SLOVENSKÝ VODOHOSPODÁRSKY PODNIK, š.p.

Odštepný závod Bratislava

Danube Strategy PA4

Experience of watercourses administrator with the application of selected legislative instruments in waste water discharges into surface waters

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The legislative framework setting conditions for authorizing waste water discharges and charging for water use

- Act No. 364 of 13 May 2004 on water, as amended (Water Act) and its implementing regulations, into which the WFD is implemented in and its related directives
- Government Regulation No.269/2010 Coll., establishing requirements to achieve good water status
- Act No. 442/2002 Coll. on public water supply and the public sewerage systems and on amendment of the Act of the Slovak National Council No. 276/2001 Coll. on regulation in network industries, as amended by Act No. 230/2005 Coll.
- Act No.71 / 1967 Coll. on Administrative Proceedings as amended
- Act No. 39/2013 Coll. on Integrated Pollution Prevention and Control, as amended (the Act IPPC)
- The Government Regulation č.755 / 2004 Coll., which establishes the amount of unregulated payments, fees and details related to charging for water as amended,

River Basin Water Management (the selection of § 11 of the Water Act)

It represents also,

- Monitoring of the point source pollution impact on the quality of the water recipients
- Providing standpoints for the implementation of river basin management plans, technical background documents and other technical documents for decision-making and other administrative works
- Water management administration of significant rivers
- River Basins Water Management is provided by the management of significant rivers

Generally watercourses management in the Slovak Republic is provided by

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Conditions determination for waste water discharging

§ 21 Water Act

special use of water has to be allowed and the permission, inter alia, determines:

- site and method of discharging, quantity of discharged waste water and permitted levels of pollution
- obligation to monitor the qualitative and quantitative parameters of discharged water and reporting the measured values

The permission holds up to six years maximum (discharges into groundwater or water containing priority hazardous substances) or ten years for other waste water

§ 36 Water Act

before discharging, waste water have to be treated in a way that limit values of discharged water are preserved in accordance with size of pollution source and waste water type

With regard to the emission control, the State Water Authority for the permission process is bounded by

- Surface water status
- Pollution limit values in wastewater
- requirements for surface water quality

The limit values can not be met by dilution with other water

The Government Regulation No.269/2010 Coll., which establishes requirements to achieve good water status

Executive Regulation for the Water Act in accordance with §81 WA

Determines the conditions, control approach, pollution limit values determination and

- Limit pollution values of waste water, discharged into surface water
- Limit pollution values of sewage waste water, urban waste water and special waste water, discharged into surface water or ground water
- Waste water discharging in sensitive area
- Requirements for waste water discharged from combined sewer overflows
- Requirements for water discharging from surface outflow

It is build on EMISSION – IMISSION principle of waste water discharging assessment

Requirements on residual pollution of discharged water

- Waste water treatment takes into account present status knowledge and economical sustainable options for technical solutions
- On behalf of water protection it is possible to state stricter limit values or state also values for other indicators
- Prevention of pollution spread mostly from industry by its elimination directly at the place of its origin
- In the sensitive areas there are stricter limits (phosphorous values have to be reduced at least by 80%, nitrogen by 70%)
- Limit values of waste water residual pollution discharged into recipient depend on the type of discharged waste water and water quality in the recipient
- Limit values are valid in so called „p“ sample, i.e. values in the mixed sample per determined time period

Emission limits presented in the Government Regulation 269/2010 Coll., Annex No 6 are not possible to exceed, Imission limits presented in the Government Regulation 269/2010 Coll., Annex No 5 are determined regarding the necessity of river natural purification capacity preservation

Emission limits (Annex No. 6 Government Regulation No.269/2010 Coll.)

- Are determined for individual types of waste water
- Are divided to the type of sewage and municipal waste water and the type of industrial and other waste water
- Sewage water is divided to size sub-categories in case of surface water discharging and to 2 sub-categories in case of groundwater discharging (max. to 50 p.e.)
- Industrial and special water discharged into surface water have 9 basic type subcategories and each subcategory is divided into further groups
- Each category, sub-category or group has the basic scale of pollution indicators and corresponding emission limits based on BAT (Best Available Technology)

EMISSION LIMITS in accordance with GR 269/2010 Coll. for sewage waste water and municipal waste water discharged into surface water

