

Attachment 18

Summarized results from physical and chemical tests of waste and groundwater of the Repository for Conventional Municipal and Industrial Wastes (RCMIW) region

SUMMARIZED RESULTS FROM PHYSICAL AND CHEMICAL TESTS OF WASTE AND GROUNDWATER OF THE REPOSITORY FOR CONVENTIONAL MUNICIPAL AND INDUSTRIAL WASTES (RCMIW) REGION FOR 2006

Monitored indicator	Unit	Limit envir.content	Contamination limit	I-st trimestre	II-nd trimestre
pH	-	7.71	7.29	7.52	-
Suspended solids	mg/dm ³	166	178	101	-
Oil products content	mg/dm ³	0.21	0.105	0.068	-
Ferrous /total/ content	mg/dm ³	8.27	1.25	1.55	-
Copper content	mg/dm ³	0.017	0.009	0.016	-
Chrome /total/ content	mg/dm ³	<0.01	0.017	0.013	-
Zinc content	mg/dm ³	0.085	0.066	0.076	-

Table 18-1 Results from samples test from inspection pit (IP) – 4 (leachate).

Monitored indicator	Unit	Limit envir.content	Contamination limit	I-st trimestre	II-nd trimestre
pH	-	7.68	7.73	8.32	7.86
Suspended solids	mg/dm ³	43	72	59	101
Oil products content	mg/dm ³	0.14	0.175	0.107	0.980
Ferrous /total/ content	mg/dm ³	0.69	0.423	0.49	0.47
Copper content	mg/dm ³	0.012	0.008	0.007	0.007
Chrome /total/ content	mg/dm ³	<0.01	<0.01	<0.01	<0.01
Zinc content	mg/dm ³	0.055	0.028	0.044	0.019

Table 18-2 Results from samples test from inspection pit (IP) – 7.

Monitored indicator	Unit	Limit envir.content	Contami- nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	-	1.90	2.10	2.60	2.30
Temperature	°C	-	-	12.5	13.9	12.8	15.4
pH	-	≥ 6,5 and ≤ 9,5		7.34	8.01	8.15	8.44
Amonia-ion content	mg/dm ³	0.12	1.2	0.01	0.014	0.005	<0.003
Nitrates content	mg/dm ³	10	30	8.17	10.6	12.9	24.1
Nitrites content	mg/dm ³	0.025	0.125	0.016	0.021	0.034	0.013
Dissolved solids	mg/dm ³	500	1000	498	453	538	503
Sulphate-ions content	mg/dm ³	50	150	272	204	73.8	58.4
Phosphates content	mg/dm ³	0.1	1	0.137	0.033	0.626	0.066
Chlorine-ions content	mg/dm ³	30	100	124	29.8	26.9	26.2
Arsenic content	µg/dm ³	10	30	0.3	0.3	< 1	1.1
Ferrous content /total/	µg/dm ³	50	200	491	161	60	50
Cadmium content	µg/dm ³	1	5	< 1	< 1	< 1	< 1
Mangan. /total/	µg/dm ³	20	50	371	44	12	< 5
Copper content	µg/dm ³	30	100	6	3	4	5
Nikel content	µg/dm ³	20	100	5	4	3	3
Lead content	µg/dm ³	30	200	< 5	< 5	< 5	< 5
Chrome /tot/ content	µg/dm ³	5	50	20	< 5	< 5	< 5
Zink content	µg/dm ³	200	1000	53	34	33	7
Cobalt content	µg/dm ³	5	100	< 1	< 1	< 1	< 1

Monitored indicator	Unit	Limit enviro.content	Contami-nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Mercury content	µg/dm ³	0.5	2	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-3 Results from samples test from test pit N 1.

Monitored indicator	Unit	Limit enviro.content	Contami-nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	-	1.60	1.95	2.30	2.12
Temperature	°C	-	-	12.6	14	13	15.2
pH	-	≥ 6.5 and ≤ 9.5		7.31	7.86	7.99	7.8
Amonia-ion content	mg/dm ³	0.12	1.2	0.013	0.012	< 0.003	0.003
Nitrates content	mg/dm ³	10	30	1.2	0.056	0.531	0.775
Nitrites content	mg/dm ³	0.025	0.125	0.059	0.018	0.015	0.176
Dissolved solids	mg/dm ³	500	1000	501	641	669	524
Sulphate-ions content	mg/dm ³	50	150	62.7	30.5	32.8	30.5
Phosphates content	mg/dm ³	0.1	1	0.08	0.006	0.196	0.012
Chlorine-ions content	mg/dm ³	30	100	43.9	47.5	47.5	48.2
Arsenic content	µg/dm ³	10	30	0,7	1,6	1,1	1,7
Ferrous content /total/	µg/dm ³	50	200	431	344	130	300
Cadmium content	µg/dm ³	1	5	< 1	< 1	< 1	< 1
Mangan. /total/	µg/dm ³	20	50	83	104	15	66
Copper content	µg/dm ³	30	100	8	3	3	6
Nikel content	µg/dm ³	20	100	1	3	1	2
Lead content	µg/dm ³	30	200	< 5	< 5	< 5	< 5
Chrome /tot/ content	µg/dm ³	5	50	7	< 5	< 5	< 5
Zink content	µg/dm ³	200	1000	10	17	39	18
Cobalt content	µg/dm ³	5	100	< 1	< 1	< 1	< 1
Mercury content	µg/dm ³	0.5	2	< 0.3	< 0.3	0.4	< 0.3

Table 18-4 Results from samples test from test pit N 2.

