPP	Zvornik HPP		
	Name	Code		Amounts					
1.	Used printer cartridges other than those indicated under 08 03 17	08 03 18	t	0,080	0,017	0,01	0,04	**0,147**	Cartridges
2.	Mineral non-chlorinated hydraulic oils	13 01 10	t				11,8	**11,8**	Turbine oil
3.	Oils for insulation and heat transfer containing PCB	13 03 01	t	6,792	0,434			**7,226**	PCB oil
4.	Oils for insulation and heat transfer containing PCB	13 03 01	t	0,52				**0,52**	Contaminated oil with PCB
5.	Mineral non-chlorinated oils for insulation and heat transfer	13 03 07	t				17,52	**17,52**	Transformer oil
6.	Waste not otherwise specified	13 08 99	t	3,319	0,25			**3,569**	Waste mixed oil
7.	Packaging containing residues of hazardous substances or contaminated by hazardous substances	15 01 10	t	1,904				**1,904**	Oil sewage
8.	Absorbent, wiping cloths contaminated by hazardous substances	15 02 02	t	0,765				**0,765**	Oily wiping clothes
9.	Used tires	16 01 03	t		0,621	0,191		**0,812**	Car tires
10.	Transformers and condensers containing PCB	16 02 09	t	15,236	1,195			**16,431**	PCB transformers
11.	Transformers and condensers containing PCB	16 02 09	t	2.336				**2,336**	PCB condensers
12.	Discarded equipment other than the one indicated under 16 02 09 to 16 02 13	16 02 14	t			2,84		**2,84**	Electrical motors and pumps
13.	Components removed from discarded equipment other than those indicated under 16 02 15	16 02 16	t				168,9	**168,9**	Stator, rotor poles
14.	Organic waste containing hazardous substances	16 03 05	t	1,5				**1,5**	Various rosin
15.	Lead batteries	16 06 01	t	0,3				**0,3**	Accumulators
16.	Copper, bronze, brass	17 04 01	t		0,65	5,62	3,06	**9,33**	Copper
17.	Copper, bronze, brass	17 04 01	t				1,86	**1,86**	Brass
18.	Iron and steel	17 04 05	t		10,6	7,92	521,31	**539,83**	Steel
19.	Iron and steel	17 04 05	t		14,9	14		**28,9**	Iron

20.	Mixed metals	17 04 07	t				2,08	**2,08**	Sheet metal, white metal
21.	Cables other than those specified under 17 04 10	17 04 11	t				2,54	**2,54**	Cables
22.	Fluorescent tubes and other waste containing mercury	20 01 21	t	0,40	0,12	0,08	0,04	**0,64**	Fluorescent tubes
23.	Discarded electrical and electronic equipment other than those indicated under 20 01 21 and 20 01 23	20 01 35	t	2,92	0,28	0,24	0,26	**3,7**	Electronic hazardous waste

Table 97a

DRINSKO – LIMSKE HPPs BRANCH									
Sold/delivered waste in 2016									
No.	**Official nomenclature of the Rules defining waste categories, its testing and classification OG RS № 56/10 dated 10.08.2010.**		**Unit (t)**	**Organizational unit**				**Total**	**Note**
				Bajina Basta HPP and PSHPP	**Limske HPPs**	**Elektromorava HPP**	**Zvornik HPP**		
	Name	**Code**		**К о л и ч и н е**					
1.	Mineral non-chlorinated hydraulic oils	13 01 10	t				11,8	**11,8**	Turbine oil
2.	Oils for insulation and heat transfer containing PCB	13 03 01	t	6,792	0,434			**7,226**	PCB oil
3.	Oils for insulation and heat transfer containing PCB	13 03 01	t	0,52				**0,52**	Contaminated oil with PCB
4.	Mineral non-chlorinated oils for insulation and heat transfer	13 03 07	t				17,52	**17,52**	Transformer oil
5.	Waste not otherwise specified	13 08 99	t	3,319	0,25			**3,569**	Waste mixed oil
6.	Packaging containing residues of hazardous substances or contaminated by hazardous substances	15 01 10	t	1,904				**1,904**	Oil sewage
7.	Transformers and condensers containing PCB	16 02 09	t	15,236	1,195			**16,431**	PCB transformers
8.	Transformers and condensers containing PCB	16 02 09	t	2,336				**2,336**	PCB condensers
9.	Discarded equipment other than the one indicated under 16 02 09 to 16 02 13	16 02 14	t			2,84		**2,84**	Electrical motors and pumps
10.	Components removed from discarded equipment other than those indicated under 16 02 15	16 02 16	t				168,9	**168,9**	Stator, rotor poles
11.	Copper, bronze, brass	17 04 01	t			5,62	3,06	**8,68**	Copper
12.	Copper, bronze, brass	17 04 01	t				1,86	**1,86**	Brass

13.	Iron and steel	17 04 05	t			7,92	521,31	**529,23**	Steel
14.	Iron and steel	17 04 05	t			14		**14**	Iron
15.	Mixed metals	17 04 07	t				2,08	**2,08**	Sheet metal, white metal
16.	Cables other than those specified under 17 04 10	17 04 11	t				2,54	**2,54**	Cables
17.	Fluorescent tubes and other waste containing mercury	20 01 21	t	0,40	0,12	0,08	0,04	**0,64**	Fluorescent tubes
18.	Discarded electrical and electronic equipment other than those indicated under 20 01 21 and 20 01 23	20 01 35	t	2,92	0,28	0,24	0,26	**3,7**	Electronic hazardous waste

Drinsko – Limske HPP Branch storages and sells the waste generated during the year within the area of hydro power plants facilities to authorized institutions according to the Regulation stipulating the hazardous waste storage, packaging and labelling method, *Official Gazette of the Republic of Serbia No.* 92/10 dated 05.12.2010, Regulation stipulating waste categories, testing and classification, *Official Gazette of the Republic of Serbia No. 56/10* dated 10.08.2010, Regulation stipulating the conditions and manner of collection, transport, storage and treatment of wastes used as secondary raw material or energy generation, *Official Gazette of the Republic of Serbia No. 98/10* dated 24.12.2010, Regulation stipulating waste oils management methods, *Official Gazette of the Republic of Serbia No. 71/10* dated 04.10.2010, and Regulation stipulating procedures of waste management containing asbestos, *Official Gazette of the Republic of Serbia No. 74/10* dated 15.10.2010.

7.2.4 Environmental Noise Measurements

Environmental noise measurements around the power facilities were not performed in 2016.

7.3 Working Environment Monitoring, Safety and Health

Occupational Safety and Health Reports in 2016 include the following elements:

- **Working environment monitoring**
  - working environment noise measurements
- **Safety**
  - training
  - work injuries
- **Health**

7.3.1 Working environment monitoring

- **Working Environment Noise Measurements**

Testing of the working conditions, physical and microclimate parameters were performed in all facilities of the Drinsko – Limske HPPs Branch during regular periodical testings in 2015. In 2016, no testings nor measurements in working environments were performed. Measurements are carried out each three years. Next measurement is foreseen for 2018.

7.3.2 Safety

- **Training**

Employee training is conducted in line with the Safety and Health Training Programme. Testing of knowledge, professional skills and health and safety competence is carried out periodically, depending on the workplace, in accordance with the current legislation. The number of employees foreseen for training and the number of employees who have received training is shown in Table 98.

Table 98

DRINSKO – LIMSKE HPPs BRANCH					
Training in 2016					
Organisational unit	**Number of employees**	**Foreseen for training**		**Trained**	
		№	**%**	**№**	**%**
Bajina Basta HPP **Bajina Basta PSHPP**	209	102	48.80	102	100,00
Elektromorava HPP	51	11	21,57	11	100,00
Zvornik HPP	63	60	95,24	60	100,00
Limske HPP	137	137	100,00	137	100,00
TOTAL: DRINSKO – LIMSKE HPPs BRANCH	**460**	**310**	**67,39**	**310**	**100,00**

Furthermore, the following training courses were organised: operation and handling of the equipment for works on heights, rescue and handling of specific devices – compressors. Trainings of management personnel were performed related to application of preventive measures during planning, preparation and implementation of works by implementing groups, as well as acquainting with basic dangers and hazards in electricity generation proceedings. Besides, individual trainings for preparation of training programs and plans were performed in accordance with the legislation as presented in table 99 below.

Table 99

DRINSKO – LIMSKE HPPs BRANCH			
№	**Type of training**	**Number of attendees**	**Note**
1.	Acquainting contractors with dangers and hazards, OSH measures and rules of conduct	475	
2.	Training and practice for independent use of insulation apparatus for artificial respiration - rescue	51	
3.	Knowledge related to high pressure compressor "BAUER PE 300 HE", its basic maintenance and independent handling	8	
4.	Training and practice of employees for independent use of anti-fall equipment	61	
5.	Obligation of work managers related to application of preventive OSH measures	32	
6.	Training and practice for independent preparation of the Training Program and implementation of personnel training	2	
7.	Training and professional exam for OSH coordinator in the phase of planning	1	
8.	Acquainting students and pupils at practice with OSH measures and rules of conduct	188	
9.	Acquainting visitors and service providers with OSH measures and rules of conduct	212	

- **Work injuries**

Table 100 provides work injuries data in 2016, with remark that out of 3 recorded injuries in total only 1 easy injury occurred during the working process while the other 2 occurred on the way from home to work.

Table 100

DRINSKO – LIMSKE HPPs BRANCH						
Work injuries in 2016						
Organisational unit	**Number of employees**	**Injuries and number of employees ratio**				
		Light	**Serious**	**Fatalities**	**Total**	**%**
Bajina Basta HPP **Bajina Basta PSHPP**	209	1	0	0	1	0,48
Elektromorava HPP	51	0	0	0	0	0
Zvornik HPP	63	0	0	0	0	0
Limske HPP	137	1	1	0	2	1,46
TOTAL: DRINSKO – LIMSKE HPPs BRANCH	**460**	**2**	**1**	**0**	**3**	**0,65**

7.3.3 Health

Medical examinations results are provided in Table 101.

Table 101

DRINSKO – LIMSKE HPPs BRANCH											
Work capability in 2016											
Organisational unit	**Number of employees**	**Periodical examination**				**For work**					
		Referred to examination		**Examined**		**Capable**		**Limited capability**		**Not capable**	
		№	**%**	**№**	**%**	**№**	**%**	**№**	**%**	**№**	**%**
Bajina Basta HPP **Bajina Basta PSHPP**	209	209	100,00	186	89,00	181	97,31	4	2,15	1	0,54
Elektromorava HPP	51	51	100,00	51	100,00	50	98,04	1	1,96	0	0,00
Zvornik HPP	63	63	100,00	60	95,24	60	100,00	0	0,00	0	0,00
Limske HPP	137	137	100,00	137	100,00	136	99,27	0	0,00	1	0,73

TOTAL: DRINSKO – LIMSKE HPPs BRANCH	**460**	**460**	**100,00**	**434**	**94,35**	**427**	**98,39**	**5**	**1,15**	**2**	**0,46**

7.4 Public complaints

There were not public complaints in 2016.

8 TECHNICAL CENTER BEOGRAD

Distribution network has not become a part of Technical Center Beograd. Transformer stations and cables lines are ownership of DSO “EPS Distribucija”.

8.1 Overview and status of permits

Overview and status of permits, licences and other necessary approvals in 2016 were not carried out. There were no new applications for permits.

8.2 Monitoring and Environmental Impact

Environmental impact factors of TC Beograd are:

- **Electromagnetic fields**
- **Environmental noise**
- **Waste**
- **Surface and groundwater quality**
- **Soil quality**

8.2.1 Electromagnetic Fields

During 2016, electromagnetic field measurements were not performed.

8.2.2 Living Environment Noise Measurements

During 2016, living environment noise measurements were not performed.

8.2.3 Waste

Waste is not owned by TC Beograd.

8.2.4 Surface, Ground Waters and Soil Monitoring

Monitoring of surface and groundwater, as well as monitoring of soil in 2016 was not performed on the territory of TC Beograd.

8.3 Working Environment Monitoring, Health and Safety

Reports on 2016 Health and Safety include the following items:

- **Working Environment Monitoring**
  - working environment noise measurements
  - working environment electromagnetic fields
  - working environment parameters
- **Safety**
  - training
  - work injuries
- **Health**

8.3.1 Working environment monitoring

- **Working environment noise measurement**

Measurements were not performed.

- **Working environment electromagnetic fields**

Measurements were not performed.

- **Working environment parameters**

Measurements were not performed.

8.3.2 Safety

- **Training**

Training of employees is carried out according to the Program of training of employees for safe work. Knowledge testing of employees working on positions with high risk is performed in accordance with newly accepted Act on Risk Assessment for Technical centers.

Training of employees is presented in the Table 102 bellow and includes training of newly recruited employees and training of employees with narrow professional occupations.

Table 102

TECHNICAL CENTER BEOGRAD					
Training in 2016					
	No. of employees	**For training**		**Trained**	
		No.	**%**	**No.**	**%**
Safe and healthy work of employees - electrical engineering jobs	**812**	**528**	**65,02**	**528**	**100,00**
Work permits issuance		**6**	**0,74**	**6**	**100,00**
Safe and healthy work of employees (without risk)		**75**	**9,24**	**75**	**100,00**

- **Work injuries**

The status of work injuries in 2016 is presented in Table 103.

Table 103

TECHNICAL CENTER BEOGRAD						
Work injuries in 2016						
Organizational unit	**No. of employees**	**Injuries – number of employees ratio**				
		Light	**Serious**	**Fatalities**	**Total**	**%**
Sector for techinal services Beograd Centar	120	3	1	0	4	3,33
Sector for techinal services Banovo Brdo	140	3	0	0	3	2,14
Sector for techinal services Zemun	124	0	0	0	0	0,00
Sector for techinal services Krnjaca	21	1	0	0	1	4,76
Sector for techinal services Mladenovac	79	3	2	0	5	6,33
Sector for techinal services Obrenovac	48	2	0	0	2	4,17

Sector for PF and MP maintenance	280	4	1	0	5	1,79
TOTAL: TECHNICAL CENTER BEOGRAD	**812**	**16**	**4**	**0**	**20**	**2,46**

8.3.3 Health

Periodical medical examinations of employees are shown in Table 104.

Table 104

TECHNICAL CENTER BEOGRAD											
Working capacity of employees in 2016											
Organizational unit	**Number of employees**	**Periodical examination**				**Capability for work**					
		Referred to examination		**Examined/ Referred to examination**		**Cappable**		**Limited capability**		**Incapable**	
		Број	**%**	**Број**	**%**	**Број**	**%**	**Број**	**%**	**Број**	**%**
Sector for techinal services Beograd Centar	120	55	45,83	55	100,00	54	98,18	0	0,00	1	1,82
Sector for techinal services Banovo Brdo	140	79	56,43	79	100,00	69	87,34	4	5,06	6	7,59
Sector for techinal services Zemun	124	64	51,61	64	100,00	61	95,31	2	3,13	1	1,56
Sector for techinal services Krnjaca	21	10	47,62	10	100,00	10	100	0	0,00	0	0,00
Sector for techinal services Mladenovac	79	27	34,18	27	100,00	25	92,59	0	0,00	2	7,41
Sector for techinal services Obrenovac	48	21	43,75	21	100,00	21	100,00	0	0,00	0	0,00
Sector for PF and MP maintenance	280	54	19,29	54	100,00	53	98,15	0	0,00	1	1,85
TOTAL: TECHNICAL CENTER BEOGRAD	**812**	**310**	**38,18**	**310**	**100,00**	**293**	**94,52**	**6**	**1,94**	**11**	**3,55**

8.4 Public complaints

There were no public complaints in 2016 in TC Beograd.

9 TECHNICAL CENTER NOVI SAD

Distribution network has not become a part of Technical Center Novi Sad. Transformer stations and cables lines are ownership of DSO “EPS Distribucija”.

9.1 Overview and status of permits

Overview and status of permits, licences and other necessary approvals in 2016 were not carried out. There were no new applications for permits.

9.2 Monitoring and Environmental Impact

Environmental impact factors of TC Novi Sad are:

- **Electromagnetic fields**
- **Environmental noise**
- **Waste**
- **Surface and groundwater quality**
- **Soil quality**

9.2.1 Electromagnetic Fields

Electromagnetic field measurements in 2016 were performed on transformer stations which are owned by DSO “EPS Distribucija”.

9.2.2 Living Environment Noise Measurements

Living environment noise measurements in 2016 were performed on transformer stations which are owned by DSO “EPS Distribucija”.

9.2.3 Waste

Waste is owned by DSO “EPS Distribucija”.

9.2.4 Surface, Ground Waters and Soil Monitoring

In 2016, waste water quality analysis was performed at the outlet of separator in overhaul workshops in Subotica and Sombor. Tested parameters on both locations met the values prescribed by the Regulation on limit values of pollutant emissions in water and deadlines for their achievement (Official Gazette of the Republic of Serbia, No.1/16).

9.3 Working Environment Monitoring, Health and Safety

Reports on 2016 Health and Safety include the following items:

- **Working Environment Monitoring**
  - working environment noise measurements
  - working environment electromagnetic fields
  - working environment parameters
- **Safety**

- training
- work injuries

- **Health**

9.3.1 Working environment monitoring

- **Working environment noise measurement**

Working environment noise measurements were not performed in 2016.

- **Working environment electromagnetic fields**

Electromagnetic field measurements were not performed in 2016.

- **Working environment parameters**

Working environment parameters measurements were not performed in 2016.

9.3.2 Safety

- **Training**

Training of employees is presented in the Table 105 bellow.

Table 105

TECHNICAL CENTER NOVI SAD						
Training in 2016						
No.	**Sectors for technical services**	**Number of employees**	**Planned for training**		**Trained**	
			No.	**%**	**No.**	**%**
1	**STS SUBOTICA**	207				
	* Regular training „general electrical“ NORCEV 2016 – training performed by TC NOVI SAD HQ		80	38,65	70	87,50
	General training due to shifting to other jobs		28	13,53	28	100,00
	Extraordinary general training due to change of name of workplace		207	100,00	206	99,52
	** General training due to employment		6	2,90	6	100,00
	***General training – getting contractors acquainted with dangers and hazards, OHS measures and rules of conduct		207	100,00	207	100,00
	****General training – getting visitors and service providers acquainted with OHS measures and rules of conduct		207	100,00	207	100,00
2	**STS Sombor**	189				

	Regular training „general electrical“ NORCEV 2016.		3	1,59	3	100,00
	Training of employees in the field of OHS based on the engagement contract with TC Novi Sad		189	100,00	189	100,00
3	**STS Zrenjanin**	154				
	Regular training „general electrical“ NORCEV 2016.		39	25,32	39	100,00
	Training for HIAB, cart, fork lifter		60	38,96	6	10,00
	Training for handling LZS when working at heights		0	0,00	0	0,00
	Extraordinary staff training - Leadership		0	0,00	0	0,00
	***** Training - getting to know with dangers and harms of third parties		154	100,00	154	100,00
4	**STS Novi Sad**	273				
	* Regular training „general electrical“ NORCEV 2016.		46	16,85	46	100,00
	** General training OHS – employment, training of employees in the field of OHS based on the engagement contract for temporary assignments with TC Novi Sad. Person for OHS in Sector for technical services		75	27,47	75	100,00
	*** General training OHS – FP (change of name of workplace)		273	100,00	273	100,00
5	**STS Ruma**	154				
	Regular training „general electrical“ NORCEV 2016.		8	5,19	8	100,00
	Emergency training as per new instructions for safe and healty work on overhead lines"		53	34,42	53	100,00
	Emergency training "Protective equipment for safe work on loading and unloading on cranes“		0	0,00	0	0,00
6	**STS Sremska Mitrovica**	63				
	Regular training „general electrical“ NORCEV 2016.		16	25,40	16	100,00

	training for handling a chainsaw		19	30,16	18	94,74
7	**STS Pancevo**	189				
	Regular training „general electrical“ NORCEV 2016.		84	44,44	83	98,81
	Emergency training "Safe and healthy work on overhead lines"		0	0,00	0	0,00
	Training of employees in the field of OHS based on the engagement contract with TC Novi Sad		189	100,00	189	100,00
8	**TECHNICAL CENTER NOVI SAD – HQ**	236	236	100,00	236	100,00
TOTAL: TECHNICAL CENTER NOVI SAD		**1.465**	**2.179**	**148,74**	**2112**	**96,92**

Periodical training of employees on workplaces with higher risk is carried out in NORCEV Educational Center, Iriski Venac. The training is organized in cycles, twice a year, so that six groups of employees are trained in one cycle, one group per week (150-180 trainees in total). In 2016, in the first cycle, 129 PE EPS TC Novi Sad employees and 48 DSO employees were trained. The same number of trainees was also trained in the second cycle in 2016. Target of the training is preventive action and permanent improvement in acquiring new knowledges and skills for performance of working tasks with full implementation of OHS measures.

Theoretical part: includes OHS training, training in fire protection and work technology. Employees are getting acquainted with issues in accordance with the OHS Rulebook – normative regulation and importance and target of OHS, sources of danger and harmfulness and preventive measures for safe and healthy work, means and equipment for personal protection at work. The second part of the training is to get acquainted with work technologies – works near voltage and in voltage-free state, dangers related to electric energy, fault PF localization, basic principles of PF manipulation, instructions on dispatching management. The third part implies getting acquainted with fire and explosion protection (practical training on simulators is carried out).

Once the theoretical part of training is accomplished, the trainees take knowledge test examination.

Practical part: it is performed in three groups on individually determined locations on polygon for demonstration such as: erection sheet metal transformer station TS 20/10/04 kV, room with measuring devices and ring main unity facility and combined MV, LV, Al/steel, self-supporting cable bundles and public lightening line.

- **Work injuries**

The status of injuries for 2016 is presented in Table 106.

Table 106

TECHNICAL CENTER NOVI SAD						
Work injuries in 2016						
Organizational unit	**Number of employees**	**Injuries - number of employees ratio**				
		Light	**Serious**	**Fatalities**	**Total**	**%**
STS Subotica	207	0	0	0	0	0,00
STS Sombor	189	1	2	0	3	1,59
STS Zrenjanin	154	1	1	0	2	1,30
STS Novi Sad	273	5	0	0	5	1,83
STS Ruma	154	5	1	0	6	3,90
STS Sremska Mitrovica	63	3	0	0	3	4,76
STS Pancevo	189	9	0	0	9	4,76
HQ	236	3	0	0	3	1,27

TOTAL: TECHNICAL CENTER NOVI SAD	**1.465**	**27**	**4**	**0**	**31**	**2,12**

9.3.3 Health

Periodic medical examinations of employees are presented in Table 107.

Table 107

TECHNICAL CENTER NOVI SAD											
Working capacity of employees in 2016											
Organizational unit	**Number of employees**	**Periodical examination**				**For work**					
		Referred to examination		**Examined**		**Capable**		**Limited capability**		**Not capable**	
		Број	**%**	**Број**	**%**	**Број**	**%**	**Број**	**%**	**Број**	**%**
STS Subotica	207	138	66,67	138	100,00	92	66,67	45	32,61	1	0,72
STS Sombor	189	104	55,03	103	99,04	83	80,58	18	17,48	2	1,94
STS Zrenjanin	154	104	67,53	104	100,00	93	89,42	11	10,58	0	0,00
STS Novi Sad	273	117	42,86	117	100,00	91	77,78	26	22,22	0	0,00
STS Ruma	154	99	64,29	99	100,00	95	95,96	2	2,02	2	2,02
STS Sremska Mitrovica	63	31	49,21	31	100,00	25	80,65	6	19,35	0	0,00
STS Pancevo	189	118	62,43	117	99,15	112	95,73	5	4,27	0	0,00
HQ	236	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
TOTAL: TECHNICAL CENTER NOVI SAD	**1.465**	**711**	**48,53**	**709**	**99,72**	**591**	**83,36**	**113**	**15,94**	**5**	**0,71**

9.4 Public compolaints

There were no public complaints in TC Novi Sad in 2016.

10 TECHNICAL CENTER KRALJEVO

Distribution network has not become a part of Technical Center Kraljevo. Transformer stations and cables lines are ownership of DSO “EPS Distribucija”.

10.1 Overview and status of permits

Overview and status of permits, licences and other necessary approvals in 2016 were not carried out. There were no new applications for permits.

10.2 Monitoring and Environmental Impact

Environmental impact factors of TC Kraljevo are:

- **Electromagnetic fields**
- **Environmental noise**
- **Waste**
- **Surface and groundwater quality**
- **Soil quality**

10.2.1 Electromagnetic Fields

During 2016, electromagnetic field measurements were not performed.

10.2.2 Living Environment Noise Measurements

During 2016, living environment noise measurements were not performed.

10.2.3 Waste

Waste is not owned by TC Kraljevo.

10.2.4 Surface, Ground Waters and Soil Monitoring

Monitoring of surface and groundwater, as well as monitoring of soil in 2016 was not performed on the territory of TC Kraljevo.

10.3 Working Environment Monitoring, Health and Safety

Reports on 2016 Health and Safety include the following items:

- **Working Environment Monitoring**
  - working environment noise measurements
  - working environment electromagnetic fields
  - working environment parameters
- **Safety**
  - training
  - work injuries
- **Health**

10.3.1 Working environment monitoring

- **Working environment noise measurement**

Noise measurements are presented in the Table 108.

Table 108

TECHNICAL CENTER KRALJEVO			
Working environment noise in 2016			
Organizational unit	Sub-branch	Registered noise level (dB(A))	Permitted noise level (dB(A))
Cacak	**Cacak**		
	1. Auto repair shop/heaters operation	73,90	85
	2. Bar/ventilation	56,80	85
	3. Office of the Chief of maintenance division/the server	60,20	85
	G. Milanovac		
	4. Emergency department/the server	59,90	85
	Ivanjica		
	5. Warehouse office/TR operation	32,61	85
	6. Business secretary office /photocopiers operation	59,48	85
	Sjenica		
	7. Office of operating personnel in SS 110/35 kV/operating personnel	30,31	85
Novi Pazar	Locksmith workshop	55,00	85
	Auto repair shop	59,00	85
	Power house in HPP	88,00	105
	Control room in HPP	66,00	70
	Tutin sub-branch - Locksmith workshop	59,00	85

- **Working environment electromagnetic fields**

Electromagnetic field measurements were carried out during 2016. Measuring results are specified within Table 109.

Table 109

TECHNICAL CENTER KRALJEVO			
Electromagnetic field in 2016			
Organizational unit	**Source and its position in the area**	**Electric field**	**Magnetic field**
		E_{max} кV/m	**B_{max} μ T**
Arandjelovac	**SS 35/10 kV „Vrbica”** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0.130 кV/m**	**0.371 μ T**
Valjevo	**SS 110/35 kV “Osecina”** Testing of workers exposure to non-ionizing radiation by measuring the electric field intensity and low frequency of magnetic induction inside	**3.737 кV/m**	**7.874μ T**
Valjevo	**SS 110/35 kV “Osecina”**	**0.279 кV/m**	**9.331μ T**

	Testing of human exposure to non-ionizing radiations of low frequency nearby		
Jagodina	**SS 110/20/10 kV Jagodina 2** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0.156 κV/m**	**0.326μ T**
Kraljevo	**SS 110/35 kV Kraljevo 5** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0.001 κV/m**	**0.050 μ T**
Krusevac	**MTK facility located with EMS SS 110/35 kV, Krusevac** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0.046 κV/m**	**0.932 μ T**
Lazarevac	**SS 110/35 kV „Ocaga", Ibarsji put bb, Lazarevac** Testing of workers exposure to non-ionizing radiation by measuring the electric field intensity and low frequency of magnetic induction inside	**5.67 κV/m**	**16.03 μ T**
Loznica	**SS 110/35 kV Krupanj** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0.282 κV/m**	**8.25 μ T**
Novi Pazar	**SS 35/10 kV „Centar" 8 mart Str. bb** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0.365κV/m**	**1.202μ T**
Uzice	**SS 110/35 kV Zlatibor 2, Zlatibor** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0.965 κV/m**	**1.642 μ T**
Cacak	**SS 110/35 kV "Guca"** Testing of workers exposure to non-ionizing radiation by measuring the electric field intensity and low frequency of magnetic induction inside	**7.686 κV/m**	**82.07 μ T**
Sabac	**SS 110/20/35 kV Sabac 2** Testing of workers exposure to non-ionizing radiation by measuring the electric field intensity and low frequency of magnetic induction inside	**5.84 κV/m**	**63.70 μ T**

	E (kV/м)	B (μT)
DIN / VDE 1995. – Germany	-	-
NRPB 1993. - Great Britain	12	1.600
CENELEC 1995. - European Pre Standards	12	640
ICNIRP 1998. - International recommendations	5	100

- **Working environment parameters**

Working environment parameters measurements were performed in 2016 in organizational units: Cacak and Novi Pazar.

Working environment parameters in all branches were not above LVI.

10.3.2 Safety

- **Training**

Training of employees is carried out according to the Program of training of employees for safe work. Knowledge testing of employees working on positions with high risk is performed every fifth year in accordance with the Act on Risk Assessment.

Training of employees is presented in the Table 110 bellow and includes training of newly recruited employees and training of employees with narrow professional occupations.

Table 110

TECHNICAL CENTER KRALJEVO					
Training in 2016					
Organizational unit	**Number of employees**	**For training**		**Trained**	
		No.	**%**	**No.**	**%**
Arandjelovac	77				
Health and Safety training		73	94,80	73	100,00
Kraljevo	230				
Health and Safety training		377	163,91	377	100,00
Krusevac	167				
Health and Safety training		187	111,98	187	100,00
Lazarevac	116				
Health and Safety training		89	76,72	89	100,00
Loznica	127				
Health and Safety training		49	38,58	49	100,00
Novi Pazar	58				
Health and Safety training		79	136,21	79	100,00
Getting constractor acquainted with dangers and harmfulness and rules of conduct		111	191,38	111	100,00
Fire protection training		111	191,38	111	100,00
Uzice	274				
Health and Safety training		2	0,73	2	100,00
Fire protection training		185	67,52	185	100,00
Cacak	190				
Health and Safety training		242	127,37	242	100,00
Fire protection training		14	7,37	14	100,00
Auto platform operator training		19	10,00	19	100,00
Getting visitors acquainted with OHS measures		23	12,11	23	100,00
Getting acquainted students on practice with OHS measures		55	28,95	55	100,00
Training for chainsaw,trimmer and mower operator		64	33,68	64	100,00
Training for operating personnel		28	14,74	28	100,00
Getting constractor acquainted with dangers and harmfulness and rules of conduct		156	82,11	156	100,00
Шабац	151				
Health and Safety training		194	128,48	194	100,00
Управа	154				
Health and Safety training		89	57,79	89	100,00
TOTAL: TECHNICAL CENTER KRALJEVO	**1.882**	**2.036**	**108,18**	**2.036**	**100,00**

- **Work injuries**

Data on work injuries in 2016 are given in Table 111.

Table 111

TECHNICAL CENTER KRALJEVO						
Work injuries in 2016						
Organizational unit	**Number of employees**	**Injuries - number of employees ratio**				
		Light	**Serious**	**Fatalities**	**Total**	**%**
Arandjelovac	77	4	1	0	5	6,49
Valjevo	140	4	0	0	4	2,86
Jagodina	198	1	2	0	3	1,52
Kraljevo	230	4	2	0	6	2,61
Krusevac	167	0	1	0	1	0,60
Lazarevac	116	3	0	0	3	2,59
Loznica	127	4	0	0	4	3,15
Novi Pazar	58	1	0	0	1	1,72
Uzice	274	5	0	0	5	1,82
Cacak	190	4	0	0	4	2,11
Sabac	151	4	1	0	5	3,31
HQ	154	1	0	0	1	0,65
TOTAL: TECHNICAL CENTER KRALJEVO	**1.882**	**35**	**7**	**0**	**42**	**2,23**

10.3.3 Health

Data on periodic medical examinations of employees are given in Table 112.

Table 112

TECHNICAL CENTER KRALJEVO											
Health in 2016											
Organizational unit	**Number of employees**	**Periodic examination**				**Work capability**					
		Referred to examination		**Examined/ Referred**		**Capable**		**Limited capability**		**Not capable**	
		Број	**%**	**Број**	**%**	**Број**	**%**	**Број**	**%**	**Број**	**%**
Arandjelovac	77	47	61,04	47	100,00	45	95,74	2	4,26	0	0,00
Valjevo	140	94	67,14	94	100,00	83	88,30	11	11,70	0	0,00
Jagodina	198	57	28,79	57	100.00	53	92,98	4	7,02	0	0,00
Kraljevo	230	117	50,87	117	100,00	112	95,73	5	4,27	0	0,00
Krusevac	167	97	58,08	97	100,00	95	97,94	2	2,06	0	0,00
Lazarevac	116	63	54,31	63	100,00	53	84,13	10	15,87	0	0,00
Loznica	127	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
Novi Pazar	58	23	39,66	23	100,00	19	82,61	4	17,39	0	0,00
Uzice	274	125	45,62	125	100,00	98	78,40	19	15,20	8	6,40
Cacak	190	127	66,84	127	100,00	122	96,06	5	3,94	0	0,00
Sabac	151	112	74,17	112	100,00	102	91,07	10	8,93	0	0,00
HQ	154	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
TOTAL: TECHNICAL CENTER KRALJEVO	**1.882**	**862**	**45,80**	**862**	**100**	**782**	**90,72**	**72**	**8,35**	**8**	**0,93**

10.4 Public compolaints

There were no public complaints in TC Kraljevo in 2016.

11 TECHNICAL CENTER KRAGUJEVAC

Distribution network has not become a part of Technical Center Kragujevac. Transformer stations and cables lines are ownership of DSO “EPS Distribucija”.

11.1 Overview and status of permits

Overview and status of permits, licences and other necessary approvals in 2016 were not carried out. There were no new applications for permits.

11.2 Monitoring and Environmental Impact

Environmental impact factors of TC Kragujevac are:

- **Electromagnetic fields**
- **Environmental noise**
- **Waste**
- **Surface and groundwater quality**
- **Soil quality**

11.2.1 Electromagnetic Fields

During 2016, electromagnetic field measurements were not performed.

11.2.2 Living Environment Noise Measurements

During 2016, living environment noise measurements were not performed.

11.2.3 Waste

Waste is not owned by TC Kragujevac.

11.2.4 Surface, Ground Waters and Soil Monitoring

Monitoring of surface and groundwater, as well as monitoring of soil in 2016 was not performed on the territory of TC Kragujevac.

11.3 Working Environment Monitoring, Health and Safety

Reports on 2016 Health and Safety include the following items:

- **Working Environment Monitoring**
  - working environment noise measurements
  - working environment electromagnetic fields
  - working environment parameters

- **Safety**
  - training
  - work injuries
- **Health**

11.3.1 Working environment monitoring

- **Working environment noise measurement**

Measurements were not performed.

- **Working environment electromagnetic fields**

Measurements were not performed.

- **Working environment parameters**

Measurements were not performed.

11.3.2 Safety

- **Training**

Training of employees is presented in the Table 113.

Table 113

TECHNICAL CENTER KRAGUJEVAC					
Training in 2016					
Организациона јединица	**Number of employees**	**For training**		**Trained**	
		No.	**%**	**No.**	**%**
Kragujevac and HQ	289	140	48,44	140	100,00
Training for safe opertionwith HTP-12		5	1,73	5	100,00
Fire protection training		2	0,69	2	100,00
FTO training		28	9,69	28	100,00
Training for safe operation with chainsaw and bush cutter		24	8,30	24	100,00
Training in the field of facilities security		10	3,46	10	100,00
Pozarevac and HQ	186	120	64,52	120	100,00
Training for safe operation according to the Act on risk assessment - introduction to risks and protection measures		30	16,13	30	100,00
Training for safe operation related to control of metering group under voltage 1 kV		6	3,23	6	100,00
Safety training for operation with hazardous substances transport		20	10,75	20	100,00
Smederevo and HQ	138	116	84,06	116	100,00
Training for safe operation according to the Act on risk assessment - introduction to risks and protection measures		116	84,06	**116**	100,00
Training in the field of facilities security		10	7,25	**10**	100,00
Training for safe operation near the gas installations		10	7,25	**10**	100,00
First aid training		50	36,23	**50**	100,00
TOTAL: TECHNICAL CENTER KRAGUJEVAC	**613**	**687**	**112,07**	**687**	**100,00**

Note: Number of trainings is greater than the number of employees, because there were more changes in jobs positions and a number of employees came through more than one type of training.
Note: Number of employees in organizational units as in Table 113, differs from the number of employees in organizational units in Tables 114 and 115, since the employees have training in their place of work, and organizationally belong to TC Kragujevac HQ.

- **Work injuries**

The status of injuries for 2016 is presented in Table 114.

Table 114

TECHNICAL CENTER KRAGUJEVAC						
Work injuries in 2016						
Organizational unit	**Number of employees**	**Injuries – number of employees ratio**				
		Light	**Serious**	**Fatalities**	**Total**	**%**
Sector Kragujevac and TC LHQ	339	8	0	0	8	2,36
Sector Pozarevac	158	4	2	0	6	3,80
Sector smederevo	116	7	0	0	7	6,03
TOTAL: TECHNICAL CENTER KRAGUJEVAC	**613**	**19**	**2**	**0**	**21**	**3,43**

11.3.3 Health

Periodical medical examination data are given in the Table 115.

Table 115

TECHNICAL CENTER KRAGUJEVAC											
Working capacity in 2016											
Organizational unit	**Number of employees**	**Periodical medical examination**				**Capable for work**					
		Referred to examination		**Examined**		**Capable**		**Limited capability**		**Incapable**	
		Бр	%	Бр	%	Бр	%	Бр	%	Бр	%
Sector Kragujevac and TC LHQ	339	137	40,41	137	100,00	91	66,42	14	10,22	32	23,36
Sector Pozarevac	158	110	69,62	110	100,00	87	79,09	0	0,00	23	20,91
Sector smederevo	116	61	52,59	61	100,00	58	95,08	3	4,92	0	0,00
TOTAL: TECHNICAL CENTER KRAGUJEVAC	**613**	**308**	**50,24**	**308**	**100,00**	**236**	**76,62**	**17**	**5,52**	**55**	**17,86**

11.4 Public complaints

There were no public complaints in TC Kragujevac in 2016.

12 TECHNICAL CENTER NIS

Distribution network has not become a part of Technical Center Nis. Substations and cable lines are owned by DSO „EPS Distribucija“.

12.1 Overview and status of permits

Overview and status of permits, licences and other necessary approvals in 2016 were not carried out. There were no new applications for permits.

12.2 Monitoring and environmental impact

Environmental impact factors for TC Nis are:

- **Electromagnetic fields**
- **Environmental noise**
- **Waste**
- **Surface and groundwater quality**
- **Soil quality**

12.2.1 Electromagnetic fields

Electromagnetic field measurements were conducted in 2016 on substatios owned by DSO „EPS Distribucija“.

12.2.2 Environmental noise

Environmental noise measurements were conducted in 2016 on substatios owned by DSO „EPS Distribucija“.

12.2.3 Waste

Waste is owned by DSO „EPS Distribution“.

12.2.4 Surface, Ground Waters and Soil Monitoring

Monitoring of surface and groundwater, as well as monitoring of soil in 2016 was not performed on the territory of TC Nis.

12.3 Working Environment Monitoring, Occupational Health and Safety

2016 Occupational Health and Safety Reports include the following activities:

- **Working Environment Monitoring**
  - working environment noise measurements
  - working environment electromagnetic fields
  - working environment parameters
- **Safety**
  - training
  - work injuries
- **Health**

12.3.1. Working Environment Monitoring

Measurements and examinations of working environment were carried out in accordance with the Law on Safety and Health at Work (Official Gazette RS, no. 101/05) and Rulebook on procedure of testing and examining work equipment and examining conditions of work environment (Official Gazette RS, no. 94/06 and 108/06).

- **Working noise measurements**

During 2016 in the sector for technical services Zajecar the noise measurements for summer period were carried out and the measurements results are given in Table 116.