Source size[1)] (EO)	COD_{Cr} (mg/l)		BOD5 (ATM) (mg/l)		NL (mg/l)		$N - NH_4$ (mg/l)		N_{total} (mg/l)		P_{total} (mg/l)	
	p	m	p	m	p	m	p	m	p	m	p	m
to 50	-	-	40	70	-	-	-	-	-	-	-	-
51 – 2 000	135	170	30	60	30	60	-	-	-	-	-	-
2 001 – 10 000	120	170	25	45	25	50	20 30(Z1) - (Z2)	40 40(Z1) - (Z2)	-	-	-	-
10 001 – 25 000	100	140	20	35	25 20(C)	50 40(C)	15 25(Z1) - (Z2)	30 40(Z1) - (Z2)	25 15(C) 30(Z1) - (Z2)	40 40(C) 45(Z1) - (Z2)	- 2(C)	- 5(C)
25 001 – 100 000	90	125	20	30	20	40	10 15(Z1) - (Z2)	20 30(Z1) - (Z2)	20 15(C) 25(Z1) - (Z2)	30 30(C) 40(Z1) - (Z2)	3 2(C)	5 4(C)
over 100 000	90	125	15	25	20	40	5 15(Z1) - (Z2)	10 30(Z1) - (Z2)	15 10(C) 25(Z1) - (Z2)	25 25(C) 40(Z1) - (Z2)	2 1(C)	4 3(C)

Emission Proposal Assessment

Water Treatment Plan XXX/ residual pollution indicator	BOD_5		COD_{Cr}		NL		$N\text{-}NH_4$	
Concentration limits - mg/l	„p“	„m“	„p“	„m“	„p“	„m“	„p“	„m“
Guaranteed parameters at biological level outflow	20	35	90	140	25	45	15 25^{Z1}	**30** **35^{Z1}**
Guaranteed parameters at micro screen outflow	10	20	50	120	10	20	12 20^{Z1}	**25** **35^{Z1}**
Required limits	15	25	80	140	15	20	15 20^{Z1}	**25** **35^{Z1}**
Emission limits GR SR No. 269/2010 Coll.– Annex No. 6	30	60	135	170	30	60	–	–
Calculation on river influence – values after the blending	6,5		34,8		8,4		–	–
Imission limits GR SR No. 269/2010 Coll.– Annex No. 5	7		35		–		1,0	

Comparing the requirements of polluter for the limits and stated values by water administrator

Indicator	ZsVS, a.s. – proposed concentration limits „p“ (mg/l)	„m“ (mg/l)
BOD_5	25	45
COD_{Cr}	120	170
NL	25	50
N-NH4	20, 30(Z1)	40, 40(Z1)

Indicator	SVP, š.p. - proposed concentration limits „p“ (mg/l)	„m“ (mg/l)
BOD_5	15	45
COD_{Cr}	80	170
NL	20	50
$N\text{-}NH_4$	10	40, $40^{(Z1)}$

Charging for water use – support for reducing emissions to water

According to the Water Act (Act No. 364/2004 Coll.), according to § 78 and § 79 the use of water is charged in the form of payments (surface water abstractions and water for energy, river hydropower potential use) and charges per
Groundwater abstraction
Discharged waste water or special water into surface water
Discharged waste water or special water into groundwater
Geothermal water discharges into surface water

Economic instruments to promote rational use of water and wastewater treatment, or reducing emissions

Executed by
Government Regulation SR No.755 / 2004 Coll., which establishes the amount of unregulated payments, fees and details related to charging for water as amended, except for point 3, which is not in GR

Implemented through reporting- the fee notices / declarations polluter - issuer and results of control analyses made by water administrator
Differences in self-test and supervision by the water administrator are sometimes very large – multiple

Charging for waste water discharging into surface water

- In case of waste water discharges the determining factors are the amount of discharged water (but not charged) and the amount of discharged pollution after reaching or exceeding concentration and balance limits for charging (mg /l and kg / year) in 9 indicators of pollution
- Charged indicators:
  chemical consumption by dichromate
  suspended solids
  Total phosphorus
  Total nitrogen
  ammonia nitrogen
  soluble inorganic salts
  Adsorbable organically bound halogens
  mercury
  cadmium
  Fees are the revenue of the Environmental Fund, which distributes them to environmental programs

Prehľad uplatňovania poplatkov za vypúšťanie odpadových vôd do povrchových vôd podľa NV SR č. 755/2004 Z.z. - rok 2012

