

## Environment – Quarterly Report – 1st Quarter

### Groundwater and surface water monitoring system

Groundwater monitoring system is used for the monitoring of impacts of plant operation on groundwater. The quality of surface water bodies is monitored in the Kotrcina stream at two stream profiles.

Index	Unit	SM1	SM2	SM3	SM4	SM5	PM1	PM2	PM4	PM7	PM8	PM9	PM10	PM11	PV1	PV2
Level	m	5.97	6	5.72	5,84	5.49	5.08	4.97	8.08	6.14	7.32	7.09	6.44	5.86		
Temperature	°C	11.1	10.8	11.8	10.4	10.1	8.2	9.0	11.3	9.7	11.2	12.5	9.2	9.6	3.6	4
pH	—	7.58	7.49	7.6	7.39	7.36	7.6	7.63	7.47	7.55	7.56	7.71	7.5	7.6	8.62	8.62
Conductivity	mS/m	68.2	72.1	68.3	71.0	69.6	66.0	71.3	69.2	64.5	68.9	67.9	71.6	73.8	49.7	49.5
COD-Mn	mg/l	0.13	0.13	<0.05	<0,05	0.38	0.06	0.06	0.06	0.16	0.22	0.06	<0.05	0.06	1.07	0.94
BOD-5	mg/l	<0.3	<0.3	0.3	0.43	<0.3	0.3	0.5	0.39	<0.3	<0.3	<0.3	0.31	<0.3	0.92	1.09
Nitrates	mg/l	16.4	14.2	22.2	22.6	25.5	12.6	13.4	26.0	13.0	14.2	17.2	22.2	16.4	0.45	0.54
Sulfates	mg/l	28.0	27.2	26.9	29.3	30.3	27.6	29.8	31.0	25.2	24.5	27.9	27.9	29.6	24.2	26.6
Ammonium ions	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrites	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01
Phosphates	mg/l	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.07	0.08
Total chromium	mg/l	0.001		0.001	0.001	<0.001	0.002	0.002	0.001	0.001	0.001	0.001	<0.001	0.001	<0.001	0.001

Ukazovateľ	Unit	SM1	SM2	SM3	SM4	SM5	PM1	PM2	PM4	PM7	PM8	PM9	PM10	PM11	PV1	PV2
Chromium Cr6	mg/l	<0.001	0.001	<0.001	<0.001	<0.001	0.002	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	mg/l	<0.002	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese	mg/l	<0.005	<0.002	<0.005	0.029	0.005	<0.005	<0.005	0.007	0.009	0.019	0.012	0.006	<0.005	0.009	0.011
Copper	mg/l	0.007	0.006	0.008	0.008	0.007	0.009	0.012	0.007	0.008	0.009	0.006	0.008	0.006	0.006	0.009
Nickel	mg/l	0.002	0.011	0.002	0.002	0.002	0.001	0.001	0.002	0.003	0.002	0.002	0.002	0.001	0.003	0.002
Lead	mg/l	0.001	0.002	0.001	0.001	0.001	0.001	<0.001	0.001	0.001	0.002	<0.001	<0.001	0.001	<0.001	<0.001
Zinc	mg/l	0.041	0.002	0.064	0.044	0.038	0.014	0.025	0.019	0.018	0.018	0.036	0.031	0.014	0.03	0.03
Iron	mg/l	0.068	0.043	0.061	0.649	0.116	0.028	0.056	0.093	0.192	0.323	0.144	0.071	0.04	0.078	0.072
NEL-IR *	mg/l	0.04	0.079	0.07	0.06	0.07	0.06	0.06	0.04	0.16	0.06	0.04	0.05	0.05	0.16	0.07
Hydrocarbon index	mg/l	<0.10	0.07	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		
Anionactive tensides	mg/l	0.03	<0.10	0.04	0.09	0.04	0.04	0.03	0.03	0.02	<0.02	<0.02	0.03	0.03	0.03	0.04
Benzene	ug/l	<1	0.04	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.05	<0.05
Toluene	ug/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.05	<0.05
Dimethylbenzenes	ug/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.05	<0.05
AOX	ug/l	5	<1	<4	<4	<4	4	7	<4	8	<4	<4	4	4		
TOC	mg/l	3.35	<4	<2	<2	<2	<2	<2	<2	<2	2.05	<2	2.95	2.65	2.99	4.54
Mercury	mg/l														<0.0002	<0.0002
Soluble Substances	-														308	320
Soluble oxygen	mg/l															13.19

### Industrial waste water pollution indicators

Quantity of industrial waste water discharged into the public sewerage: 106,344 m<sup>3</sup>

Index	pH	COD <sub>Cr</sub>	BOD <sub>5</sub>	Soluble Substances	N total	P total
Unit		mg/l	mg/l	mg/l	mg/l	mg/l
Publi sewerage limit	6-9	800	400	2,500	70	10
Concentration of pollutants*	8.39	183	33.6	451	8.46	0.24

\* Indicator values were measured on a qualified spot sample



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## Ambient air protection

KIA Motors Slovakia s.r.o. operates the following air pollution sources, categorised in line with Regulation of the Ministry of Environment of the Slovak Republic No 706/2002 Coll., as amended:

Large Pollution Sources	Medium-Sized Air Pollution Sources
Paint Shop	Press Shop
Vehicle process center (VPC)	Body Shop
Tank Farm	Assembly Shop
	Engine Shop
	Canteen
	Main office
	Section 6(Utility buildings)
	Fuel Station

The first authorised measurement of emissions produced by those sources, to which the obligation to carry out such measurements applies according to the current laws, was carried out during the trial operation. The results confirmed compliance with the emission limits by all air pollution sources that were measured.



In 2008, one-air pollution operated by KIA Motors Slovakia s.r.o. was changed, namely SO 100 Press Shop. The change consisted of the installation of exhaust system in the die washing area in March 2008. Emissions are exhausted from the working area and discharged by two exhausts on the roof. On both exhausts, authorised measurements of emissions of selected air pollutants were carried out on April 25, 2008 to verify compliance with the set emission limits. The measurements confirmed that emission limits were complied with.

Equipment	Pollutant	Emission limit [mg.m <sup>-3</sup> ]	Comparing value [mg.m <sup>-3</sup> ]	Result
exhaust 1	total organic compounds	120	8	ACCORDANCE
		180	8	
exhaust 2	total organic compounds	120	9	ACCORDANCE
		180	11	

*Broken down according to the validity of emission limit: Article 2 letter c) of Regulation of MoEnv SR No. 409/2003 Coll.*

*Requirements on compliance with emission limit: Article 5(6) of Regulation of MoEnv SR No. 409/2003 Coll.*

*Emission limit and comparison values stated at: weight concentration in mg.m<sup>-3</sup> under standard conditions (p=101,325 kPa, t=0°C), moist gas.*

*Emission limit value according to Annex 2, point 2.2 to Regulation of MoEnv SR No. 409/2003 Coll.*



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## Waste management

In the car production, KIA Motors Slovakia s.r.o. produces waste belonging to other and hazardous waste category. The table below shows the quantity of produced waste and methods of disposal in the 1st quarter of 2008.

Wastes	Amount in t	Utilization in %	Disposal in %
Hazardous	949.74	12.15%	87.85%
Others	11675.70	98.35%	1.65%
<b>Total</b>	<b>12625.44</b>	<b>94.56%</b>	<b>5.44%</b>