During 2016 in the sector for technical services Pirot the examination of working environment for summer period was carried out and the mesurements results are given in Table 116. In the offices not included in the table, noise does not represent the polluter.

Table 116

TECHNICAL CENTER NIS			
Working noise in 2016			
Oranizational unit	**Examination subject**	**Registered noise level in working rooms in dB (A)**	**Permitted noise level in dB (A)**
Sector for technical services Zajecar	Workshop for electricty works - Knjaževac	73	85
	Sub-branch Bor – Locksmith workshop	81	85
	Sub-branch Negotin – Locksmith workshop	73	85
	Sub-branch Negotin – Auto mechanic workshop	67	85
	Locksmith workshop – Zaječar	55	85
	Service for exterior cleaning of meters – painting of meters	81	85
	Branch Boljevac – locksmith workshop	62	85
	Sub-branch Majdanpek – locksmith workshop	60	85
	Hydro power plant „Sokolovica“ – Room for employees	65	85
	Hydro power plant „Sokolovica“ – Command room	61	85
	Hydro power plant „Sokolovica“ – Machine hall - plant	82	85
	Hydro power plant „Sokolovica“ – Mezzanine HU1-hydro unit 1	85	85
	Hydro power plant „Sokolovica“ – Mezzanine HU3-turbine part	85	85
	Hydro power plant „Gamzigrad“ – Generator room	85	85
	Hydro power plant „Gamzigrad“ – Room for employees	83	85
	HQ of Technical Services Sector Pirot		
	Locksmith workshop	81,5	85

Technical Services Sector Pirot	Auto mechanic workshop	78	85
	Branch Dimitrovgrad		
	Auto mechanic workshop	80,39	85
	Locksmith workshop	82,04	85
	SHPP „Temac“		
	Machine hall	78	85
	Office of duty machine operator	59	85
	Banch Babusnica		
	Auto mechanic workshop	71,3	85

- **Environemental electromagentic fields**

There were no measurements performed in 2016.

- **Working environment parameters**

During 2016 in the branch for technical services Pirot the testing of working environement conditions for summer period was conducted and the mesurement results are given in the follwong tables. All checked working environment parameters for summer period with measurement results meet the working criteria.

In the Technical Service Sector Zajecar the examination of working enevironment parameters for summer period was conducted in 2016. All checked working environment parameters for summer period with monitoring of temperature, humidity and velocity parameters for summer period 2016 is given in Table 117.

Table 117

TECHNICAL CENTER NIS					
Technical services sector Vranje					
Temperature, humidity and velocity					
No.	**Measurement point**	**Monitoring**			**Note**
		t *C	**Rv %**	**Vm/s**	**Comfort zone**
1.	Auto mechanic workshop	20,7	55,3	0,07	Within zone
2.	Locksmith workshop	23,6	47,1	0,06	Within zone
3.	Archive	22,3	46,5	0,04	Within zone
4.	Office at Maricka 8	20,6	50,4	0,03	Within zone
5.	Warehouse	20,6	50,4	0,07	Within zone
6.	Counter hall	22,1	51,1	0,05	Within zone
7.	Accounting and Collection Office S.Prvovenčanog 1	23,2	41,7	0,04	Within zone

8.	Accounting and Collection Office S.Prvovenčanog 2	24,5	40,7	0,05	Within zone
9.	Complaints office V. Han	21,7	51,3	0,05	Within zone
10.	Counter hall V. Han	22,6	50,1	0,05	Within zone
11.	Couner hall Presevo	20,9	50,5	0,07	Within zone
12.	Counter hall Bujanovac	21,6	49,9	0,06	Within zone
13.	Counter hall Trgoviste	22,1	51,1	0,05	Within zone
14.	HPP Jelasnica	24,5	40,7	0,05	Within zone
15.	Dispatch center	22,8	48,2	0,08	Within zone
16.	Accouting office	22,9	43,4	0,07	Within zone
17.	Head office Presevo	20,9	55,4	0,03	Within zone
18.	Room for employees Vranjska Banja	20,2	48,7	0,06	Within zone
Technical Services Sectro Pirot					
1.	Warehouse in the seat of sector	23,0	56,9	0,03	Within zone
2.	Locksmith workshop	22,3	61,3	0,1	Within zone
3.	Room for elctrical fitters	23,2	58,3	0,05	Within zone
4.	Auto mechanic workshop	22,5	59,0	0,08	Within zone
5.	Counter hall	26,7	53,3	0,05	Within zone
6.	Accounting and collection office	26,4	54,5	0,07	Within zone
7.	Dispatch center	25,5	52,2	0,08	Within zone
8.	Emergency service office	23,3	57,8	0,08	Within zone
9.	Business unit Dimitrovgrad, office of associate for electric power unit maintanance	25,7	49,0	0,03	Within zone
10.	Business unit Dimitrovgrad , counter hall	24,6	51,4	0,05	Within zone
11.	Business unit Dimitrovgrad , auto mechanic workshop	20,9	57,7	0,1	Within zone
12.	Business unit Dimitrovgrad, locksmith workshop	20,4	60,7	0,1	Within zone
13.	Business unit Dimitrovgrad, warehouse	21,3	58,3	0,07	Within zone
14.	Business unit Dimitrovgrad, room for electric fitters	21,4	60,0	0,05	Within zone
15.	„Nova lokacija“ Gnjilane, entrance desk	22,3	60,2	0,1	Within zone
16.	„Nova lokacija“ Gnjilane, srock keeper office	21,6	61,7	0,08	Within zone
17.	„Nova lokacija“ Gnjilane, warehouse	21,1	59,5	0,1	Within zone

18.	„Nova lokacija“ Gnjilane, oil and lubricant warehouse	20,4	58,8	0,1	Within zone
19.	SHPP „Temac“, machine hall	22,4	59,6	0,1	Within zone
20.	SHPP „Temac“, emergency machine operator room	23,7	64,6	0,05	Within zone
21.	SHPP „Temac“, breakroom	23,4	64,4	0,1	Within zone
22.	Business unit Babusnica, office of the business unit director	24,4	49,5	0,03	Within zone
23.	Business unit Babusnica, counter hall	26,6	55,4	0,02	Within zone
24.	Business unit Babusnica, emergency service room	23,4	57	0,1	Within zone
25.	Business unit Babusnica, auto mechanic workshop	22,2	56,6	0,04	Within zone
26.	Business unit Babusnica, warehouse	22,4	58,5	0,02	Within zone
27.	Business unit Babusnica, stock-keeper office	22,2	54,6	0,05	Within zone
28.	Business unit Babusnica, room for electric fitters	21,3	57	0,02	Within zone
Technical Services Sector Zajecar					
1.	Office of Branch director Svrljig	25,6	56,8	0,02	Within zone
2.	Cash desk of the branch Svrljig	25,3	57,3	0,03	Within zone
3.	Emergency dispatcher office Svrljig	25,1	56,0	0,03	Within zone
4.	Workshop for electric fitting operations - Svrljig	24,7	54,3	0,07	Within zone
5.	Office of sub-branch Knjazevc director	27,0	50,4	0,03	Within zone
6.	Office of senior associate for electric power unit maintenance Knjazevac	26,3	53,9	0,05	Within zone
7.	Kitchen – sub-branch Knjazevac	26,6	51,3	0,06	Within zone
8.	Counter hall	26,8	52,8	0,01	Within zone
9.	Office for the head of trading office - Knjazevac	26,4	54,7	0,01	Within zone
10.	Entrance desk – Knjazevac	25,8	48,7	0,06	Within zone
11.	Auto mechanic workshop - Knjazevac	26,9	49,6	0,04	Within zone
12.	Stok-keeper office - Knjazevac	27,6	49,4	0,04	Within zone
13.	Warehouse - Knjazevac	27,3	48,7	0,05	Within zone
14.	Electric works workshop - Knjazevac	27,1	51,2	0,04	Within zone
15.	Office of senior associate for electric power units maintenance – Branch Sokobanja	27,6	48,9	0,02	Within zone
16.	Book-keeping office – Sokobanja	27,9	51,2	0,03	Within zone

17.	Branch director office - Sokobanja	27,7	51,7	0,01	Within zone
18.	Office of the warhouse operations officer - Sokobanja	26,9	51,3	0,02	Within zone
19.	Counter hall - Sokobanja	27,1	52,2	0,03	Within zone
20.	Sub-branch Bor – Locksmith workshop	24,5	52,1	0,02	Within zone
21.	Sub-branch Bor – Auto mechanic workshop	23,2	57,8	0,12	Within zone
22.	Sub-branch Bor – Entry desk	23,5	56,2	0,04	Within zone
23.	Sub-branch Bor – counter hall	24,5	52,5	0,01	Within zone
24.	Sub-branch Bor – counter hall, collection	24,9	51,1	0,05	Within zone
25.	Sub-branch Bor – Assistant office	25,5	47,2	0,02	Within zone
26.	Sub-branch Bor – Office of the head of customer relations service	25,4	32,5	0,03	Within zone
27.	Sub-branch Bor – Director's office	26,0	46,0	0,03	Within zone
28.	Sub-branch Bor – Technical preparation office	26,1	36,9	0,02	Within zone
29.	Sub-branch Bor – Office for Cash desk officer	26,3	48,3	0,04	Within zone
30.	Sub-branch Bor – Office for transfer order customers	26,4	34,9	0,04	Within zone
31.	Sub-branch Bor – Office for Public Relations Service officer	26,7	38,9	0,01	Within zone
32.	Sub-branch Bor – stock-keeper office	24,9	54,7	0,03	Within zone
33.	Branch Zagubica – Branch director - office	26,1	47,2	0,02	Within zone
34.	Branch Zagubica – complaints service office канцеларија	25,7	46,3	0,01	Within zone
35.	Branch Zagubica – counter hall	27,4	49,2	0,03	Within zone
36.	Branch Zagubica – room for employees	26,8	47,3	0,02	Within zone
37.	Krepoljin – office for electric fitters	27,1	49,1	0,04	Within zone
38.	Sub-branch Negotin – office for electric power units maintenance officer	26,9	42,7	0,03	Within zone
39.	Sub-branch Negotin – office for senior associate for electric power units maintenance	25,5	48,4	0,02	Within zone
40.	Sub-branch Negotin – rooms for electric fitters	27,4	49,0	0,03	Within zone
41.	Sub-branch Negotin – locksmith workshop	27,5	50,0	0,04	Within zone
42.	Sub-branch Negotin – entrance desk, Seat building	27,3	43,2	0,01	Within zone
43.	Sub-branch Negotin – counter hall	27,1	47,1	0,02	Within zone
44.	Sub-branch Negotin – counter hall, collection 2	27,2	45,7	0,01	Within zone

45.	Sub-branch Negotin – Seat building cash desk	27,1	44,3	0,02	Within zone
46.	Sub-branch Negotin – office for customer relations officer	27,0	49,8	0,01	Within zone
47.	Sub-branch Negotin – office for senior associate for accounting and collection	26,3	49,6	0,02	Within zone
48.	Sub-branch Negotin – office for leading expert associate for customer relations	26,1	50,3	0,03	Within zone
49.	Sub-branch Negotin – meeting room	26,2	49,1	0,03	Within zone
50.	Sub-branch Negotin – office for EPS sub-branch director	24,7	50,5	0,03	Within zone
51.	Sub-branch Negotin – Business assistant office	25,8	52,3	0,01	Within zone
52.	Sub-branch Negotin – Technical office	25,1	49,3	0,03	Within zone
53.	Sub-branch Negotin – office for leading expert associate for measurement points control	27,5	48,5	0,01	Within zone
54.	Garage used by branch expert services	25,4	30,1	0,07	Within zone
55.	Seat building Zajecar – Entrance desk	26,8	33,6	0,03	Within zone
56.	Office no.8	26,8	36,4	0,03	Within zone
57.	Financial Service Head Office	27,0	31,3	0,01	Within zone
58.	Legal and General Operations Service office	27,2	32,5	0,01	Within zone
59.	Meeting room – 2. floor	26,6	45,2	0,03	Within zone
60.	Branch Director office	27,3	32,3	0,01	Within zone
61.	Office for independent expert associate for legal operations	27,8	36,1	0,01	Within zone
62.	No.2 Office for Legal and General Operations Service	27,1	34,3	0,03	Within zone
63.	Cafeteria	27,8	31,3	0,01	Within zone
64.	Office for the warehouse operations officer	27,2	35,4	0,07	Within zone
65.	Office of senior HS associate	27,1	35,4	0,03	Within zone
66.	Central warehouse– stock-keeper office	26,4	47,7	0,01	Within zone
67.	Central warehouse	25,2	49,8	0,03	Within zone
68.	Central warehouse	24,8	50,4	0,01	Within zone
69.	Garage – Service for equipment and vehicle maintenance	26,1	45,2	0,03	Within zone
70.	Locksmith workshop – Zajecar	25,7	52,3	0,07	Within zone
71.	Zajecar – Counter hall	25,6	40,9	0,01	Within zone
72.	Main cash desk Zajecar	24,8	38,8	0,03	Within zone

73.	Office for meter handover	24,5	44,9	0,07	Within zone
74.	Service for meter cleaning	24,4	47,6	0,01	Within zone
75.	Service for external meter cleaning-meter painting	24,3	45,3	0,12	Within zone
76.	Entrance desk Zajecar – Generala Gambete str. 84	25,4	33,5	0,01	Within zone
77.	Office of the accounting officer for transfer order customers - Zajecar	25,3	39,5	0,02	Within zone
78.	Office of technical operations service director -Zajecar	26,7	39,0	0,01	Within zone
79.	Office of customers relations service – Zajecar	25,3	43,9	0,05	Within zone
80.	Manager office - Zajecar	27,1	33,4	0,07	Within zone
81.	Kitchen - Zajecar	27,1	29,7	0,08	Within zone
82.	Business assistant office – Zajecar Generala Gambete str. 84	25,3	37,6	0,03	Within zone
83.	Laboratory for meter calibration no.2	26,2	35,7	0,07	Within zone
84.	Laboratory for meter calibration – control body	27,7	29,3	0,03	Within zone
85.	Office for calibration laboratory head	27,2	27,9	0,03	Within zone
86.	Laboratory for meter calibration – timers	27,0	33,7	0,02	Within zone
87.	System hall for the IT service	25,0	36,0	0,04	Within zone
88.	Office for leading expert associate for customers relations Zajecar	25,9	36,8	0,03	Within zone
89.	Office for accounting and collection -Zajecar	26,0	36,2	0,01	Within zone
90.	Economic Affairs office – Zajecar	27,5	33,4	0,04	Within zone
91.	Meeting room – Zajecar Generala Gambete str. 84	27,0	33,8	0,03	Within zone
92.	Teaching, Educational and Recreational Center – Gamzigradska banja	25,5	44,4	0,02	Within zone
93.	Teaching, Educational and Recreational Center – Training room	24,7	43,6	0,01	Within zone
94.	Teaching, Educational and Recreational Center - Kitchen	24,6	47,2	0,02	Within zone
95.	Branch Boljevac – Office of the Branch director	26,5	38,6	0,03	Within zone
96.	Branch Boljevac – Cafeteria	26,1	45,6	0,02	Within zone
97.	Branch Boljevac – Counter hall	26,1	43,2	0,03	Within zone
98.	Branch Boljevac – office of electric power units' maintenance officer	26,4	46,0	0,02	Within zone
99.	Branch Boljevac – electric works workshop	27,7	28,9	0,03	Within zone

100.	Branch Boljevac – locksmith workshop	26,8	30,8	0,02	Within zone
101.	Branch Kladovo – technical service office	26,3	50,8	0,01	Within zone
102.	Branch Kladovo – Financial Service office	26,4	50,0	0,03	Within zone
103.	Branch Kladovo – counter hall	26,2	35,8	0,04	Within zone
104.	Branch Kladovo – Branch director office	27,3	41,1	0,04	Within zone
105.	Branch Kladovo – Business assistant office	27,3	40,8	0,01	Within zone
106.	Branch Kladovo – Financial Service office	27,4	41,4	0,06	Within zone
107.	Branch Kladovo – workshop	26,5	43,3	0,09	Within zone
108.	Branch Kladovo – Entrance desk	27,3	41,2	0,06	Within zone
109.	Branch Kladovo – Stok-keeper office	27,6	43,1	0,02	Within zone
110.	Branch Kladovo – Manager office	27,4	44,0	0,02	Within zone
111.	Donji Milanovac – Branch director office	24,0	48,1	0,09	Within zone
112.	Donji Milanovac – Counter hall	24,7	47,2	0,03	Within zone
113.	Donji Milanovac – Employees room	25,5	52,1	0,02	Within zone
114.	Branch Majdanpek – Technical service office	25,6	46,0	0,01	Within zone
115.	Branch Majdanpek – Branch director office	27,1	44,4	0,02	Within zone
116.	Branch Majdanpek – Business assistant office	26,9	43,6	0,03	Within zone
117.	Branch Majdanpek – Trade senior associate office	26,3	42,7	0,04	Within zone
118.	Branch Majdanpek – Counter hall	25,8	48,3	0,05	Within zone
119.	Branch Majdanpek – Locksmith workshop	25,2	55,4	0,01	Within zone

Monitoring of chemical hazards parameters in summer period in 2016 is presented in Table 118.

Table 118

TECHNICAL CENTER NIS

Technical Services Sector Pirot

Chemical hazards in 2016

No.	**Measurement point**	**Type of chemical hazards**	**Measured concentration**	**Exposition (h)**	**MDK**	**Concentration exceedance**
1.	Locksmith workshop (sector seat)	dust mineral with less than 1% SiO2	4,1	8	15	Meets the limit
2.	Auto mechanic workshop (sector seat)	dust mineral with less than 1% SiO2	1,2	8	15	Meets the limit

3.	Business unit Dimitrovgrad, Auto mechanic workshop	dust mineral with less than 1% SiO2	2,6	8	15	Meets the limit
4.	Business unit Dimitrovgrad, Locksmith workshop	dust mineral with less than 1% SiO2	1,8	8	15	Meets the limit
5.	SHPP „Temac“, machine hall	dust mineral with less than 1% SiO2	0,37	8	15	Meets the limit
6.	Business unit Babusnica, auto mechanic workshop	dust mineral with less than 1% SiO2	0,58	8	15	Meets the limit
Sector for Technical Services Zajecar						
		dust mineral with less than 1% SiO2				
1.	Electric works workshop – Knjazevac	dust mineral with less than 1% SiO2	0,19			
2.	Sub-branch Bor– Locksmith workshop	dust mineral with less than 1% SiO2	0,73			
3.	Sub-branch Ngotin – locksmith workshop	dust mineral with less than 1% SiO2	0,84			
4.	Sub-branch Negotin – auto mechanic workshop	dust mineral with less than 1% SiO2	0,51			
5.	Locksmith workshop – Zajecar	dust mineral with less than 1% SiO2	1,27			
6.	Service for external meter cleaning-meter painting	Ethyl alcohol	214			
7.	Branch Boljevac – locksmith workshop	dust mineral with less than 1% SiO2	1,15			
8.	Branch Kladovo – workshop	dust mineral with less than 1% SiO2	2,27			
9.	Sub-branch Majdanpek – locksmith workshop	dust mineral with less than 1% SiO2	0,13			

Monitoring of temperature, humidity and velocity parameters in summer period in 2016 is presented in Table 119.

Table 119

TECHNICAL CENTER NIS					
Sector for technical services Zajecar					
Temperature, humidity and velocity					
No.	**Measurement point**	**Monitoring**			**Note**
		t *C	Rv %	Vm/s	Comfort zone
1.	Office of Branch director Svrljig	25,6	56,8	0,02	Within zone

2.	Cash desk of the branch Svrljig	25,3	57,3	0,03	Within zone
3.	Emergency dispatcher office Svrljig	25,1	56,0	0,03	Within zone
4.	Workshop for electric fitting operations - Svrljig	24,7	54,3	0,07	Within zone
5.	Office of sub-branch Knjazevc director	27,0	50,4	0,03	Within zone
6.	Office of senior associate for electric power unit maintenance Knjazevac	26,3	53,9	0,05	Within zone
7.	Kitchen – sub-branch Knjazevac	26,6	51,3	0,06	Within zone
8.	Counter hall	26,8	52,8	0,01	Within zone
9.	Office for the head of trading office - Knjazevac	26,4	54,7	0,01	Within zone
10.	Entrance desk – Knjazevac	25,8	48,7	0,06	Within zone
11.	Auto mechanic workshop - Knjazevac	26,9	49,6	0,04	Within zone
12.	Stok-keeper office - Knjazevac	27,6	49,4	0,04	Within zone
13.	Warehouse - Knjazevac	27,3	48,7	0,05	Within zone
14.	Electric works workshop - Knjazevac	27,1	51,2	0,04	Within zone
15.	Office of senior associate for electric power units maintenance – Branch Sokobanja	27,6	48,9	0,02	Within zone
16.	Book-keeping office – Sokobanja	27,9	51,2	0,03	Within zone
17.	Branch director office - Sokobanja	27,7	51,7	0,01	Within zone
18.	Office of the warhouse operations officer - Sokobanja	26,9	51,3	0,02	Within zone
19.	Counter hall - Sokobanja	27,1	52,2	0,03	Within zone
20.	Sub-branch Bor – Locksmith workshop	24,5	52,1	0,02	Within zone
21.	Sub-branch Bor – Auto mechanic workshop	23,2	57,8	0,12	Within zone
22.	Sub-branch Bor – Entry desk	23,5	56,2	0,04	Within zone
23.	Sub-branch Bor – counter hall	24,5	52,5	0,01	Within zone
24.	Sub-branch Bor – counter hall, collection	24,9	51,1	0,05	Within zone
25.	Sub-branch Bor – Assistant office	25,5	47,2	0,02	Within zone
26.	Sub-branch Bor – Office of the head of customer relations service	25,4	32,5	0,03	Within zone
27.	Sub-branch Bor – Director's office	26,0	46,0	0,03	Within zone
28.	Sub-branch Bor – Technical preparation office	26,1	36,9	0,02	Within zone
29.	Sub-branch Bor – Office for Cash desk officer	26,3	48,3	0,04	Within zone
30.	Sub-branch Bor – Office for transfer order customers	26,4	34,9	0,04	Within zone
31.	Sub-branch Bor – Office for Public Relations Service officer	26,7	38,9	0,01	Within zone

32.	Sub-branch Bor – stock-keeper office	24,9	54,7	0,03	Within zone
33.	Branch Zagubica – Branch director - office	26,1	47,2	0,02	Within zone
34.	Branch Zagubica – complaints service office канцеларија	25,7	46,3	0,01	Within zone
35.	Branch Zagubica – counter hall	27,4	49,2	0,03	Within zone
36.	Branch Zagubica – room for employees	26,8	47,3	0,02	Within zone
37.	Krepoljin – office for electric fitters	27,1	49,1	0,04	Within zone
38.	Sub-branch Negotin – office for electric power units maintenance officer	26,9	42,7	0,03	Within zone
39.	Sub-branch Negotin – office for senior associate for electric power units maintenance	25,5	48,4	0,02	Within zone
40.	Sub-branch Negotin – rooms for electric fitters	27,4	49,0	0,03	Within zone
41.	Sub-branch Negotin – locksmith workshop	27,5	50,0	0,04	Within zone
42.	Sub-branch Negotin – entrance desk, Seat building	27,3	43,2	0,01	Within zone
43.	Sub-branch Negotin – counter hall	27,1	47,1	0,02	Within zone
44.	Sub-branch Negotin – counter hall, collection 2	27,2	45,7	0,01	Within zone
45.	Sub-branch Negotin – Seat building cash desk	27,1	44,3	0,02	Within zone
46.	Sub-branch Negotin – office for customer relations officer	27,0	49,8	0,01	Within zone
47.	Sub-branch Negotin – office for senior associate for accounting and collection	26,3	49,6	0,02	Within zone
48.	Sub-branch Negotin – office for leading expert associate for customer relations	26,1	50,3	0,03	Within zone
49.	Sub-branch Negotin – meeting room	26,2	49,1	0,03	Within zone
50.	Sub-branch Negotin – office for EPS sub-branch director	24,7	50,5	0,03	Within zone
51.	Sub-branch Negotin – Business assistant office	25,8	52,3	0,01	Within zone
52.	Sub-branch Negotin – Technical office	25,1	49,3	0,03	Within zone
53.	Sub-branch Negotin – office for leading expert associate for measurement points control	27,5	48,5	0,01	Within zone
54.	Garage used by branch expert services	25,4	30,1	0,07	Within zone
55.	Seat building Zajecar – Entrance desk	26,8	33,6	0,03	Within zone
56.	Office no.8	26,8	36,4	0,03	Within zone
57.	Financial Service Head Office	27,0	31,3	0,01	Within zone
58.	Legal and General Operations Service office	27,2	32,5	0,01	Within zone
59.	Meeting room – 2. floor	26,6	45,2	0,03	Within zone
60.	Branch Director office	27,3	32,3	0,01	Within zone

61.	Office for independent expert associate for legal operations	27,8	36,1	0,01	Within zone
62.	No.2 Office for Legal and General Operations Service	27,1	34,3	0,03	Within zone
63.	Cafeteria	27,8	31,3	0,01	Within zone
64.	Office for the warehouse operations officer	27,2	35,4	0,07	Within zone
65.	Office of senior HS associate	27,1	35,4	0,03	Within zone
66.	Central warehouse– stock-keeper office	26,4	47,7	0,01	Within zone
67.	Central warehouse	25,2	49,8	0,03	Within zone
68.	Central warehouse	24,8	50,4	0,01	Within zone
69.	Garage – Service for equipment and vehicle maintenance	26,1	45,2	0,03	Within zone
70.	Locksmith workshop – Zajecar	25,7	52,3	0,07	Within zone
71.	Zajecar – Counter hall	25,6	40,9	0,01	Within zone
72.	Main cash desk Zajecar	24,8	38,8	0,03	Within zone
73.	Office for meter handover	24,5	44,9	0,07	Within zone
74.	Service for meter cleaning	24,4	47,6	0,01	Within zone
75.	Service for external meter cleaning-meter painting	24,3	45,3	0,12	Within zone
76.	Entrance desk Zajecar – Generala Gambete str. 84	25,4	33,5	0,01	Within zone
77.	Office of the accounting officer for transfer order customers - Zajecar	25,3	39,5	0,02	Within zone
78.	Office of technical operations service director -Zajecar	26,7	39,0	0,01	Within zone
79.	Office of customers relations service – Zajecar	25,3	43,9	0,05	Within zone
80.	Manager office - Zajecar	27,1	33,4	0,07	Within zone
81.	Kitchen - Zajecar	27,1	29,7	0,08	Within zone
82.	Business assistant office – Zajecar Generala Gambete str. 84	25,3	37,6	0,03	Within zone
83.	Laboratory for meter calibration no.2	26,2	35,7	0,07	Within zone
84.	Laboratory for meter calibration – control body	27,7	29,3	0,03	Within zone
85.	Office for calibration laboratory head	27,2	27,9	0,03	Within zone
86.	Laboratory for meter calibration – timers	27,0	33,7	0,02	Within zone
87.	System hall for the IT service	25,0	36,0	0,04	Within zone
88.	Office for leading expert associate for customers relations Zajecar	25,9	36,8	0,03	Within zone
89.	Office for accounting and collection -Zajecar	26,0	36,2	0,01	Within zone
90.	Economic Affairs office – Zajecar	27,5	33,4	0,04	Within zone

91.	Meeting room – Zajecar Generala Gambete str. 84	27,0	33,8	0,03	Within zone
92.	Teaching, Educational and Recreational Center – Gamzigradska banja	25,5	44,4	0,02	Within zone
93.	Teaching, Educational and Recreational Center – Training room	24,7	43,6	0,01	Within zone
94.	Teaching, Educational and Recreational Center - Kitchen	24,6	47,2	0,02	Within zone
95.	Branch Boljevac – Office of the Branch director	26,5	38,6	0,03	Within zone
96.	Branch Boljevac – Cafeteria	26,1	45,6	0,02	Within zone
97.	Branch Boljevac – Counter hall	26,1	43,2	0,03	Within zone
98.	Branch Boljevac – office of electric power units' maintenance officer	26,4	46,0	0,02	Within zone
99.	Branch Boljevac – electric works workshop	27,7	28,9	0,03	Within zone
100.	Branch Boljevac – locksmith workshop	26,8	30,8	0,02	Within zone
101.	Branch Kladovo – technical service office	26,3	50,8	0,01	Within zone
102.	Branch Kladovo – Financial Service office	26,4	50,0	0,03	Within zone
103.	Branch Kladovo – counter hall	26,2	35,8	0,04	Within zone
104.	Branch Kladovo – Branch director office	27,3	41,1	0,04	Within zone
105.	Branch Kladovo – Business assistant office	27,3	40,8	0,01	Within zone
106.	Branch Kladovo – Financial Service office	27,4	41,4	0,06	Within zone
107.	Branch Kladovo – workshop	26,5	43,3	0,09	Within zone
108.	Branch Kladovo – Entrance desk	27,3	41,2	0,06	Within zone
109.	Branch Kladovo – Stok-keeper office	27,6	43,1	0,02	Within zone
110.	Branch Kladovo – Manager office	27,4	44,0	0,02	Within zone
111.	Donji Milanovac – Branch director office	24,0	48,1	0,09	Within zone
112.	Donji Milanovac – Counter hall	24,7	47,2	0,03	Within zone
113.	Donji Milanovac – Employees room	25,5	52,1	0,02	Within zone
114.	Branch Majdanpek – Technical service office	25,6	46,0	0,01	Within zone
115.	Branch Majdanpek – Branch director office	27,1	44,4	0,02	Within zone
116.	Branch Majdanpek – Business assistant office	26,9	43,6	0,03	Within zone
117.	Branch Majdanpek – Trade senior associate office	26,3	42,7	0,04	Within zone
118.	Branch Majdanpek – Counter hall	25,8	48,3	0,05	Within zone
119.	Branch Majdanpek – Locksmith workshop	25,2	55,4	0,01	Within zone

Monitoring of illumination in summer period in 2016 is presented in Table 120.

Table 120

TECHNICAL CENTER NIS					
Technical Services Sector Vranje					
Illumination					
No.	**Measurement point**	**Monitoring**			**Note**
		Illumination	Illumination (lx)		Illumination
			Measured	Sufficient	
1.	Auto mechanic workshop	combined	170	80-150	Sufficient
2.	Locksmith workshop	combined	320	80-150	Sufficient
3.	Archive	combined	500	150-300	Sufficient
4.	Office at Maricka 8	combined	367	150-300	Sufficient
5.	Warehouse	combined	180	80-150	Sufficient
6.	Counter hall	combined	350	150-300	Sufficient
7.	Accounting and Collection Office S.Prvovenčanog 1	combined	356	150-300	Sufficient
8.	Accounting and Collection Office S.Prvovenčanog 2	combined	330	150-300	Sufficient
9.	Complaints office V. Han	combined	370	150-300	Sufficient
10.	Counter hall V. Han	combined	310	150-300	Sufficient
11.	Couner hall Presevo	combined	402	150-300	Sufficient
12.	Counter hall Bujanovac	combined	520	150-300	Sufficient
13.	Counter hall Trgoviste	combined	450	150-300	Sufficient
14.	HPP Jelasnica	combined	330	150-300	Sufficient
15.	Dispatch center	combined	320	150-300	Sufficient
16.	Accouting office	combined	360	150-300	Sufficient
17.	Head office Presevo	combined	560	150-300	Sufficient
18.	Room for employees Vranjska Banja	combined	250	80-150	Sufficient
Technical Services Sector Pirot					
1.	Warehouse at the seat of sector	combined	173	150-300	Sufficient
2.	Locksmith workshop	combined	754	80-150	Sufficient
3.	Room for elctrical fitters	combined	754	80-150	Sufficient
4.	Auto mechanic workshop	combined	507	80-150	Sufficient

5.	Counter hall	combined	189	150-300	Sufficient
6.	Accounting and collection office	combined	756	150-300	Sufficient
7.	Dispatch center	combined	510	150-300	Sufficient
8.	Emergency service office	combined	191	80-150	Sufficient
9.	Business unit Dimitrovgrad, office of associate for electric power unit maintanance	combined	310	150-300	Sufficient
10.	Business unit Dimitrovgrad , counter hall	combined	219	150-300	Sufficient
11.	Business unit Dimitrovgrad , auto mechanic workshop	combined	241	80-150	Sufficient
12.	Business unit Dimitrovgrad, locksmith workshop	combined	403	80-150	Sufficient
13.	Business unit Dimitrovgrad, warehouse	combined	179	150-300	Sufficient
14.	Business unit Dimitrovgrad, room for electric fitters	combined	172	80-150	Sufficient
15.	„Nova lokacija“ Gnjilane, entrance desk	combined	621	150-300	Sufficient
16.	„Nova lokacija“ Gnjilane, srock keeper office	combined	754	80-150	Sufficient
17.	„Nova lokacija“ Gnjilane, warehouse	combined	817	80-150	Sufficient
18.	„Nova lokacija“ Gnjilane, oil and lubricant warehouse	combined	746	80-150	Sufficient
19.	SHPP „Temac“, machine hall	combined	314	80-150	Sufficient
20.	SHPP „Temac“, emergency machine operator room	combined	315	150-300	Sufficient
21.	SHPP „Temac“, breakroom	combined	385	80-150	Sufficient
22.	Business unit Babusnica, office of the business unit director	combined	258	150-300	Sufficient
23.	Business unit Babusnica, counter hall	combined	530	150-300	Sufficient
24.	Business unit Babusnica, emergency service room	combined	440	80-150	Sufficient
25.	Business unit Babusnica, auto mechanic workshop	combined	432	80-150	Sufficient
26.	Business unit Babusnica, warehouse	combined	376	80-150	Sufficient
27.	Business unit Babusnica, stock-keeper office	combined	218	150-300	Sufficient
28.	Business unit Babusnica, room for electric fitters	combined	301	80-150	Sufficient
Technical Sservices Sector Zajecar					
1.	Office of Branch director Svrljig	combined	216	150-300	Sufficient
2.	Cash desk of the branch Svrljig	combined	231	150-300	Sufficient
3.	Emergency dispatcher office Svrljig	combined	223	150-300	Sufficient
4.	Workshop for electric fitting operations - Svrljig	combined	248	80-150	Sufficient
5.	Office of sub-branch Knjazevc director	combined	585	150-300	Sufficient

6.	Office of senior associate for electric power unit maintenance Knjazevac	combined	1035	150-300	Sufficient
7.	Kitchen – sub-branch Knjazevac	combined	236	80-150	Sufficient
8.	Counter hall	combined	353	80-150	Sufficient
9.	Office for the head of trading office - Knjazevac	combined	1376	80-150	Sufficient
10.	Entrance desk – Knjazevac	combined	223	80-150	Sufficient
11.	Auto mechanic workshop - Knjazevac	combined	804	150-300	Sufficient
12.	Stok-keeper office - Knjazevac	combined	298	80-150	Sufficient
13.	Warehouse - Knjazevac	combined	549	80-150	Sufficient
14.	Electric works workshop - Knjazevac	combined	1002	150-300	Sufficient
15.	Office of senior associate for electric power units maintenance – Branch Sokobanja	combined	770	150-300	Sufficient
16.	Book-keeping office – Sokobanja	combined	630	150-300	Sufficient
17.	Branch director office - Sokobanja	combined	247	150-300	Sufficient
18.	Office of the warhouse operations officer - Sokobanja	combined	643	150-300	Sufficient
19.	Counter hall - Sokobanja	combined	793	80-150	Sufficient
20.	Sub-branch Bor – Locksmith workshop	combined	247	80-150	Sufficient
21.	Sub-branch Bor – Auto mechanic workshop	combined	168	150-300	Sufficient
22.	Sub-branch Bor – Entry desk	combined	237	150-300	Sufficient
23.	Sub-branch Bor – counter hall	combined	196	150-300	Sufficient
24.	Sub-branch Bor – counter hall, collection	combined	193	150-300	Sufficient
25.	Sub-branch Bor – Assistant office	combined	467	150-300	Sufficient
26.	Sub-branch Bor – Office of the head of customer relations service	combined	356	150-300	Sufficient
27.	Sub-branch Bor – Director's office	combined	259	150-300	Sufficient
28.	Sub-branch Bor – Technical preparation office	combined	268	150-300	Sufficient
29.	Sub-branch Bor – Office for Cash desk officer	combined	718	150-300	Sufficient
30.	Sub-branch Bor – Office for transfer order customers	combined	469	150-300	Sufficient
31.	Sub-branch Bor – Office for Public Relations Service officer	combined	194	150-300	Sufficient
32.	Sub-branch Bor – stock-keeper office	combined	388	150-300	Sufficient
33.	Branch Zagubica – Branch director - office	combined	320	150-300	Sufficient
34.	Branch Zagubica – complaints service office канцеларија	combined	577	150-300	Sufficient
35.	Branch Zagubica – counter hall	combined	234	150-300	Sufficient

36.	Branch Zagubica – room for employees	combined	444	150-300	Sufficient
37.	Krepoljin – office for electric fitters	combined	522	150-300	Sufficient
38.	Sub-branch Negotin – office for electric power units maintenance officer	combined	376	150-300	Sufficient
39.	Sub-branch Negotin – office for senior associate for electric power units maintenance	combined	701	150-300	Sufficient
40.	Sub-branch Negotin – rooms for electric fitters	combined	302	80-150	Sufficient
41.	Sub-branch Negotin – locksmith workshop	combined	175	80-150	Sufficient
42.	Sub-branch Negotin – entrance desk, Seat building	combined	290	150-300	Sufficient
43.	Sub-branch Negotin – counter hall	combined	205	150-300	Sufficient
44.	Sub-branch Negotin – counter hall, collection 2	combined	243	150-300	Sufficient
45.	Sub-branch Negotin – Seat building cash desk	combined	416	150-300	Sufficient
46.	Sub-branch Negotin – office for customer relations officer	combined	167	150-300	Sufficient
47.	Sub-branch Negotin – office for senior associate for accounting and collection	combined	261	150-300	Sufficient
48.	Sub-branch Negotin – office for leading expert associate for customer relations	combined	351	150-300	Sufficient
49.	Sub-branch Negotin – meeting room	combined	657	80-150	Sufficient
50.	Sub-branch Negotin – office for EPS sub-branch director	combined	641	150-300	Sufficient
51.	Sub-branch Negotin – Business assistant office	combined	437	150-300	Sufficient
52.	Sub-branch Negotin – Technical office	combined	725	150-300	Sufficient
53.	Sub-branch Negotin – office for leading expert associate for measurement points control	combined	437	150-300	Sufficient
54.	Garage used by branch expert services	combined	576	150-300	Sufficient
55.	Seat building Zajecar – Entrance desk	combined	269	150-300	Sufficient
56.	Office no.8	combined	388	150-300	Sufficient
57.	Financial Service Head Office	combined	388	150-300	Sufficient
58.	Legal and General Operations Service office	combined	624	150-300	Sufficient
59.	Meeting room – 2. floor	combined	444	150-300	Sufficient
60.	Branch Director office	combined	440	150-300	Sufficient
61.	Office for independent expert associate for legal operations	combined	350	150-300	Sufficient
62.	No.2 Office for Legal and General Operations Service	combined	442	150-300	Sufficient
63.	Cafeteria	combined	386	150-300	Sufficient
64.	Office for the warehouse operations officer	combined	518	150-300	Sufficient

65.	Office of senior HS associate	combined	748	150-300	Sufficient
66.	Central warehouse– stock-keeper office	combined	254	150-300	Sufficient
67.	Central warehouse	combined	111	150-300	Sufficient
68.	Central warehouse	combined	108	150-300	Sufficient
69.	Garage – Service for equipment and vehicle maintenance	combined	382	150-300	Sufficient
70.	Locksmith workshop – Zajecar	combined	207	150-300	Sufficient
71.	Zajecar – Counter hall	combined	350	150-300	Sufficient
72.	Main cash desk Zajecar	combined	292	150-300	Sufficient
73.	Office for meter handover	combined	652	150-300	Sufficient
74.	Service for meter cleaning	combined	459	150-300	Sufficient
75.	Service for external meter cleaning-meter painting	combined	834	150-300	Sufficient
76.	Entrance desk Zajecar – Generala Gambete str. 84	combined	795	150-300	Sufficient
77.	Office of the accounting officer for transfer order customers - Zajecar	combined	284	150-300	Sufficient
78.	Office of technical operations service director -Zajecar	combined	738	150-300	Sufficient
79.	Office of customers relations service – Zajecar	combined	457	150-300	Sufficient
80.	Manager office - Zajecar	combined	436	150-300	Sufficient
81.	Kitchen - Zajecar	combined	343	150-300	Sufficient
82.	Business assistant office – Zajecar Generala Gambete str. 84	combined	459	150-300	Sufficient
83.	Laboratory for meter calibration no.2	combined	697	150-300	Sufficient
84.	Laboratory for meter calibration – control body	combined	428	150-300	Sufficient
85.	Office for calibration laboratory head	combined	298	150-300	Sufficient
86.	Laboratory for meter calibration – timers	combined	311	150-300	Sufficient
87.	System hall for the IT service	combined	656	150-300	Sufficient
88.	Office for leading expert associate for customers relations Zajecar	combined	475	150-300	Sufficient
89.	Office for accounting and collection -Zajecar	combined	452	150-300	Sufficient
90.	Economic Affairs office – Zajecar	combined	214	150-300	Sufficient
91.	Meeting room – Zajecar Generala Gambete str. 84	combined	434	150-300	Sufficient
92.	Teaching, Educational and Recreational Center – Gamzigradska banja	combined	777	150-300	Sufficient
93.	Teaching, Educational and Recreational Center – Training room	combined	707	150-300	Sufficient

94.	Teaching, Educational and Recreational Center - Kitchen	combined	528	150-300	Sufficient
95.	Branch Boljevac – Office of the Branch director	combined	506	150-300	Sufficient
96.	Branch Boljevac – Cafeteria	combined	165	150-300	Sufficient
97.	Branch Boljevac – Counter hall	combined	503	150-300	Sufficient
98.	Branch Boljevac – office of electric power units' maintenance officer	combined	336	150-300	Sufficient
99.	Branch Boljevac – electric works workshop	combined	774	150-300	Sufficient
100.	Branch Boljevac – locksmith workshop	combined	599	80-150	Sufficient
101.	Branch Kladovo – technical service office	combined	201	150-300	Sufficient
102.	Branch Kladovo – Financial Service office	combined	433	150-300	Sufficient
103.	Branch Kladovo – counter hall	combined	486	150-300	Sufficient
104.	Branch Kladovo – Branch director office	combined	679	150-300	Sufficient
105.	Branch Kladovo – Business assistant office	combined	853	150-300	Sufficient
106.	Branch Kladovo – Financial Service office	combined	443	150-300	Sufficient
107.	Branch Kladovo – workshop	combined	592	80-150	Sufficient
108.	Branch Kladovo – Entrance desk	combined	946	150-300	Sufficient
109.	Branch Kladovo – Stok-keeper office	combined	517	150-300	Sufficient
110.	Branch Kladovo – Manager office	combined	411	150-300	Sufficient
111.	Donji Milanovac – Branch director office	combined	1051	150-300	Sufficient
112.	Donji Milanovac – Counter hall	combined	509	150-300	Sufficient
113.	Donji Milanovac – Employees room	combined	207	150-300	Sufficient
114.	Branch Majdanpek – Technical service office	combined	951	150-300	Sufficient
115.	Branch Majdanpek – Branch director office	combined	842	150-300	Sufficient
116.	Branch Majdanpek – Business assistant office	combined	682	150-300	Sufficient
117.	Branch Majdanpek – Trade senior associate office	combined	393	150-300	Sufficient
118.	Branch Majdanpek – Counter hall	combined	162	150-300	Sufficient
119.	Branch Majdanpek – Locksmith workshop	combined	164	80-150	Sufficient

Monitoring of the parameters of chemical hazards for summer period 2016 is given in Table 121

Table 121

TECHNICAL CENTER NIS						
Branch for technical services Zajecar						
Chemical hazards						
No.	**Measurement point**	**Chemical hazards type**	**Measured concentration**	**Exposition (h)**	**MDK**	**Concentration exceedance**
1.	Elcetric workshop – Knjaževac	mineral dust with less than 1% SiO2	0,19			
2.	Unit Bor – Locksmith workshop	mineral dust with less than 1% SiO2	0,73			
3.	Unit Negotin – locksmith workshop	mineral dust with less than 1% SiO2	0,84			
4.	Unit Negotin – mechanic workshop	mineral dust with less than 1% SiO2	0,51			
5.	Locksmith workshop - Zaječar	mineral dust with less than 1% SiO2	1,27			
6.	Service for external cleaning/painting of meters	ethyl alcohol	214		1900	
7.	Branch office Boljevac – locksmith workshop	mineral dust with less than 1% SiO2	1,15			
8.	Branch office Kladovo – workshop	mineral dust with less than 1% SiO2	2,27			

12.3.2 Protection at work

- **Employee training**

Employee training is presented in Table 122.