Skutočnosť je od predpokladu odlíšená tučným písmom

Por. čís.	Zdroj znečistenia / Číslo rozhodnutia / Vydané/Právoplatné	Suma poplatkov Predpoklad	Suma poplatkov Skutočnosť	Zníž. § 9 A/N	Preddavok (€) Mesiac,Štvrťrok (M)	(Š)	Množstvo odp. vôd m3/rok	Ukazovateľ znečistenia	Priemerná ročná koncentrácia mg/l	Ročná bilančná hodnota kg/rok	Odpočet zneč. odobranej vody kg/rok	Ročná bilančná hodnota po odpočte kg/rok	Sadzba €/kg	Upl %	Poplatok €
									0.0001	**0.10**		**0.10**			
								Cd							
									0.00008	**0.08**		**0.08**			
1	**Bratislavská vodárenská spoločnosť, a.s.,ČOV Holíč**									IČO: 35 850 370		Tok: KYŠTOR, 4.00 km			
	5101002212	26 537.47			M	2 211.46	1275000	CHSKCr	37.0	47175.00		47175.00	0.1992	100	9 397.26
	25.11.2011					2 211.41			**54.9**	**49982.72**		**49982.72**	**0.1992**	**100**	**9 956.56**
	16.12.2011							NL	10.0	12750.00		12750.00			
									15.0	**13656.48**		**13656.48**			
	5102002212	24 789.58					910432	Pcelk	1.80	2295.00		2295.00			
	25.03.2013								**1.55**	**1411.17**		**1411.17**			
								Ncelk	27.000	34425.00		11475.00	0.4979	100	5 713.40
									32.722	**29791.16**		**14332.94**	**0.4979**	**100**	**7 136.37**
								N-NH4	18.000	22950.00		22950.00	0.4979	100	11 426.81
									16.979	**15458.22**		**15458.22**	**0.4979**	**100**	**7 696.65**
								RAS							
									807.5	**735173.84**		**735173.84**			
								AOX							
									0.043	**39.15**		**39.15**			
								Hg							
								Cd							
									0.00008	**0.07**		**0.07**			
1	**Bratislavská vodárenská spoločnosť, a.s.,ČOV Petržalka**									IČO: 35 850 370		Tok: DUNAJ, 1862.50 km			
	5101002112	184 740.73			M	15 395.06	14550500	CHSKCr	22.0	320111.00		320111.00			
	25.11.2011					15 395.07			**18.7**	**194184.00**		**194184.00**			
	16.12.2011							NL	10.0	145505.00		145505.00			
									10.4	**107995.38**		**107995.38**			
	5102002112	105 473.69					10384171	Pcelk	1.05	15278.03		15278.03	3.3194	100	50 713.89
	25.03.2013								**0.76**	**7891.97**		**7891.97**			
								Ncelk	18.500	269184.25		269184.25	0.4979	100	134 026.84
									20.400	**211837.09**		**211837.09**	**0.4979**	**100**	**105 473.69**
								N-NH4	0.700	10185.35		10185.35			
									1.001	**10394.56**		**10394.56**			
								RAS							
									320.9	**3332280.47**		**3332280.47**			
								AOX							
									0.037	**384.21**		**384.21**			

Experience in the authorization of waste water discharge:

- Rarely the pollution source receives limit values at the level of emission limits (they are also built for sources with older equipment). Greater reduction of emission limits is at the municipal resources, in industry the reduction is more moderate
- A significant difference between the values achieved in the purification process or between the guaranteed values of the project and the values required for permission
- The large reserve of limits is needed
- The result is a compromise taking into account the options (recipient- quality, flow rate, further use, protected area etc. and possibilities of technology, operating costs, and other use of water – recycling
- Possibility - alteration of authorization
  - emission limits violation (mostly one time)
- Small household wastewater treatment plant
- Problems: Incorrect information about resource due to the control in "accredited" laboratory

Experience in charging

- Improvement of waste water treatment, decrease of emissions of pollution into watercourses (particularly the completion of removing nutrients from wastewater)
- Annual decrease in the amount of charged sources, the amount of charged pollution and the amount of collected charges
- The decrease is rapid
  e.g. during last five years in the territory administrated by OZ Bratislava from 35 to 25 resources, financial volume by more than 60%, that represents a decrease in the payments by about € 1.7 million.

Thank you for your attention