

Environment – Quarterly Report – 3rd Quarter

Groundwater and surface water monitoring system

Monitoring system of underground water is centered on plant operation impact on underground water. The surface water quality is monitored in Kotrcina stream at two stream profiles.

Index	Jedn	SM1	SM2	SM3	SM4	SM5	PM1	PM2	PM4	PM7	PM8	PM9	PM10	PM11	PV1	PV2
Level	m	6.61	6.58	6.39	6.56	6.23	5.96	5.92	9.09	6.95	8.00	7.76	7.22	6.80		
Temperature	°C	12.6	12.80	13.90	11.50	11.20	13.00	13.20	12.60	13.60	12.50	15.40	12.20	13.50	15.30	16.10
pH	—	7.21	7.17	7.20	7.19	7.12	7.19	7.26	7.24	7.32	7.24	7.33	7.20	7.25	7.67	7.81
Conductivity	mS/m	67.50	69.20	75.70	73.20	73.40	64.30	66.10	64.90	62.10	66.10	71.70	71.80	70.00	50.50	50.00
COD-Mn	mg/l	0.56	0.31	0.44	0.31	0.13	0.13	0.16	<0.05	<0.05	0.19	0.13	0.13	0.09	6.46	11.90
Nitrates	mg/l	10.80	9.50	18.70	19.40	22.90	9.00	12.2	22.30	9.90	9.00	13.20	19.40	16.90	<0.11	<0.11
NEL-IR *	mg/l	0.08	0.08	0.07	0.07	0.06	0.09	0.08	0.09	0.07	0.07	0.07	0.07	0.07	0.08	0.07
BTX	mg/l	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Etylbenzene	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hydrocarbon index	mg/l	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<2.00	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzene	ug/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	ug/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dimethylbenzenes	ug/l	<0.05	<0.05	<0.05	<0.05	0.10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05



TOC	mg/l	7.53	6.33	7.04	7.07	5.60	<2.00	<2.00	<0.11	<2.00	<2.00	<2.00	<2.00	<2.00	8.86	8.59
Sulphurs	mg/l	26.80	23.80	29.90	28.30	29.50	22.10	27.70	27.30	21.70	<0.02	27.20	28.30	28.60		
Ammoniacal salt	mg/l	0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	0.05	<0.02	<0.02		
Nitrite	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01		
Total chrome	mg/l	0.001	0.001	0.001	0.001	<0.001	<0.02	0.02	<0.02	0.02	0.001	0.02	<0.02	0.02		
Cadmium	mg/l	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.001	0.002	0.001	0.01	<0.0003	0.001	0.001	<0.001		
Manganese	mg/l	0.003	0.003	0.002	0.001	0.002	<0.0003	<0.0003	<0.0003	<0.0003	0.004	<0.0003	<0.0003	<0.0003		
Copper	mg/l	<0.004	<0.004	<0.004	<0.004	<0.004	<0.001	0.002	<0.001	0.005	0.017	<0.001	<0.001	0.002		
Nickel	mg/l	<0.001	0.001	0.001	0.001	0.001	0.013	0.026	0.009	0.016	0.001	0.024	0.013	0.02		
Lead	mg/l	0.001	0.001	0.001	<0.001	0.001	<0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001	0.001		
Mercury	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	<0.001	0.001	<0.001	<0.0002	0.001	<0.001	0.001		
Argentum	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002		
Zinc	mg/l	0.013	0.028	0.008	0.003	0.014	<0.001	<0.001	<0.001	<0.001	0.01	<0.001	<0.001	<0.001		
Total ferrous	mg/l	0.007	0.007	<0.005	0.055	0.038	0.009	0.021	0.005	0.016	0.026	0.024	0.004	0.009		
Soluble oxygen	mg/l														0.21	10.00

Indexes of industrial waste water contamination

Quantity of industrial waste water discharged into the public sewerage: 78,700.00 m³

Index	pH	COD _{Cr}	BOD ₅	Soluble Substances	N total	P total
Unit		mg/l	mg/l	mg/l	mg/l	mg/l
Public sewerage limit	6-9	800	400	2,500	70	10
Concentration of pollutants*	8.46	210.00	90.40	1,050.00	3.00	0.17

* Indexes are set by qualified spot sample

Air protection

KIA Motors Slovakia, s.r.o. is operating following air pollution sources dividing based on public notice No.706/2002 Coll.:

Large air pollution source	Middle 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

During the trial operation there was realized the first authorized emission measurement on the air pollution sources that has obligation of emission measurement based on legislation. The results confirmed the observance of emission limits by all measured air pollution sources. In On 14.9.2009 was realized the authorized emission measurement for pollutants (TOC) on SO 300 Paint shop (exhaust 08-62 and 10-63, spray cabin of top coat). Scope of measurement was found out amount of pollutants TOC in accordance with condition I.1.1. (2.3.) IPPC No 5742-24410/2009/Mar/770700104/Z4.

The purpose of measurement given is a comparison with the requirements and to raise the compliance or non-compliance respectively feasible.



Waste management

KIA Motors Slovakia s.r.o. is generating hazardous and other wastes by car production. Their amount and disposal method in the 3rd quarter 2009 is described in following table.

Wastes	Amount in t	Utilization in %	Disposal in %
Hazardous	688.88	12.00 %	88.00 %
Others	6,654.37	98.00 %	2.00 %
Total	7,343.25	90.00 %	10.00 %