Table 122

TECHNICAL CENTER NIS					
Employee training in 2016					
Organizational unit	**Employee number**	**For training**		**Trained**	
		number	**%**	**number**	**%**
Nis	**224**				
Safe work training		112	50,00	112	100,00
Training for newly employed and non-qualified workers		0	0,00	0	0,00
Training for safe operation of employees with Temporary Employment Contract		38	16,96	38	100,00
Branch Leskovac	**231**				
Safe work training		261	112,99	261	100,00
Training for newly employed and non-qualified workers		0	0,00	0	0,00
Training for safe operation of employees with Temporary Employment Contract		21	9,09	21	100,00
Zaječar	**322**				
Safe work training		322	100,00	295	91,61
Training for newly employed and non-qualified workers		0	0,00	0	0,00
Training for safe operation of employees with Temporary Employment Contract		23	7,14	23	100,00
Branch for technical services Vranje	**147**				

Safe work training		147	100,00	147	100,00
Training for safe work of employees with Temporary Employment Contract		0	0	0	0
Training for newly employed and non-qualified workers		0	0,00	0	0,00
Training for safe work with hazardous matters		0	0,00	0	0,00
Branch for technical services Pirot					
Safe work training		127	115,45	127	100,00
Training for newly employed and non-qualified workers		1	0,91	1	100,00
Training for safe work of employees with Temporary Employment Contract	**110**	13	11,82	13	100,00
Trainingn and testing of employees in fire protection		127	115,45	127	100,00
Theoretical and practical training of employees for the position of turbine operator for voltage level 35, 10 and 0.4kV		30	27,27	30	100,00
Prokuplje					
Safe work training		95	94,06	95	100,00
Training for newly employed and non-qualified workers	**101**	8	7,92	8	100,00
Training for safe work of employees with Temporary Employment Contract		6	5,94	6	100,00
HQ					
Safe work training		0	0,00	0	0,00
Training for safe work of employees with Temporary Employment Contract	**137**	0	0,00	0	0,00
Training for newly employed and non-qualified workers		0	0,00	0	0,00
TOTAL: TEHNICAL CENTER NIS	**1.272**	**1.174**	**92,30**	**1.156**	**98,47**

- **Work injuries**

Number of work injuries in 2016 is presented in Table 123.

Table 123

TEHNICAL CENTER NIŠ						
Work injuries in 2016						
Organizational unit	**Number of employees**	**Work injuries in relation to the number of employees**				
		Light	**Serious**	**Fatal**	**Total**	**%**
Division for technical services Niš	224	2	0	0	2	0,89
Division Leskovac	231	4	3	0	7	3,03
Division for technical services Zajecar	322	5	1	0	6	1,86
Division for technical services Vranje	147	1	0	1	2	1,36
Division for technical services Pirot	110	5	0	0	5	4,55
ED Prokuplje	101	2	0	0	2	1,98
HQ	137	0	0	0	0	0,00
TOTAL: TECHNICAL CENTER NIS	**1.272**	**19**	**4**	**1**	**24**	**1,89**

12.3.3 Health protection

Periodic medical examinations of employees, presented in Table 124 are carried out regularly for all newly recruited workers and employees working on jobs with special working conditions.

Table 124

TECHNICAL CENTER NIS											
Work capabilty in 2016											
Organizational unit	**Number of employees**	**Periodic examination**				**Work capability**					
		Referred to examination		**Examined**		**Capable**		**Limited capabilty**		**Incapable**	
		Number	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**
Division for technical services Niš	224	105	46,88	105	100,00	93	88,57	12	11,43	0	0,00
Division for technical services Leskovac	231	176	76,19	174	98,86	165	94,83	8	4,60	1	0,57
Division for technical services Zaječar	322	159	49,38	159	100,00	130	81,76	26	16,35	3	1,89
Division for technical services Vranje	147	74	50,34	74	100,00	67	90,54	7	9,46	0	0,00
Division for technical services Pirot	110	70	63,64	70	100,00	54	77,14	15	21,43	1	1,43
Division for technical services Prokuplje	101	95	94,06	95	100,00	93	97,89	1	1,05	1	1,05
HQ	137	0	0,00	0	100,00	0	0,00	0	0,00	0	0,00
TOTAL: TECHNICAL CENTER NIS	**1.272**	**636**	**50,00**	**634**	**99,69**	**561**	**88,49**	**68**	**10,73**	**5**	**0,79**

One fatalty was recorded in the organizational unit TC Niš in 2016.

On 17.03.2016around 12.20 p.m., Slobodan Stošić, employed at the position: Officer for EEF and MP maintanance was fatally injured. He was injured during the works executed on LV netwrok, when wooden pole broke and this employee fell from the pole, wherein the employee was fatally injured.

12.4 Public complaints

There were no any public complaints in TC Nis in 2016.

II DISTRIBUTION SYSTEM OPERATOR "EPS DISTRIBUCIJA"

Pursuant to the status change as of 1st July 2015, made in accordance with the Reorganization Plan of Public Enterprize Electric Power Industry of Serbia, Belgrade, approved by the Govermnet of Republic of Serbia dated 27th November 2014, Distribution System Operator „EPS Distribucija" doo Beograd was formed through the aquisition of the companies for electricty distribution, as follows: the company for electricity distribution „Elektrovojvodina" doo, Novi Sad, the company for electricity distribution „Elektrosrbija" doo Kraljevo, the company for electricity distribution „Centar" doo Kragujevac and the company for electricity distribution „Jugoistok" doo Nis, the company for electricity distribution „Elektrodistribucija Beograd" doo Beograd.

DSO „EPS Distribution" is comprised of the following:

- **DISTRIBUTION AREA BEOGRAD**
- **DISTRIBUTION AREA NOVI SAD**
- **DISTRIBUTION AREA KRALJEVO**
- **DISTRIBUTION AREA KRAGUJEVAC**
- **DISTRIBUTION AREA NIS**

1. DISTRIBUTION AREA BEOGRAD

Table 125 provides the structure of all facilities within the system of Elektrodistribucija Beograd.

Table 125

EPS DISTRIBUCIJA BEOGRAD												
Facilities and systems in 2016												
Branch	**Electricity distribution substations**								**Distribution network in km**			
	110/10 KV	**110/20 KV**	**110/35 KV**	**110/x/z KV**	**35/10 KV**	**20/0.4 KV**	**10/0.4 KV**	**Total:**	**Voltage level**	**Overhead**	**Cable**	**Total length**
ED BEOGRAD - HQ									110 kV		36,182	36,182
									35 kV			
									20 kV			
									10 kV	851.8	2.277	3.128,8
									1.0 kV			
									0.4 kV	3,864.5	4.299	8.163,5
Total	24		1		68		1.351	**1.444**	**Total**	**4.716**	**6.612**	**11.328**
ED Banovo Brdo									110 kV			
									35 kV			
									20 kV			
									10 kV	366	840	1.206,4
									1.0 kV			
									0.4 kV	1.187,73	1.657,26	2.844,99
Total							1.345	**1.345**	**Total**	**1.553,73**	**2.497**	**4.051**
ED Zemun									110 kV			
									35 kV			
									20 kV			
									10 kV	105,4	675	780,4
									1.0 kV			
									0.4 kV	1.354	.1.073	2.427
Total							1.164	**1.164**	**Total**	**1.459**	**1.748**	**3.207**
ED Krnjača									110 kV			
									35 kV			
									20 kV			
									10 kV	212	126	338
									1.0 kV			
									0.4 kV	451	197	648
Total							286	**286**	**Total**	**663**	**323**	**986**
ED Mladenovac									110 kV			
									35 kV	14,752	7,006	21,758
									20 kV			
									10 kV	537,56	91,655	629,22
									1.0 kV			

									0.4 kV	1.800,86	86,4	1.887,26
Total	0	0	0	0	0	0	590	**590**	**Total**	**2.351**	**184**	**2.535**
ED Obrenovac									110 kV			
									35 kV			
									20 kV			
									10 kV	576,6	102,16	678,76
									1.0 kV			
									0.4 kV	1.290,89	153,11	1.444
Total	0	0	0	0	0	0	493	**493**	**Total**	**1.866**	**255**	**2.122**
TOTAL: EPS DISTRIBUCIJA BEOGRAD									110 kV	0	36,182	36,182
									35 kV	14,752	7,006	21,758
									20 kV			
									10 kV	2.649,45	4.112,57	6.762,034
									1.0 kV			
									0.4 kV	9.950,301	7.465,94	17.416,241
Total:	**24**		**1**		**68**		**5.229**	**5.332**	**Total**	**13.091,245**	**12.059,285**	**25.150,53**

1.1 Overview and Status of Permits

Overview and status of permits and other necessary approvals, as well as new applications for permits in 2016, is shown in Table 126

Table 126

EPS DISTRIBUCIJA BEOGRAD			
Overview and Status of Permits 2016			
Organizational unit	**Obtained approvals and permits (number and date)**	**Applications for obtaining of new or extension of the existing permits**	**Note**
ED BEOGRAD - CENTAR			
	Decision on building works approval according to Article 145 of the Law on planning and construction № 351-437/15 (issued by the Municipality of Voždovac) effective from 26.6.2015		
	Decision on building works approval according to Article 145 of the Law on planning and construction № 351-628/15 (issued by the Municipality of Voždovac) effective from 14.9.2015		

	Decision on building works approval according to Article 145 of the Law on planning and construction № 35-876/2015 (issued by the Municipality of Voždovac) effective from 21.10.2015		
	Decision on building works approval according to Article 145 of the Law on planning and construction № 351-77/2015 effective from 28.05.2015		
	Decision on building works approval according to Article 145 of the Law on planning and construction № IV 351-844/15 (issued bz the Municipalty of Voždovac) effective from 13.10.2015		
ED BANOVO BRDO			
ED ZEMUN			
	Decision on building works approval according to Article 145 of the Law on planning and construction № 351-77/2015, effective from 28.5.2015.		
	Decision on building works approval according to Article 145 of the Law on planning and construction № 351-322/2015 effective from 25.12.2015.		
	Decision on building works approval according to Article 145 of the Law on planning and construction №.351-132/2105 effective from 16.7.2015.		
	Decision on building works approval according to Article 145 of the Law on planning and construction №.351-182/2105 effective from 25.8.2015.		
	Decision on building works approval according to Article 145 of the Law on planning and construction №.351.022-6/2015 effective from 30.3.2015		
ED KRNJAČA			

ED MLADENOVAC			
ED OBRENOVAC			

1.2 Monitoring and Environmental Impact

EPS Distribution DP Beograd affects the environment by the following factors:

- **Electromagnetic fields**
- **Environmental noise**
- **Waste**
- **Surface and groundwater quality**
- **Soil quality**

1.2.1 Electromagnetic fields

During 2016, measurement of electric and magnetic fields for sources of non-ionizing radiation of SS 10/04 kV no. B 404, located in the basement of the building in Belgrade at the address 93 Cvijićeva.

1.2.2 Environmental Noise

Measurements were not carried out in 2016.

1.2.3 Waste

Waste production in 2016 is presented in Table 127, according to the Serbian waste management regulations.

Table 127

DISTRIBUTION AREA											
Waste in 2016											
No.	**Official nomenclature of the Rules defining waste categories, its testing and classification** **Official Gazette of the RS № 56/10, dated 10.08.2010**	**Index number**	**UNIT**	**Branch**						**Total**	**NOTE**
				ED BEOGRAD - CENTAR	**ED BANOVO BRDO**	**ED ZEMUN**	**ED KRNJAČA**	**ED MLADENOVAC**	**ED OBRANOVAC**	**EPS DISTRIBUCIJA DA**	
				Amounts							
1.	Other oils for insulation and heat transfer	13 03 10*				57,00				57,00	Waste transformer oils
2.	Discarded equipment containing hazardous components other than specified in 16 02 09 to 16 02 13	16 02 14		77,00						77,00	This type of waste is comprised of power transformers without insulation oil
3.	Concrete	17 01 01		62,00	22,50		6,2	3,81	4,25	98,76	Waste concrete poles
4.	Copper, bronze, brass	17 04 01		2,73						2,73	Waste copper cables, copper leftovers and waste, rails, copper wire, waste brass -outdated tools
5.	Aluminium	17 04 02		7,12				1,68		8,80	Scrap aluminum, worn out cables, broken or blown cables, parts of outdated equipment
6.	Iron and steel	17 04 05		58,00						58,00	Miscellaneous scrap iron resulting in the outage or aging equipment. Old Fe console with insulators, metal lattice poles, and waste galvanized sheet metal etc.…
7.	Mixed metals	17 04 07		31,00					3,20	34,20	Waste made while replacing equipment and performing network services due to the damages and old age, cable Al-Fe
8.	Soil and stone containing hazardous substances	17 05 03*				8,14				8,14	Contaminated soil and gravel from the spilling location of transformer oil
9.	Insulation materials other than specified in 17 06 01 and 17 06 03	17 06 04		3,30						3,30	Waste insulators
10.	Discarded electric and electronic equipemnt other than specified in 20 01 21 and 20 01 35	20 01 35*				3,86				3,86	Wast electric meters

Table 127

11.	Wood containing hazardous substances	20 01 37*		50,24	11,68			22,74		84,66	Wooden scrap and leftovers (wooden poles)

1.2.4 Surface, Ground Waters and Soil Monitoring

Monitoring of surface and groundwater, as well as monitoring of soil in 2016 was not performed.

1.3 Working Environment Monitoring, Occupational Health and Safety

2016 Occupational Health and Safety Reports also include the following activities:

- **Working Environment Monitoring**
  - working environment noise measurements
  - working environment electromagnetic fields
  - working environment parameters
- **Safety**
  - training
  - work injuries
- **Health**

1.3.1. Working Environment Monitoring

- **Working environment noise measurement**

Working environment noise measurements in 2016 were not carried out.

- **Working environment electromagnetic fields**

Measurements of the level of electrical and magnetic field in the working environment were not carried out during 2016.

- **Working environment parameters**

Illumination testing is satisfactory according to the expert finding №. 3014059-1 and expert finding №. 3014059-2 of the Company for control of quality and quantity of goods - sector Tehnokontrola "Jugoinspekt Belgrade".

Thermal comfort investigation is satisfactory according to the expert finding №. 3014059-1 and expert finding №. 3014059-2 of the Company for control of quality and quantity of goods - sector Tehnokontrola "Jugoinspekt Belgrade".

1.3.2. Safety

- **Training**

It is carried out in accordance with the Occupational Safety Qualification and Knowledge Improvement Programmed.

Training of workers is shown in Table 128, also including the training of new workers, as well as knowledge testing of workers in the aforementioned fields.

Table 128

DISTRIBUTIONAL AREA BEOGRAD					
Training in 2016					
Branch	Number of employees	For training		Trained	
		No.	%	No.	%

Beograd- centar	724				
Knowledge testing		307	42,40	307	100,00
Newly recruited workers		48	6,63	48	100,00
ED Banovo Brdo	51				
Knowledge testing		43	84,31	43	100,00
ED Zemun	34				
Knowledge testing		39	114,71	39	100,00
ED Krnjača	18				
Knowledge testing		12	66,67	12	100,00
ED Mladenovac	16				
Knowledge testing		13	81,25	13	100,00
ED Obrenovac	14				
Knowledge testing		15	107,14	15	100,00
TOTAL: DISTRIBUTIONAL AREA BEOGRAD	**857**	**477**	**55,66**	**477**	100,00

*The number of workers that was sent to training is higher than the number of employees, because a number of trained workers have been retired and the calculation of the number of employees was performed on 31st December 2016

- **Work injuries**

The status of injuries for 2016 is presented in Table 129.

Table 129

DISTRIBUTIONAL AREA BEOGRAD						
Work injuries in 2016						
Branch	**Number of employees**	**Work injuries in relation to the number of employees**				
		light	**serious**	**fatal**	**total**	**%**
ED Beograd - Centar	724	**5**	**1**	0	6	0,83
ED Banovo Brdo	51	**0**	**0**	0	0	0,00
ED Zemun	34	**0**	**0**	0	0	0,00
ED Krnjača	18	**0**	**0**	0	0	0,00
ED Mladenovac	16	**0**	**1**	0	1	6,25
ED Obrenovac	14	**0**	**1**	0	1	7,14
TOTAL: DISTRIBUTIONAL ARE BEOGRAD	**857**	**5**	**3**	**0**	**8**	**0,93**

1.3.3. Health

Periodic medical examinations of employees, presented in Table 130, are carried out regularly for all newly recruited workers and employees working on jobs with special working conditions.

Table 130

DISTRIBUTIONAL AREA BEOGRAD											
Capability to work in 2016											
Branch	**Number of employees**	**Periodic examination**				**Work capability**					
		Referred to examination		**Examined**		**Capable**		**Limited capability**		**Incapable**	
		No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
ED Beograd – Centar	724	**228**	**31,49**	**228**	**100,00**	**228**	**100,00**	0	0,00	0	0,00
ED Banovo Brdo	51	**32**	**62,75**	**32**	**100,00**	**32**	**100,00**	0	0,00	0	0,00
ED Zemun	34	**58**	**170,59**	**58**	**100,00**	**58**	**100,00**	0	0,00	0	0,00
ED Krnjača	18	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
ED Mladenovac	16	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00

ED Obrenovac	14	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
TOTAL:DISTRIBUTIONAL AREA BEOGRAD	**857**	**318**	**37,11**	**318**	**100,00**	**318**	**100,00**	**0**	**0,00**	**0**	**0,00**

*The number of workers that was sent to medical examination is higher than the number of employees, because a number of workers have been retired throught the year and they were examined. Calculation of the number of employees was performed on 31st December 2016

1.4 Public Complaints

Public complaints during 2016 are given in Table 131.

Table 131

DISTRIBUTIONAL AREA BEOGRAD			
Public complaints in 2016			
Branch	**Complaint (number and date)/ complainant**	**Subject of complaint**	**Undertaken measures**
	Republic of Serbia, the City of Belgrade, City Adminstration, Secretariat for Inspections, Sector for Environmental and Water Protection Inspection Supervision X-05 number 501.9-983/1/2016 dated 25 July 2016	1. Submit a request to the Secretariat for Environmental Protection of Belgrade City Administration regarding the need to assess the evironmental impacts of the existing situation in substation B404, installed in the basiment premises of the building located in Belgrade at the address 93 Civijićeva. 2. Apply the measures for the reduction of magnetic induction on measuring points in the apartment no. 1 at the address 93 Cvijićeva in Belgrade, where the magnetic induction values exceed the value of 10% of reference limit level for given frequency	Orders by the Secretariat for Inspections, Sector for Environmental and Water Protection Inspection Supervision were conducted

2. DISTRIBUTIONAL AREA NOVI SAD

Table 132 indicates all facilities and systems structure within DA NOVI SAD.

Table 132

DISTRIBUTIONAL AREA NOVI SAD											
FACILITIES AND SYSTEMS IN 2016											
ELECTRICITY DISTRIBUTION SUBSTATIONS								ELECTRICITY DISTRIBUTION NETWORK LENGTH IN KM			
110/10 kV	110/20 kV	110/35 kV	110/x/z kV	35/10 kV	20/0.4 Kv	10/0.4 kV	Total	Voltage level	Overhead	Cable	Total length
								110 kV	0	0	0
								35 kV	193,46	14,10	207,56
								20 kV	984,50	383,35	1367,85
ED Subotica								10 kV	105,95	1,580	107,53
								1.0 kV	0	0	0
								0.4 kV	2.217,660	298,26	2.515,92
0	9	2	0	7	1.285	162	**1.465**	**Total:**	**3.501,56**	**697,28**	**4.198,85**
								110 kV	0	0	0
								35 kV	220,950	6,180	227,130
								20 kV	1.056,90	297,46	1.354,35
ED Sombor								10 kV	0	0	0
								1.0 kV	0	0	0
								0.4 kV	1.359,30	297,58	1.656,88
0	8	0	0	0	1.093	0	**1.101**	**Total:**	**2.637,15**	**601,21**	**3.238,36**
								110 kV	0	0	0
								35 kV	235,240	25,600	260,840
								20 kV	789,15	285,59	1.074,74
ED Zrenjanin								10 kV	88,740	17,090	105,830
								1.0 kV	0	0	0
								0.4 kV	1.660,41	234,42	1.894,83
0	6	2	0	17	906	120	**1.051**	**Total:**	**2.771,230**	**551,610**	**3.322,820**
								110 kV	0	0	0
								35 kV	162,98	88,57	251,55
								20 kV	755,49	731,90	1.487,39
ED Novi Sad								10 kV	103,98	69,24	173,22
								1.0 kV	0	0	0
								0.4 kV	2.403,33	1.016,29	3.419,62
0	9	6	0	19	1.627	166	**1.827**	**Total:**	**3.425,78**	**1.906,00**	**5.331,77**
								110 kV	0	0	0
								35 kV	53,330	5,270	58,600
								20 kV	293,600	169,090	462,690
ED Sremska Mitrovica								10 kV	9,350	1,270	10,620

								1.0 kV	0	0	0
								0.4 kV	400,27	134,21	534,48
0	2	1	0	5	368	13	**389**	**Total:**	**756,07**	**311,80**	**1.067,86**
ED Ruma								110 kV	0	0	0
								35 kV	1,34	2,620	3,96
								20 kV	599,25	473,92	1.073,17
								10 kV	0	2,570	2,570
								1.0 kV	0	0	0
								0.4 kV	1.184,22	165,58	1.349,80
0	6	1	0	2	883	1	**893**	**Total:**	**1.784,81**	**644,69**	**2.429,50**
ED Pancevo								110 kV	0	0	0
								35 kV	226,800	22,860	249,660
								20 kV	824,67	339,70	1.164,37
								10 kV	78.70	20,60	99,30
								1.0 kV	0	0	0
								0.4 kV	1.975,850	553,20	2.529,05
0	7	2	0	10	861	215	**1.095**	**Total:**	**3.106,02**	**936,36**	**4.042,38**
TOTAL: DISTRIBUTIONAL AREA NOVI SAD								110 kV	0	0	0
								35 kV	1.094,10	165,20	1.2959,30
								20 kV	5.304,62	2.682,95	7.987,57
								10 kV	385,18	112,35	497,52
								1.0 kV	0	0	0
								0.4 kV	11.201,04	2.699,54	13.900,58
0	**47**	**14**	**0**	**60**	**7.023**	**677**	**7.821**	**Total:**	**17.984,93**	**5.660,03**	**23.644,96**

*Note: regarding electricity distribution substations and electricity distribution network length, facilities and cable lines in own property must be taken into consideration. Others not to take into consideration.

2.1 Overview and status of permits

Overview and status of permits, licenses and other required approvals, as well as applications for permits in 2016, are shown in Table 133.

Table 133

DISTRIBUTION AREA NOVI SAD			
Overview and status of permits 2016			
Branch	**Obtained approvals and permits (Number and date)**	**New applications for obtaining new or extending existing permits**	**Note**
ED SUBOTICA			
Construction of MBTS-55 Ada	RP-ADA-5329-ISAW-1/2016 dated 08.4.2016		Decision on building approval
Construction of STS-29 with 20 kV cable line in Donji Tavankut	ROP-SUB-5982-ISAWHA-2/2016 dated 06.5.2016		Decision on building approval
Construction of MBTS-618 with 20 kV cable line in Kanjiža	ROP-KAN-9851-IASAW-1/2016 dated 18.5.2016		Decision on building approval

Construction of STS-11 Horgoš	ROP-KAN-4483-ISAW-1/2106 dated 30.3.2016		Decision on building approval
Construction of STS 32 and 0,4 kV in the street JNA in Bajmok	ROP-SUB-15430-ISAW-1/2016 dated 07.7.2016		Decision on building approval
Construction of MBTS-589 with 20 kV cable lines in Subotica	ROP-SUB-11226-ISAW-3/2016 dated 12.8.2016		Decision on building approval
Construction of MBTS-27 with 20 kV cable lines in Mol	ROP-ADA-5957-ISAW-2/2016 dated 04.8.2016		Decision on building approval
Construction od 20 kV cable lines from TS 110/20 kV Subotica to industrial zone	ROP-SUB-19427-ISAW-1/2016 dated 15.8.2016		Decision on building approval
Construction of STS -14 Čoka	ROP-COK-21493-ISAWHA-2/2016 dated 08.9.2016		Decision on building approval
Construction of KBTS- 13 with 20 kV and 0,4 kV cable lines in Ada	ROP-ADA-8710-ISAW-1/2016 Dated 13.5.2016		Decision on building approval
Construction of two LW 0,4 kV cable lines from MBTS-101 in B. Topola	ROP-BTP-9155-ISAW-1/2016 dated 23.5.2016		Decision on building approval
Construction of STS-t with 20kV overhead line Bajmok, Golubova street	ROP-SUB-7645-ISAW-1/2016 Dated 28.4.2016		Decision on building approval
Construction of STS-84 Palić	ROP-SUB-5975-ISAWHA-2/2016 dated 17.5.2016		Decision on building approval
ED SOMBOR			
LW cable line from 3TS 20/0,4 kV "Dispanzer" to business building in Apatin, Srpskih Vladara str.	ROP-APA-32599-ISAWHA-2/2016 dated 13.12.2016.		Decision on building approval
Connection 20 kV cable line and STS 20/0,4 kV "Drumski terminal" - Apatin	ROP-APA-25226-ISAW-1/2016 dated 04.10.2016.		Decision on building approval
LW cable line from MBTS 20/0,4 kV "Blok 61" to business building Kruzar - Apatin	ROP-APA-1767-ISAW-1/2016 dated 09.03.2016.		Decision on building approval
STS 20/0,4 kV "Subotička draž" i conn. 20kV cable line – Svetozar Miletić	ROP-SOM-5610-ISAWHA-2/2016 dated 13.04.2016.		Decision on building approval
MBTS 20/0,4 kV "Semenara" and conn. 20 kV cable line - Odžaci	ROP-ODZ-4306-IUP-1/2016 dated 04.04.2016.		Exploitation permit
20kV cable line for MBTS 20/0,4kV "Zalivni sistem Agrolika" – Bački Gračac	ROP-ODZ-12545-IUP-4/2016 dated 28.09.2016.		Exploitation permit
Construction of 0,4kV cable line for residential-business building in Vrbas, Save Kovačevića 109	ROP-VRB-12876-ISAWHA-2/2016 dated 22.06.2016		Decision on building approval
MBTS 20/0,4kV "Blok 52" and 20 and 0,4kV cable lines - Vrbas	ROP-VRB-12879-ISAWHA-2/2016 dated 22.06.2016		Decision on building approval
Cabling of 0,4 kV overhead network in Kula, Kramerova str.	ROP-KUL-14940-ISAW-12016 dated 30.06.2016		Decision on building approval
STS 20/0,4 kV "Filipa Kljajića" – Sombor	ROP-SOM-12878-ISAW-22016 dated 20.06.2016		Decision on building approval
Construction of 0,4 kv cable line for residential-businnes building in Sombor, Vujadina Sekulića street	ROP-SOM-15846-ISAW-12016 dated 08.07.2016		Decision on building approval
Construction of 0,4kV cable line for residential building "APABILD", at Ive Lole Ribara street - Apatin	ROP-APA-20360-ISAWHA-2/2016 dated 05.09.2016.		Decision on building approval

Double 20 kV cable line and MV plant for TS 20/0,4 kV "Al Rawafed" – Sivac	ROP-KUL-17764-ISAW-1/2016 dated 26.07.2016		Decision on building approval
STS 20/0,4kV "Pumping station" –Bačko Dobro Polje	ROP-VRB-17086-ISAW-12016 dated 25.07.2016		Decision on building approval
STS 20/0,4 kV "Crpna stanica" – Zmajevo	ROP-VRB-17089-ISAW-12016 dated 25.07.2016		Decision on building approval
STS 20/0,4 kV "Silos Tepić" i conn. 20kV overhead line – Deronje	ROP-ODZ-17760-ISAW-1/2016 dated 28.07.2016		Decision on building approval
20kV overhead conn. line for STS 20/0,4 kV "Lovački dom" – Plavna	ROP-BAC-20361-ISAW-1/2016 dated 24.08.2016.		Decision on building approval
0,4kV cable line from MBTS 20/0,4kV "C5/2" to residential building at Branka Radičevića str. – Apatin	ROP-APA-21328-ISAWHA-2/2016 dated 05.09.2016.		Decision on building approval
Cabling of 0,4kV overhead network at the streets Staparski put and Vojnička – Sombor	ROP-SOM-21329-ISAW-1/2016 dated 29.08.2016.		Decision on building approval
20kV cable line for STS 20/0,4 kV "Emission station" – Čonoplja	ROP-SOM-21484-ISAW-1/2016 dated 29.08.2016.		Decision on building approval
20kV double cable line for TS 20/0,4kV "Radna zona" to RS 20/0,4kV "Lepenka" – Odžaci	ROP-ODZ-22109-ISAW-1/2016 dated 05.09.2016.		Decision on building approval
20kV conn. canle line and STS 20/0,4kV "Josić vikendice" - Sobmor	ROP-SOM-25442-ISAW-1/2016 dated 05.10.2016.		Decision on building approval
ED ZRENJANIN			
Double MV cable line from RTS-119 Zrenjanin to GRS at Topičina street	351-371/15-IV-05-02 dated 17.03.2016.		
Reconstruction of RTS-76 ZR on the cadaster lot no. 5790/2 cadaster area Zrenjanin 1	351-13/2016-17-IV-05-02 dated 18.05.2016		
Double LW cable line from RTS-271 ZR with OMM- Prvomajska street, Zrenjanin (AGRO MEDAN)	351-13/2016-15-IV-05-02 dated 12.04.2016.		

LW cable line from RTS-10 Klek with OMMand KPK- Vikend Naselje , Klek (ŠLJUNKARA BMB)	351-13/2016-14-IV-05-02 dated 16.04.2016		
STS road to Elemir (Vikendice)	351-13/2016-13-IV-05-02 dated 11.04.2016.		
Small bio gas power plant in Botoš (BIOELEKTRA)	III-05-351-8/2016 dated 08.03.2016.		
LW cable line from RTS-92 ZR with OMM at Mađarske komune 54 in Zrenjanin, on the cadaster lot no. 10857 in the cadaster area Zrenjanin (Roman Catholic Parish Mužlja)	351-13/2016-9-IV-05-02 од 24.03.2016.		
Double LW cable line at Beogradska str. in Zrenjanin on the cad. lot no. 9638/1 and 7246/1 in the cadaster area Zrenjanin 1 (LIDL)	351-13/2016-117-IV-05-02 dated 16.12.2016.		
MBTS, MV, LV terminal in Titel on the cadaster lot no. 4297/8 in the cadaster area Titel	351-13/2016-114-IV-05-02 dated 13.12.2016.		
MBTS EV-41-A and MV cable line at the street Magistalni put in Kikinda (OLD INDUSTRIAL ZONE)	351-620/2016-IV-03 dated 05.12.2016.		
STS EV-4 and LV terminal in Novi Bečej (TRIANGL)	III-01-351-2-64/2016 од 23.11.2016.		
Cabling of two lines for FSK	IV-05-351-991/2016 dated д 18.11.2016.		
Reconstruction of RTS-262 Zrenjanin from 250 at 400, location furnishing and placing of 0,4kV distribution network (GOMEKS)	351-13/2016-103-IV-05-02 dated 18.11.2016.		
Cable line 20kV AD KOZARA – System-1	351-13/2016-99-IV-05-02 dated 23.11.2016		
KBTS, MV terminal and LV terminal at Pančevačka str. in Zrenjanin	III-01-351-2-49/2016 dated 13.10.2016.		
MBTS EV-41A and mixed line at Žarka Zrenjanina st. inLazarevo	351-13/2016-91-IV-05-02 dated 01.11.2016.		
Double LV cable line from RTS-12 Perlez with OMM at Dimitrja Tucovića st. 31 in Perlez on the cad. lot no 810 in the cad. area Perlez (JEVROSIMOVIĆ)	351-13/2016-90-IV-05-02 dated 01.11.2016.		

LV cable line from RTS-107 ZR with OMM- Dr. Vasae Savića in Zrenjanin, cad.lot no. 6265 of the cad. area Zrenjanin (VELISAVLJEV)	351-13/2016-82-IV-05-02 dated 19.10.2016.		
STS EV-4 and reconfiguration LV network at Branka Radičeviča in Srpski Itebej	351-13/2016-77-IV-05-02 dated 11.10.2016.		
LV cable lines from RTS-68 ZR with KPK and OMM at Jug Bogdana 4 in Zrenjanin on the cad. lots 7399/9, 9644/1, 7428 in the cad. area Zrenjanin 1 (MAKSIMOVIĆ GRADNJA)	351-13/2016-90-IV-05-02 dated 01.11.2016.		
STS EV-4 and mixed line at Đure Daničića st. in Melenci	351-13/2016-68-IV-05-02 dated 05.09.2016.		
LV cable line from RTS-11 Sečanj with KPK and OMM – Partizanski put str. in Sečanj (KNEZ PETROL)	351-13/2016-62-IV-05-02 dated 05.09.2016.		
LV cable line from RTS-5 Lukićevo with OMM at Ivana MArkovića 20 str. in Lukićevo on the cad. lot no. 168 in the cad.area Lukićevo (DUPLJANOVIĆ)	351-22/2016-II dated 22.07.2016.		
LV cable line from RTS-6 kumane with KPK and OMM – Kumane, cad. lot no. 2913 in the cad. area Kumane (VRENALOV AGRAR)	IV 05 351-750/2016 од 21.06.2016.		
LV cable lines from RTS-58 ZR with KPK and OMM at 2 Đure Jakšića str. in Zrenjanin on the cad.lots no. 9649/1, 7576/1 and 7605 of the cad. area Zrenjanin 1 (BIOELEKTRIK)	351-13/2016-44-IV-05-02 од 18.06.2016.		
MBTS EV-21, MV and LV cable line on the cad. lot 1759/1 in the cad. area Sutjeska in Sutjeska (refrigerator car SVETI NIKOLA)	351-12/2016-III од 15.05.2016		
MBTS EV-21A, MV terminal and MV terminal at stevica Jovanovića str. and Đorđa Stratimirovića str. in Zrenjanin	351-13/2016-32-IV-05-02 од 18.05.2016		
CABLE LINE 20kV for CS"MOKRINSKA 2"and HV UNIT with metering cell	III-01-351-2-19/2016 од 27.05.2016.		
LV cable line atStevice Jovanovića and Đorđa Stratimirovića in Zrenjanin (VBEASTHOME)	351-13/2016-54-IV-05-02 од 05.07.2016		
MBTS; mV and LV terminal at Uroša Predića str. in Zrenjanin	351-13/2016-29-IV-05-02 од 27.05.2016		
MV cable line, MV unit and OMM in Working zone Jugoistok in Zrenjanin on the cad. lot 15365/124 in the cad. area Zrenjanin 1 (TECHNOSTRUCTURE)	351-13/2016-59-IV-05-02 од 29.07.2016.		

