



Environment – Quarterly Report – 4th Quarter 2013

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.

Monitoring place	Marking	Pollution parameters
Bore	SM-1, SM-2, SM-3, SM-4, SM-5, PM-1, PM-2, PM-4, PM-7, PM-8, PM-9, PM-10, PM-11, PM-13	temperature, level, pH, conductivity, CHSk-Mn, NEL-IR, BTEX, TOC
Creek - Kotrcina	PV-1, PV-2	temperature, pH, oxygen, conductivity, CHSK-Mn, nitric nitrogen, NEL-IR, BTX, benzene, toluene, xylene, ethylbenzene, hydrocarbon index, TOC
Rainwater sewage <i>(behind oil separator)</i>	DK-2 KIA	NEL-IR



Indexes of industrial waste water contamination

Quantity of industrial waste water discharged into the public sewerage: 84,089.00 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*	7.76	144.00	32.70	793.00	12.70	0.24

* 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. 410/2012 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.



On November 7th, 2013 there was carried out the authorized periodical measurement of emissions to verify compliance with the set emission limits on some boiler rooms exhausts in objects SO 410 Assembly, SO 500 Main office, SO 510 Canteen and SO M005 Engine Shop. The measurement confirmed that the emission limits were complied with.

Object	Exhaust	Pollutant	Emission limit [mg.m ⁻³]	Average measured value [mg.m ⁻³]	Result
SO 410	boiler K1	NOx-NO ₂	200	53	COMPLIANCE
		CO	100	36	COMPLIANCE
	boiler K2	NOx-NO ₂	200	48	COMPLIANCE
		CO	100	88	COMPLIANCE
SO 500	boiler K1	NOx-NO ₂	200	68	COMPLIANCE
		CO	100	2	COMPLIANCE
	boiler K2	NOx-NO ₂	200	64	COMPLIANCE
		CO	100	2	COMPLIANCE
SO 510	boiler K1	NOx-NO ₂	200	61	COMPLIANCE
		CO	100	3	COMPLIANCE
	boiler K2	NOx-NO ₂	200	70	COMPLIANCE
		CO	100	2	COMPLIANCE
SO M005	boiler K1	NOx-NO ₂	200	83	COMPLIANCE
		CO	100	2	COMPLIANCE
	boiler K2	NOx-NO ₂	200	82	COMPLIANCE
		CO	100	2	COMPLIANCE

Status conditions expressing the mass concentration of 0° C, 101.3 kPa, dry gas and reference oxygen value 3% (vol.)



On December 12th, 2013 there was carried out the authorized periodical measurement of emissions to verify compliance with the set emission limits in waste gas from process burners in object SO 300 Paint Shop. The measurement confirmed that the emission limits were complied with.

Exhaust	Pollutant	Emission limit [mg.m ⁻³]	Average measured value [mg.m ⁻³]	Result	Exhaust	Pollutant	Emission limit [mg.m ⁻³]	Average measured value [mg.m ⁻³]	Result
V23-121	NO _x -NO ₂	200	47	COMPLIANCE	V32-123	NO _x -NO ₂	200	87	COMPLIANCE
	CO	100	31,8	COMPLIANCE		CO	100	21,1	COMPLIANCE
V24-120	NO _x -NO ₂	200	51	COMPLIANCE	V33-24	NO _x -NO ₂	200	73	COMPLIANCE
	CO	100	34,5	COMPLIANCE		CO	100	14	COMPLIANCE
V25-119	NO _x -NO ₂	200	165	COMPLIANCE	V30-26	NO _x -NO ₂	200	184	COMPLIANCE
	CO	100	48,6	COMPLIANCE		CO	100	14	COMPLIANCE
V20-117	NO _x -NO ₂	200	181	COMPLIANCE	V36-109	NO _x -NO ₂	200	170	COMPLIANCE
	CO	100	14	COMPLIANCE		CO	100	14	COMPLIANCE
V21-118	NO _x -NO ₂	200	186	COMPLIANCE	V38-112	NO _x -NO ₂	200	165	COMPLIANCE
	CO	100	14	COMPLIANCE		CO	100	14	COMPLIANCE
V28-122	NO _x -NO ₂	200	143	COMPLIANCE	V41-124	NO _x -NO ₂	200	184	COMPLIANCE
	CO	100	14	COMPLIANCE		CO	100	82	COMPLIANCE
V31-25	NO _x -NO ₂	200	55	COMPLIANCE	V44-125	NO _x -NO ₂	200	181	COMPLIANCE
	CO	100	14	COMPLIANCE		CO	100	70	COMPLIANCE

*Status conditions expressing the mass concentration of 0° C, 101.3 kPa, dry gas and reference oxygen 3% (vol.)
The requirement to comply with the emission limit by integrated permit for Paint shop*



On December 12, 2013 there was carried out the authorized periodical measurement of emissions to verify compliance with the set emission limits in waste gas from top coat spray booths in object SO 300 Paint Shop. The measurement confirmed that the emission limits were complied with.

Exhaust	Pollutant	Emission limit [mg.m ⁻³]	Average measured value [mg.m ⁻³]	Result
V07-69	solids	3	0,9	COMPLIANCE
V09-70	solids	3	1,0	COMPLIANCE
V08-62	solids	3	1,0	COMPLIANCE
V10-63	solids	3	1,0	COMPLIANCE

Status conditions expressing the mass concentration of 0° C, 101.3 kPa and dry gas.



Waste management

Kia Motors Slovakia s.r.o. is generating hazardous and other wastes by car production. Their amount and disposal method in the 4th quarter 2013 is described in following table.

Wastes	Amount in t	Utilization in %	Disposal in %
Hazardous	1,263.92	3.49	96.51
Others	14,930.76	98.81	1.20
Total	16,194.68	91.37	8.63

Based on the Act No. 119/2010, obliged person – Kia Motors Slovakia s.r.o. ensures collection, recovery and recycling of packaging at its own expense.