Double MV cable line for supply of TS on cad. lot no. 9538/20 in the cad. area Kikinda in Kikinda (MECAFOR PRODUCTS)	III-01-351-1-6/2016 од 14.04.2016.		
MBTS (AGROGLOBE)	351-66/2016-II од 29.11.2016.		
Cable conn. line 20kV for the supply of STS 20/0,4kV on the cad. lot 11228/4, in the cad. area Kikinda in Kikinda (EMISSION STATION KIKINDA)	III-01-315-2-45/2016 од 29.07.2016.		
GRS, MV cable line, STS EV-3 and OMM in Banatsko Veliko Selo (KOZARA)	III-01-351-3-51/2016 dated 13.12.2016.		
ED NOVI SAD			
STS"Njegoševa" with HVand LV lines, on the cadaster lots no. 7195/ 7134/ 5592, 5593, 5595/2, 8202/5 and 7193/1 in the cadaster area Temerin	V-351/2015-131-04 04.02.2016		
KBTS "Bulka" with 20 and 0,4 kV lines at Bulevar Evrope str., on the cad. lots no. 421/9, 419/3, 418/3, 402/2, 382/2, 335/5, 335/7, 337/7, 342/17, 342/15, 360/16, 193/29, 193/27, 193/25, 193/23, 193/21, 193/20, 192/2, 191/1, 836/5, 138/17, 139/3 138/18, 138/16, 191/13 and 863/3 in the cad. area Novi sad IV	ROP-NSD-12925-ISAW-1/2016 17.06.2016		
Underground 0,4kV line with residential and business building at Maršala Tita no. 87, on the cad. lots no. 993/4 and 460 in the cad. are Kulpin	ROP-BPE-15497-ISAW-1/2016. 06.07.2016		
TS "Vojvode Stepe 2" with underground 20 an 0,4kV distribution network, on cad. lots no. 704/34, 704/2,705/8, 705/1, 706/3, 706/1, 706/2, 707/1, 707/2, 708/20, 708/29, 708/30, 708/2 in the cad. area Novi Sad IV	ROP-NSD-10513-ISAWHA-2/2016 30.06.2016		
Cable line 20 kV from TS 110/20kV "Rimski šančevi" to TS 20/0,4kV "Proleterska", on cadaster lots 87/2, 830/2, 830/4, 830/5, 832/2, 832/7, 832/8, 855/36, 835/1, 835/7, 122/1 in cad. area Novi Sad IV and 2/3, 39/5, 38/3, 40/5, 41/9, 41/12, 41/13, 42/7, 42/8, 42/5, 42/2, 43/1, 43/4, 43/5, 43/3, 44/2, 45/2, 46/2, 46/1, 48/1, 50/4, 53/3, 67, 69, 75/3, 78/2, 78/5 и 10398/1 in cad. are Novi Sad I	V-351-3083/15 03.03.2016		
Underground 0,4 kV distribution network at Gundulićeva st. on cad. lots 8679, 8680/1, 8680/2 in the cad. area Novi Sad I	V-351-3066/15 04.03.2016		
Underground 0,4kV network for the building at Vuka Kaaradžića str. on the cad. lot no. 9792/1 (cad. area N.Sad I)	ROP-NSD-23940-ISAWHA-2/2016 10.10.2016		
Overhead LV network at Svetislava Ivana Petrovića str., on the lots 2390/1, 2690/2, 2691, 2692, 2693/5, 2694, 2695, 2696, 2697, 2629/13, 2629/2 in the cad. area Novi Sad III	V-351-1974/15 03.03.2016		
Underground 0,4 kV line for business building at Nikole Tesle 1, on the cad. lots no. 13460/2, 7285/1 and 7285/28 in cad. area Temerin	ROP-TEM-21572-ISAW-2/2016 11.10.2016		
Underground 0.4 kV network at Adi Endre no. 18, on the cad. lots no. 2350, 7799/1 and 2361 in the cad. area Temerin	V-351-3070/15 04.02.2016		

Underground LV network at Javorva and Šimširova streets	V-351-3074/15 и ROP-NSD-28125-ISAWHA-2/2016, 5.2.2016 and 17.11.2016		
TS Borislav Pekić with 20 and 0,4kV lines, on the cad. lots 3698/70, 3698/81, 3698/71, 3698/84, 3698/89, 3698/73 in the cad. area Veternik and 852/1, 852/6, 852/5, 890/1, 852/11, 733/1, 733/2, 803/22, 803/27, 803/28, 758/1 and 852/2 in the cad. area Novi Sad IV	V-351-3080/15 29.02.2016		
Underground 20kV lines for MBTS "Servis vodovod" on the cad. lots no. 3983 and 3997 in the cad. area Novi Sad I	V-351-3073/15 25.01.2016		
TS "Danila Kiša 4" on the cad. lots no. 7741, 1046 and 1048/5 in the cad. area Novi Sad II	V-351-3072/15 25.01.2016		
Underground line 0,4kV for the facility at Petefi Šandora str.(no number) on the cad. lots no. 5842/2 and 7830/1 in the cad. area Novi Sad II	ROP-NSD-11048-ISAW-1/2016 03.06.2016		
Underground LV line at Nova (Orahova) street, on the cad. lots no. 6656, 5208/1, 5203/7 and 5204/5 in the cad area Petrovaradin	ROP-NSD-34736-ISAW-1/2016 29.12.2016		
TS 35/10kV "Industrijska" in Novi Sad, on the cad. lot no. 2231 in the cad. area Novi Sad I	ROP-NSD-25683-ISAWHA-2/2016 26.10.2016		
Underground 20 kV lines for the locations "Klanice" and "Idol" from TS 35/10kV "Industrijska" on the cad. lots. no. 855/63, 420/1, 421/4, 421/5, 421/8, 423/4, 421/9, 421/15, 421/14, 418/3, 419/3, 424/3, 425/4, 426/5, 427/5, 428/5, 429/5, 429/7, 430/3, 431/3, 431/6, 432/22, 432/20, 432/18, 433/10, 434/7, 434/9, 434/2, 435/2, 427/2, 879, 403/2, 403/1, 842/9, 382/4, 335/7, 841/1, 382/3, 382/2, 402/1, 402/2 , 380/2 in the cad. area Novi Sad IV and 2231, 2236/1 in the cad.area Novi Sad I	ROP-NSD-23970-ISAWHA-2/2016. 01.11.2016		
Underground 0,4 kV network from TS "Rade Kondića" to KPK at Rade Kondića no.44 on the cad. lots no. 5239, 6741/1 and 6791 in the cad. area Futog	V-351-3071/15 25.01.2016		
Overhead LV network at Tešana Podrugovića (LV branch at Nova str.) on the cad. lots no. 3360, 3361, 3371/7, 3370/10, 3371/2 and 5002/3 in the cad. area Novi Sad I	ROP-NSD-26946-ISAW-1/2016 20.10.2016		
Underground LV network in the corner of Rumenačka and Kornelija Stankovića streets, 5002/2, 5000/1, 5000/2, 5000/5 and 5002/3 in the cad. area Novi Sad I	V-351-3037/15 10.02.2016		
KBTS "Kružna" with 20kV and 0,4 kV distribution network , on the cad. lots no. 5601, 6500, 5596, 5597, 5574, 5552 and 5607 in the cad. area Novi Sad II	V-351-3077/15 02.02.2016		
Underground 0,4 kV (extension of LV network) from STS "Livade Vizić" on the cad. lots no. 9959 and 9849 in the cad. area Futog	ROP-NSD-12266-ISAW-1/2016 10.06.2016		
Underground LV network to the streets Nova (Atar) and Nova 43 from MBTS "Veternička 2"	V-351-3081/15-for the project 15-476 and ROP-NSD-6499-ISAW-1/2016 17.3.2016 and 20.4.2016		

Overhead 0,4kV network as extension to the street Stevana sinđelića, on the lot no. 1539/7,1538, 1530/13, 1529/8, 673/4, 669, 673/13, 672/2, 876/9 and 878 in the cad. area Ledinci	ROP-NSD-7713-ISAW-1/2016 28.04.2016		
Underground 0,4kV lines up to in front of the businesss building at Fruškogorska 20, on the cad. lots no. 3861/5 and 3861/8 in the cad. area Novi Sad II	V-351-3084/5 02.02.2016		
Underground 0,4kV network at the corner of the streets Zemljane Ćuprije and Save Vukovića, on the cad. lots no. 9625/2, 9622,10530 and 10557 Novi Sad I	ROP-NSD-12788-ISAW-1/2016 14.06.2016		
STS "Međunarodni put" with accompanying MV and LV line, on the cad. lots 2135, 4361, 4189/1, 4423 and 2239 in the cad. area Čenej	ROP-NSD-23923-ISAW-1/2016. 21.09.2016		
Underground 0,4kV network at Subotička 29, on the cadaster lot no. 7800 in the cad. area Novi Sad II	V-351-3036/15 05.01.2016		
STS "CS FUTOG" with accompanying MV and LV lines, on the cad. lots no. 8679, 9960, 7109, 10239 and 8661 in the cad. lot Futog	V-351-2933/15 05.01.2016		
Distribution network 0,4kV from TS"Novosadski put" up to Tri bagrema Street, on the cad. lots no. 1772/7, 1772/6, 1772/5 in the cad. area Veternik	V-351-3079/15 02.02.2016		
Underground 0,4kV network in svetojovanovksa 11, on the cad. lots no. 6962, 10435 and 10437 in the cad. area Novi Sad I	ROP--NSD-6095-ISAW-1/2016 21.04.2016		
Underground 0,4kV network at Ilije Birčanina 45, on the cad. lotas no, 10462, 6245/1 and 6247/2 in the c ad. area Novi Sad I	V-351-3082/15 11.03.2016		
Underground 20kV line for ZTS "P.D. Petefi Silos"	ROP-TEM-3403-ISAW-1/2016 28.03.2016		
Underground 0,4kV network at Fruškogorska 21, on the cad. lots no. 3744, 3739/1 and 3739/4 in the cad. area Novi Sad II	ROP-NSD-9101-ISAW-1/2016. 13.05.2016		
Underground distribution network 0,4kV at Vojvode Šupljikca 45, on the cad. lots no. 4551/1 and 10434/1 in cad. area Novi Sad I	V-351-3076/2015 24.02.2016		
Underground 20kV line from TS "Robna Kuća Novitet" up to TS "Partizan 2", on the cad. lots no. 3056/2, 2065/2, 3075/1, 3075/4, 3084/3 and 3083/2 in the cad. area Bačka Palanka – town	IV-05-351-505/2015 28.01.2016		

Partial cabling of the street Cara Lazara, in the part from Fruškogorska str. up to Partizanska str. on the cad. lots 6744/2, 6741/1, 5623, 5605, 5603, 5601, 5582, 5581/1, 5580, 5574, 5572, 5562, 5560, 5554, 5552, 5546, 5544/2, 5544/1, 5538, 5511/3, 5512, 5513, 5514, 5515, 5511/1, 5509, 5510, 5503, 5501, 5472, 5473, 5475, 5477, 5479, 5481, 5482, 5483, 5484, 6227, 6233, 6234, 6235, 6236, 6237, 6242, 6246, 6248, 6249, 6250, 6251, 6257, 6267, 6268, 6269, 6270, 6271, 6273, 6274, 6275, 6277, 6278, 6279, 6300, 6301, 6302, 6303, 6304, 6305, 5015, 5404, 5405, 5406, 5407, 5408, 5409, 5410, 5411, 5413, 6850, 5414, 5416, 5417, 5432, 5433, 5434, 5435, 5436, 5437, 5444, 5446, 5447, 5454, 5455, 5457, 5459, 5461, 5462, 5465, 5466, 5468, 5469, 5351, 5349, 5347, 5338, 5337, 5331, 5330, 5326, 5324/2, 5324/1, 5319, 5318, 5313, 5312, 5309, 5308, 5307, 6847, 5609, 5608, 5606, 5618, 5620, 5622, 5624, 6849, 5366, 5367, 6846 и 6738/1 in the cad. area Futog	V-351-3078/15 12.02.2016		
Distribution network 0,4kV at Miroslava Prodanovića Micka str. on the cad. lots n o. 2221/8, 2218/12,2218/1 in the cad. area Novi Sad I and 855/62, 855/31, 372/13 in the cad. lots Novi Sad IV	ROP-NSD-9144-ISAW-1/2016 16.05.2016		
Distribution network 0,4kV at Jovana Subotića no.17, on the cad. lots no. 9791/2, 9791/1, 10561/1, 10562 and 9787/1 in the cad. area Novi Sad I	ROP-NSD-3849-ISAWHA-2/2016 18.04.2016		
Distribution network 0,4kV at Alberta Tome no.2, on the cad. lots no. 929, 938/2 and 934 in the cad. area Novi Sad II	ROP-NSD-8332-ISAW-1/2016 13.05.2016		
Distribution network 0,4kV at Šafarikova 31, on the cad. lots no. 9984, 10588, 9972/1 and 9972/5 in the cad. area Novi Sad I	ROP-NSD-12274-ISAWHA-2/2016 22.06.2016		
Underground 0,4kV network up to the facility at Banatska 4, on the cad. area no. 10962/4, 10535/16m10480/4 and 11032/3 in the cad. area Baška Palanka – town	ROP-BAP-25174-ISAW-1/2016 04.11.2016		
Underground 20kV distribution network up to TS “Jugodent”, on the cad. lots no. 5872 and 5860/2 in the cad. area Srbobran	ROP-SRB-22586-ISAWHA-2/2016 12.10.2016		
Underground 0,4kV network at Vojvođanska 13, on the cad. lots no. 1581, 1541, 2253/2 and 2254 in the cad. area Rumenka	ROP-NSD-291-ISAWHA-2/2016 25.03.2016		
TS”TROGLAV” with LV and MV network in units 2 and 4 on the cad. lots no. 9786/36, 9786/17, 9786/26, 99786/27, 9786/28 in the cad. area Temerin	ROP-TEM-13073-ISAWHA-2/2016 01.07.2016		
Underground 0,4kV network at Bate Brkića str. from TS”Braće Dronjak” on the cad. lots no. 8261/1, 8264, 8263/1, 8121, 10500/2, 10501/4, 10501/5, 8257/1, 8257/2, 8258/3, 8267/1, 8266/2 и 8266/1 in the cad. area Novi Sad I	ROP-NSD-13937-ISAW-1/2016 27.06.2016		
Distribution 20kV overhead network up to STS “Vuksanović”, on the cad. lots no. 7142 and 1757/2 in the cad. area Temerin	ROP-TEM-1882-ISAW-1/2016 09.03.2016		

Distribution network 0,4 kV at Matice Srpske and Sterijina str., on the cad. lots no. 9657, 9655, 9653/1, 9653/2, 9650, 10559/1, 10523 and 10559/2 in cad. area Novi Sad I	ROP-NSD-9174-ISAWHA-2/2016 02.06.2016		
TS Branislava Nušića with distribution network 20 and 0,4kV on the cad. lots no. 10484/1, 7468, 7433 anad 7432 Novi Sad I	ROP-NSD-11841-ISAW-1/2016 09.06.2016		
Underground 0,4kV network at Petra Pirtića (no number) on the cad. lots no. 679, 680, 2012, 706 in the cad. area Mošorin	351-682 03.02.2016		
Underground 0,4kV line Jovana Popovića 25b, on the cad. lots no. 5249/2, 5249/1 and 5251 in the cad. area Novi Sad II	ROP-NSD-13941-ISAW-1/2016. 28.06.2016		
Distribution network 0,4kV at Jovana Cvijića 10, on the cad. lots no. 8863/2, 10517, 10427, 8873/2, 8874/2, 8875 and 8873/1 in the cad. area Novi Sad I	ROP-NSD-9263-ISAWHA-2/2016 01.06.2016		
Underground 0,4kV line at Košut Lajoša 38/40 on the cad. lots no. 3880, 7177, 7178, amd 30 in the cad. area Temerin	ROP-TEM-24377-ISAW-1/2016, 28.09.2016		
Underground distribution neetwrk 20kV for TS “Celina D”, on the cad. lot no. 2282 in the cad. area Novi Sasd I	ROP-NSD-6805-ISAW-1/2016 09.05.2016		
Underground distribution network 0.4kV at Dalmatinska 27, on the cad lots. no 4086/1 in the cad. area Novi Sad II	ROP-NSD-6429-ISAW-1/2016 19.04.2016		
Undergroun 0,4kV network at Jugoslovenske Armije 78 on the cad. lots no. 5071/1, 7314, 7303, and 5059 in the cad. area Bačka Palanka – town	ROP-BAP-19967-ISAN-1/2016 15.08.2016		
Underground 0,4kV line at Nikole Tesle 17 on the cad. lots 798, 648, 1772/1 and 799/3 in the cad. area Šajkaš	351-680/2015-IV-03 23.12.2015		
TS “Bolmanska 3” with underground 20kV and 0,4kV distribution network on the cad. lots no. 7392, 6876/3 and 6877/1 in the cad. area Novi Sad II	ROP-NSD-13126-ISAW-1/2016 29.06.2016		
TS “Janka Čmelika” with underground 20kV and 0,4kV distribution network, on the cad. lots no. 6045/1, 6045/2, 10465 and 107466/1 in the cad. area Novi Sad I, Novi Sad	ROP-NSD-12969-ISAW-1/2016 17.06.2016	17.6.2016	
Underground 0.4kV network at Desanke Maksimović (up to the corner with the street sime Milutinovića Sarajlije), on the cad. lots no. 3937/4, 3937/12, 4277/4, 3938/1, 3938/25, 3938/23, 3938/43, 3938/40, 3938/39, 3938/38, 3938/37, 3938/44, 3938/45, 3938/22, 3938/47, 3938/21, 3938/49, 3938/20 and 3938/51 in the cad. area Veternik	ROP-NSD-6620-ISAW-1/2016 20.04.2016		
Underground 0,4kV network at Subotička, on the cad. lots no. 7800, 4551/3, 4552/3, 4551/4 and 4553/3 in the cad. area Novi Sad II	ROP-NSD-30685-ISAWHA-2/2016 21.12.2016		
Underground 0,4kV network at Rumenačka 152, on the cadaster lota no. 3847 and 10445/1 in the cad. area Novi Sad I	ROP-NSD-5712-ISAW-1/2016 25.05.2016		
Underground 20kV network at Veljka Vlahovića, on the cad. lots no. 2738/1 and 2738/9 in the cad. area BAčka Palanka – town	ROP-BAP-13024-ISAW-1/2016 22.07.2016		

Underground 0,4kV line at Avalska 15, on the cad. lots. no. 1687/2, 1687/1, 10384, 2632 and 2624 in the cad. area Novi Sad I	ROP-NSD-22496-ISAW-1/2016, 14.09.2016		
Underground 0,4kV distribution network at Miroslava Prodanovića Micka on the cad. lots no. 2214/9 and 2215/1 in the cad. area Novi Sad I	ROP-NSD-12268-ISAW-1/2016 09.06.2016		
Distribution network 0,4kV at Jaše Ignjatovića no. 6a, on the cad. lots no. 10536, 9237/2, 9236/2, 9236/1 and 8573 in cad. are Novi Sad I	ROP-NSD-14698-ISAW-1/2016 30.06.2016		
Distribution network 0,4kV at Mornarska 44, on the cadaster lots no. 7826 and 6894 in cad. area Novi Sad II	ROP-NSD-14965-ISAW-1/2016, 01.07.2016		
Underground 20 and 0,4kV distribution network from TS "Ilirska 2", on cad. lots no. 5381/1,5381/2, 5383, 5384/1, 5384/5, 5384/6, 5382/6, 5382/5, 5384/7, 5379 in cadaster area Novi Sad II, Novi Sad	ROP-NSD-30723-ISAW-1/2016 и ROP-NSD-25162-ISAW-2/2016 18.11.2016 и 6.12.2016		
Underground 0,4kV distribution network at Jaše Ignjatovića 1, on cad. lots no. 8574/1,8574/2, 10514, 8573 and 8574 in the cad area Novi sad I	ROP-NSD-28609-ISAWHA-2/2016 14.11.2016		
Underground 0,4 kV distribution network at Novosadska str. nearby the church, on the cad. lots no. 1108, 1143, 629,625, 623,619, 618, 621 and 620 in the cad. area Sirig	ROP-TEM-13023-ISAW-1/2016 24.06.2016		
Underground 0,4kV distribution network at Janka Čmelnika 5, on the cad .lots no. 6016/1, 6016/2, 6018/2 and 10465 in the cad. area Novi Sad I	ROP-NSD-9166-ISAWHA-2/2016 01.06.2016		
Overhead 0,4kV distribution network ar Nova (no number) str. (Mali do part), on cad. lots no. 5441/5, 5440/4, 5439/14 and 5439/4 in cad. area Sremska Kamenica	ROP-NSD-31540-ISAWHA-2/2016 21.12.2016		
Underground 0,4kV distribution network at Kralja Alkesandra 3, on cad. lots no. 221/5, 221/2, 221/1, 224, 222/3 222/1 in cad. area Novi Sad II	V-351-3106/15 04.03.2016		
TS "Desanke Maksimović 2" with underground 20 and 0,4kV distribution network, on cad. lots no. 3937/4, 3937/12, 4277/4, 3938/1, 3938/25, 3938/40, 3938/39, 3938/38, 3938/37, 3938/34, 3938/33, 3938/32, 3938/31, 3938/30, 3938/29, 3938/28, 3974/7, 3974/3, 3974/14, 3943/5, 3972/3, 3944/4, 3971/35, 3971/11, 3971/9 in cad. area Veternik, Novi Sad	ROP-NSD-23960-ISAW-1/2016 27.09.2016		
Underground 0,4 kV network at Milete Protić (no number), on the cad. lota no. 203/23, 209, 203/22, 203/20 in the cad. area Obrovac	ROP-BAP-29402-ISAW-1/2016 30.10.2016		
TS "Satelitska pijaca" with underground 20kv and 0,4kV distribution network, on cad. lots no. 8340/1 and 8340/3 in cad.are Novi Sad I	ROP-NSD-12965-ISAW-1/2016. 16.06.2016		
Underground 20kV distribution network for TS "Lidl", on cad. lots no. 5843/2,10753/36 and 10753/37 in cad. area Novi Sad I	ROP-NSD-21958-ISAW-1/2016 09.09.2016		

Underground 20kV line from RS 110/20/10kV "Novi Sad)" to TS "LEAR" on cad. lots no. 916/3, 910/1, 916/5, 916/9, 916/13, 911/4, 907/6, 905/3 3183/3, 903/3, 901/6, 897/1, 896/2 and 892/4 in cad. area Novi Sad III	ROP-NSD-16962-ISAW-1/2016 20.07.2016		
Underground 20kV line for TS"Zemljoradnička zadruga" on cad. lots no. 51, 882, 77 and 74 in cad. area Nova Gajdobra	ROP-BAP-18881-ISAWHA-2/2016 26.10.2016		
Underground 20kV line from TS "Zemljoradnička zadruga" up to TS "Žarkova" on cad. lots no. 1590,1589, 1591, 898, 887 and 74 in cad. area Nova Gajdobra	ROP-BAP-18691-ISAWHA-2/2016 06.10.2016		
MBTS "Put šajkaškog odreda" and underground 20kV line frim TS"LEAR" to TS"Put šajkaškog odreda" on cad. lots no. 3253/1, 3231/1, 864/2, 865, 866/2, 867, 868/2, 869, 870/2, 870/4, 870/3, 871/2, 890/1, 891/1, 892/1, 892/3, 896/2 and 892/4 in cad. area Novi Sad III	ROP-NSD-16653-ISAW-1/2016 18.07.2016		
Relocation of 20 and 0,4kV mixed line aprt at Radnička str. on the cad. lots no 1729/1 and 1741 in cad. area Šajkaš	ROP-TIT-27972-ISAWHA-2/2016 15.12.2016		
TS "Teodora Pavlovića 3" with 20 and 0,4kV distribution network	ROP-NSD-26115-ISAWHA-2/2016 22.11.2016		
TS "Prešernova" with underground 20 and 0,4kV lines, on cad. lots no. 7458, 7827/1, 7445/2, 7444 and 7448/1 in cad .area Novi Sad II	ROP-NSD-27955-ISAW-1/2016. 27.10.2016		
Construction of 20 and 0,4kV lines at the corner of Belavar Cara Lazara and Hopovska str., on cad. lots no. 1528, 7744/1, 1671/1, 1662, 1660/2, 1659/2, 1657/2, 1658/2, 1525/2 and 7744/2 in cad. area Novi Sad II	ROP-NSD-32771-ISAWHA-2/2016 29.12.2016		
Overhead 0,4kV networkat Nova str., on cad. lots no. 3456/17, 3456/16, 3449, 3460/2 in cad. area Veternik	ROP-NSD-32775-ISAW-1/2016 15.12.2016		
Underground 0,4kV line for the facility at Dimitrija Avramovića 1, on cad. lots no. 7021/2, 7022/2, 7023/2 and 7022/1 in cad. area Novi Sad I	ROP-NSD-27953-ISAW-1/2016 27.10.2016		
Underground 0,4 kV line for the facility at Varga Đule 14 on cad. lots no. 5705, 5713 and 5714 in cad. area Novi Sad II	ROP-NSD-12854-ISAWHA-2/2016 29.06.2016		
MBTS "JNA 2" with accompanying MV network and underground LV line for the facility at JNA str. no. 47, on cad. lots no. 960 and 1140 in cad. area Sirig	ROP-TEM-22006-ISAWHA-2/2016 29.09.2016		
Undergound 20kV line for TS"Kondor 033" on cad. lots no 283, 1112 and 1129 in cad. area Sirig	ROP-TEM-27236-ISAW-1/2016 17.10.2016		
Undergorund 0,4kV line for the facility at kopernikova 44, on cad. lots no. 5974/1, 5974/2 and 5972/2 in cad. area Novi Sad I	ROP-NSD-26321-ISAWHA-2/2016 27.10.2016		
MBTS "Univerzal" with MV and LV network on cad. lots no. 3179, 3183, 3453, 3454/3 and 8064 in cad. area Bečej	ROP-BEC-29559-ISAW-1/2016 07.11.2016		
Underground 0,4kV distribution network at Jug Bogdana str., on cadaster lots no. 2464/6, 2464/5, 7383, 247/4, 2467/3, 2469/2, 2479/1, 2480/2, 2481/3 and 2481/2 Bačka Palanka – town.	ROP-BAP-23955-ISAW-1/2016. 11.10.2016		

Underground 20kV and 0,4kv distribution network from TS "Železnik" to TS"Devet Jugovića" on cad. lots no. 2482, 2481/1, 2481/3, 2469 and 7383 Bačka Palanka – town.	ROP-BAP-23862-ISAW-1/2016 22.09.2016		
Underground 0,4kV distribution network for facilities at III krajiške proleterske brigate str. (no number), on cad. lots no. 11814/118, 11814/16, 2194/17, 2194/18 and 2194/19 in cad. area Temerin	ROP-TEM-29406-ISAW-1/2016 08.11.2016		
Underground 0,4kV line for the facility at Milana Savića (no number) on cad. lots no 5881/5, 5882/5m 5883/4 and 5883/2 in cad area Novi Sad II	ROP-NSD-21962-ISAWHA-2/2016 14.10.2016		
Underground 0,4kV line fir the facility at Kopernikova 35 on cad. lots no. 6080/2, 6080/1, 6084, 10465 and 5986 in cad. area Novi Sad I	ROP-NSD-22469-ISAWHA-2/2016 21.09.2016		
Underground 0,4kV line for the facility at Futoška 34 having the exit at Žike Popovića str. on cad. lots no. 10364, 10357/1 in cad. area Novi Sad I	ROP-NED-18575-ISAN-1/2016 04.08.2016		
Underground 0,4kV line for the facility at the corner of Đorđa Zličića and Koste Šokice on cad. lot 4347 in cad. area Novi Sad I	ROP-NSD-21965-ISAW-1/2016 05.09.2016		
Underground line 0,4kV for the facility at Futoški put 15, on cad. lots no. 2672/1, 2634, 2635/1, 2635/, 7793/1 and 2636 in cad. area Novi Sad II	ROP-NSD-30475-ISAW-1/2016 22.11.2016		
Underground line 0,4kV for sports hall ar Jožefa Maročka (no number), on cad. lot no. 669/6, 666, 669/2, 665/1 in cad. area Gložan	ROP-BPE-20447-ISAW-1/2016 17.08.2016		
Underground 20kV lines for TS"Johan" on cad. lots no. 2782, 2794, 10417,10419 in cad area Novi Sad I	ROP-NSD-31136-ISAW-1/2016 28.11.2016		
Underground 0,4kV line for business building at Janka Veselinovića 8, on cad. lots no. 5341/2, 5342/2, in cad. area Novi Sad I	ROP-NSD-23913-ISAW-1/2015 22.09.2016		
Uderground 0,4kV lines for sports hall at Vojvodie Purnika (no number) on cad. lot no. 4259/6 in cad. area Sremska Kamenica	ROP-NSD-32167-ISAW-1/2016 05.12.2016		
Underground 0,4kV lilne for the facility at Ogledna polja 54, on cad. lots no. 3475, 3474, 3472, 3471, 3470, 3469 and 3468 in the cad. area Čenej	ROP-NSD-23958-ISAW-1/2016, 21.09.2016		
Underground 0,4kV line for the facility at Somborska (no number), on cad. lots no. 5459/2, 5460/2, 5461/2, 5463/2, 5465/2, 5466/2, 5466/4 and 5466/5 in cad. area Novi Sasd II	ROP-NSD-23967-ISAW-1/2016, 22.09.2016		
Underground 0,4kV line for business premises at Polgar Andraša 2-4, on cad. lots no. 5460/2, 5461/2, 5463/2, 5465/2, 5466/2, 5466/4 and 5466/5 in cad. area Novi Sad II	ROP-NSD-29700-ISAWHA-2/2016 14.11.2016		
Underground 0,4kV lines for the facility at Branka Bajića (no number), Wing 4,on cad.lots no. 7541/2, 7541/1 and 7541/4 in cad.area Novi Sad I	ROP-NSD-18440-ISAW-1/2016 05.08.2016		

Extension of the overhead LV network at Nova III, on cad. lots no. 8 and 9/5 in cad. area Veternik	ROP-NSD-30645-ISAW-1/2016 22.11.2016		
Underground 0,4kV network at Stojana vukosavljevića on cad. lots no. 801/1, 2896 and 758/2 in cad. area Beočin	ROP-BEO-31559-ISAWHA-2/2016 14.12.2016		
Underground 0,4kV line for the facility at Partizanska 54, on cad. lots no. 2252, 795 in cad. area Rumenka	ROP-NSD-19949-ISAW-1/2016 15.08.2016		
TS "Koči Ivana" with accompanying 20 and 0,4kV lines, on cad. lots no. 1769/1, 1806, 1807/4 and 1807/5 in cad. area Novi Sad II	ROP-NSD-30468-ISAW-1/2016 16.11.2016		
Overhead 0,4kV network at Nova 3 str. on cad. lots no. 361/1, 361/2, 402/1 and 401/25 in cad. area Novi Sad III, at Veliki rit, Novi Sad	ROP-NSD-32222-ISAW-1/2016 09.12.2016		
Underground 0,4kV line for the facility at Janošikova (no number), on cad.lots no. 6760 and 6761/1 in cad. area Novi Sad II	ROP-NSD-23964-ISAW-1/2016 21.09.2016		
Underground 0,4kV lines for car show-room at Zrenjaninski put (no number), on cad. lots no. 250/33 and 250/434 in cad. area Novi Sad III	ROP-NSD-33516-ISAW-1/2016 14.12.2016		
Underground 0,4kV lines for the facilty at Jugoslovenske armije 62 (IV phase) on cad. lots no. 5323/2 and 7303 in cad. area Bačka Palanka –town	ROP-BAP-32233-ISAW-1/2016 09.12.2016		
Underground 0,4kV line for the facility at Doža Đerđa 63, on cad.lots no 1399/1, 7810 and 1402/1 in cad. area Novi Sad II	ROP-NSD-34725-ISAW-1/2016 28.12.2016		
Construction of underground 20kV lines for the construction of the facility "Pupinova Palata", on cad. lots no. 208/1,464/1,464/5, 463/2, 243, 7732/1, 464/3, 464/2 in ad. area Novi Sad II	ROP-NSD-34726-ISAW-1/2016 28.12.2016		
Underground 0,4kV network at Nova, Čerevićka and Bogdana Popovića str. on the cad. lots no. 3938/1, 3938/24, 3938/41, 3938/42, 3939/18, 3939/24, 3939/25, 3939/26, 3974/7, 3974/3, 3938/52, 3938/3, 4304, 3938/26, 3938/6, 3938/7, 3938/8, 3938/71, 3938/72, 3939/33, 3939/35, 3939/34, 3939/38, 4310, 3939/4, 3939/5, 3939/6, 3939/55, 3939/60, 3939/59, 3939/28, 3939/29, 3939/30, 4309, 3939/15, 3939/13, 3939/45, 3939/46, 4315 and 4316 in cad. area Veternik	ROP-NSD-33978-ISAWHA-2/2016 26.12.2016		
Underground 0,4kV lines for garden facilty at Groyde Gajšin 6, on cad. lots no. 9729, 9727/1, 9727/2 and 9727/3 in cad. area Novi Sad I	ROP-NSD-34959-ISAW-1/2016 30.12.2016		
Underground 0,4kV lines for the facility at Hadži Ruvimova 40, on cad.lots no. 6132/1,6132/2, 6134/2, 6130/2 in cad. area Novi Sad I	ROP-NSD-34792-ISAW-1/2016 28.12.2016		
Underground 0,4kV lines for the facility at Aleksandra Popovića (no number), on cad. lots no. 3698/61, 3698/62, 3699/7, 3700/48, 3700/49, 3700/42, 3701/18, 3701/13 in cad. area Veternik	ROP-NSD-34730-ISAW-1/2016 29.12.2016		
ED SREMSKA MITROVICA			
STS 20/0,4kV "Super silver" with CL 20kV at D.Nikšić str. in Sremska Mitrovica	351-512/2016-VI 27.04.2016.		Decision on building approval
CL 20kV from the existing ČRS to MBTS 20/0,4kV "Elit Srem" and MV switch yard with metering point cabinet in Bačinci	351-341/2016-05 30.03.2016.		Decision on building approval

CL 20kV and STS 10(20)/0,4kV "Tabeks" in Sremska MItrovica	351-458/2016-VI 13.04.2016.		Decision on building approval
STS 10(20)/0,4kV "Granit Lješće" with double CL 20kV in Sremska MItrovica	351-1679/2016-VI 28.10.2016.		Decision on building approval
STS 10(20)/0,4kV "Knežević Trade" with CL 20kV in Sremska Mitrovica	351-72/2016-VI 28.01.2016.		Decision on building approval
Installation of line separator and HV metering group on post ČRS no. 61 of transmission line Šid- Bačinci for the needs of connection of STS "Superior Foods" with connection air line in Bačinci	351-716/2016-05 05.09.2016.		Decision on building approval
STS 20/0,4kV "Divoška" at fruškogorska str. in Divoš	351-1140/2016-VI 17.08.2016.		Decision on building approval
STS 20/0,4kV "Kuzmanska" at Savska str. in Kuzmin	351-1209/2016-VI 30.08.2016.		Decision on building approval
Cable line 20kV from KS 20 kV towards MBTS "Prešernova" to MBTS "Žarka Zrenjanina" in Sremska Mitrovica	351-1409/2016-VI 30.09.2016.		Decision on building approval
LV CL 0,4kV with SABP and POMM for connection of future prefabricated facilities at the location "Carina" in the vicinity of "Mitros" in Sremska Mitrovica	351-1408/2016-VI 30.09.2016.		Decision on building approval
LV Overhead line 0,4kV in Radnička str.in Martinci	351-1697/2016-VI 02.11.2016.		Decision on building approval
LV overhead network 0,4kV in the part Fruškogorska str. in Laćarak	351-106/2016-VI 04.02.2016.		Decision on building approval
CL 20kV from new GRS at the location TS 35/10kV "Kuzmin" up to the plant of GRS transmission line for Kuzmin in Kuzmin	351-717/2016-VI 25.05.2016.		Decision on building approval
CL 20kV – placing KV 35kV in the plant 20kV in TS 110/20kV "Šid" in Šid, with the aim to relocate 20kV of the existing TL 35kV from TS 110/20kV Šid to TS 35/10kV Kuzmin	351-407/2016-05 18.04.2016.		Decision on building approval
Part of CL 20kV Šid-Morović and Šid-Adaševci, at the intersection point with the railways Beograd – Šid in Šid	351-586/2016-05 14.07.2016.		Decision on construction permirt
CL 20kV from MBTS 20/0,4kV "G-2" to the coupling 20kV towards MBTS "Sremska" at A. Čarnojevića str in Šid	351-772/2016-05 28.09.2016.		Decision on building approval
CL 20kV from the existing GRS at Grobljanska str. to the existing STS "Pilana" in Višnjićevo	351-700/2016-05 02.09.2016.		Decision on building approval
CL 20kV from cble coupling 20kV at TS 110/20kV "Šid" to cable coupling 20kV towards STS 20/0,4kV "Poslovnica Šid" in Šid	351-910/2016-05 05.12.2016.		Decision on building approval
LV CL 0,4kV for residential buildings supply in Sremska MItrovica at Vodna no.4 str. in Sremska Mitrovica	351-623/2016-VI 09.05.2016.		Decision on building approval
LV CL 0,4kV from MBTS 10(20)/0,4kV "PRivredni centar" to KPK at SABP on regulation line of business building at Rumski drum str. in Sremaska Mitrovica	351-707/2016-VI 26.05.2016.		Decision on building approval
Double LV CL 0,4kV for business buildings supply at Đure Jakšića no.1 in Sremska Mitrovica	351-708/2016-VI 26.05.2016.		Decision on building approval
Double LV CL from couplings 0,4kV to KPK and MOMM on residential and business building at Vodna street no. 44 in Sremska Mitrovica ("Eurograd Invest" d.o.o. in bankrupcy)	351-1272/2016-VI 13.09.2016.		Decision on building approval

Double LV CL 0,4kV from the coupling 0,4kV to KPK And MOMM on residential and business building at Ulica Kralja Petra I no.5-7 in Sremska Mitrovica	351-1638/2016-VI 24.10.2016.		Decision on building approval
LV CL 0,4kV for the supply of residential buildings at Jupiterova no.77 and 79 in Sremska Mitrovica	351-530/2016-VI 20.04.2016.		Decision on building approval
LV CL 0,4kV from the existing KPK EV-2P/600 on residential and business building at KArađorđeva 69 to KPK EV-1P/400 and POMM-4 on the façade of the building at Karađorđeva no. 67 in Šid	351-893/2016-05 17.11.2016.		Decision on building approval
ED RUMA			
CL 20 kV TS "Vašarište" – TS "Velebit" in Inđija	ROP-IND-6827-CPI-2/2016 29.08.2016.		Construction permit
KTS "Gimnazija" with 20kV and 1kV cable terminal in Inđija	ROP-IND-12886-CPI-1/2016 14.06.2016.		Construction permit
Two cable lines 1kV from TS"Apatinska pivara" for kralja Petra str. Inđija	ROP-IND-7933-CPI-2/2016 05.12.2016.		Construction permit
Overhead LV network at Nikole Tesle str. in Pećinci	ROP-PEC-22038-ISAW-1/2016 05.09.2016.		Decision pursuant to Article 145
Overhead LV network at Nikole Tesle str. in Šimanovici	ROP-PEC-26261-ISAW-2/2016 23.12.2016.		Decision pursuant to Article 145
STS "Mikanova 2"Stejanovci (instead of the existing ZTS type "tower")	351-24/2016 22.01.2016.		Decision pursuant to Article 145
STS "Matis" and double connection CL 20kV in RUma	351-153/2016 01.03.2016.		Decision pursuant to Article 145
STS "Centar" Platičevo (instead of the existing ZTS type "tower")	351-25/2016 23.02.2016.		Decision pursuant to Article 145
Cable line 1kV from STS "Stara Sušara" for residential and business facility at Železnička no. 185 in Ruma	ROP-RUM-23527-ISAW-2/2016 23.10.2016.		Decision pursuant to Article 145
KTS"Glavna" with connection double CL 20kV and LV Terminal in Ruma	ROP-RUM-23529-ISAW-2/2016 08.11.2016.		Decision pursuant to Article 145
Double connection 20kV CL and MBTS "Aerodrom" in Ruma	ROP-RUM-33186-ISAW-1/2016 14.12.2016.		Decision pursuant to Article 145
CL 1kV from MBTS "Stara Pošta" for residential and business facility at JNA str. no. 176 in Ruma	ROP-RUM-23528-ISAW-2/2016 21.12.2016.		Decision pursuant to Article 145
ED PANCEVO			
Decision on building approval (LV cable for Nokić)	ROP-pan-129-ISAW-1/2016 dated 27.1.2016		
Site information (HV cable for Vršački Ritovi)	353-146/15-IV-03 dated 6.1.2016		
Site information (HV cable for Vršački Ritovi)	353-147/15-IV-03 dated 6.1.2016		
Site information (HV cable at Marina Držića str.)	V-15-353-403/2015 dated 3.2.2016		
Decision on building approval (KTS Sefkerin 9)	ROP-OPO-2757-ISAW-1/2016 dated 15.3.2016		
Site information (STS "B. Karlovac 17")	ROP-ALI-1160-LOCH-2-CDS-1/2016 dated 18.3.2016		
Decision on building approval (NN cable for Stemi invest)	ROP-PAN-2802-ISAWHA-2/2016 dated 22.3.2016		
Decision on building approval (MBTS Skadarska)	ROP-PAN-6159-ISAW-1/2016 dated 14.4.2016		Works in progress

Decision on building approval (LV cable at Cara Lazara)	ROP-PAN-6063-ISAW-1/2016 dated 14.4.2016		
Decision on building approval (HV cable in Bela Crkva)	ROP-BCR-5436-ISAW-1/2016 dated 15.4.2016		
Works submission (connection point at Sinđelićeva – Stemi invest)	ROP-PAN-6630-WA-1/2016 dated 19.4.2016		
Works submission (connection point for Kutak)	ROP-PAN-5920-WA-1/2016 dated 13.4.2016		
Decision on building approval (LV cable in Sterijina str. NB1projektgradnja)	ROP-PAN-6251-ISAW-1/2016		
Decision on building approval (STS "Jugokoža 2")	ROP-PAN-5433-ISAWHA-2/2016 dated 20.04.2016		Completed
Site information (KTS "Sports hall")	ROP-KOV-2756-LOC-1/2016 dated 12.5.2016		
Site information (HV cable at Laze Kostića str.)	ROP-KOV-4249-LOC-1/2016 dated 12.5.2016		
Decision on building approval (STS Skrobara 4)	ROP-PAN-9796-ISAW-1/2016 dated 19.5.2016		Works in progress
Submission of works (LV cables from MBTS DDOR)	ROP-PAN-12018-WA-1/2016 dated 8.6.2016		
Site information (cabling of tariff region STS"Dolovo 18")	ROP-PAN-9824-LOC-1/2016 dated 8.6.2016		
Site information (MBTS "Žarka Zrenjanina 2")	ROP-PAN-9799-LOC-1/2016 dated 8.6.2016		
Decision on building approval (HV cable in Debeljača")	ROP-KOA-10382-ISAW-1/2016 dated 01.06.2016		
Works submission (STS Skrobara 4)	ROP-PAN-12440-WA-1/2016 dated 09.06.2016		Works in progress
Decision on building approval (Kovačica 22)	ROP-KOA-10452-ISAW-1/2016 dated 01.06.2016		
Works submission (STS Vodovod Pločice)	ROP-KOV-12107-LOC-1/2016 datde 30.6.2016		
Decision on building approval (MBTS "Banijska")	ROP-PAN-14867-ISAW-1/2016 dated 05.07.2016.		Works in progress
Decision on building approval (MBTS "Strelište 23")	ROP-PAN-14873-ISAW-1/2016 dated 05.07.2016.		Works in progress
Decision on building approval (KTS "Sports Hall")	ROP-KOV-20878-ISAW-1/2016 dated 23.08.2016.		
Decision on building approval (STS "Dubovac 5")	ROP-KOV-20874-ISAW-1/2016 dated 23.08.2016.		
Decision on builing approval (LV cable for cultural centre in Opovo)	ROP-OPO-19828-ISAW-1/2016 dated 16.08.2016.		Completed
Decision on building approval (LV cable in Oslobođenja str. in Pančevo)	ROP-PAN-16423-ISAW-1/2016 dated 14.07.2016		
Decision on building approval (LV cable at M. Obrenovića in Pančevo)	ROP-PAN-17531-ISAW-1/2016 dated 28.07.2016		
Works submission (LV cable in M.Obrenovića str. in Pančevo)	ROP-PAN-20953-WA-1/2016 dated 23.08.2016		
Works submission (LV cable in Oslobođenja str. in Pančevo)	ROP-PAN-19832-WA-1/2016 dated 12.08.2016		
Works submission (HV cable in Debeljača)	ROP-KOA-20852-WA-1/2016 dated 22.08.2016		
Works submission (STS "Kovačica 22")	ROP-KOA-20853-WA-1/2016 dated 22.08.2016		

Works submission (MBTS “Banijska” in Pančevo)	ROP-PAN-19834-WA-1/2016 dated 12.8.2016		Works in progress
Works submission (MBTS “Strlište 23” in Pančevo”)	ROP-PAN-19836-WA-1/2016 dated 12.8.2016		Works in progress
Works submission (STS “Vodovod” in Bavanište)	ROP-KOV-19639-WA-1/2016 dated 10.08.2016		Completed
Works submission (HV cable in Bela Crkva)	ROP-BCR-19838-WA-1/2016 dated 12.08.2016		Completed
Changed site conditions (STS “Alibunar 13”)	ROP-ALI-15301-LOCH-2/2016 dated 29.08.2016		
Site conditions (KTS “Crepaja 14”)	ROP-KOA-19565-LOC-1/2016 dated 05.09.2016		
Decision on building approval (HV cable at B. Radičevića and Matije Gupca)	ROP-PAN-22981-ISAW-1/2016 dated 12.09.2016		Completed
Decision on building approval (HV cable Strelište 20- Strelište 21)	ROP-PAN-22986-ISAW-1/2016 dated 12.09.2016		Completed
Decision on building approval (HV canle Strelište 3 – Strelište 4)	ROP-PAN-22984-ISAW-1/2016 dated 12.09.2016		Completed
Decision on building approval (HV cable at Laze Kostića in Kovin)	ROP-KOV-22979-ISAW-1/2016 dated 12.09.2016		Completed
Works submission (STS “Dubovac 5”)	ROP-KOV-23558-WA-1/2016 15.9.2016		
Works submission (KTS “Sports Hall”)	ROP-KOV-23569-WA-1/2016 15.9.2016		Completed
Decision on building approval (LV cable in Knićaninova str.)	ROP-PAN-21853-ISAWHA-2/2016 dated 02.09.2016		
Decision on building approval (LV cable for Blečić Željka)	ROP-PAN-23056-ISAW-1/2016 dated 02.09.2016		
Works submission (HV cable from Margitske str. to Miloša Obilića)	ROP-VRS-23576-WA-1/2016 dated 19.09.2016		
Works submission (HV cable Pivara –JAT)	ROP-VRS-23574-WA-1/2016 dated 19.09.2016		
Works submission (LV cable at Primorska str. in Pančevo)	ROP-PAN-24783-WA-1/2016 dated 27.09.2016		
Works submission (antenna pole in Šušara)	ROP-VRS-24788-WA-1/2016 dated 26.09.2016		
Decision on building approval (HvA cable in Jabuka)	ROP-PAN-25158-ISAW-1/2016 dated 29.09.2016		
Works submission (HV cable in Laze Kostića in Kovin)	ROP-KOV-26885-WA-1/2016 dated 15.09.2016		Completed
Works submission (LV cable at Knićaninova str. in Pančevo)	ROP-PAN-26783-WA-1/2016 dated 13.10.2016		
Works submission (HV cable TS “B.Radičevića” – TS “M.Gupca”)	ROP-PAN-26888-WA-1/2016 dated 13.10.2016		
Works submission (HV cable TS “Strelište 20” – TS “Strelište 21”)	ROP-PAN-26887-WA-1/2016 dated 13.10.2016		Completed
Works submission (HV cable in Jabuka)	ROP-PAN-27025-WA-1/2016 dated 14.10.2016		
Decision on building approval (STS “Bavanište 17”)	ROP-KOV-27022-ISAW-1/2016 dated 14.10.2016		
Decision on building apporival (STS “Malo Bavanište 4”)	ROP-KOV-27032-ISAW-1/2016 dated 14.10.2016		
Works submission (LV cable at Cara Lazara str. in Pančevo)	ROP-PAN-27519-WA-1/2016 dated 19.10.2016		
Decision on building approcal (HV in north industrial zone)	ROP-PAN-27515-ISAW-1/2016 dated 19.10.2016		Completed
Decision on building approval (STS “Deliblato 11”)	ROP-PAN-28238-ISAW-1/2016 dated 25.10.2016		

Site conditions (STS "Pumping Station – Opovo 1")	ROP-OPO-25436-LOC-1/2016 dated 20.10.2016		
Site conditions (MBTS "Žarka Zrenjanina 2")	ROP-PAN-9799-LOCA-3/2016 dated 08.11.2016		
Decision on building approval (MBTS " West industrial zone" with MVand LV cables in Plandište)	ROP-PLA-29385-ISAW-1/2016 dated 09.11.2016		Completed
Site conditions (HV cable Pančevo 3 – school center)	ROP-PAN-28393-LOC-1/2016 dated 15.11.2016		
Site conditions (MBTS "North Zone 2")	ROP-PAN-28080-LOC-1/2016 dated 03.11.2016		
Decision on building approval on capital maintenance (MBTS "Nemanjina")	ROP-KOV-30924-ISAW-1/2016 dated 25.11.2016		
Decision on building approval (Nikole Đurkovića)	ROP-PAN-31367-ISAW-1/2016 dated 24.11.2016		Completed
Works submission (HV cable from TS "Strelište 3" to TS "Strelište 4" in Pančevo	ROP-PAN-32158-WA-1/2016 dated 02.12.2016		Completed
Site conditions (MBTS "Žarka Fogaraša")	ROP-PAN-7604-LOC-4/2016 dated 10.11.2016		
Site conditions (LV at Svetog Save str)	ROP-PAN-30485-LOC-1/2016 dated 30.11.2016		
Site conditions (LV at Dimitrija Tucovića str.)	ROP-PAN-30495-LOC-1/2016 dated 30.11.2016		
Site conditions (LV at Dimitrija Tucovića str.)	ROP-PAN-30503-LOC-1/2016 dated 07.12.2016		
Site conditions MBTS "Lenjinova" in Kovin	ROP-KOV-30508-LOC-1/2016 dated 09.12.2016		
Decision on building approval (LV for Probanat izgradnja)	ROP-PAN-32745-ISAW-1/2016 dated 07.12.2016		
Ddecision on building approval (MBTS "Vladimirovac 11")	ROP-ALI-29826-ISAWHA-2/2016 dated 15.12.2016		
Decision on building approval (KTS "Gavrila Principa")	ROP-VRS-33457-ISAW-2/2016 dated 26.12.2016		
Works submission (LV cable for Probanat izgradnja in Pančevo)	ROP-PAN-34722-WA-1/2016 dated 27.12.2016		
Decision on building approval (Vlasinska)	ROP-PAN-34921-ISAW-1/2016 dated 30.12.2016		
Decision on building approval (MBTS "Sterijina 2" in Vršac)	ROP-VRS-34921-ISAW-1/2016 dated 26.12.2016		

2.2 Monitoring and Environmental Impact

Environmental impact factors for DA Novi Sad, which haven't been completely included in monitoring, are

- **Electromagnetic fields**
- **Environmental noise**
- **Waste**
- **Surface and groundwater quality**
- **Soil quality**

2.2.1 Electromagnetic Fields

During 2016 electromagnetic field measurements are performed as indicated in Table 134.

Table 134

DISTRIBUTION AREA NOVI SAD			
Electromagnetic fields in 2016			
Branch	**Measurement subject**	**Magentic field Vmax (μT)**	**Electric field Emax (κV/m)**
ED SUBOTICA	TS 110/20 kV „Palic“	0,49	855
	TS 110/20 kV „Subotica 1a“	0,66	293
	TS 110/20 kV „Subotica 4“	0,60	150
	TS 110/20 kV „Subotica 2“	0,70	246
ED SOMBOR	TS 20/0,4 kV „Samoposluga“	1,11	19
	TS 20/0,4 kV „Novi kvart 1 and 2“	0,93	50
	TS 20/0,4 kV „Vladimira Nadzora“	2,30	8
	TS 20/0,4 kV „Beogradska“	0,38	13
	TS 110/20 kV „Odzaci“	0,96	640
	TS 110/20 kV „Sombor 2“	0,12	90
ED ZRENJANIN	TS 110/35 kV "KI 1"	0,16	<10
	TS 110/20 kV "KI 2"	0,19	223
	TS 110/35 kV "ZR 1"	0,09	25
	TS 110/20/35 kV „Nova Crnja"	0,31	966
	TS 110/20/35 kV "Novi Becej"	0,30	825
	TS 110/20 kV "Begejci"	0,32	494
ED NOVI SAD	TS 110/20 kV „Novi Sad 7“	1,19	970
	TS 110/20 kV „Novi Sad 1“	0,46	804
	TS 110/20 kV „Rimski Šančevi“	0,71	758
	TS 110/20 kV „Novi Sad 2“	0,37	885
	TS 110/35 kV „Novi Sad 4“	1,05	670
	TS 110/20 kV „Novi Sad 9“	0,14	282
	TS 110/20 kV „ Novi Sad 5“	0,40	58

ED SREMSKA MITROVICA	TS 110/20 kV „Šid“	0,17	73
	TS110/20 kV „Sremska Mitrovica 3“	0,57	173
	TS 110/20 kV „Sremska MItrovica 1“	1,67	681
ED RUMA	TS 110/20 kV „Pećinci“	1,36	1115
	TS 110/20 kV „Ruma 2“	0,98	612
	TS 110/20 kV „Ruma 1“	0,75	1180
	TS 110/20 kV „Nova Pazova“	2,50	1300
	TS 110/20 kV „Stara Pazova“	0,26	70
	TS 110/20 kV „Inđija 1“	1,33	15
	TS 110/20 kV „Inđija 2“	0,12	80
ED PANČEVO	TS 110/20 kV „Vršac“	0,36	12
	TS 110/20 kV „Bela Crkva“	0,33	219
	TS 110/35 kV „Alibunar“	0,14	<10
	TS 110/20 kV „Kačarevo“	4,38	1124
	TS110/20 kV „Pančevo 3“	0,39	105
	TS 110/20 kV „Kovin“	0,62	578

2.2.2 Living Environment Noise Measurements

Table 135 indicates measured and relevant environmental noise levels data from 2016.

Table 135

DISTRIBUTION AREA NOVI SAD				
Noise level in 2016 (dB)**(A)**				
Limit values of noise indicators Decree on noise indicators, limit values, methods for assessing noise indicators, disturbing			**Day**	**Night**
	Outdoors	**Areas for recreation, hospital zones and rehabilitation, cultural and historical sites, large parks**	**50**	**40**
		Tourist areas, camps and school zones	**50**	**45**
		Strictly residential areas	**55**	**45**

and harmful effects of environmental noise, „Official Gazette of RS" №. 75/10		**Business-residential areas, trading – residential areas and children playgrounds**	**60**	**50**
		City Center, commercial, administrative area with apartments, zones along highways and city roads	**65**	**55**
		Industrial, warehouse and service areas and transport terminals without residential buildings	**On the limit of this zone noise level must not exceed the limit value in the zone with which it borders**	

ED SOMBOR						
Measurement points	**TS „Crvenka" day**		**TS „Crvenka" evening**		**TS „Crvenka" night**	
	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A	Measured level Leq dB(A)	Relevant level dB(A
MEASURED VALUES	55,6	54	52,3	52	50,7	48
GVI	60		60		50	
ED SOMBOR						
Measurement points	**TS „Subotica 4" day**		**TS „Subotica 4" evening**		**TS „Subotica 4" night**	
	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)
MEASURED VALUES	49,2	47	50,7	49	46,4	45
GVI	65		65		55	
Measurement points	**ZTS „263" day**		**ZTS „263" evening**		**ZTS „263" night**	
	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)
MEASURED VALUES	43,8	42	44,2	43	44,2	43
GVI	60		60		50	
Measurement points	**ZTS „Bolnica" day**		**ZTS „Bolnica" evening**		**ZTS „Bolnica" night**	
	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)
MEASURED VALUES	57,5	56	55,3	53	55,2	53
GVI	50		50		40	
Measurement points	**MBTS „Medinciska škola" day**		**MBTS „Medicinska škola" evening**		**MBTS „Medicinska škola" night**	
	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)
MEASURED VALUES	45,7	44	45,6	44	42,3	40
GVI	50		50		45	
ED SREMSKA MITROVICA						
Measurement points	**TS „Petospratnica" day**		**TS „Petospratnica" evening**		**TS „Petospratnica" night**	

	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)	Meausred level Leq dB(A)	Relevant level dB(A)
MEASURED LEVELS	59,8	60	59,6	60	54,3	54
GVI	55		55		45	
Measurement points	**TS „Plaža“ day**		**TS„Plaža“ evening**		**TS „Plaža“ night**	
	Measued level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)
MEASURED LEVELS	58,8	59	59,2	59	46,7	46
GVI	55		55		45	
ED ZRENJANIN						
Measurement points	**„Centar“ day**		**„Centar“ evening**		**„Centar“ night**	
	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)
MEASURED LEVELS	51	50	49,1	48	49,5	48
GVI	60		60		50	
Measurement points	**RTS „151“ day**		**RTS „151“ evening**		**RTS „151“ night**	
	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)
MEASURED VALUES	52,6	52	50,9	50	48,2	46
GVI	60		60		50	
ED RUMA						
Measurement points	**LTS „Berak 1“ day**		**LTS „Berak 1“ evening**		**LTS „Berak 1“ night**	
	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A))
MEASURED VALUES	53,2	50	52,5	51	44,9	44
GVI	55		55		45	
Measurement points	**MBTS „Centar“ day**		**MBTS „Centar“ evening**		**MBTS „Centar“ night**	
	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)
MEASURED VALUES	48,5	49	49,6	49	42,5	43
GVI	55		55		45	
Measurement points	**MBTS„Blok C“ day**		**MBTS„Blok C“ evening**		**MBTS„Blok C“ night**	
	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)
MEASURED VALUES	52,4	52	52,2	51	44,3	44
GVI	55		55		45	
ED NOVI SAD						
Measurement points	**TS „Lasta“ day**		**TS „Lasta“ evening**		**TS „Lasta“ night**	

	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)
MEASURED VALUES	52,5	52	50,2	48	49,9	48
GVI	55		55		45	
Measurement points	**TS„Sentelekijeva“ day**		**TS „Sentelekijeva“ evening**		**TS „Sentelekijeva“ night**	
	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)
MEASURED VALUES	57,1	57	56,3	56	42,9	43
GVI	55		55		45	
Measurement points	**TS „Gogoljeva“ day**		**TS „Gogoljeva“ evening**		**TS „Gogoljeva“ night**	
	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)	Measured level Leq dB(A)	Relevant level dB(A)
MEASURED VALUES	49,6	49	53,2	53	40,7	41
GVI	55		55		45	
ED Pančevo	There were no environmental noise measurements performed in 2016					

2.2.3 Waste

Characterization, categorization and partial sale of waste in 2016 are given in Table 136.

Table 136

DISTRIBUTION AREA NOVI SAD												
Waste in 2016												
№	**RULEBOOK ON CATEGORIES, TESTING AND CLASSIFICATION OF WASTE Official Gazette RS No. 56/10 from 10th August 2010**	**INDEX NUMBER**	**UNIT**	**Branch**							**Total**	**NOTE**
				SUBOTICA	**SOMBOR**	**ZRENJANIN**	**NOVI SAD**	**SREMSKA MITROVICA**	**RUMA**	**PANČEVO**	**Total Distribution Area Novi Sad**	
					AMOUNTS							
	Waste toner for printing other than that listed in 08 03 17	08 03 18	t	0,293	0,200	0,49	0,08			0,211	**1,274**	
	Other oils for insulation and heat transfer	13 03 10*	t	0,583	2,300	1,54	4,19		1,62	2	**12,233**	Transformer oil
	Other emulsions	13 08 02*	t									Oily water from oily pits
	Packaging containing remains of hazardous substances or contaminated with hazardous substances	15 01 10*	t	0,015		0,015	0,349			0,004	**0,383**	Waste plastic bottles used for testing of transformer oil in the workshops
	Absorbents, filter materials(including the oil filters which are not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	15 02 02*	t				1,246			0,038	**1,284**	Waste absorption resources with oil and heavy fuel oil, oily gravel
	Waste tires	16 01 03	t	1,637							**1,637**	Waste auto tires
	Waste vehicles that do not contain liquids and other hazardous substances	16 01 06	t									
	Oil filters	16 01 07*	t									
	Ferrous metals	16 01 17	t	9,416	24,400	26,48	53,4			10,578	**124,274**	Waste iron

	Transformers and condensers containing PCB	16 02 09*	t									Waste PCB transformers
	Equipment containing hazardous components other than specifiedin16 02 09 to16 02 12	16 02 13*	t									Condensers batteries
	Rejected equipment other than specified in 16 02 09 to 16 02 13	16 02 14	t	2,620	0,900				8,17	4,66	**16,35**	Waste meters
				0,985							**0,985**	Waste transformers not containing oils
												Electrical devices
				1,215							**1,215**	Measurin cabinets
				2,135							**2,135**	Measuring devices (ammeters, voltmeters)
				2,012	0,500						**2,512**	Disconnector 20 kV
				1,997	20,100				15,179		**37,276**	LV and HV units
												Waste HV and LV fuse
	Lead batteries	16 06 01*	t	1,020							**1,020**	Batteries
	Waste containing oil	16 07 08*	t			0,027	0,042			0,0,017	**0,086**	Waste kits for testing transformer oil on PCB
	Oily water	16 10 01					67,94			12,92	**80,86**	Oily water from oily pit
	Concrete	17 01 01	t	45,88	43,000	113,52	47,15	12,5	61,9		**323,95**	Concrete poles
	Wood	17 02 01	t	0,5	46,500		12,32	11,2	21,08	16,24	**107,84**	Wooden poles - poles
												Waste mixed wood
	Plastic	17 02 03	t	0,06						0,07	**0,13**	
	Glass, plastic and wood containing hazardous substances or contaminated by dangerous substances	17 02 04*	t	35,320		21,32			15,18		**71,82**	Wooden poles with impregnation
	Copper bronze brass	17 04 01	t									Waste and scrap of copper and brass
				0,052		6,48	6,07		3,080	4,582	**20,264**	Waste copper

				7,008	2,088		2,55	1,1	2,80		**15,466**	Waste cooper cables
	Aluminum	17 04 02	t	0,20		0,116					**0,316**	Waste aluminum
				4,234		0,76	24,28	0,38	1,98	0,557	**32,191**	Waste aluminum cables
	Iron and steel	17 04 05	t						14,235		**14,235**	Waste SS parts
	Mixed metals	17 04 07	t	12,559	18,940			1,9	8,34	4,4879	**46,2269**	Al - Fe
	Cables containing oil, tar and other hazardous substances	17 04 10*	t	0,885				0,1			**0,985**	Oily cable
	Oily gravel	17 05 03*								15,5	**15,5**	
	Insulation materials other than specified in 17 06 01 and 17 06 03	17 06 04	t	54,171	29,660	23,56	25,70	13	25,01	30,795	**201,896**	Waste ceramics insulators
	Construction materials containing asbestos	17 06 05*	t	5,120					1,08		**6,2**	Waste asbestos boards
	Paper and card board	20 01 01	t	2,7	1,100	3,52				2,411	**9,731**	
	Glass	20 01 02	t									
	Fluorescent pipes and the mercury-containing waste	20 01 21*	t				0,18	0,017		0,004	**0,201**	Fluorescent pipes, light balls containing mercury
	Rejected electrical and electronic equipment other than that listed in 20 01 21 and 20 01 23 and 20 01 35 containing hazardous components	20 01 35*	t	1,68		1,22			3,28		**6,18**	Waste computers, keyboards, monitors, electronic meters
	Bulky waste	20 03 07	t	0,116							**0,116**	Waste office furniture

2.2.4 Surface, Ground Waters and Soil Monitoring

Surface, ground waters monitoring as well as soil monitoring were not performed during 2016.

2.3 Working Environment Monitoring, Health and Safety

Reports on 2016 Health and Safety include the following items:

- **Working Environment Monitoring**
  - working environment noise measurements
  - working environment electromagnetic fields
  - working environment parameters
- **Safety**
  - training
  - work injuries
- **Health**

2.3.1 Working environment monitoring

- **Working environment noise measurement**

Noise level measurements in 2016 are shown in Table 137.

Table 137

DISTRIBUTION AREA NOVI SAD			
Noise in working environment in 2016			
Branch	**Unit**	**Recorded noise level in work rooms, (dB)**	**Permitted noise level in (dB (A))**
ED PANCEVO	Measurements were not performed in 2016		
ED RUMA	Measurements were not performed in 2016		
ED SREMSKA MITROVICA	Measurements were not performed in 2016		
ED SOMBOR	Measurements were not performed in 2016		
ED SUBOTICA	Measurements were not performed in 2016		
ED ZRENJANIN	Measurements were not performed in 2016		
ED NOVI SAD	Underground lines preparation workshop	74 ± 2,20	85
	Underground lines workshop	69 ± 2,10	85
	Workshop 110 kV	75 ± 2,30	85
	Workshop of public lighting	76 ±2,30	85
	Electrical repair workshop	69 ±2,10	85
	Computing and Printing center	80 ±2,40	85

- **Working environment electromagnetic fields**

Electromagnetic fields measurements were not performed in 2016.

- **Working environment parameters**

Working environment parameters are given in Table 138.

Table 138

EPS DISTRIBUCIJA NOVI SAD																			
Working environment parameters in 2016																			
Branch	**Number of tested**	**Number of working environments where parameters exceed permissible limits**		**Number of working environments where parameters are within permissible limits**		**Total number of recorded parameters**	**Number of parameters exceeding permissible limit**	**Distribution of unsatisfactory parameters**											
								Dust		**Harmful gasses**		**Noise**		**Vibrations**		**Micro climate**			
	№	**№**	**%**	**№**	**%**	**№**	**№**	**%**	**№**	**%**	**№**	**%**	**№**	**%**	**№**	**%**	**№**	**%**	
ED SUBOTICA	Measurements were not performed in 2016																		
ED SOMBOR	Measurements were not performed in 2016																		
ED ZRENJANIN	Measurements were not performed in 2016																		
ED NOVI SAD	100	0	0,00	100	100,00	100	0	0,00	0	0,00	12	12,00	6	6,00	0	0,00	100	100,00	

ED RUMA	Measurements were not performed in 2016																	
ED S.MITROVICA	Measurements were not performed in 2016																	
ED PANCEVO	Measurements were not performed in 2016																	
HQ Winter period	195	0	0,00	195	100,00	3	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
HQ Summer period	201	0	0,00	201	100,00	3	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
TOTAL: DISTRIBUTION AREA NOVI SAD	**496**	**0**	**0,00**	**496**	**100,00**	**106**	**0**	**0,00**	**0**	**0,00**	**12**	**12,00**	**6**	**6,00**	**0**	**0,00**	**100**	**100,00**

Chemical hazards are given in Table 139.

Table 139

DISTRIBUTION AREA NOVI SAD				
Chemical hazards in working environment for 2016				
Branch	**Working place**	**Detected chemical compounds**	**Registered level of chemical hazards in workplaces. (mg/m3)**	**Permitted level of chemical identification ± measurement uncertainty (mg/ m3)**
ED NOVI SAD	Underground lines preparation workshop	benzene	0,01	3,25
		toluene	0,02	192
		n-hexane	0,16	72
	Underground lines workshop	vinyl chloride	0,10	7,77
	Workshop 110 kV	ethyl acetate	0,02	1400
		iso-propanol	0,16	980
		acetone	0,03	1210
	Workshop of public lighting	ethyl acetate	0,07	1400
		iso-propanol	0,06	980
		acetone	0,01	1210
		xylene	0,08	221
	Electrical repair workshop	benzene	0,15	3,25
		n-hexane	1,30	72
	Printing center	styrene	0,18	215
	Overhead lines workshop	toluene	0,01	192
		n-hexane	0,03	72
		iso-propanol	0,01	980

	SS Maintenance workshop 20/10/0,4 kV	acetone	0,02	1210
	Distribution warehouse	carbon monoxide	2,47	55
	IT 1	carbon monoxide	0,12	55
	Carbonation of chemical analysis of insulation oil	n-hexane	1,63	72
	Meters repair workshop	ethyl acetate	0,01	1400
		iso-propanol	0,12	980
		acetone	0,02	1210

2.3.2 Safety

- **Training**

Training data are given in table 140.

Table 140

DISTRIBUTION AREA NOVI SAD						
Training in 2016						
No.	**Branch**	**Number of employees**	**Planned for training**		**Trained**	
			Number	**%**	**Number**	**%**
1.	ED Novi Sad	146	19	13,01	18	94,74
2	ED Subotica	123	14	11,38	13	92,86
3	ED Sombor	57	8	14,04	8	100,00
4	ED Zrenjanin	74	10	13,51	10	100,00
5	ED Ruma	58	7	12,07	7	100,00
6	ED Sremska Mitrovica	23	4	17,39	4	100,00
7	ED Pančevo	71	9	12,68	9	100,00
8	HQ	215	0	0,00	0	0,00
TOTAL: DISTRIBUTION AREA NOVI SAD		**767**	**71**	**9,26**	**69**	**97,18**

- **Work injuries**

Injuries - number of employees ratio			
Easy	**Heavy**	**Fatality**	**Total**

The status of injuries in 2016 is presented in Table 141.

Table 141

DISTRIBUTION AREA NOVI SAD						
Work injuries in 2016						
Branch	**Number of employees**	**Injuries - number of employees ratio**				
		Easy	**Heavy**	**Fatality**	**Total**	**%**
ED Novi Sad	146	2	0	0	2	1,37
ED Subotica	123	0	1	0	1	0,81
ED Sombor	57	0	0	0	0	0,00
ED Zrenjanin	74	0	0	0	0	0,00
ED Ruma	58	1	0	0	1	1,72
ED Sr. Mitrovica	23	0	0	0	0	0,00

ED Pančevo	71	0	0	0	0	0,00
HQ	215	2	1	0	3	1,40
TOTAL: DISTRIBUTION AREA NOVI SAD	**767**	**5**	**2**	**0**	**7**	**0,91**

2.3.3 Health

Periodical medical examinations of employees shown in Table 142 are carried out regularly for new workers and the employees working under special conditions.

Table 142

DISTRIBUTION AREA NOVI SAD											
Work capability in 2016											
Branch	**Employees number**	**Periodical examination**				**Work capability**					
		Referred to examination		**Examined/ Referred**		**Capable**		**Limited capability**		**Not capable**	
		No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
ED Novi Sad	146	91	62,33	90	98,90	87	96,67	3	3,33	0	0,00
ED Subotica	123	43	34,96	43	100,00	43	100,00	0	0,00	0	0,00
ED Sombor	57	19	33,33	19	100,00	18	94,74	1	5,26	0	0,00
ED Zrenjanin	74	32	43,24	32	100,00	31	96,88	1	3,13	0	0,00
ED Ruma	58	26	44,83	26	100,00	25	96,15	1	3,85	0	0,00
ED Sr. Mitrovica	23	10	43,48	10	100,00	10	100,00	0	0,00	0	0,00
ED Pančevo	71	41	57,75	41	100,00	41	100,00	0	0,00	0	0,00
HQ	215	23	10,70	23	100,00	22	95,65	1	4,35	0	0,00
TOTAL: DISTRIBUTION AREA NOVI SAD	**767**	**285**	**37,16**	**284**	**99,65**	**277**	**97,54**	**7**	**2,46**	**0**	**0,00**

2.4 Public complaints

There were no public complaints in DA Novi Sad during 2016.

3. DISTRIBUTION AREA KRALJEVO

Table 143 indicates all the structure of all facilities and system within DA Elektrosrbija Kraljevo.

Table 143

DISTRIBUTION AREA KRALJEVO												
Facilities and system in 2016												
Branch	**Electricity distribution substations**								**Distribution network length in km**			
	110/10 kV	**110/20 kV**	**110/35 kV**	**110/x/z kV**	**35/10 kV**	**20/0,4 kV**	**10/0,4 kV**	**Total**	**Voltage level**	**Overhead**	**Cable**	**Total length**
ED Arandjelovac									110 kV	0	0	0
									35 kV	50,590	0	50,590
									20 kV	24,880	30,760	55,640
									10 kV	430,200	18,810	451,010
									1,0 kV	0	0	0
									0,4 kV	1.543,700	56,400	1.601,100
Total	0	0	0	2	8	66	443	**519**	**Total:**	**2.051,370**	**106,970**	**2.158,300**
ED Valjevo									110 kV	0	0	0
									35 kV	108,000	33,000	1.048,000
									20 kV	0	0	0
									10 kV	876,000	172,000	1,042
									1,0 kV	0	0	0
									0,4 kV	4,489	111,000	4,600
Total	0	0	3	0	18	0	917	**938**	**Total:**	**5.473,000**	**316,000**	**5.789,000**
ED Jagodina									110 kV	0	0	0
									35 kV	342,210	26,912	369,122
									20 kV	492,254	100,442	592,696
									10 kV	1.386,701	281,144	1.667,845
									1,0 kV	0	0	0
									0,4 kV	5.564,510	608,150	6.172,660
Total	2	0	5	4	31	452	1.975	**2.469**	**Total:**	**4.980,715**	**725,848**	**5.706,563**
ED Kraljevo									110 kV	25,807	0	25,807
									35 kV	190,897	10,089	200,986
									20 kV	75,000	26,137	101,137
									10 kV	898,618	219,061	1.117,679
									1,0 kV	0	0	0
									0,4 kV	4.431,700	328,320	4.760,020
Total	1	0	2	2	23	149	1.119	**1.296**	**Total:**	**5.622,022**	**583,607**	**6.205,629**

ED Krusevac									110 kV	61,879	0	61,879
									35 kV	197,993	15,128	213,121
									20 kV	0	0	0
									10 kV	1.090,856	319,758	1.410,614
									1,0 kV	0	0	0
									0,4 kV	4.749,090	405,620	6.154,710
Total	0	0	1	4	22	0	1.274	**1.301**	**Total:**	**6.099,818**	**740,506**	**6.840,324**
ED Lazarevac									110 kV	/	/	/
									35 kV	110,000	3,000	113,000
									20 kV	/	/	/
									10 kV	713,000	97,000	810,000
									1,0 kV	/	/	/
									0,4 kV	3.100,000	80,000	3.180,000
Total	0	0	1	1	12	0	809	823	**Total:**	**3.923,000**	**180,000**	**4.103,000**
ED Loznica									110 kV	21,180	/	21,180
									35 kV	186,000	20,000	206,000
									20 kV	/	/	/
									10 kV	732,158	126,896	859,054
									1,0 kV	/	/	/
									0,4 kV	3.069,390	64,170	3.133,560
Total	0	0	2	2	17	0	906	927	**Total:**	**4.008,720**	**211,060**	**4.219,780**
ED Novi Pazar									110 kV	32,630	/	32,630
									35 kV	92,000	0,600	92,600
									20 kV	/	/	/
									10 kV	628,000	66,000	694,000
									1,0 kV	/	/	/
									0,4 kV	1677,000	15,000	1692,000
Total:	0	0	1	1	9	21	602	**634**	**Total:**	**2.429.630**	**81,600**	**2.511,230**
ED Uzice									110 kV	/	/	/
									35 kV	373,623	23,127	396,75
									20 kV	/	/	/
									10 kV	2.204,080	350,590	2.554,670
									1,0 kV	/	674,608	674,608
									0,4 kV	6.489,777	/	6.489,777
Total:	0	0	4	3	45	0	2.126	**2.178**	**Total:**	**9.067,480**	**1.048,325**	**10.115,805**
ED Cacak									110 kV	1,166	/	1,166
									35 kV	298,025	40,579	338,604
									20 kV	/	/	/
									10 kV	1.487,600	256,836	1.744,436
									1,0 kV	/	/	/
									0,4 kV	6.241,233	212,753	6.453,986
Total:	0	0	4	2	36	0	1.899	**1.941**	**Total:**	**8.028,024**	**510,168**	**8.539,192**
ED Sabac									110 kV	/	/	/

									35 kV	94,000	27,000	121,000
									20 kV	630,000	96,000	726,000
									10 kV	277,000	67,000	344,000
									1,0 kV	/	/	/
									0,4 kV	2.243,000	170,000	2.413,000
Total:	0	2	0	4	8	735	291	**1.040**	**Total:**	**3.244,000**	**360,000**	**3.604,000**
TOTAL: DISTRIBUTION AREA KRALJEVO									110 kV	142,662	/	142,662
									35 kV	2.043,338	199,435	2.242,773
									20 kV	1.222,134	253,339	1.475,473
									10 kV	10.726,213	1.975,095	12.701,308
									1,0 kV	/	674,608	674,608
									0,4 kV	43.598,400	2.052,413	45.650,813
Total:	**3**	**2**	**23**	**25**	**229**	**1.423**	**12.361**	**14.066**	**Total:**	**57.732,747**	**5.154,890**	**62.887,637**

3.1 Overview and Permits Status

Overview and status of permits, licenses and other required approvals, as well as applications for permits in 2016 are presented in Table 144.

Table 144

DISTRIBUTION AREA KRALJEVO			
Overview and status of permits in 2016			
Branch	**Obtained approvals and permits (number and date)**	**Applications for obtaining of new or extension of the existing permits**	**Note**
ED Aranđelovac			
SBTS10/0,4 kV Nemetali Lipovac	351-156/2016-02 dated 16.05.2016.		
SBTS 10/0,4 kV Prokići Gornja Trnava	351-157/2016-02 dated 16.05.2016.		
SBTS 10/0,4 kV Lipovac	351-452/2016-02 dated 16.09.2016.		
SBTS 10/0,4 kV Ovsište	351-453/2016-02 dated 26.09.2016.		
ED Valjevo			
MBTS 10/0,4 kv „Prva Proleterska“	351-300/2016-07 dated 18.04.2016.		
CL 1kV from TS 10/0,4 kV„Stevan Filipović 3“ up to the building of EMCO d.o.o. Valjevo	351-429/2016-07 dated 25.05.2016.		
Built TS 10/0,4 кB 1000kVA, connecting CL HNE49-A and CL10 kV „Uzun Mirkova 2“	351-389/2016-07 dated 27.05.2016.		
CL 10 kV from TS 35/10kV „Valjevo 8“ from TS 10/0,4 kV „Radnička kraj“, CL 10 kV from TS 10/0,4 kV „Prva Proleterska“-school Brđani up to TS 10/0,4 kV „Miloševa kraj“	351-390/2016-07 dated 02.06.2016.		
CL 1kV from TS „Prva Proleterska“-school Bradjani up to KPK on the school building	351-390/2016-07 dated 02.06.2016.		

Double CL 1 kV from TS10/0,4 kV „Prva Proleterska“-school Brđani p to LV exit pole across TS on the cadaster lot no. 4883/1,4883/2, 4884/1, 4885/1, 4828, 5002/2 and 11396 in cadaster area Valjevo	351-390/2016-07 dated 02.06.2016.		
STS 10/0,42 kV „Valjevska Loznica 6“ - Potes	351-696/2016-07 dated 28.07.2016.		
Double CL 1kV from TS10/0,4кВ „Pantićeva 102“ up to KPK 1 and KPK2 on the facility of „GRADNJA BETON ING“ Pantićeva str no. 119-121 on cad. lot no. 6878, 6726, 6844 and 6845 in cadaster area Valjevo	351-1006/2016-07dated 16.09.2016.		
Double CL 1kV from MBTS 10/0,4kV„K-84“ up to KPK 1 and KPK 2 on residential and business building GP „Rafailovići gradnja“ d.o.o. Valjevo	351-1108/2016-07dated 06.10.2016.		
SBTS 10/0,4 100kVA „Popučke 24“- Čubrovići and extension of isolated overground MV line 10kV SBTS „pobučke 24“- Čubrovići on the existing LV poles	351-1119/2016-07 dated 10.10.2016.		
MBTS 10/0,4 kV 1×630кВА „Obnica- Pop Lukina“ type ČVTS 1×630 (1000) kvA on the cad. lot no. 7525 and 7539 in cad. area Valjevo	351-1189/2016-07 dated 10.11.2016.		
Double conn. CL for MBTS 10/0,4 kV „Obnica-Pop Lukina“ from the connection points at the location of crossection of cable 10kV from TS 10/0,4 kV „K-57“ up to TS 10/0,4 kV „Dom Vojske“	351-1189/2016-07 dated 10.11.2016.		
CL 1kV dated MBTS 10/0,4 kV „Obnica-Pop Lukina“ up to KPK1 and KPK2 on the facility at Pop Lukina 12 of the facility G	351-1189/2016-07 dated 10.11.2016.		
ED Jagodina			
LV netwrok „Rasputnuca“	351-88/16-05-2 dated 01.06.2016.		
Reconstruction of TS35/10 kV „Ćuprija 4.“	351-98/16-05-2 dated 10.06.2016.		
LV network Despotovac	351-500/16-08 dated 31.10.2016.		
LV network Despotovac	351-557/16-08 dated 02.12.2016.		
LV network Ćuprija	351-270/2016-05-2 dated 02.11.2016.		
Overhead line 35kV «Popovac»	351-235/2016-05-2 dated 26.10.2016.		
LV network from TS „MIJATOVAC 2“	351-107/16-05-2 dated 21.06.2016.		
CABLE LINE from TS „JAGODINA 138“	351-250/145/2016-04 dated 02.12.2016.		
CABLE LINE FOR TS „RAKITOVO 9“ and TS „RAKITOVO 9“	351-193/145/2016-04 dated 13.10.2016.		
ED Kraljevo			
Cable channel CL 5 – Bore Strefanović str.	351-521/2015-08 dated 03.11.2015.		Transferred to thr Plan for 2017
SBTS 10/0,4 kV Beogradska 5	351-285/2015-08 dated 18.05.2015.		Transferred to thr Plan for 2017
Overhead line 10kV Beogradska 2 - Beogradska 5	351-285/2015-08 dated 18.05.2015.		Transferred to thr Plan for 2017
CL10kV Jarčujak 14 – Adrani 15	351-586/2015-08 dated 18.12.2015		Transferred to thr Plan for 2017
TS 110 Ribnica	351-03-01528/2015-07 dated 12.11.2015		Transferred to thr Plan for 2017

TS „Kej 2“	351-08-47/2016-08 dated 10.06.2016.r.		Transferred to thr Plan for 2017
CL10kV „Kej 2“	351-08-47/2016-08 dated 10.06.2016.r.		Transferred to thr Plan for 2017
TS „Adrani 24“	351-08-10/2016-08 dated 14.03.2016		Completed
Unit Rudno			
SBTS 10/0,4 kV Staro Selo - Dolovi	351-233/2012-06 dated 21.06.2012		Transferred to thr Plan for 2017
MBTS10/0,4 kV Čajetinska Česma 5	351-112/16 dated 21.06.2012		Completed
Overhead line TS 35/10kV Kopaonik – Pančićev Vrh	351-108/16 dated 20.10.2016		Completed
Overhead line TS 35/10кB Kopaonik - Grand	351-106/16 dated 18.10.2016		Completed
Overhead line TS 35/10кB Kopaonik – Vojni dom	351-107/16 dated 18.10.2016		Completed
Overhead line Čajetinska Česma 5 – Lisinsko Brdo 2	351-109/16 dated 20.10.2016		Completed
Overhead line Stara strugara 2 - Supnje 1	351-408/15 dated 14.05.2015		Transferred to Plan for 2017
Overhead line branch Pašajlićki Do	351-729/15 dated 23.10.2015		Transferred to Plan for 2017
Overhead line 10 kV Double Branch Kopaonik – Vikend naselje (Air)	351-698/15 dated 08.10.2015		Transferred to Plan for 2017
TS 110/35/10 kV Kopaonik	351-02-00096/2016-07 dated 30.05.2016		Transferred to Plan for 2017
Unit Vrnjačka Banja			
TS 20/04 cl 2x630 kVA „Vila Zagorka“	351-59/15 dated 25.03.2015.		Transferred to Plan for 2017
TS 20/04 cl 2x630 kVA „Zamak Belimarković“	351-108/15 dated 28.04.2015.		Transferred to Plan for 2017
CL 20kV TS 20/0,4kV Sklonište - TS 20/0,4kV Poštanski dom	351-429/15 dated 23.12.2015.		
ED Kruševac			
Branch Kruševac	01-351-777/2015 dated 21.01.2016.		Local self-government
Branch Kruševac	351-228/2016 dated 18.03.2016		Local self-government
Branch Kruševac	351-163/2016 dated 18.03.2016.		Local self-government
Branch Kruševac	351-880/2015 dated 31.12.2015.		Local self-government
Branch Kruševac	350-72/2016-04 dated 18.10.2016.		Local self-government
Branch Kruševac	351-332/2016 dated 08.04.2016		Local self-government
Branch Kruševac	351-332/2016 dated 08.04.2016		Local self-government
Branch Kruševac	351-375/2016 dated 18.04.2016.		Local self-government
Branch Kruševac	351-387/2016 dated 25.04.2016.		Local self-government
Branch Kruševac	350-194/2016 dated 27.04.2016.		Local self-government
Branch Kruševac	350-28/2016-04 dated 19.04.2016.		Local self-government
Branch Kruševac	350-32/2016-04 dated 28.04.2016.		Local self-government

Branch Kruševac	351-616/2016 dated 17.06.2016		Local self-government
Branch Kruševac	351-730/2016 dated 21.06.2016		Local self-government
Branch Kruševac	350-799/2016 dated 27.06.2016		Local self-government
Branch Kruševac	351-55/2016-IV-06 dated 20.06.2016		Local self-government
Branch Kruševac	351-03-00382/2015-07 dated 31.05.2016		Local self-government
Branch Kruševac	350-817/2016 dated 29.06.2016.		Local self-government
Branch Kruševac	351-189/2016-04 dated 25.08.2016.		Local self-government
Branch Kruševac	351-190/2016-04 26.08.2016.		Local self-government
Branch Kruševac	351-1249/2016 dated 01.09.2016.		Local self-government
Branch Kruševac	351-1253/2016 dated 15.09.2016.		Local self-government
Branch Kruševac	350-498/2016 dated 22.09.2016.		Local self-government
Branch Kruševac	351-1484/2016 dated 12.10.2016.		Local self-government
Branch Kruševac	350-551/2016 dated 21.10.2016.		Local self-government
Branch Kruševac	350-237/2016-04 dated 25.10.2016.		Local self-government
Branch Kruševac	351-1540/2016 dated 27.10.2016.		Local self-government
Branch Kruševac	351-1633/2016 dated 31.10.2016.		Local self-government
Branch Kruševac	351-1660/2016 dated 07.11.2016.		Local self-government
Branch Kruševac	351-1647/2016 dated 18.11.2016.		Local self-government
Branch Kruševac	351-1900/2016 dated 25.11.2016.		Local self-government
Branch Kruševac	351-267/2016-04 dated 18.11.2016.		Local self-government
Branch Kruševac	351-1911/2016 dated 01.12.2016.		Local self-government
Branch Kruševac	351-1928/2016 dated 02.12.2016.		Local self-government
Branch Kruševac	351-2023/2016 dated 08.12.2016.		Local self-government
Branch Kruševac	351-2021/2016 dated 12.12.2016.		Local self-government
Branch Kruševac	351-379/2016-02 dated 15.12.2016.		Local self-government
Branch Kruševac	351-2008/2016 dated 08.12.2016.		Local self-government
Branch Kruševac	351-385/2016-02 dated 22.12.2016.		Local self-government
Branch Kruševac	351-2126/2016 од 26.12.2016.		Local self-government
ED Lazarevac			
Overhead line 10kV „Simanići – Gornje Radljevo 2“	351-13212/15-04 19.01.2016.		

CL 10 kV „Komitet“ Lajkovac –relocation	351-115/2015-03 01.02.2016.		
Overhead line 10 kV and SBTS 10/0,4 kV „Đurđevići“ Trbušnica	ROP-LAZ-29571-ISAWHA-2/2016 16.12.2016		
ED Loznica			
Branch Loznica	353-4-279/2016-11 dated 22.12.2016.		
Branch Loznica	351-622/2016-V dated 23.12.2016.		
ED Novi Pazar			
TS 20(10)/0,4 kV Grlica and conn. cable line 10 (20) kV	ROP-NPA-11098-ISAW-1/2016 dated 1.6.16.		
TS 20(10)/0,4 kV Zaguljača 2	ROP-NPA-12184-ISAW-3/2016 dated 21.7.16.		
TS 20(10)/0,4 kVB Paralovo 3	ROP-NPA-13219-ISAW-2/2016 dated 14.7.16.		
MBTS 20(10)/0,4 kV Zapad	ROP-NPA-32479-ISAW-2/2017 dated 11.1.17.		
SBTS 10/0,4 kV SPA Center – NP Banja	ROP-NPA-10531-ISAW-1/2016 dated 30.5.16.		
SBTS 20(10)/0,4 kV Dolovo 3	ROP-TUT-16491-ISAW-1/2016 dated 9.8.16.		
SBTS 20(10)/0,4 kV Đerekare 3	ROP-TUT-16491-ISAW-1/2016 dated 9.8.16.		
Cable LV connect. for old Business building Dacić/ Š. Koče str.	ROP-NPA-29345-ISAWHA-1/2016 dated 9.11.16.		
ED Čačak			
TS 35/10 kV/kV „Spektar“ Gornji Milanovac	ROP-GML-10285-WA-2/2016 27.05.2016.		
TS 35/10 kV/kV „Spektar“ Gornji Milanovac	ROP-GML-19076-CPA-1/2016 09.08.2016.		
Overhead line 10 kV for SBTS 10/0,4 kV/kV „Frigo David“ Krstac	350-27/2016-04 14.04.2016.		
Overhead line 10 kV for SBTS 10/0,4 kV/kV „Frigo David“ Krstac	ROP-LUC-8294-ISAW-1/2016 13.05.2016.		
Ovehead line10 kV for SBTS 10/0,4 kV/kV „Frigo David“ Krstac	ROP-LUC-8294-WA-2/2016 23.06.2016.		
SBTS 10/0,4 kV/kV „Agrokooperativa“ with conn. 10 kV cable ine in Guča	350-26/2016-04 26.04.2016.		
SBTS 10/0,4 kV/kV „Agrokooperativa“ with conn. 10 kV cable line in Guča	ROP-LUC-10220-ISAW-1/2016 26.05.2016.		
SBTS 10/0,4 kV/kV „Agrokooperativa“ with conn. 10 kV cable line in Guča	ROP-LUC-10220-WA-2/2016 23.06.2016.		
SBTS 10/0,4 kV/kV „Frigo Rođo“ with conn. 10 kV line in Guča	350-28/2016-04 14.04.2016.		
SBTS 10/0,4 kV/kV „Frigo Rođo“ with conn.10kV cable line in Guča	ROP-LUC-9760-ISAW-1/2016 23.05.2016.		
SBTS 10/0,4 kV/kV „Frigo Rođo“ with conn. 10 kV line in Guča	ROP-LUC-9760-WA-2/2016 23.06.2016.		

MBTS 10/0,4 kV/kV „Viča“ with conn. 10 kV lines and 1 kV exits in Guča	ROP-LUC-8448-LOCA-2/2016 18.10.2016.		
MBTS 10/0,4 kV/kV „Viča“ with conn. 10 kV lines and 1 kV exits in Guča	ROP-LUC-8448-ISAW-3/2016 09.11.2016.		
MBTS 10/0,4 kV/kV „Viča“ with conn. 10 kV lines and 1 kV exits in Guča	ROP-LUC-8448-WA-4/2016 25.11.2016.		
MBTS 10/0,4 kV/kV „SVIN“ with conn. 10 kV lines in Gornji Milanovac	ROP-GML-22054-ISAW-1/2016 07.09.2016.		
MBTS 10/0,4 kV/kV „SVIN“ with conn. 10 kV lines in Gornji Milanovac	ROP-GML-22054-WA-2/2016 15.12.2016.		
CL 10 kV „Ključka 2 – CER 1“ in Čačak	ROP-CAC-25036-LOC-1/2016 29.09.2016.		
SBTS 10/0,4 kV/kV „Hladnjača Jokić“ with conn. ovehead line 10 kV y in Miokovci	ROP-CAC-25927-ISAW-1/2016 10.10.2016.		
SBTS 10/0,4 kV/kV „Hladnjača Jokić“ with conn. overhead line 10 kV in Miokovci	ROP-CAC-25927-WA-2/2016 19.10.2016.		
CL 10 kV from TS 35/10 kV/kV „Zablaće“ up to ČRS 1 on the cad. lot no. 180 in cad. area Ježevica (cabling of the part of overhead line 10 kV towards Viljuša)	ROP-CAC-14135-LOCH-2/2016 16.08.2016.		
CL 10 kV from TC 35/10 kV/kV „Zablaće“ up to ČRS 1 on the cad. lot. no. 180 in cad. area Ježevica (cabling of the part of overhead line 10 kV towards Viljuša)	ROP-CAC-14135-ISAW-3/2016 08.09.2016.		
CL 10 kV from TC 35/10 kV/kV „Zablaće“ up to ČRS 1 on the cad. lot. no. 180 in cad. area Ježevica (cabling of the part of overhead line 10 kV towards Viljuša)	ROP-CAC-14135-WA-4/2016 26.09.2016.		
CL 10 kV „Tatović – Miraleks“ in Čačak	ROP-CAC-30998-ISAWHA-2/2016 14.02.2016.		
CL 10 kV „Tatović – Miraleks“ in Čačak	ROP-CAC-30998-WA-3/2016 27.12.2016.		
SBTS 10/0,4 kV/kV „Dolovići“ with conn. overhead line 10 kV – Kotraža	350-29/2016-04 06.04.2016.		
SBTS 10/0,4 kV/kV „Dolovići“ with conn. overhead line 10 kV – Kotraža	ROP-LUC-7470-ISAWHA-2/2016 26.05.2016.		
СБТС 10/0,4 kV/kV „Доловићи“ са прикључним ДВ 10 kV – Котража	ROP-LUC-7470-WA-3/2016 22.09.2016.		
SBTS 10/0,4 kV/kV „Dolovići“ with conn. overhead line 10 kV – Kotraža	ROP-LUC-7470-WA-4/2016 23.09.2016.		
SBTS 10/0,4 kV/kV „Siesta“ with conn. overhead line 10 kV and 1 kV lines – Rti	ROP-LUC-22369-WA-3/2016 18.10.2016.		
SBTS 10/0,4 kV/kV „Siesta“ with conn. overhead line 10 kV and 1 kV lines – Rti	ROP-LUC-22369-ISAW-2/2016 05.10.2016.		
SBTS 10/0,4 kV/kV „Siesta“ with conn. overhead line 10 kV and 1 kV lines – Rti	ROP-LUC-22369-LOC-1/2016 14.09.2016.		

MBTS 10/0,4 kV/kV „Lomina“ with conn. CL 10 kV and 1 kV lines – Čačak	ROP-CAC-17097-ISAWHA-4/2016 15.11.2016.		
MBTS 10/0,4 kV/kV „Lomina“ with conn. CL 10 kV and 1 kV lines – Čačak	ROP-CAC-17097-LOCH-2/2016 15.08.2016.		
SBTS 10/0,4 kV/kV „Ivanovići“ with conn. overhead line 10 kV – Veles	ROP-LUC-21888-LOC-1/2016 05.09.2016.		
SBTS 10/0,4 kV/kV „Ivanovići“ with conn. overhead line 10 kV – Veles	ROP-LUC-21888-ISAW-2/2016 05.10.2016.		
SBTS 10/0,4 kV/kV „Ivanovići“ with conn. overhead line 10 kV – Veles	ROP-LUC-21888-WA-3/2016 18.10.2016.		
MNN facilities			
CL 1 kV from the existing TS „Mojsinje – kula“ up to UZB 12/1000 on the cad. lot no. 725/8 in cad. area Mojsinje	353-173/15-IV-2 27.01.2016.		
CL 1 kV from the existing TS „Mojsinje – kula“ up to UZB 12/1000 on the cad. lot no. 725/8 in cad. area Mojsinje	ROP-CAC-5242-ISAWHA-2/2016 22.04.2016.		
Conn. CL 1 kV fro residential and business facility on the cad. lot no. 5979/4 in cad. area Čačak	ROP-CAC-6858-LOCH-2/2016 12.05.2016.		
Conn. CL 1 kV fro residential and business facility on the cad. lot no. 5979/4 in cad. area Čačak	ROP-CAC-6858-ISAW-3/2016 05.09.2016.		
Conn. CL 1 kV fro residential and business facility on the cad. lot no. 5979/4 in cad. area Čačak	ROP-CAC-6858-WA-4/2016 16.09.2016.		
Conn. CL 1kV for residential and business facility on the cad. lot no. 1813 in cad. area Čačak	ROP-CAC-14071-LOCA-4/2016 05.10.2016.		
Conn. CL 1kV for residential and business facility on the cad. lot no. 1813 in cad. area Čačak	ROP-CAC-14071-ISAW-4/2016 13.10.2016.		
Conn. CL 1kV for residential and business facility on the cad. lot no. 1813 in cad. area Čačak	ROP-CAC-14071-WA-6/2016 25.10.2016.		
Conn. CL 1 kV from MBTS 10/0,4 kV/kV „Svetozar Marković“ for residential facility on the cad. lot no. 1286 in cad. area Čačak	ROP-CAC-18755-LOC-1/2016 18.08.2016.		
Conn. CL 1 kV from MBTS 10/0,4 kV/kV „Svetozar Marković“ for residential facility on the cad. lot no. 1286 in cad. area Čačak	ROP-CAC-18755-ISAWHA-3/2016 20.12.2016.		
OPD ED Užice			
Cabling of lines 35kV and 10kV nearby TS 35/10kV „Terazije“, Užice	351-419/15-02 dated 11.01.2016		
SBTS 10/0,4 kV „Dubljani“, Ribaševina, Užice	351-61/16-02 dated 18.05.2016		
Cable line 10kV for MBTS 10/0,4kV „Dositejeva 2“ and MBTS 10/0,4kV „Dositejeva 2“ Užice	351-142/16-02 dated 16.09.2016		
Cable liine 10kV for MBTS 10/0,4kV „Lidl“, Ućžice	351-153/16-02 dated 05.10.2016		
Cable line 10kV for SBTS 10/0,4kV „Ršumovića gaj“, Sevojno, Užice	351-173/16-02 dated 25.10.2016		
SBTS 10/0,4 kV „Ršumovića gaj“, Sevojno, Užice	351-175/16-02 dated 16.11.2016		
Čajetina Unit			

SBTS 10/0,4 kV „Stara Kafana“, Vodice, Čajetina	351-329/2015-03 dated 11.08.2016		
MBTS 10/0,4 kV „Sunčani Breg“, Zlatibor, Čajetina	351-265/2016-03 dated 09.06.2016		
CL 10 kV from TS 10/0.4 Bip up to TS 10/0.4 Studentsko, Zlatibor, Čajetina	351-343/2015-03 dated 14.06.2016		
SBTS 10/0,4 kV „Virići“, Kriva Reka, Čajetina	351-318/2015-03 dated 28.02.2016		
Overhead line 10 kV ,separate for TS Virići, Kriva Reka, Čajetina	351-319/2015-03 dated 12.01.2016.год.		
MBTS 10/0,4 kV „Dunav 2“, Zlatibor, Čajetina	351-331/2015-03 dated 11.04.2016		
Prijepolje Unit			
SBTS 10/0,4 kV „Ivanje 2“, Ivanje, Prijepolje	351-33/16 dated 25.01.2016		
Separate overhead line 10kV for TS 10/0,4kV „Jasike“, Drenova, Prijepolje	353-172/2016 dated 25.10.2016		
RF Šabac			
ZTS 20/0,4 kV MP- Profil in Šabac	353-4-193/2016-11 dated 12.09.2016		
BSTS 20/0,4 kV Svileuva 18in Svileuva	351-98/16-02 dated 09.08.2016		
Cable line 20 kV for the supply of BSTS Mehovine 5 in Mehovine	351-23/15-ИВ/02 datd 23.03.2016.г.		
CL 20 kV for the supply of TS Hajduk Veljkova 3 in Šabac	353-4-67/2016-11 dated 26.04.2016		
CL 20 kV for supply of ZTS MP – Profil in Šabac	353-4-186/2016-11 dated 01.09.2016		
CL 20 kV for supply of MBTS Masarikova and MBTS Masarikova in Šabac	353-4-191/2016-11 dated 15.09.2016		
CL 20 kV for supply of TS Uniplast Srbija in Jelenča	353-4-129/2016-11 dated 30.06.2016		
BTS 20/0,4 kV Klenje18 in Klenje	351-2-14/206-04 dated 04.05.2016		
MBTS Hajduk Veljkova 3 in Šabac	353-4-87/2016-11 dated 10.05.2016		

3.2 Monitoring and Environmental Impact

The factors by which DA Kraljevo is affecting the environment are:

- **Electromagnetic fields**
- **Environmental noise**
- **Waste**
- **Ground and surface waters quality**
- **Soil quality**

3.2.1 Electromagnetic fields

Electromagnetic field measurements were carried out during 2016, on 11 locations, and they are specified within Table145.

Table 145

DISTRIBUTION AREA KRALJEVO			
Electromagnetic field in 2016			
Branch	**Source and its position in the area**	**Electric field**	**Magnetic field**
		E_{max} kV/m	**B_{max} μ T**
ED Jagdina	**TS 110/10 kV „Paraćin 3“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**1,315 kV/m**	**1,168 μT**
ED Jagodina	**TS 110/35/10 kV „Paraćin 1“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,621 kV/m**	**2,495 μT**
ED Jagodina	**TS 110/35 kV „Jagodina 1“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**1,049 kV/m**	**1,673 μT**
ED Jagodina	**TS 110/20/10 kV „Jagodina 3“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,187 kV/m**	**0,980 μT**
ED Jagodina	**TS 110/35//10 kV „Stenjevac“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,195 kV/m**	**1,580 μT**
ED Kraljevo	**TS 110/35 kV „Kraljevo 1“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,428 kV/m**	**0,981 μT**
ED Kraljevo	**TS 110/20/10 kV „Vrnjačka banja“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,550 kV/m**	**0,793 μT**
ED Kruševac	**TS 110/35/10 kV „Kruševac 4“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,003 kV/m**	**1,932 μT**
ED Kruševac	**TS 110/35/10 kV „Kruševac 2“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,992 kV/m**	**2,177 μT**
ED Kruševac	**TS110/35/10 kV „Trstenik“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,394 kV/m**	**2,164 μT**
ED Kruševac	**TS 110/35/10 kV „Ćićevac“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,640 kV/m**	**1,917 μT**
ED Lazarevac	**TS 110/20/35 kV „Љиг“**	**0,234 kV/m**	**0,838 μT**

	Testing of human exposure to non-ionizing radiations of low frequency nearby		
ED Loznica	**TS 110/35/10 kV „Љубовија“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,09 kV/m**	**0,14 μT**
ED Novi Pazar	**TS 35/10 kV „Tutin“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,210 kV/m**	**0,583 μT**
ED Užice	**TS 110/35/10 kV „Arilje“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,965 kV/m**	**1,929 μT**
ED Užice	**TS 110/35 kV „Kosjerić“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**1,651 kV/m**	**1,552 μT**
ED Užice	**Ts 110/35 kV „Sušica“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**1,654 kV/m**	**2,217 μT**
ED Užice	**TS 110/35 kV „Нова Варош“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,587 kV/m**	**0,244 μT**
ED Užice	**TS 110/35 kV „Prijepolje“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**1,387 kV/m**	**0,928 μT**
ED Čačak	**TS110/35 kV „Čačak 1“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,493 kV/m**	**1,159 μT**
ED Čačak	**TS 110/35 kV „Горњи Милановац“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,795 kV/m**	**3,322 μT**
ED Čačak	**TS 110/35 kV „Сјеница“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**1,166 kV/m**	**1,964 μT**
ED Čačak	**TS 110/35/10 kV „Ivanjica“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,951 kV/m**	**0,775 μT**
ED Šabac	**TS 110/20/35 kV „Богатић“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**1,583 kV/m**	**1,687 μT**
ED Šabac	**TS 110/20/35 kV „Vladimirci“**	**1,672 kV/m**	**1,697 μT**

	Testing of human exposure to non-ionizing radiations of low frequency nearby		
ED Šabac	**TS 110/20 kV „Šabac 5“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,513 кV/m**	**1,1417 μT**
ED Šabac	**TS 10(20)/0.4 kV „Predvorica 4 – Bajevići“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,014 кV/m**	**1,196 μT**

	E (kV/м)	B (μT)
DIN / VDE 1995. – Germany	-	-
NRPB 1993. - Great Britain	12	1.600
CENELEC 1995. - European Prestandard	12	640
ICNIRP 1998. – International recommendations	5	100

3.2.2 Environmental noise

Environmental noise measurement was not performed in 2016.

3.2.3 Waste

Characterization, categorization and partial sale of waste in 2016 is given in Table 146.

Table 146

DISTRIBUTION AREA KRALJEVO																		
Waste in 2016																		
No.	**RULES DEFINING WASTE CATEGORIES, ITS TESTING AND CLASSIFICATION** ***Issued in "Official Gazette of RS", № 56/10 dated 10.8.2010***	**Index no.**	**Unit**	**Огранак**													**NOTE**
				HQ	**ED Arandelovac**	**ED Valjevo**	**ED Jagodina**	**ED Kraljevo**	**ED Kruševac**	**ED Lazarevac**	**ED Loznica**	**ED Novi Pazar**	**ED Čačak**	**ED Užice**	**ED Šabac**	**TOTAL EPS DISTRIBUTION AREA KRALJEVO**	
				AMOUNTS														
1.	Sulfuric Acid	06 01 02*	t								0,107					**0,107**	Waste sulfuric acid
2.	Base KOH	06 02 04*	t														Waste KOH
3.	Waste cartriges	08 03 18	t	1,210						0,150			0,030			**1,390**	Used cartriges
4.	Oils for insulation and transfer of heat containing PCB	13 03 01*				8,084								4,550		**12,634**	PCB Oils contaminated
5.	Mineral non chlorinated motor oils, gearbox oil and lubrication oils	13 02 05*	t							0,030	0,030	0,050	0,141	0,480		**0,731**	Motor oil
6.	Mineral non chlorinated oils for insulation and heat transfer	13 03 07*	t										1,625			**1,625**	Transformer oil
7.	Packaging materials containing residues of hazardous substances or contaminated with hazardous substances	15 01 10*	t										0,150	0,100		**0,250**	Waste contaminated PVC packaging material from chemicals
8.	Absorbents, filter materials (including oil filters not otherwise specified), wiping	15 02 02*	t										0,070		0,010	**0,080**	Waste absorbent

	cloths, protective clothing, which are contaminated with hazardous substances																agents with oil and oil fuel
9.	Waste tyres	16 01 03	t	1,350			0,060	0,400		0,060	0,696	0,300	1,590	0,900	0,100	**5,456**	Old car tyres
10.	Waste vehicles	16 01 04*	t		5,000		18,000	2,600		0,900	2,800					**29,300**	Old vehicles
11.	Waste vhicles not containing liquid and other hazardous substances	16 01 06	t									1,000	2,400	16,340		**19,740**	Old vehicles
12.	Oil filters	16 01 07	t							0,006			0,073	0,100		**0,179**	Old filters
13.	Antifreeze containing hazardous substances	16 01 14*	t										0,036			**0,036**	Antifreeze
14.	Ferrous materials	16 01 17	t									0,050	0,100			**0,150**	Ferrous material (power switches breakers and disconnectors)
15.	Transformers and condensers containging PCB	16 02 09*	t				1,171							5,657		**6,828**	PCB contaminated equipment
16.	Rejected equipment other than the stated in 16 02 09 up to 16 02 13	16 02 14	t										4,880			**4,880**	Old transformers
17.	Lead-acid batteries	16 06 01*	t			1,264		0,227		0,065		0,100	1,161	0,710	0,110	**3,637**	Lead –acid batteries
18.	Nickel-cadmium batteries	16 06 02*	t										0,120			**0,120**	Waste nickel-cadmium batteries
19.	Concrete	17 01 01	t					1,100		0,150	3,980		4,500		1,000	**10,730**	Old concrete piles
20.	Tiles and ceramics	17 01 03	t				0,020	0,300								**0,320**	Ceramics
21.	Insulation materials other than the stated in 17 06 01 and 17 06 03	17 06 04						0,200			0,503	0,150	0,350	0,400		**1,603**	Old insulators
22.	Plastic	17 02 03	t							0,065	0,040		0,102			**0,207**	Waste plastic
23.	Copper	17 04 01	t										5,052		0,150	**5,202**	Pure copper pieces and cooper wires

										0,017						**0,017**	Light copper
24.	Aluminum	17 04 02	t							0,041			0,135			**0,176**	Waste aluminum
25.	Iron and steel	17 04 05	t				0,110		0,320	0,070	32,171	0,300	4,700		0,900	**38,571**	Waste parts of equipment in TS, etc.
26.	Mixed metals	17 04 07	t						1,007	0,307	0,223	0,500	7,412	7,234	7,500	**24,183**	Al-Fe rope
27.	Cables containing oil, tar from oil and other hazardous substances	17 04 10	t										0,100			**0,100**	Oiled cables
28.	Cables other than the stated in 17 04 10	17 04 11	t														Waste aluminum cables
										0,523	0,069					**0,592**	Waste copper cables
29.	Paper and cardboarad	20 01 01	t	7,040							0,310					**7,350**	Old paper and cardboard
30.	Fluorescent tubes and other mercury containing waste	20 01 21*	t							0,033		0,020	0,003		0,010	**0,066**	Waste fluorescent tubes
31.	Batteries and accu-bateries included in 16 06 01,160602 and 160603 and unsorted batteries and accu-batteries containing these batteries	20 01 33	t														Waste batteries and accu-batteries
32.	Rejected electric and electronic equipment other than the stated in 20 01 21 and 20 01 23 containing hazardous componenets	20 01 35*	t		0,035	1,000	1,045	1,100	1,560	0,115		0,200	0,130		0,680	**5,865**	Computers,monitors
33.	Rejected electric and electronic equipment other than the stated	20 01 36	t			2,956				0,374		0,150	0,892			**4,372**	Induced meters

	in 20 01 21, 20 01 23 and 20 01 35																
34.	Tree cintaing hazardous substances	20 01 37*	t				65,020		3,420			0,100	1,930		0,500	**70,970**	Waste water proof poles-black water-proofing
35.	Tree other than in 20 01 37	20 01 38	t				7,000			0,200		0,200	4,500			**11,900**	Waste water proof poles-green water-proofing
36.	Bulky waste	20 03 07	t	1,960						0,250						**2,210**	Old carpentry, etc.

3.2.4 Surface, Groundwater and Soil Monitoring

In EPS Distribution Kraljevo, surface, ground waters and soil were not monitored in 2016.

3.3 Working Environment Monitoring, Health and Safety

2016 Occupational Health and Safety Reports include the following activities:

- **Working Environment Monitoring**
  - working environment noise measurements
  - working environment electromagnetic
  - working environment parameters
- **Safety**
  - training
  - injuries
- **Health**

3.3.1 Working Environment Monitoring

- **Working environment noise**

Noise measurement in working environment was not performed in 2016.

- **Electromagnetic fields in working environment**

Measurements of the level of electrical and magnetic field in the working environment were carried out during 2016 and the results are given in Table 147.

Table 147

DISTRIBUTION AREA KRALJEVO			
Electromagnetic field in 2016			
Branch	**Source and its position in the area**	**Electric field**	**Magnetic fied**
		E_{max} kV/m	**B_{max} μ T**
ED Jagodina	**TS 110/10 kV „Paraćin 3“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**1,315 kV/m**	**1,168 μT**
ED Jagodina	**TS 110/35/10 kV „Paraćin 1“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,621 kV/m**	**2,495 μT**
ED Jagodina	**TS 110/35 kV „Jagodina 1“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**1,049 kV/m**	**1,673 μT**
ED Jagodina	**TS 110/20/10 kV „Jagodina 3“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,187 kV/m**	**0,980 μT**

ED Jagodina	**TS 110/35//10 kV „Stenjevac“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,195 kV/m**	**1,580 μT**
ED Kraljevo	**TS 110/35 kV „Kraljevo 1“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,428 kV/m**	**0,981 μT**
ED Kraljevo	**TS 110/20/10 kV „Vrnajčka Banja“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,550 kV/m**	**0,793 μT**
ED Kruševac	**TS 110/35/10 kV „Kruševac 4“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,003 kV/m**	**1,932 μT**
ED Kruševac	**TS 110/35/10 kV „Kruševac 2“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,992 kV/m**	**2,177 μT**
ED Kruševac	**TS 110/35/10 kV „Trstenik“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,394 kV/m**	**2,164 μT**
ED Kruševac	**TS 110/35/10 kV „Ćićevac“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,640 kV/m**	**1,917 μT**
ED Lazarevac	**TS 110/20/35 kV „Ljig“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,234 kV/m**	**0,838 μT**
ED Loznica	**TC 110/35/10 kV „Љубовија“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,09 kV/m**	**0,14 μT**
ED Novi Pazar	**TS 35/10 kV „Tutin“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,210 kV/m**	**0,583 μT**
ED Užice	**TS 110/35/10 kV „Arilje“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,965 kV/m**	**1,929 μT**
ED Užice	**TS 110/35 kV „Kosjerić“**	**1,651 kV/m**	**1,552 μT**

	Testing of human exposure to non-ionizing radiations of low frequency nearby		
ED Užice	**TS 110/35 kV „Sušica“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**1,654 кV/m**	**2,217 μT**
ED Užice	**TS 110/35 kV „Nova Varoš“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,587 кV/m**	**0,244 μT**
ED Užice	**TS 110/35 kV „Prijepolje“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**1,387 кV/m**	**0,928 μT**
ED Čačak	**TS 110/35 kV „Čačak 1“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,493 кV/m**	**1,159 μT**
ED Čačak	**TS 110/35 kV „Gornji Milanovac“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,795 кV/m**	**3,322 μT**
ED Čačak	**TS 110/35 kV „Sjenica“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**1,166 кV/m**	**1,964 μT**
ED Čačak	**TS 110/35/10 kV „Ivanjica“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,951 кV/m**	**0,775 μT**
ED Šabac	**TS 110/20/35 kV „Bogatić“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**1,583 кV/m**	**1,687 μT**
ED Šabac	**TS 110/20/35 kV „Vladimirci“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**1,672 кV/m**	**1,697 μT**
ED Šabac	**TS 110/20 kV „Šabac 5“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,513 кV/m**	**1,1417 μT**
ED Šabac	**TS 10(20)/0.4 kV „Predvorica 4 – Bajevići“** Testing of human exposure to non-ionizing radiations of low frequency nearby	**0,014 кV/m**	**1,196 μT**

	E (kV/м)	B (μT)
DIN / VDE 1995. – Germany	-	-
NRPB 1993. - The Great Britain	12	1.600

CENELEC 1995. - European prestandard	12	640
ICNIRP 1998. – International recommendations	5	100

- **Working environment parameters**

Working environment parameters were not measured in 2016.

3.3.2 Safety

- **Training**

It is carried out in accordance with the Occupational Safety Qualification and Knowledge Improvement Program. Testing of knowledge of the employees on the positions with increased risk is performed every fifth year in accordance with Risk Assessment Act.

Training of workers is shown in Table 148, also including the training of new workers, as well as knowledge testing of workers for narrowly professional occupations.

Table 148

DISTRIBUTIONAL AREA KRALJEVO					
Training in 2016					
Branach	**Employee no.**	**For training**		**Trained**	
		No.	**%**	**No.**	**%**
ED Aranđelovac	38				
Health and Safety training		38	100,00	38	100,00
ED Valjevo	56				
Health and Safety training		56	100,00	56	100,00
Fire protection training		1	1,79	1	100,00
Training for safe work with chainsaw, timmer and lownmower		4	7,14	4	100,00
Auto crane handling training		4	7,14	4	100,00
Auto platform operator training		3	5,36	3	100,00
ED Jagodina	92				
Health and Safety training		92	100,00	92	100,00
Fire protection training		92	100,00	92	100,00
ED Kraljevo	82				
Health and Safety training		82	100,00	82	100,00
ED Kruševac	106				
Health and Safety training		106	100,00	106	100,00
ED Lazarevac	48				
Health and Safety training		48	100,00	48	100,00
ED Loznica	70				
Health and Safety training		6	8,57	6	100,00
ED Novi Pazar	48				
Health and Safety training		42	87,50	42	100,00
Fire protection training		48	100,00	48	100,00
ED Užice	147				

Health and Safety training		97	65,99	97	100,00
Fire protection training		84	57,14	84	100,00
ED Čačak					
Health and Safety training		145	100,00	145	100,00
Fire protection training		1	0,69	1	100,00
Training for safe work with chainsaw, timmer and lownmower	145	4	2,76	4	100,00
Auto crane handling training		4	2,76	4	100,00
Auto platform operator training		3	2,07	3	100,00
ED Šabac					
Health and Safety training	47	47	100,00	47	100,00
Training for operating personnel		12	25,53	12	100,00
HQ	134				
Health and Safety training		134	100,00	134	100,00
TOTAL: DISTRIBUTION AREA KRALJEVO	**1.013**	**1.153**	**113,82**	**1.153**	**100,00**

- **Work injuries**

Data on work injuries in 2016 are given in Table 149.

Table 149

DISTRIBUTION AREA KRALJEVO						
Work injuries in 2016						
Branch	**Number of employees**	**Work injuries in relation to the number of employees**				
		Light	**Serious**	**Fatalities**	**Total**	**%**
ED Arandjelovac	38	1	1	0	2	5,26
ED Valjevo	56	3	0	0	3	5,36
ED Jagodina	92	1	1	0	2	2,17
ED Kraljevo	82	1	0	0	1	1,22
ED Krusevac	106	1	0	0	1	0,94
ED Lazarevac	48	0	0	0	0	0,00
ED Loznica	70	2	0	0	2	2,86
ED Novi Pazar	48	1	0	0	1	2,08
ED Uzice	147	3	0	0	3	2,04
ED Cacak	145	1	0	0	1	0,69
ED Sabac	47	2	0	0	2	4,25
HQ	134	1	0	0	1	0,75
TOTAL: DISTRIBUTION AREA KRALJEVO	**1.013**	**17**	**2**	**0**	**19**	**1,87**

3.3.3 Health

Periodic medical examinations of employees are given in Table 150.

Table 150

DISTRIBUTION AREA KRALJEVO											
Health in 2016											
Branch	Number of employees	Periodic examination				Work capability					
		Referred to examination		Examined/ Referred		Capable		Limited capability		Not capable	
		№	%		№	%		№	%		№
ED Arandjelovac	38	26	68,42	24	92,31	23	95,83	1	4,16	0	0,00
ED Valjevo	56	26	46,43	26	100	17	65,38	8	30,77	1	3,85
ED Jagodina	92	59	64,13	58	98,30	27	46,55	30	51,72	1	1,72
ED Kraljevo	82	74	90,24	74	100,00	56	75,68	15	20,27	3	4,05
ED Krusevac	106	70	66,04	70	100,00	52	74,29	18	25,71	0	0,00
ED Lazarevac	48	31	64,58	31	100,00	30	96,77	1	3,22	0	0,00
ED Loznica	70	59	84,29	55	93,22	31	56,36	22	40,00	2	3,64
ED Novi Pazar	48	31	64,58	31	100,00	26	83,87	5	16,13	0	0,00
ED Uzice	147	97	65,99	97	100,00	89	91,75	8	8,25	0	0,00
ED Cacak	145	55	37,93	55	100,00	44	80,00	10	18,18	1	1,82
ED Sabac	47	34	72,34	33	97,05	29	87,88	4	12,12	0	0,00
HQ	134	14	10,45	14	100,00	14	100,00	0	0,00	0	0,00
TOTAL: DISTRIBUTION AREA KRALJEVO	**1.013**	**576**	**56,86**	**568**	**98,61**	**438**	**77,11**	**122**	**21,48**	**8**	**1,41**

3.4 Public complaints

There were no public complaints in 2016.

4. DISTRIBUTION AREA KRAGUJEVAC

Table 151 shows structure of all facilities within the system of Distribution Area Kragujevac.

Table 151

DISTRIBUTION AREA KRAGUJEVAC												
Facilities within the system in 2016												
Branch	Electricity distribution substations							Total:	Distribution network			Total overhead network in km.
	110/10 KV	110/20 KV	110/35 KV	110/x/z KV	35/10 KV	20/0,4 KV	10/0,4 KV		Voltage level	Overhead network in km.	Voltage level	
ED KRAGUJEVAC									110 kV	0,000	0,000	0,000
									35 kV	193,000	34,000	227,000
									20 kV	0,000	0,000	0,000
									10 kV	1.177,20	552,000	1.729,200
									1,0 kV	0,000	0,000	0,000
									0,4 kV	4.201,000	804,000	5.005,000
Total no.	1	0	1	5	13	0	894	**914**	**TOTAL:**	**5.571,200**	**1.390,000**	**6.961,200**
ED POŽAREVAC									110 kV	0,000	0,000	0,000
									35 kV	253,300	36,140	289,440
									20 kV	0,000	0,000	0,000
									10 kV	1.048,394	220,330	1.268,724
									1,0 kV	0,000	0,000	0,000
									0,4 kV	4.086,189	462,965	4.549,154
Total no.	0	0	4	0	23	0	896	**933**	**TOTAL:**	**5.387,883**	**719,435**	**6.107,308**
ED SMEDEREVO									110 kV	2,060	0,000	2,060
									35 kV	179,552	24,040	203,590
									20 kV	0,000	0,000	0,000
									10 kV	830,068	209,750	1.039,816
									1,0 kV	0,000	0,000	0,000
									0,4 kV	2.669,100	73,610	2.742,706
Total no.	1	0	4	0	25	0	962	**992**	**TOTAL:**	**3.680,780**	**294,200**	**3.921,700**
TOTAL: DISTRIBUTION AREA KRAGUJEVAC									110 kV	2,060	0,000	2,060
									35 kV	720,030	94,180	720,030
									20 kV	0,000	0,000	0,000
									10 kV	3.054,662	982,080	4.036,742
									1,0 kV	0.000	0,000	0,000
									0,4 kV	10,956.289	1,340.575	12.296,864
TOTAL:	**2**	**0**	**9**	**5**	**61**	**0**	**2.752**	**2.839**	**TOTAL:**	**14.638,861**	**2.416,835**	**17.055,696**

4.1 Overview and Permits Status

Review and statuses of permits, licenses and other required approvals as well as new requests for obtaining permits in 2016 are presented in Table 152.

Table 152

DISTRIBUTION AREA KRAGUJEVAC			
Overview and Permits status in 2016			
Branch	**Obtained approvals and permits (Number and date)**	**Applications for obtaining new or extending existing permits**	**Note**
ED KRAGUJEVAC			
1 kV c able lines for the connection of residential building at Velimira Stevanoviča – soc. accommmodation	XVIII-351-9 06.01.2016.		Decision on works approval
Overheadline 10 kV for the connection of TS 10/0,42 kV no.765 "IGA PETROL"	XVIII-351-3/16 26.01.2016.		Decision on works approval
1 kV c able lines for the connection of RO and residential and business facility at Kraljevića Marka 1	XVIII-351-13/16 25.01.2016.		Decision on works approval
1 kV c able lines for the connection of extension to residential building at Svetozara Markovića 101	XVIII-351-35 05.02.2016.		Decision on works approval
1 kV c able lines for the connection of the residential building of more families at Svetozara Maarkovića 102 and 106	XVIII-351-68 23.02.2016.		Decision on works approval
1 kV c able lines for the connection of the residential building of more families I phase at the corner of Obilićeva str. and Voje Radića	XVIII-351-72 24.02.2016.		Decision on works approval
1 kV c able lines for the connection of the residential building of more families at Mihaila Iveše 7	XVIII-351-86 28.03.2016.		Decision on works approval
Overhead line 0,42 kV for the connection of Main Measuring Regulation Station „Batočina“ in Brzan	351-37/16-03 21.03.2016.		Decision on works approval
1 kV cable line for the connection of family residential building at Ilije Kolovića 73	XVIII 351-14R/OP 24.04.2016. XVIII I 351-14R/OP 11.05.2016. - Akt		Decision on works approval
1kV cable lines for the connection of residential and business building of more families at Kralja Milana IV no.24	XVIII 351-17P/16-OP 19.04.2016.		Decision on works approval
1 kV cable lines for the connection of the business building „Mitel mont“ on cad. lot no. 10455/2 in the cad. area KG 4	XVIII 351P/16-OP 13.05.2016.		Decision on works approval
10 kV cable lines for the connection of MBTS 781"Veliko polje-igralište" and 1 kV cable lines	XVIII 351-56P/16-OP 27.05.2016.		Decision on works approval
1 kV cable lines for the connection of business building Autobranša-I phase on the cad. lot 10454/2 in cad. area: KG4	XVIII 351-43R/16-OP 31.05.2016.		Decision on works approval
1 kV cable lines for the connection of residential and business building at Karođerđeva no.49 on the cad. lot 2968/1	XVIII 351-55R/16-OP 07.06.2016.		Decision on works approval
1 kV cable line for the connection of RO at the corner of Andre Marinkovića and Gružanska str. and conn. of thebuilding at Gružanska str. 46	XVIII 351-70R/16-OP 13.06.2016.		Decision on works approval
1 kV cable lines for the connection of business building B Sunce Marinković	XVIII 351-35P/16-OP 31.05.2016.		Decision on works approval

1 kV cable lines for the connection of new RO on the pavement at Stevan Visokog nearby the no. 15 and conn. of the building at Dragog Barjaktarevića no. 6A	XVIII 351-69R/16-OP 16.6.2016.		Decision on works approval
1 kV cable lines for the connection of building at Višnjićeva str.18	XVIII 351-72R/16-OP 16.6.2016.		Decision on works approval
1 kV cable lines for connection of building at Milutina Markovića no.2	XVIII 351-71R/16-OP 16.6.2016.		Decision on works approval
1 kV cable lines for connection of the building at Prvog maj str. no.5	XVIII 351-113R/16-OP 13.07.2016.		Decision on works approval
1 kV cable lines for the connection of the building and RO at Svetozara Markovića 74	XVIII 351-115R/16-OP 13.07.2016.		Decision on works approval
10 kV cable lines for the connection of SBTS 10/0,42 kV no.1654 "Moretto" in Brzan	351-107/16-03 15.07.2016.		Decision on works approval
1 kV cable lines for the connection of the building art Vojvode Putnika 58a	XVIII 351-116P/16-OP 18.07.2016.		Decision on works approval
SBTS 10/0,42 kV no.2171 Balosave Dubljaci on the cad. lot no. 28/2 in cad. area Balosave, overhead line 10 kV LV network in Balosave	351-889/2016-02 15.07.2016.		Decision on works approval
1 kV cable lines for the connection of the building at Balkanska 11	XVIII 351-114P/16-OP 20.07.2016.		Decision on works approval
SBTS 10/0,42 kV no.769 "Ramaća Prodinac" on the cad. lot no. 2112 in cad. cad area Ramaća	XVIII 351-142R/16-OP 04.08.2016.		Decision on works approval
Construction of LV network for the connection of the plant Zastava inpro– Stojana Protića	XVIII 351-118P/16-OP 02.08.2016.		Decision on works approval
1 kV cable lines for the connection of the building at Njegoševa 49 in Lapovo	351-240/16-02 15.08.2016.		Decision on works approval
1 kV cable lines for the connection of buildings at Kralja Petra I 30, Batočina	351-128/16-03 23.08.2016.		Decision on works approval
1 kV cable lines for the connection of business building Banja komerc Bekament on the cad. lot no. 10456/3 in the cad. area KG 4	XVIII 351-139P/16-OP 22.08.2016.		Decision on works approval
SBTS 10/0,42 kV no.778 "Čumić Limovac Bojnjača" on the cad. lot no. 4608 in the cad. area Čumić	XVIII 351-141P/16-OP 23.08.2016.		Decision on works approval
1 kV cable lines for the connection of the building at Svetozara Markovića 40-42 on the cad. lot no. 3789/1 i cad. area KG3	XVIII 351-187R/16-OP 15.09.2016.		Decision on works approval
Construction of LV network in TR TS KOrićani Mladićevići TS 209 for the connection of customers	XVIII 351-197R/16-OP 27.09.2016.		Decision on works approval
Construction of LV netwrok at Kragujevački oktobar nearby the Museum on cad. lot no. 949 in the cad. area KG3 – customers' connection	XVIII-351-213R/16-OP 12.10.2016		Decision on works approval
Compact semi-undergorund TS 200107 "Radnička" on the cad. lot no. 7991/2 in cad area KG 1	XVIII 351-234R/16-OP 18.10.2016		Decision on works approval
1 kV cable lines for connection of the building at Kopitareva 33 on cad.lot no. 10622 in cad. area KG 4	XVIII 351-227P/16-OP 21.10.2016		Decision on works approval
Construction of LV network in TR TS 1026 „Kula“ Malo Krčmare	351-638/2016-IV-01-2 02.11.2016		Decision on works approval
1 kV cable lines for the connection of the building at the corner of Atinska Atinska and Svetogorska – Sva bilding on cad. lot no. 6551/4 in the cad. area KG 4	XVIII 351-241R/16-OP 08.11.2016		Decision on works approval
Construction of overhead line for the connection of SB TS 10/0,42 kV 250 kVA no. 1655 "Srbotehnika" in Žirovnica	351-179/16-03 29.11.2016		Decision on works approval

1 kV cable lines for the connection of the building at Vite Džajevića no.15 on the cad .lot no 10316/1 in cad. area KG4	XVIII 351-286R/16-OP 08.12.2016		Decision on works approval
ED POŽAREVAC			
Construction of BSTS 10/0,4 kV „Popovac 3“ ,10 kV overhead line and low voltage cables 0,4 kV	351-382/16-02 from 19.12.2016		Decision on works approval
Construction of STS 10/0,4 kV „ Stari Kostolac 1“ with conn. 10 kV overhead line and LV cables,4 kV in Stari Kostolac, on the cad. lot no. 1731,1740,1767 and 1768 in cad. area Stari Kostolac	04-351-784/2016 from 07.12.2016		Decision on works approval
Construction of 10 kV line from TS 10/0,4 kV ,,Dunavac cad. lot no.1673/18,2402/1,2401 and 2398 all in cad area Kostolac –town in Kostolac	04-351-616/2016 from 03.10.2016		Decision on works approval
Construction of 10 kV line from TS 10/0,4 kV ,,Bare 3“ up to TS 10/0,4 kV ,,Kasidol 1“ on the cad. lot no.5136 and 2107 both in the cad area Bare, 2962,2959/1 and 1948 all in the cad. area Kasidol	04-351-771/2016 from 15.11.2016		Decision on works approval
Construction of TS 10/0,4 kV for electricty supply SGS „Ostrovo“ and construction od conn. cable line 10kV and fibre optic cable for the connection of TS 10/0,4kV ,,Ostrovo“ to EEDS	04-351-762/2016 from 05.12.2016		Decision on works approval
KBTS 10/0,4 kV „Kneza Lazara “ at Kneza Lazara in Požarevac, cad.lot no 1209/1 in cad. area Požarevac	04-351-666/2015 from 04.01.2016		Decision on works approval
Reconstruction of overhead line 35 kV Blagojev Kamen – Debeli Lug; up to the existing pole no. 22- the first on the territory of the cad. area Debeli Lug on cad. lot no. 64/1 in the cad . area Blagojev Kamen Камен (Kučevo)	351-317/16-02 17.10.2016		Decision on works approval
Reconstruction of the part of Overhead line 35 kV Blagojev Kamen-Debeli Lug; up to the last pole no..21 upto pole no.66 in cad.area Debeli lug on the cad area no. 1/1 and 5/1 in cad.are Debeli Lug (Majdanpek)	351-295/1/2016-03 21.10.2016		Decision on works approval
Construction of STS 0/0,4 kV „Boževac vodovod“ with conn. 10 kV and reconstruction of LV network 0,4 kV in Boževac	351-139/16 from 24.10.2016		Decision on works approval
Construction of TS “Rezervoar kod repetitora” on tha cad. lot no. 2366/437 and TS “Aerodrom” on the cad. lor no.2366/180, with connected lines from TS “Aerodrom”yp to TS“Veliko Gradište 3” over cad. lot no. 2366/180, 3869/2, 4597/2, 3886/3 from TS „Aerodrom” up to TS “Rezervoar kod repetitora“ over the cad. lot no. 2366/180, 3869/2, 2366/183, 2366/195 and 2366/437 and from TS “Rezervoar kod repetitora” up to TS “Beli Bagrem” over cad. lot no. 2366/437, 2366/190, 2366/195, 2366/252, 2366/13, 2366/14 and 2366/10 all in the cad area Veliko Gradište	351-1710/2016-06 from 5.12.2016		Decision on works approval
			Decision on works approval
ED SMEDEREVO			
KBTS10/0,4kV "STARČEV GROB" Smederevo	351-320/2014-05 dated 15.01.2015.		Decision on works approval
SBTS 10/0,4kV "VRANOVO 8" in Vranovo, Smederevo	351-405/2015-05 dated 27.11.2015		Decision on works approval

SBTS 10/0,4kV "RADINAC 10" in Radinac, Smederevo	351-433/2015-05 dated 16.12.2015.		Decision on works approval
TS 10/0,4kV "FRUCT COMPANY" in Udovice, Smederevo With conn. overhead line 10 kV	351-470/2015-05 dated 11.01.2016.		Decision on works approval
SBTS 10/0,4kV "LANDOLSKI PUT" in Landol, Smederevo With conn. overhead line 10 kV	351-469/2015-05 dated 11.01.2016.		Decision on works approval
MBTS 10/0,4kV "VATROGASNI DOM" Smederevo With conn. underground line 10 kV	351-468/2015-05 dated 11.01.2016.		Decision on works approval
TS 10/0,4kV "ĐURE DANIČIĆA 3" Smederevo With conn. line 10 kV	351-471/2015-05 dated 11.01.2016.		Decision on works approval
KBST 10/0,4kV "ROBNA PIJACA" Smederevo With conn. underground line 10 kV	ROP-SMD-5176-ISAW-1/2016 dated 08.04.2016.		Decision on works approval
SBTS 10/0,4kV "VIP DRAGOVAC" Smederevo With conn. underground line 10kV	ROP-SMD-1467-ISAWHA- 4/2016 dated 17.06.2016.		Decision on works approval
SBTS 10/0,4kV "PEKARA LUKIĆ" in Mihajlovac, Smederevo With conn. overhead line 10kV	ROP-SMD-14006-ISAW-1/2016 dated 27.06.2016.		Decision on works approval
Construction of underground line 1kV for the conn. of the building at Cvijićeva (building of Tina Trade) in Smederevo	ROP-SMD-12470-ISAW-1/2016 dated 05.07.2016.		Decision on works approval
KBTS 10/0,4kV "PARK" in Smederevska Palanka	ROP-SPA-21410-ISAWHA-2/2016 dated 22.09.2016.		Decision on works approval
KBTS 10/0,4kV "JOSIPA FAJLA" Smederevo With conn overhead line 10kV	ROP-SMД-25859-ISAW-1/2016 dated 10.10.2016.		Decision on works approval
Relocation of overhead line 10kV from TS 10/0,4 kV „Radinac 5“ up to TS 10/0,4 kV „Radinac 10“ Smederevo	ROP-SMD-18222-ISAWHA- 2/2016 dated 13.09.2016.		Decision on works approval
Relocation of overhead line 10kV from TS 10/0,4 kV „Ćir Antina Česma“ up to TS 10/0,4 kV „Jugovo kula“ Smederevo	ROP-SMD-33763-ISAWHA- 2/2016 dated 06.01.2017.		Decision on works approval

4.2 Monitoring and Environmental Impact

Distribution area Kragujevac affects the environment by the following factors:

- **Electromagnetic fields**
- **Environmental noise**
- **Waste**
- **Surface and ground waters quality**
- **Soil quality**

4.2.1 Electromagnetic fields

Measurements of electric and magnetic fields size in the environment are carried out in 2016.

Location:

1.TS 110 /35 kW KG 001 Ilićevo - within permissible limits
2. TS 110 /35 kW KG 005 Divlje polje - within permissible limits

3. TS 110 /35 kW KG 024 Stragari - within permissible limits
4. TS 110 /10/10 kW KG 008 Metino brdo - within permissible limits
5. TS 110 /35 kW KG 00020 Ribeš - within permissible limits
6. TS 110 /35 kW KG 018 Lapovo - within permissible limits
7. TS 110 /35 kW Velika Plana - within permissible limits
8. TS 110 /35 kW Smederevska Palanka - within permissible limits
10. TS 110 /35 kW Smederevo 1 - within permissible limits
11. TS 110 /35 kW Smederevo 4 - within permissible limits
12. TS 110 /35 kW Petrovac - within permissible limits
13. TS 110 /35 kW Neresnica - within permissible limits
14. TS 110 /35 kW Požarevac - within permissible limits
15. TS 110 /35 kW Veliko Gradište - within permissible limits

4.2.2 Environmental Noise

Measurements of environmental noise were carried out in 2016 at the following locations.

TS 110/10/10 kV "Kragujevac 3" at Dragana Blagojevica – no number, by accredited institutions, the Institute IMS AD, Belgrade, Institute for Materials Testing a.d. Beograd, Bulevar Vojvode Misica № 43, Belgrade.

Table 153 shows the results of mesurements of environmental noise in 2016 for the branch Elektrodistribucija Kragujevac.

Noise is produced by the following sources:

- Transformer T1:"Minel", type TP 3803-31,5,110000, from 1985
- 10 cooling fans T1 "Elektrokovin", power 750W, 1320 rpm

while,

- 14 cooling fans T1 "Elektrokovin", power 250W, 1320 rpm
- Transformer T2: "Minel", type TP 7504-31,5,110000, from 1976

were not operational since the overhaul was conducted.

Measurment was conductd in:

1. TS KG 003, at Dragana Blagojevića str.

2. Measurement was conducted at the location in the house of Anđelković Pavla at Dragana Blagojevića 11, Kragujevac (referent apartment). Metering point 1.

Table 153

DISTRIBUTION AREA KRAGUJEVAC				
Noise level in 2016 (dB)(A)				
Limit values of noise indicators Decree on noise indicators, limit values, methods for assessing noise indicators, disturbing and harmful effects of environmental noise, „Official Gazette of RS" №. 75/10			Day	Night
	Outdoors	Areas for recreation, hospital zones and rehabilitation, cultural and historical sites, large parks	50	40
		Tourist areas, camps and school zones	50	45
		Strictly residential areas	55	45
		Business-residential areas, trading – residential areas and children playgrounds	60	50
		City Center, commercial, administrative area with apartments, zones along highways and city roads	65	55
		Industrial, warehouse and service areas and transport terminals without residential buildings	On the limit of this zone	

			noise level must not exceed the limit value in the zone with which it borders

Measurement points	Mesurement point 1 Dining room with kitchen	
	Measured level	Relevant level
Daily level	**32** dBA	35 dBA
Evening level	**24** dBA	35 dBA
Night level	***33*** dBA	*30* dBA

Obtained relevant noise levels are reviewed according to the Decree on noise indicators, limit values, methods for assessing noise indicators, disturbing and harmful effects of environmental noise, „Official Gazette of RS" №. 75/10 Attachment 2.

Data evaluation for measured noise levels for 2015 was not conducted since local self-governemnt of the city of Kragujevac did not perform acustic area zoning in accordance with Law on the Protection of Environemntal Noise, "Official Gazette RS", no. 36/09 and 88/10.

4.2.3 Waste

Waste amounts generated in Distribution Area Kragujevac in 2016 are presented in Table 154.

DISTRIBUTION AREA KRAGUJEVAC Table 154

Waste in 2016

№	RULES DEFINING WASTE CATEGORIES, ITS TESTING AND CLASSIFICATION Published in "Official Gazete RS", № 56/2010 dated: 10th August 2010	INDEX NUMBER	UNIT	Branch			TOTAL DISTRIBUTION AREA	Detailed description
				Branch ELEKTRODISTRIBUCIJA KRAGUJEVAC	Branch ELEKTRODISTRIBUCIJA POŽAREVAC	Branch ELEKTRODISTRIBUCIJA SMEDEREVO		
				Quantities				
1.	Mineral non chlorinated motor oils for gears and lubrication	13 02 05*	t	0,000	0,000	0,000	**0,000**	
2.	Mineral non chlorinated oils for insulation and heat transportation	13 03 07*	t	0,000	0,000	0,175	**0,175**	Tariff oil
3.	Paper and card board packaging	15 01 01	t	0,000	1,000	0,000	**1,000**	Paper and cardboard
4.	Wooden packaging	15 01 03	t	0,000	3,700	0,000	**3,700**	Wooden packaging
	Packaging containing residual hazardous substances or is contaminated by hazardous substances	15 01 10*	t	0,000	0,015	0,000	**0,015**	Waste contaminated PVC packaging used for chemicals
5.	Absorbent filter materials (including oils filters not specified otherwise), wiping cloths, protection clothes, contaminated by hazardous substances	15 02 02*	t					Waste packaging from used oils and lubricants
6.	Absorbent filter materials (including oils filters not specified otherwise), wiping cloths, protection clothes, contaminated by hazardous substances	15 02 02*	t	0,000	0,050	0,000	**0,050**	Waste adsorption agent with oil and heavy fuel oil
7.	Waste tires	16 01 03	t	0,000	0,080	0,134	**0,214**	Auto tires
8.	Coloured metals	16 01 18	t	0,000	0,000	0,057	**0,057**	Copper residues (racks, ropes and wires)
9.	Transformers and condensers containing PCB	16 02 09*	t	0,000	0,000	0,000	**0,000**	Waste and used transformers with PCB oil
10.	Discarded equipment containing hazardous components other than specified in 16 02 09 to 16 02 12	16 02 13*	t	0,000	0,000	0,000	**0,000**	Laed batteries
11.	Lead batteries	16 06 01*	t	0,000	1,320	0,011	**1,331**	Accu-bateries
12.	Ni-Cd batteries	16 06 02*	t	0,000	0,024	1,470	**1,494**	
13.	Concrete	17 01 01	t	37,130	6,700	3,550	**47,380**	Old concrete poles, pole foundations
14.	Tiles and ceramics	17 01 03	t	0,030	0,090	0,290	**1,490**	(porcelain insulators)
15.	Wood	17 02 01	t	8,860	0,000	14,000	**22,860**	Wooden poles -green
16.	Copper, bronze, brass	17 04 01	t	0,000	0,000	0,000	**0,000**	Cu, brass

17.	Iron and steel	17 04 05	t	0,800	1,100	1,640	**3,540**	Waste parts of TS
18.	Mixed metals	17 04 07	t	1,200	1,150	9,067	**11,417**	Mixed metals, AlČe rope
19.	Cables containing oil, oil tar and other hazardous substances	17 04 10*	t	0,095	0,363	2,400	**2,858**	
20.	Cables different than listed in 17 04 10	17 04 11	t	0,820	0,100	2,022	**2,942**	Waste aluminum cables
21.	Soil and stones containing dangerous substances	17 05 03*	t	0,000	0,000	0,000	**0,000**	Oily soil
22.	Fluorescent tubes and other waste containing mercury	20 01 21*	t	0,000	0,001	0,000	**0,001**	
23.	Discarded electric and electronic equipment other than specified in 20 01 21 and 20 01 23 containing hazardous components	20 01 35*	t	0,210	5,060	0,000	**5,270**	Discarded electronin and electric equipment
24.	Discarded electric and electronic equipment other than specified in 20 01 21, 20 01 23 and 20 01 35	20 01 36	t	0,370	1,246	0,115	**1,731**	Electronic and induction meters, disconnectors, lamps and power switches
25.	Wood containing hazardous substances	20 01 37*	t	1,900	44,990	64,700	**111,500**	Impregnated wooden poles
26.	Wood other than specified in 20 01 37	20 01 38	t	1,000		0,300	**1,300**	Commercial wood

4.2.4 Surface, Ground Waters and Soil Monitoring

Monitoring of surface and groundwater as well as monitoring of soil in 2016 was not carried out.

4.3 Working Environment Monitoring, Health and Safety

2016 Occupational Health and Safety Reports include the following items:

- **Working Environment Monitoring**
  - working environment noise measurements
  - working environment electromagnetic fields
  - working environment parameters
- **Safety**
  - training
  - work injuries
- **Health**

4.3.1 Working Environment Monitoring

- **Working environment noise measurements**

There were no environmental noise measurements performed in 2016.

- **Working environment electromagnetic fields**

Measurements were not performed in 2016.

- **Working environment parameters**

Working environment parameters are presented in Table 155.

Table 155

DISTRIBUTION AREA KRAGUJEVAC				
Working environment parameters				
No.	**Branch**	**Testing subject**	**Above ILV (Immision Limit Value)**	**Undertaken measures**
1.	ED Kragujevac	Testing of working environment conditions were carried out in summer period 2014 and winter period 2015	/	/
2.	ED Požarevac	Testing of working environment conditions were carried out in winter period in the end of 2015. Testing of working environment conditions were carried out in aummer period 2015.	/	/
3.	ED Smederevo	Testing of chemical and physical harmfulness, lightning, micro climate in all facilities of the Branch	1. Increased noise level in locksmith workshop in Smederevo	1. Procured protection equipment (hearing protection equipment)

		for winter and summer period in 2014.	2. 2. Insufficent lightning in counter hall in the facility in Velika Plana	2. Fixed lightning in counter hall (light bulbs replaced)

Testing of other working envirnomental parameters in 2016 were not carried out.

4.3.2 Safety

- **Training**

Training data are given in Table 156.

Table 156

DISTRIBUTION AREA KRAGUJEVAC					
Training in 2016					
Branch	**Number of employees**	**For training**		**Trained**	
		№	**%**		**№**
Branch ED Kragujevac					
Training of employees who according to the employment contract work for other employer	72	21	29,17	21	100,00
Branch ED Požarevac					
Training of employees who according to the employment contract work for other employer	59	9	15,25	9	100,00
Branch ED Smederevo					
Training for safe operation according to the Act on risk assessment - introduction to risks and protection measures	88	5	5,68	5	100,00
DA HQ	111	0	0,00	0	0,00
TOTAL: DISTRIBUTION AREA KRAGUJEVAC	**330**	**35**	**10,61**	**35**	**100,00**

Note: Number of training is greater than the number of employees, because there were more changes in jobs positions and a number of employees came in more types of training

- **Work injuries**

The status of injuries for 2016 is presented in Table 157.

Table 157

DISTRIBUTION AREA KRAGUJEVAC						
Work injuries 2016						
Branch	**Number of employees**	**Injuries related to the number of employees**				
		Light	**Difficult**	**Fatalities**	**Total**	**%**
ED Kragujevac	72	0	1	0	1	1,39
ED Pozarevac	59	0	0	0	0	0
ED Smederevo	88	0	0	0	0	0
HQ	111	3	0	0	3	2,70
TOTAL: DISTRIBUTION AREA KRAGUJEVAC	**330**	**3**	**1**	**0**	**4**	**1,21**

4.3.3 Health

Periodical medical examinations of employees shown in Table 158.

Table 158

DISTRIBUTION AREA KRAGUJEVAC											
Work capability in 2016											
Branch	**Number of employees**	**Previous and periodical examination**				**Work capability**					
		Referred to examination		**Examined**		**Capable**		**Limited capability**		**Unable**	
		№	%	№	%	№	%	№	%	№	%
ED Kragujevac	72	56	77,78	56	100,00	43	76,79	13	23,21	0	0,00
ED Pozarevac	59	31	52,54	31	100,00	31	100,00	0	0,00	0	0,00
ED Smederevo	88	23	26,14	23	100,00	23	100,00	0	0,00	0	0,00
DA HQ	111	12	10,81	12	100,00	10	83,33	2	16,67	0	0,00
TOTAL: DISTRIBUTION AREA KRAGUJEVAC	**330**	**122**	**36,97**	**122**	**100,00**	**107**	**87,70**	**15**	**12,30**	**0**	**0,00**

4.4 Public Complaints

Public complaints for 2016 are given in Table 159.

Table 159

DISTRIBUTION AREA KREGUJEVAC				
Public complaints in 2016				
Branch	**Complaint (number and date) and submitted by whom**	**Subject of complaint**	**Measures undertaken**	**Note**
ED Kragujevac	According to the complaint of the citizens, on site investigation was conducetd by the Inspector for Environmental Protection and the report no. 334 dated: 5th July 2016 was made	The application is regarding TS 10/0,4kV no. 538, which is a source of noise according to the claims from the application, and is located at the street Ljubomira Stojanovića, Kragujevac	Electro-magnetic switch for street lightning was replaced, since it was the source of noise.	
ED Pozarevac	There were no public complaints			
ED Smederevo	There were no public complaints			
HQ	There were no public complaints			

5. DISTRIBUTION AREA NIŠ

Table 160 presents the structure of all facilities within the system of Distribution Area Niš.

Table 160

DISTRIBUTION AREA NIŠ												
Facilities within system 2016												
Branch	**Electricity distribution transformer stations**								**Distribution network in km**			
	110/10 KV	**110/20 KV**	**110/35 KV**	**110/x/z KV**	**35/10 KV**	**20/0.4 KV**	**10/0.4 KV**	**Total**	**Voltage level**	**Overhead**	**Cable**	**Total length**
ED ZAJEČAR									110 kV	0	0	0
									35 kV	579,59	17,84	597,43
									20 kV	0	0	0
									10 kV	2.218,08	407,58	2.625,66
									1,0 kV	0	0	0
									0,4 kV	5.148,55	267,87	5.416,42
Total	0	0	10	2	50	0	1.648	**1.710**	**Total:**	**7.946,22**	**693,29**	**8.639,51**
ED PROKUPLJE									110 kV	0	0	0
									35 kV	172,68	9,90	182,58
									20 kV	0	0	0
									10 kV	802,9	83,33	886,23
									1.0 kV	0	0	0
									0.4 kV	2.082,98	93,05	2176,03
Total	0	0	2	0	14	0	613	**629**	**Total:**	**3058,56**	**186,28**	**3244,84**
ED NIŠ									110 kV	0	0	0
									35 kV	204,63	36,69	241,32
									20 kV	0	0	0
									10 kV	917,85	651,42	1.569,27
									1.0 kV	0	0	0
									0.4 kV	4.391,54	483,56	4.875,10
Total	3	0	3	1	27	0	1476	**1.510**	**Total:**	**5.514,02**	**1.171,67**	**6.685,69**
ED PIROT									110 kV	0	0	0
									35 kV	184,00	31,15	215,15
									20 kV	0	0	0
									10 kV	738,78	94,35	833,13
									1.0 kV	0	0	0
									0.4 kV	1.348,47	153,38	1.501,85
Total	0	0	3	0	19	0	503	**525**	**Total:**	**2.271,25**	**278,88**	**2.550,13**
ED LESKOVAC									110 kV	0	0	0
									35 kV	339,03	1,58	340,61
									20 kV	0	0	0
									10 kV	1.617,70	267,85	1.885,55
									1,0 kV	0	0	0
									0,4 kV	3.851,06	141,57	3.992,63

Total	2	0	3	2	32	0	1.239	**1.278**	**Total:**	**5.807,79**	**411,00**	**6.218,79**
ED VRANJE									110 kV	0	0	0
									35 kV	126,50	12,30	138,80
									20 kV	0	0	0
									10 kV	1.442,50	184,20	1.626,70
									1.0 kV	0	0	0
									0.4 kV	2.970,05	116,00	3.086,05
Total	2	0	1	3	11	0	952	**969**	**Total:**	**4.539,05**	**312,50**	**4.851,55**
TOTAL:DISTRIBUTION AREA NIŠ									110 kV	0	0	0
									35 kV	1.606,43	109,46	1.715,89
									20 kV	0	0	0
									10 kV	7.737,81	1.688,73	9.426,54
									1.0 kV	0	0	0
									0.4 kV	19.792,65	1.255,43	21.048,08
Total	**7**	**0**	**22**	**8**	**153**	**0**	**6431**	**6621**	**Total:**	**29.136,89**	**3.053,62**	**32.190,51**

Note: Data provided on 31st December 2016. Only power facilities owned by EPS Distribution are taken into account, while the facilities owned byEMS, EPS other useres and facilities with split ownership on the teritory of DA Niš are not taken into account.

5.1 Overview and Permits Status

Review and statuses of permits, licenses and other required approvals as well as new requests for obtaining permits in 2016 are presented in Table 161.

Table 161

DISTRIBUTION AREA NIŠ			
Overview and Permits status in 2016			
Branch	**Obtained approvals and permits (Number and date)**	**Applications for obtaining new or extending existing permits**	**Note**
ED ZAJEČAR			
Decision on construction permit fpr the extension of TS 35/10 kV Boljevac	351-699/2016-III -02 21.07.2016.		Boljevac
Decision on works approval on the construction of typical TS and part of distribution netwrok at Pastirska str. - no number in Svrljig	351-36-/2016 11.10.2016.		Svrljig
Decision on works approval on the construction of STS 10/0,4 kV „Burdimo Vretenci“ with conn. line 10 kV Burdimo	351-147/2016 19.12.2016.		Svrljig
Decision on works approval on the construction of poles STS 10/0,4 kV “J.izvor- Najdići“ Kalna with conn. line 10 kV	351-1-102/2016-04 30.11.2016.		Knjaževac (Kalna)
Decision on works approval on the construction of STS Velika Vrbica	351-372/2016-III-04 02.08.2016.		Kladovo
Decision on works approval on the investment maintenace of 35 kV „TS 35/10 kV „Kladovo 1 – Brza Palanka within the section between TS Kladovo 1 and TS 35/0,4 kV Solaris	351-894/2016- III-04 16.12.2016.		Kladovo

ED Niš			
Decision on approval for construction of 10 kV cable line from point A in the vicinity of TS 35/10kV "Ratko Pavlović'" up to TS 10/04kV "Voždova Škola"	351-820/2016-06 dated 28.11.2016		Niš
Decision on approval for the construction of 10kV line from TS 35/10kV „Centar 1" up to the point "A" in front of TS 10/04kV „Stanoja Bunuševca" and up to TS 10/04kV „Palilula".	351-821/2016-06 dated 15.11.2016		Niš
Decision on approval for works on the construction STS 10/04kV "Gudure 2" and 10kV cable line from TS 10/04kV „Gudure" up to STS 10/04kV „Gudure 2"	351-752/1 dated 09.12.2016		Cad. area Aleksandrovo
Decision on approval for construction of STS 10/04kV "Gornje Međurovo 4"	351-771/2016-06 dated 20.10.2016		Cad. area Gornje Međurovo
Decision on approval for construction of TS 10/0kV „Medoševac 2"	351-248/2016-06 dated 22.04.2016		Cad. area Medoševac
Decision on approval for works on construction 10kV cable line from TS 10/04kV „Kamenica" up to STS 10/04kV „Kulina 2"	351-503/15 dated 31.12.2015 Decision is effective as of 04.01.2016		Cad. area Kamenica
ED PROKUPLJE			
Relocation of LV network in the village Berilje	351-736/16 15.04.2016		Prokuplje
Construction of BSTS Gornja Draganja with conn. 10kV line	351-190/2016-05 27.05.2016		Prokuplje
Extension of LV network in the settlement Sokolica	351-26-2015-05 06.11.2016		Prokuplje
Construction of LV conn. line for ind. facility HLADNJAČA in the village Velika Plana	351-156/2016-05 09.05.2016		Prokuplje
Cables of LV network in tariff region Novo Naselje 1	350-103/2016-05 09.06.2016		Prokuplje
Extension of LV netwrok in the village Gornja Bresnica	351-399/2016-05 17.10.2016		Prokuplje
Construction of extension TS Gimanzija	351-293/2016-05 16.08.2016		Prokuplje
Extension of LV netwrok in D.Rakića str.	351-440/2016-05 10.11.2016		Prokuplje
ED PIROT			
Construction of 35kV cable line TS 110/35kV Pirot 2 - TS 35/10kV Tigar (decision on approval for construction)	03-У-351-1505/2016 dated 11.07.2016.		Pirot
Construction of STS 10/0,4kV Sukovo 3 (decision on works approval)	03-У-351-791/2015 dated 28.12.2015.		Pirot
Construction of 35kV switchgeaer "Vrgudinac" with conn. 35kV line (decision on construction permit)	351-277/2016-IV/02 dated 13.12.2016.		Bela Palanka
ED LESKOVAC			
Information on the location for the construction of overhead line 35kV from Vlasotince up to Tegošnice, 20,7km in length	353-6/16-03 dated 26.02.2016		Vlasotince Municipality
Location conditions for ocnstruction of overhead line 35 kV from Vlasotince up to Tegošnice, 20,7 km in length.	353-79/15-03 dated 19.03.2016		Vlasotince Municipality
Location conditions for construction of 10kV cable line from TS 10/0,4kV „ Industrijska Nova" up to TS 400/220/110kV „Leskovac 2" in Leskovac	353-370/15-02 dated 11.03.2016		City of Leskovac
Decision on the approval of works for the replacement of the part of the existing cable from TS 35/10 kV „Nevit" up to TS 10/0,4 kV „Rosulja", 220 m in length, in Vlasotince	ROP-VLS-9757-ISAW-1/2016, no. 03-351-107/16, dated 02.06.2016		Vlasotince Municipality

Decision on approval for construction of 10kV cable from TS 10/0,4 kv“ Kolektor“ up to TS 10/0,4kV „Streljina“, 600m in length, in Vlasotince	ROP-VLS-9757-ISAW-1/2016, Br.03-351-106/16, dated 02.06.2016		Vlasotince Municipality
Decision on approval for construction – extension of LV network 0,4kV and public lightning from Velikove do Mandžine Mahale, Vlasina Rid, Surdulica	351-03-02620/2015-07, dated 09.03.2016		Republic of Serbia, Ministry of Construction, Transport and Infrastructure
Location conditions for construction of TS 35/10kV "Grdelica-Nova“ in the function of Highway E-75, Oraovica, Grdelica	ROP-MSGI-6324-LOCH-2/2016, no.350-02-02092/2016-14, dated 20.06.2016		Republic of Serbia, Ministry of Construction, Transport and Infrastructure
Decision on facility use – extension of LV netwrold in „ Pop Milenkova Mahala“, Vlasina Stojkovići, VlasinaРешење о употреби објекта – продужетак НН мреже у "Поп Миленковој махали", Власина Стојковићи,Власина	ROP-SUR-26829-IUPH-2/2016, No..351-2-153/16-03, dated 03.11.2016		Surdulica Municipality
ED VRANJE			
Cable line 10 kV “Davidovac – Vrtogos	Decision 351-639/2016-07 dated 10.10.2016		Bujanovac Municipality
Cable line and STS 10/0,4 kV „Gornji Vrtogoš“	351-196/2016-07 from 2016		Bujanovac Municipality

5.2 Monitoring and Environmental Impact

Distribution Area Niš affects the environment by the following factors that are currently not completely covered by the monitoring:

- **Electromagnetic fields**
- **Environmental noise**
- **Waste**
- **Surface and ground waters quality**
- **Soil quality**

5.2.1 Electromagnetic fields

In 2016, monitoring of electromagnetic fields in the vicinity of TSs TS 110/35 kV Prokuplje and TS 110/35 kV Kuršumlija. Measured parameters show that electromagnetic radiations (non-ionizing) is not harmful, i.e. obtained results are within permitted values.

5.2.2 Environmental Noise

Environmetal noise monitoring at the territory of DA Niš was not carried out in 2016.

5.2.3 Waste

Waste production in 2016 is shown in Table 162, according to the Serbian waste management regulations.

DISTRIBUTION AREA NIS											Table 162
Waste in 2016											
№	**Rules defining waste categories, its testing and classification Official Gazette of RS № 56/10 dated: 10th August 2010**	**INDEX NUMBER**	**UNIT**	**Branch**						**Total**	**NOTE**
				ED ZAJECAR	**ED PROKUPLJE**	**ED NIS**	**ED PIROT**	**ED LESOVAC**	**ED VRANJE**	**DISTRIBUTION AREA NIS**	
				QUANTITIES							
1.	Mineral non-chlorinated motor oils for, gear and lubrication oils	13 02 05*	t	0,044	0	0	0,040	0	0	**0,084**	Motor oil
2.	Mineral non-chlorinated oils for insulation and heat transfer	13 03 07*	t	0,160	0	0	0,340	0	0	**0,500**	Tarif oil
3.	Waste not otherwise specified	13 08 99*	t	0	0	0	0,100	0	0	**0,100**	Oily soil and absorbents
4.	Wooden packaging	15 01 03	t	0,325	0	0	4,470	0	0	**4,795**	(wood packaging)
5.	Waste tiers	16 01 03	t	0,460	0	0	0,010	0	0,149	**0,619**	Auto abd truck tiers
6.	Discarded vehicles not containing fluids or other hazardous components	16 01 06	t	18,000	0	0	10,000	0	0	**28,000**	Old vehicles without hazardous fluids
7.	Ferrous materials	16 01 17	t	0	0	0	0	0	0	**0**	Switchers and disconnector
8.	Hazardous components other than specified in 16 01 07 - 16 01 11 and 16 01 13 and 16 01 14	16 01 21*	t	0,072	0	0	0,220	0	0	**0,292**	Waste vehicles components
9.	Discarded equipment containing hazardous components other than specified in 16 02 09 - 16 02 12	16 02 13*	t	0	0	0	0,200	0	0	**0,200**	Cables, transformers heads
10.	Lead batteries	16 06 01*	t	0,180	0	0	0,160	0	0	**0,340**	Batteries
11.	Ni-Cd batteries	16 06 02*	t	0,202	0	0	0,150	0	0	**0,352**	Ni-Cd batteries
12.	Concrete	17 01 01	t	0	0	0	5,000	0	14,670	**19,670**	Old concrete columns
13.	Tiles and ceramics	17 01 03	t	2,566	0	0	0,920	0	0	**3,486**	(porcelain insulators)
14.	Copper, bronze, brass	17 04 01	t	0,01	0	0	0	1,982	0	**1,992**	copper
15.	Aluminum	17 04 02	t	2,48	0	0	0,420	0,738	3,3	**6,938**	Waste wire – aluminum-steel
16.	Iron and steel	17 04 05	t	0,08	0	0	0,100	0	0	**0,180**	Pieces
17.	Cables other than specified in 17 04 10	17 04 11	t	0,422	0	0	1,900	0	0	**2,322**	Waste cables with plastic protection
18.	Paper and card board	20 01 01	t	0,06	0	0	0,350	0	0	**0,410**	Paper and card board

19.	Fluorescent pipes and other waste containing mercury	20 01 21*	t	0,016	0	0	0,010	0	0	**0,026**	Fluorescent pipes
20.	Discarded electrical and electronic equipment other than specified in 20 01 21 and 20 01 23 containing hazardous substances	20 01 35*	t	0,855	0	0	0,810	0	0	**1,665**	(meters)
21.	Discarded electrical and electronic equipment other than specified in 20 01 21, 20 01 23, 20 01 35	20 01 36	t	0	0	0	0,100	0	0	**0,100**	(computers, monitors)
22.	Wood containing hazardous substances	20 01 37*	t	0	0	0	0,500	0	10.060	**10,560**	(wooden poles)

5.2.4 Surface, Ground Waters and Soil Monitoring

In 2016, the water monitoring was not performed at the territory of Distribution Area Niš.

In 2016 soil monitoring, in the viscinity of TSs where PCB contaminated transformers are located, was paerformed, but we have not received the results yet.

5.3 Working Environment Monitoring, Health and Safety

2016 Occupational Health and Safety Reports include following items:

- **Working Environment Monitoring**
  - working environment noise measurements
  - working environment electromagnetic fields
  - working environment parameters
- **Safety**
  - training
  - work injuries
- **Health**

5.3.1 Working Environment Monitoring

Measurements and testing of working environment conditions were carried out according to the Occupational Safety and Health law („Official Gazette RS“, No. 101/05) and the Rules on procedure of inspection and testing of working equipment and testing of working environment conditions (Official Gazette RS No. 94/06, 108/06 and 102/2015).

- **Working environment noise**

During 2015, the branch ED Pirot (business unit Bela Palanka) conducted noise measurements in the working environment for summer period. Measurements were carried out at the offices of the branch, dispatch center, emergency office and TS 35/10kV. The measured results show that the noise is not harmful, i.e. during the measurement in TS 110/35kv, the results obtained are within the permissible values.

Measurement results are presented in Table 163.

Table 163

DISTRIBUTION AREA NIŠ			
Noise in working environment 2016			
Branch	**Unit**	**Registered noise level in working premises in dB (A)**	**Permitted noise level in dB (A)**
ED Pirot	TS 110/35kV	63	85

- **Working environment electromagnetic fields**

In 2016 in DA Niš working environment electromagnetic fields were not measured.

- **Working environment parameters**

In the branch ED Zaječar and ED Pirot the examination of working environment parameters for summer period in 2016 by the Institute "1. Maj" –Niš was carried out. All checked working environment parametrs for summer period with results of measurements meet working criteria and they are presented in Table 142 and 145.

Monitoring of parameters of temeperature, relative humidity and velocity for summer period 2016 of ED Zaječar and ED Pirot is given in Table 164.

Table 164

DISTRIBUTION AREA NIŠ					
ED Zaječar					
Temperature, relative humidity and velocity					
No.	**Measurement point**	**Monitoring**			**Note**
		t *C	**Rv %**	**Vm/s**	**Comfort zone**
1.	TS 110/35 kV Knjaževac	27,7	49,9	0,04	Within zone
2.	Dispatch center 35/10 kV Бор	26,2	45,8	0,02	Within zone
3.	TS 110/35 kV Bor 1	24,4	54,2	0,03	Within zone
4.	TS 110/35 kV Negotin	27,1	50,1	0,01	Within zone
5.	TS 110/35 kV Zaječar 1	26,3	42,5	0,04	Within zone
6.	TS 35/10 kV Zaječar 1	25,7	37,4	0,04	Within zone
7.	Regional dispatch center Zaječar	25,8	30,3	0,04	Within zone
8.	Office of dispatch service Kladovo	27,4	44,1	0,06	Within zone
9.	TS 110/35 kV Command Room	24,7	44,4	0,05	Within zone
10.	TS 35/10 kV Majdanpek 1	26,5	47,4	0,03	Within zone
11.	Office of emergency dispatcher Knjaževac	27,2	53,5	0,04	Within zone
ED Pirot					
Temperature, relative humidity and velocity					
No.	**Metering point**	**Monitoring**			**Note**
		t *C	**Rv %**	**Vm/s**	**Comfort zone**
1.	TS 35/10kV	24,0	47,6	0,01	Within zone
2.	TS110/35kV	24,7	50,1	0,02	Within zone
3.	Office	26,4	54,5	0,07	Within zone
4.	Office of Dimitrovgrad unit	27,0	52,3	0,09	Within zone
5.	Dispatch center	25,5	52,2	0,08	Within zone
6.	Dispatch center emergency room	23,3	57,8	0,08	Within zone

Monitoring parameters of illumination for summer period 2016 of the branch ED Zaječar and ED Pirot is given in Table 165.

Table 165

DISTRIBUTION AREA NIŠ					
ED Zaječar					
Illumination					
No.	**Measuting point**	**Monitoring**			**Note**
		Illumination	Illumination (lx)		Illumination
			Measured	Sufficient	
1.	TS 110/35 kV Knjaževac	combined	295	150-300	sufficient
2.	Dispatch center 35/10 kV Bor	combined	892	150-300	sufficient
3.	TS 110/35 kV Bor 1	combined	266	80-150	sufficient
4.	TS 110/35 kV Negotin	combined	368	80-150	sufficient
5.	TS 110/35 kV Zaječar 1	combined	240	150-300	sufficient

6.	TS 35/10 35 kV Zaječar 1	combined	826	150-300	sufficient
7.	Regional dispatch center Zaječar	combined	495	150-300	sufficient
8.	Office of dispatch service Kladovo	combined	577	150-300	sufficient
9.	TS110/35 kV Command room	combined	370	150-300	sufficient
10.	TS 35/10 kV Majadnpek 1	combined	256	150-300	sufficient
11.	Office of emergency dispatcher Knjaževac	combined	435	150-300	sufficient

ED Pirot					
Illumination					
No.	**Measurement point**	**Monitoring**			**Note**
		Illumination	Illumination (lx)		Illumination
			Measured	Sufficient	
1.	TS 35/10kV	combined	388	80-150	sufficient
2.	TS 110/35kV	combined	576	80-150	sufficient
3.	Office	combined	756	150-300	sufficient
4.	Office of unit Dimitrovgrad	combined	310	150-300	sufficient
5.	Dispatch center	combined	510	150-300	sufficient
6.	Dispatch center emergency room	combined	191	80-150	sufficient

5.3.2 Safety

- **Training**

Training report is presented in Table 166.

Table 166

EPS DISTRIBUCIJA NIS					
Training in 2016					
Branch	**Number of employees**	**For training**		**Trained**	
		№	**%**		**№**
ED Nis					
Safety training	**145**	163	112,41	145	88,96
Safety training for employees under the contract on temporary works		0	0,00	0	0,00
Training for newly employed or unqualified workers		0	0,00	0	0,00
Training and testing of employees in fire protection		163	112,41	145	88,96
ED Leskovac					
Safety training	**79**	50	63,29	50	100,00
Safety training for employees under the contract on temporary works		0	0,00	0	0,00
Training for newly employed or unqualified workers		0	0,00	0	0,00
Training and testing of employees in fire protection		87	110,13	87	100,00
ED Zajecar					
Safety training	**137**	145	105,84	144	99,31
Safety training for employees under the contract on temporary works		0	0,00	0	0,00
Training for newly employed or unqualified workers		0	0,00	0	0,00
Training and testing of employees in fire protection		145	105,84	144	99,31
ED Vranje					
Safety training	**37**	45	121,62	45	100,00
Safety training for employees under the contract on temporary works		7	18,92	7	100,00

Training for newly employed or unqualified workers		0	0,00	0	0,00
Training and testing of employees in fire protection		45	121,662	45	100,00
ED Pirot					
Safety training		40	125,00	40	100,00
Training for newly employed or unqualified workers	**32**	1	3,12	1	100,00
Health and Safety training for employees under the contract on temporary works		0	0,00	0	0,00
Training and testing of employees in fire protection		41	128,12	41	100,00
ED Prokuplje					
Safety training		57	123,91	57	100,00
Safety training for employees under the contract on temporary works	**46**	0	0,00	0	0,00
Training for newly employed or unqualified workers		0	0,00	0	0,00
Training and testing of employees in fire protection		57	123,91	57	100,00
Management DISTRIBUCIJA NIS					
Safety training		0	0,00	0	0,00
Health and Safety training for employees under the contract on temporary works	**134**	0	0,00	0	0,00
Training for newly employed or unqualified workers		0	0,00	0	0,00
TOTAL: EPS DISTRIBUCIJA NIS					
Safety training		500	81,97	481	96,2
Health and Safety training for employees under the contract on temporary works		8	1,31	8	100,00
Training for newly employed or unqualified workers	**610**	0	0,00	0	0,00
Обука и провера запослених из области заштите од пожара		**508**	**83,28**	**489**	**96,26**

Note: Number of employees is calculated on 31st December 2016. During the year, the number of employees was higher, but it was gradually reduced, thus there are cases where the number of trained employees is higher than the number of employees, i.e. the percentage in the column "for training" exceeds 100%.

- **Work injuries**

The number of injuries in 2016 is presented in Table 167.

Table 167

EPS DISTRIBUCIJA NIS						
Work injuries in 201						
Branch	**Number of Employees**	**Injuries related to the number of employees**				
		Light	Serious	Fatal	Total	%
ED Nis	**145**	3	0	0	3	2,07
ED Leskovac	**79**	1	0	0	1	1,27
ED Zajecar	**137**	0	0	0	0	0
ED Vranje	**37**	0	0	0	0	0
ED Pirot	**32**	0	0	0	0	0
ED Prokuplje	**46**	0	0	0	0	0
Management	**134**	1	0	0	1	0,75
TOTAL: EPS DISTRIBUCIJA NIS	**610**	**5**	**0**	**0**	**5**	**0,82**

5.3.3 Health protection

Periodic medical examinations of employees, presented in Table 168.They are performed regularly for all newly employed workers and workers on working places with special working conditions.

Table 168

EPS DISTRIBUCIJA NIS											
Work capability in 2016											
Branch	**№ of employees**	**Periodic examination**				**Work capability**					
		Referred to examination		**Examined/ Referred**		**Capable**		**Limited capability**		**Not capable**	
		No.	%	No.	%	No.	%	No.	%	No.	%
ED Nis	145	86	59,31	86	100,00	67	77,91	17	19,77	2	2,33
ED Leskovac	79	50	63,29	50	100,00	50	100,00	0	0,00	0	0,00
ED Zajecar	137	144	105,11	144	100,00	120	83,33	24	16,67	0	0,00
ED Vranje	37	22	59,46	22	100,00	20	90,91	2	9,09	0	0,00
ED Pirot	32	21	65,63	21	100,00	14	66,67	7	33,33	0	0,00
ED Prokuplje	46	30	65,22	30	100,00	22	73,33	7	23,33	1	3,33
Management of DP Nis	134	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
TOTAL: EPS DISTRIBUCIJA NIS	**610**	**353**	**57,87**	**353**	**100,00**	**293**	**83,00**	**57**	**16,15**	**3**	**0,85**

Note: Number of employees is calculated on 31st December 2016. During the year, the number of employees was higher, but it was gradually reduced, thus there are cases where the number of employees sent to the medical examinations is higher than the number of employees, i.e. the percentage in the column "referred to examination" exceeds 100%.

5.4 Public complaints

There were no public complaints in 2016 in DP Niš.

APPENDIX 1 EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT ENVIRONMENTAL MODEL REPORT

Coal Production, Processing and Transportation Facilities

For each mining company:

- Summarize the Status of permits, licenses and other approvals required for each major facility (e.g. coal mine). Note any incidents of non–compliance with the applicable national environment, health and safety requirements;
- Identify any new permits required during reporting year or permits that will expire in less than a year and therefore require renewal.

Please provide data on the following parameters for each facility.

- Air Emissions (key air emissions, permitted limits, actual emissions);
- Solid wastes (type and quantity of waste)
- Water use (quantities of water used, permitted limits)
- Liquid effluents (key liquid effluents, permitted limits, actual effluents produced)
- Noise
- Summarize the health and safety record, including the accident rate and any initiatives implemented or planned during the reporting period, including training programs.
- Summarize public complaints, if any, relating to the project, steps taken to address these.

Power Generation Facilities

For each Power Plant:

- Summarize the status of permits, licenses or other approvals required for each plant. Note any incidents of non–compliance with the applicable national environment, health and safety requirements;
- Identify any new permits required during reporting year or permits that will expire in less than a year and therefore require renewal;

Please provide data on the following parameters for each plant:

Air Emissions

	Actual emissions	Limited values
Particulate Matter		
Sulphur Dioxide (CO_2)		
Nitrogen Oxides NO_x (NO_2)		

Identified negative impact on river flow and ecological system below the reservoir

- Solid Wastes (type and quantity of waste);
- Water Use (quantities of water used, permitted limits);
- Liquid effluents (key liquid effluents, permitted limits, actual effluents produced)
- Noise
- Summarize the Health and Safety record, including the accident rate and any initiatives implemented or planned during the reporting period, including training programs;
- Summarize Public Complaints, if any, relating to the project, steps taken to address these.

Power Transmission

- Summarize the status of permits, licenses or other approvals required for each facility. Note any incidents of non–compliance with the applicable national environment, health and safety requirements;
- Identify any new permits required during reporting year or permits that will expire in less than a year and therefore require renewal;
- Summarize the health and safety record, including the accident rate and any initiatives implemented or planned during the reporting period, including training programs.
- Summarize public complaints, if any, relating to the project, steps taken to address these.

Power Distribution

- Summarize the status of permits, licenses or other approvals required for each facility. Note any incidents of non–compliance with the applicable national environment, health and safety requirements;
- Identify any new permits required during reporting year or permits that will expire in less than a year and therefore require renewal;
- Summarize the health and safety record, including the accident rate and any initiatives implemented or planned during the reporting period, including training programs.
- Summarize public complaints, if any, relating to the project, steps taken to address these.

APPENDIX 2 SERBIAN ENVIRONMENTAL LEGISLATION

LAWS

1. Law on environmental protection “Official Gazette RS", No.135/04, 36/2009, 36/2009-other law, 82/2009, 43/2011- Constitutional Court decision and 14/2016)
2. Law on Environmental Impact Assessment “Official Gazette RS", No. 135/04 and 88/2010
3. Law on environmental impact strategic assessment (“Official Gazette RS”, no. 135/04 and 88/2010)
4. Law on integrated environmental pollution prevention and control, (“Official Gazette RS", No.135/2004 and 25/2015)
5. Air protection law (“Official Gazette RS” no.36/2009 and 10/2013)
6. Noise Protection Act (“Official Gazette RS” no. 36/2009 and 88/2010)
7. Act on Ionizing Radiation Protection and on Nuclear Safety (“Official Gazette RS”, no. 36/2009 and 93/2012)
8. Law on non-ionizing radiation protection (“Official Gazette RS”, no. 36/2009)
9. Law on packaging and packaging waste (“Official Gazette RS”, no. 36/2009)
10. Law on Biocidal Products (“Official Gazette RS”, no. 36/2009, 88/2010, 92/2011 25/2015)
11. Law on chemicals (“Official Gazette RS”, no. 36/2009,88/2010, 92/2011 and 93/2012 and 25/2015)
12. Law on waste management (“Official Gazette RS”, no. 36/2009, 88/2010 and 14/2016)
13. Law on Environmental Protection (“Official Gazette RS”, no. 36/2009, 88/2010, 91/2010 14/2016)
14. Water Law (“Official Gazette RS”, no. 30/02010 and 93/2012)
15. Law on meteorological and hydrological activities (“Official Gazette RS”, no. 88/2010)
16. Law on transportation of hazardous load (“Official Gazette RS”, no. 88/2010)
17. Law on protection and sustainable use of fish stocks, (“Official Gazette RS", No.36/09)
18. Law on Mining and Geological Research (“Official Gazette RS", No. 88/2011)
19. Law on planning and construction (“Official Gazette RS”, no. 72/2009, 81/2009- correction, 64/2010-Constitutional Court decision, 24/2011,121/2012, 42/2013 – Constitutional Court decision, 50/2013 – Constitutional Court decision, 98/2013 - Constitutional Court decision, 132/2014 and 145/2014)
20. Agricultural Land Law ("Official Gazette RS", No. 62/2006, 65/2008 and 41/2009)
21. Law on forests ("Official Gazette RS", No. 30/2010, 93/2012 and 89/2015)
22. Law on confirmation of the convention on access to information, public participation in decision-making and access to justice in environmental matters („Official Gazette RS“, No. 38/09)
23. Law on Fund for Environmental Protection („Official Gazette RS“, No. 72/2009 and 101/2011)
24. Occupational Safety and Health Protection Law („Official Gazette RS“, No. 101/2005 and 91/2015)

REGULATIONS

1. Decree on establishing the list of projects which require environmental impact assessment and list of projects which may require environmental impact assessment ("Official Gazette of the RS", No. 114/2008),
2. Decree on noise indicators, limit values, method for assessment of noise indicators, disturbance and harmful environmental impact of noise ("Official Gazette of the RS", No.75/2010)
3. Air Quality Monitoring Conditions and Requirements Regulation (“Official Gazette RS”, № 11/2010, 75/2010 and 63/2013)

4. Regulation on Emissions Limit Values of Pollutants in the Air ("Official Gazette RS", No. 71/2010, 6/2011)
5. Regulation on the Methodology for Data Collection for the National Inventory of Unintentional Emissions of Persistent Organic Pollutants ("Official Gazette RS", No. 76/2010)
6. Regulation on the Methodology for Data Collection for the National Greenhouse Gases Inventory ("Official Gazette RS", No. 81/2010)
7. Regulation on ozone depleting substances management, as well as on conditions for license issuance to import and export of such substances („Official Gazette", No. 114/2013)
8. Regulation on zones and agglomerations classification ("Official Gazette RS", no. 58/2011 and 98/2012)
9. Regulation determining program of air quality control in national network ("Official Gazette RS", no. 58/2011)
10. Regulation on types of waste subject to thermal treatment, conditions and criteria for determination of location, technical and technological conditions for projecting, construction, equipping and work of the thermal waste treatment plants and handling of combustion residues ("Official Gazette of RS", No. 102/2010 and 50/2012)
11. Regulation on the landfill of waste ("Official Gazette RS", no. 92/2010)
12. Regulation on list of non-hazardous waste not requiring a permit, with the documentation accompanying cross-border movement ("Official Gazette RS", No. 102/10)
13. Regulation on determination of certain types of hazardous waste that can be imported as secondary raw material ("Official Gazette RS", no. 60/2009)
14. Regulation on products that become special waste streams after use, form of daily record on the amount and type of produced and imported products and annual report, manner and deadlines for submission of annual report to the persons liable, calculation criteria, amount of compensation and method for calculation and payment of compensation ("Official Gazette RS", no. 54/2010, 86/2011, 15/2012, 41/2013, 3/2014, 8/2014 and 31/2015)
15. Regulation on limit values of priority and priority hazardous substances polluting surface water and deadlines for their achievement ("Official Gazette RS", No. 24/2014)
16. Regulation on types of activities and facilities for which integrated permit is issued ("Official Gazette RS", No. 84/2005)
17. Regulation on content of the program for adaptation measures of the existing facilities or activities by prescribed conditions ("Official Gazette RS", No. 84/2005)
18. Regulation on the criteria for determination of the best available techniques, for the implementation of quality standards, as well as for determination of limit values of emissions in integrated permit ("Official Gazette RS", No. 84/2005)
19. Regulation on establishing the program for dynamics of completing the application for integrated permit ("Official Gazette RS", No. 108/2008)
20. Regulation establishing a program of systematic soil quality monitoring, indicators for assessing the risk of soil degradation and remediation programs development methodology ("Official Gazette RS", № 88/2010)
21. Regulation on Establishing Criteria for Determining of the Status of Endangered Environment and Priorities for Sanitation and Remediation ("Official Gazette RS", No. 22/2010)
22. Regulation on the waste lists for trans-boundary shipments, content and layout of documents accompanying the transboundary transport of the waste with the instructions how they should be filled in ("Official Gazette RS", No. 60/2009)
23. Regulation on Amendment to Regulation on criteria and conditions for return, exemption or reduction of fees for environmental pollution ("Official Gazette RS", No. 24/2010)
24. Regulation on Determination of Activities with Impact on the Environment ("Official Gazette RS", No.109/2009 and 8/10)

25. Regulation on Criteria for Determination of Fees for the Protection and Improvement of the Environment and the Highest Value of the Fee ("Official Gazette RS", No. 111/09)
26. Regulation on the Criteria for Determination of the Best Available Techniques, for the Implementation of Quality Standards, as well as for Determination of Limit Values "Official Gazette RS", No. 84/05
27. Regulation on Content of the Program for Adaptation Measures of the Existing facilities or Activities by Prescribed Conditions ("Official Gazette RS", No. 84/2005)
28. Regulation on types of activities and facilities for which the integrated permit is issued ("Official Gazette RS", no.135/04)
29. Decree on establishing the list of projects which require environmental impact assessment and list of projects which may require environmental impact assessment ("Official Gazette of the RS", No. 114/2008),
30. Regulation on amount and conditions for allocation of stimulation funds ("Official Gazette RS", No. 88/2009, 67/2010,101/2010,86/2011 and 35/2012)
31. Regulation on products that become special waste streams after use, form of daily record on the amount and type of produced and imported products and annual report, manner and deadlines for submission of annual report to the payers of such fees, calculation criteria, fee amount and manner of fee calculation and payment ("Official Gazette RS", no. 54/2010, 86/2011, 15/2012, 41/2013, 3/2014, 81/2014 and 31/2015)
32. Regulation on termination of the Regulation on way and procedures for management of waste containing asbestos ("Official Gazette RS", No. 74/10)
33. Regulation on waste oil management ("Official Gazette RS", No. 60/2008 and 8/2010)
34. Regulation on the list of industrial facilities and activities which control emission of volatile organic compounds, on the value of volatile organic compounds at certain consumption of solvents and total allowed emissions, as well as the emission reduction scheme ("Official Gazette RS", No. 100/2011)
35. Regulation amending the air quality monitoring conditions and requirements regulation ("Official Gazette RS", no. 75/2010)
36. Regulation on the criteria and method for counting of the programs and projects being realized within the mechanism of clean development ("Official Gazette RS", No. 44/2010)
37. Regulation on emission limit values in waters and deadlines for the achievement thereof ("Official Gazette RS", No. 67/11 and 48/12)
38. Regulation on establishing the program for systematic testing of non-ionizing radiation levels in the environment for the period from 2015 to 2016 ("Official Gazette RS", no. 105/2015)
39. Regulation on the content and methods of management of environmental information system, methodology, structure, common grounds, categories and levels of data acquisition, as well as the content of information the public is regularly and necessarily informed about ("Official Gazette RS", No. 112/09)
40. Regulation on types of pollution, criteria for calculation of compensation for environmental pollution and persons liable, amount and method for calculation and payment of compensation ("Official Gazette RS", No. 113/2005, 6/2007, 8/2010, 102/2010,15/2012, 91/2012, 30/2013 and 25/2015)
41. Regulation on criteria for determination of the environmental protection compensation and the highest amount of compensation ("Official Gazette RS", № 111/09)

RULES

1. Regulation stipulating the emission limit values, measuring and data recording methods and time limits ("Official Gazette RS", number 30/1997, 35/1997)
2. Rulebook on contents, appearance and method of keeping the public book of implemented procedures and taken decisions on environmental impact assessment, "Official Gazette RS", No. 69/2005
3. Rulebook on public insight, presentation and public discussion about the EIA Study,("Official Gazette of the RS", No. 69/2005),

4. Rulebook on work of technical committee for environmental impact assessment study, ("Official Gazette of the RS", No. 69/2005),
5. Rulebook on contents of the request for necessity of environmental impact assessment and contents of the request for defining the scope and content of EIA Study ("Official Gazette of the RS", No. 69/2005),
6. Rulebook on contents of the Environmental Impact Assessment Study ("Official Gazette of the RS", No. 69/2005),
7. Rules on methods of noise measurement, content and scope of report on noise measurement "Official Gazette RS", No. 72/2010
8. Rules on conditions which have to be complied by the expert organization for noise measurement, as well as on the documents submitted together with the request for authorization for noise measurement ("Official Gazette RS"; No. 72/2010)
9. Rules on methodology for determining of acoustic zones "Official Gazette RS", No. 72/2010
10. Rules on content and methods for preparation of strategic noise maps and the manner of their presentation to the public ("Official Gazette RS", No. 80/2010)
11. Rules on methodology for preparation of action plans ("Official Gazette RS ", No. 72/2010)
12. Rules on manner of the exchange of information about the metering points in state and local network, measurement techniques, as well as the manner of the exchange of data obtained during the monitoring of air quality in state and local network ("Official Gazette RS", no. 84/2010)
13. Rulebook on contents of air quality plans ("Official Gazette of the RS", No. 21/2010)
14. Rulebook on contents of short-term air action plans ("Official Gazette of the RS", No. 65/2010)
15. Rules on categories, testing and classification of waste ("Official Gazette RS", No. 56/10)
16. Rules on form of document for movement of waste and instruction for its completion ("Official Gazette RS", No. 72/09)
17. Rules on form of request for the issuance of permit for waste storage, treatment and disposal ("Official Gazette RS", no.72/2009)
18. Rules on form of request for the issuance of permit for waste storage, treatment and disposal ("Official Gazette RS", no.72/2009)
19. Rules on the content, manner of record keeping and design of the register of issued permits for waste storage, treatment and disposal ("Official Gazette RS", no. 96/2009)
20. Rules on the content of the certificate on exemption from the obligation to obtain the permit for of internal non-hazardous waste storage ("Official Gazette RS", no. 73/2010)
21. Rules on daily evidence form and annual waste report form with the instruction for its completion ("Official Gazette RS", No. 95/2010)
22. Rules on the form of the document on hazardous waste transport and instructions how to fill in the form („Official Gazette RS", 114/2013)
23. Rules on hazardous waste storage, packing and labelling method („Official Gazette RS", no. 92/2010)
24. Rules on conditions, method and procedure for waste oil management, ("Official Gazette RS", No. 71/2010)
25. Rules on the way and procedure of old batteries and accumulators management ("Official Gazette RS", No. 86/10)
26. Rules on the way and procedure of waste tires management ("Official Gazette RS"; No. 104/09)
27. Rules on manner and procedure for management end-of-life vehicles ("Official Gazette RS", No. 98/10)
28. Rules on method and procedure for the management of waste fluorescent tubes containing mercury ("Official Gazette RS", No. 97/10)
29. Rules on the management the waste containing asbestos ("Official Gazette RS", no. 75/2010)
30. Rules on medical waste management ("Official Gazette RS", no. 78/2010)

31. Rules on how to destroy medicines, auxiliary medical devices and medical devices (“Official Gazette FRY”, no. 16/1994, and 22/1994 – correct. , “Official Gazette Serbia and Montenegro”, no. 1/2003, Constitutional Charter and “Official Gazette RS”, no. 78/2010 – other rules)
32. Rules on conditions and way of collecting, transportation, storage and treatment of waste used as secondary raw material or for energy generating "Official Gazette RS ", No. 98/10
33. Rules on methodology for collection of data on the content and amounts of municipal waste on the territory of local self-government unit (“Official Gazette RS”, no. 61/2010)
34. Rules on devices and waste containing PCB (“Official Gazette RS”, no. 37/2011)
35. Instructions defining preventive measures for safe keeping, storage, i.e. use of extremely hazardous chemicals (“Official Gazette RS”, no. 94/2010)
36. Rules on import and export of extremely hazardous chemicals (“Official Gazette RS”, 89/2010,15/2013 and 114/2014)
37. Rules on the content of the safety list ("Official Gazette RS", No. 100/11)
38. Rules on chemical registry (“Official Gazette RS”, No. 100/2011, 16/2012, 47/2012, 15/2013, 115/2013 and 1/201on 5)
39. Rules on bans and restrictions of production, placement on the market and use of chemicals (“Official Gazette of RS”, no. 90/2013 and 25/2015)
40. Rules on the criteria to identify substances as PBT or vPvB (“Official Gazette ES” no. 23/2010)
41. Rules on permits allowing transactions, i.e. on permits allowing the use extremely hazardous chemicals (“Official Gazette RS”, no. 94/2010, 55/2011 and 15/2013)
42. Rules on detergents („Official Gazette RS“ no. 25/2015)
43. List of surfactants for which an approval has been issued or an act has been adopted allowing the use of surfactants in detergent in the EU and list of surfactants for which a request for approval has been rejected and surfactants banned in the EU (“Official Gazette RS” no. 94/2010)
44. Rules on the manner of chemical record keeping (“Official Gazette”, no. 31/2011)
45. Rules on classification, packaging, labelling and advertising of certain chemicals and products (“Official Gazette RS”, no. 59/2010, 25/2011 and 5/2012)
46. Rules on classification, packaging, labelling, and advertising of certain chemicals and products in line with globally harmonized classification and marking system of the UN ("Official Gazette RS", No. 105/2013)
47. Rules on detailed conditions how to store hazardous chemicals in shops and the manner how to label those shops ("Official Gazette RS", No. 31/2011 and 16/2012)
48. List of substances of high concern (“Official Gazette RS”, No. 94/2013)
49. Rules on the content and form of request for the issuance of water acts and content of the opinion in the procedure of water conditions issuance (“Official Gazette RS”, 74/2010, 116/2012 and 58/2014)
50. Regulation on water information system that defines data collection, methodology, structure, categories and procedures, and form of information to be presented to public (“Official Gazette RS”, no. 54/2011)
51. Rules on water facilities/ structures cadaster (“Official Gazette RS”, no. 34/2011)
52. Rules on the content and manner of keeping the register of issued integrated permits (“Official Gazette RS” no. 69/2005)
53. Rules on the content, layout and manner of completing the application for integrated permit (“Official Gazette RS”, no. 30/2006)
54. Rules on the content and layout of integrated permit (“Official Gazette RS”, no. 30/2006)
55. Rules on the methodology for the preparation of national and local register of pollution sources as well as the methodology for types, manners and deadlines of data collection (“Official Gazette RS”, no. 91/2010 and 10/2013)

STRATEGIES

1. Waste Management Strategy for period 2010-2019 ("Official Gazette RS", № 29/2010)
2. The National Strategy for Sustainable Use of Natural Resources and Goods ("Official Gazette RS", № 33/2012)
3. National Environmental Approximation Strategy of the RS ("Official Gazette RS", № 80/2011)
4. Strategy of Cleaner Production Introduction in the RS ("Official Gazette RS", № 17/2009)
5. Strategy for Convention introduction on access to information, public participation in decision – making, and access to justice in Environmental Matters – The Aarhus Convention ("Official Gazette RS", № 103/2011)
6. National Sustainable Development Strategy ("Official Gazette RS", № 57/2008)
7. National Strategy on the Inclusion of the Republic of Serbia into Clean Development Mechanism of the Kyoto Protocol for the Waste Management Sector, Agriculture and Forestry ("Official Gazette RS", № 8/2010)

PROVISIONS FROM OTHER AREAS APPLIED IN THE AREA OF ENVIRONMENTAL PROTECTION

Ratified International treaties of significance for the Republic of Serbia

1. Law on confirmation of the Kyoto Protocol with United Nations Framework Convention on Climate Change, "Official Gazette RS", No. 88/07
2. Law Ratifying the Convention on Environmental Impact Assessment in a Transboundary Context, ("Official Gazette RS", No. 102/2007)
3. Law on confirmation of the Stockholm Convention on Persistent Organic Pollutants „Official Gazette RS", No. 42/09
4. Law ratifying the Convention on Biological Diversity ("Official Journal of SRJ - International Treaties ", No. 11/01)
5. Law ratifying the Convention on International Trade in Endangered Species of Wild Fauna and Flora ("Official Journal of SRJ - International Treaties ", No. 11/01)
6. Law ratifying the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal ("Official gazette of FNRY– International contracts", № 2/99)
7. Law ratifying The United Nations Framework Convention on Climate Change, with Annexes ("Official Journal of SRJ - International Treaties ", No. 2/97)
8. The Montreal Protocol on Substances that Deplete the Ozone Layer ("Official Journal of SFRY - International Treaties", No. 16/90 "Official Journal of Serbia and Montenegro - International Treaties ", No. 24/04)
9. The Vienna convention for the protection of the ozone layer, with Appendices I and II ("Official Journal of SFRY - International Treaties ", No. 1/90)
10. International Convention on bird protection ("Official Journal of SFRY- International Treaties ", No. 6/73)
11. Convention on swamps of international significance, especially as habitat of water birds ("Official Journal of SFRY - International Treaties ", No. 9/77)
12. European Convention on the protection of animals in international transportation ("Official Journal of SRY "- International Treaties ", No. 1/92)
13. Convention on cooperation for the protection and sustainable use of the Danube River ("Official Journal of SCG"- International Treaties ", No. 4/2003)
14. Montreal amendment to Vienna Convention on substances damaging the ozone layer ("Official Journal of SCG- International Treaties ", No. 2/2004)
15. Regulation on fish stock and waters of the Danube between the Government of FNRY, National Republic of Bulgaria, the Romanian National Republic and the Union of Soviet Republics ("Official Journal of FNRY" International Treaties, No. - 8/58)
16. Law ratifying the Convention for the protection of world cultural and natural heritage "Official Journal of SFRY" International Treaties, No. 8/74
17. Law ratifying the Convention for the Protection of Cultural Property in the Event of Armed Conflict "Official Journal of SFRY" International Treaties, No. 4/56
18. Law ratifying the Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property "Official Journal of SFRY" International Treaties, No. 50/73
19. Law ratifying the Vienna Convention on Civil Liability for Nuclear Damage "Official Journal of SFRY" International Treaties, No. 5/77
20. Regulation on ratification of the Convention on establishing European organization for plant protection "Official Journal of SFRY" International Treaties, No.12/57
21. Regulation on ratification of the International Plant Protection Convention "Official Journal of SFRY" International Treaties, No.7/55
22. Law Ratifying the Convention on Environmental Protection from Pollution of the Tisa River and its tributaries "Official Journal of SFRY" International Treaties, No.1/90

23. Law Ratifying the Convention on Long-range Trans-boundary Air Pollution "Official Journal of SFRY" International Treaties, No.11/86
24. Law Ratifying the Protocol 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
25. Law Ratifying the Montreal protocol on Substances that Deplete the Ozone Layer "Official Journal of SFRY "- International Treaties, No. 16/90
26. Law Ratifying the Convention on physical protection of nuclear material "Official Journal of SFRY "- International Treaties, No. 9/85
27. Law on the Conventions adopted based on Versailles treaty 8 June 1919, and based on appropriate provisions of other treaties adopted on International labour conferences, held in Washington, Geneva and Genoa1919-1926) "Official Gazette of The Kingdom of Yugoslavia", No. 44 XBI/30
28. Regulation on Ratification of the Convention on Protection against Benzol Poisoning "Official Journal of SFRY "- International Treaties, No. 16/76
29. Law Ratifying the Convention for prohibition and control of professional risks caused by carcinogens substances and agents "Official Journal of SFRY "- International Treaties, No. 3/77
30. Law on prohibition of experiments with nuclear weapons into the atmosphere, cosmos and under water "Official Journal of SFRY "- International Treaties, No. 11/63)
31. 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
32. Law Ratifying the Convention for protection of employees from professional risks in working environment caused by air pollution, noise and vibration "Official Journal of SFRY "- International Treaties, No. 14/82
33. Law Ratifying the Convention for occupational health, medical protection and working environment "Official Journal of SFRY "- International Treaties, No. 7/87
34. Law Ratifying the Convention for occupational health services "Official Gazette SRJ "- International Treaties, No. 14/89
35. Law Ratifying the Convention for safe use of asbestos "Official Gazette SRJ "- International Treaties, No. 4/89
36. Law Ratifying the European Convention for the Protection of the Archaeological Heritage "Official Gazette SRJ "- International Treaties, No. 9/90
37. Law Ratifying the European Convention for the Protection of the Architectural Heritage "Official Gazette SRJ "- International Treaties, No. 4/91
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

APPENDIX 3 ABBREVIATIONS

BOD	Biological Oxygen Demand
CHPP	Combined Heat and Power Plant
LEV	Limit Emission Value
MPC	Maximum Permissible Concentration
MP	Measuring Point
FGD	Flue Gas Desulfurization
OCM	Open Cast Mine
MB	Mining Basin
PSHPP	Pumped Storage Hydro Power Plant
TPP	Thermal Power Plant
TPP–OCM	Thermal Power Plant – Open Cast Mine
CHPP	Combined Heat and Power Plant
SS	Substation
TPM	Total Particulate Matters
HPP	Hydro Power Plant
COD	Chemical Oxygen Demand