Monitored indicator	Unit	Limit enviro.content	Contami-nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	-	1.70	1.98	2.46	2.43
Temperature	°C	-	-	10.6	12.4	12.9	15.7
pH	-	≥ 6.5 and ≤ 9.5		7.62	7.73	7.66	7.69
Amonia-ion content	mg/dm ³	0.12	1.2	0,037	0.031	0.068	0.263
Nitrates content	mg/dm ³	10	30	0.258	2.09	7.09	9.08
Nitrites content	mg/dm ³	0.025	0.125	0.051	0.037	0.178	0.309
Dissolved solids	mg/dm ³	500	1000	529	577	700	584
Sulphate-ions content	mg/dm ³	50	150	42.9	277	90.1	75.2
Phosphates content	mg/dm ³	0.1	1	0.409	0.117	0.948	0.029

Monitored indicator	Unit	Limit enviro.content	Contami-nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Chlorine-ions content	mg/dm ³	30	100	35.5	20.6	27.6	33.3
Arsenic content	µg/dm ³	10	30	1.7	1.7	3	4.2
Ferrous content /total/	µg/dm ³	50	200	692	246	80	130
Cadmium content	µg/dm ³	1	5	< 1	< 1	< 1	< 1
Mangan. /total/	µg/dm ³	20	50	59	9	196	371
Copper content	µg/dm ³	30	100	5	5	6	5
Nikel content	µg/dm ³	20	100	2	2	3	9
Lead content	µg/dm ³	30	200	< 5	< 5	< 5	< 5
Chrome /tot/ content	µg/dm ³	5	50	6	< 5	< 5	7
Zink content	µg/dm ³	200	1000	60	35	51	27
Cobalt content	µg/dm ³	5	100	< 1	< 1	< 1	< 1
Mercury content	µg/dm ³	0.5	2	< 0.3	< 0.3	0.8	< 0.3

Table 18-5 Results from samples test from test pit N 3.

Monitored indicator	Unit	Limit enviro.content	Contami-nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	-	2.15	2.50	3.00	2.74
Temperature	°C	-	-	10.9	14	12.5	15.9
pH	-	≥ 6.5 and ≤ 9.5		7.19	7.57	7.63	7.53
Amonia-ion content	mg/dm ³	0.12	1.2	0.005	0.23	0.117	< 0.003
Nitrates content	mg/dm ³	10	30	2.05	3.16	1.63	0.353
Nitrites content	mg/dm ³	0.025	0.125	0.014	0.083	0.019	0.176
Dissolved solids	mg/dm ³	500	1000	662	869	635	619
Sulphate-ions content	mg/dm ³	50	150	133	358	85.9	59.5
Phosphates content	mg/dm ³	0.1	1	0.103	0.215	0.407	0.039
Chlorine-ions content	mg/dm ³	30	100	29.1	39	41.8	39.7
Arsenic content	µg/dm ³	10	30	0.6	0.9	0.5	1.3
Ferrous content /total/	µg/dm ³	50	200	293	151	60	70
Cadmium content	µg/dm ³	1	5	< 1	< 1	< 1	< 1
Mangan. /total/	µg/dm ³	20	50	21	76	100	33
Copper content	µg/dm ³	30	100	9	3	3	6
Nikel content	µg/dm ³	20	100	2	4	2	3
Lead content	µg/dm ³	30	200	< 5	< 5	< 5	< 5
Chrome /tot/ content	µg/dm ³	5	50	12	6	< 5	6
Zink content	µg/dm ³	200	1000	33	33	44	27
Cobalt content	µg/dm ³	5	100	< 1	< 1	< 1	< 1
Mercury content	µg/dm ³	0.5	2	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-6 Results from samples test from test pit N 4.

Monitored indicator	Unit	Limit enviro.content	Contami-nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	-	1.87	2.10	2.40	2.30
Temperature	°C	-	-	13.1	14.4	12.7	15.4
pH	-	≥ 6.5 and ≤ 9.5		7.39	7.45	7.71	7.62
Amonia-ion content	mg/dm ³	0.12	1.2	0.017	0.007	< 0.003	< 0.003
Nitrates content	mg/dm ³	10	30	< 0.003	0.240	0.620	0.733
Nitrites content	mg/dm ³	0.025	0.125	0.02	0.026	0.01	0.100
Dissolved solids	mg/dm ³	500	1000	530	625	530	558
Sulphate-ions content	mg/dm ³	50	150	41.2	18.6	38.6	32.6
Phosphates content	mg/dm ³	0.1	1	0.107	0.015	0.189	0.128
Chlorine-ions content	mg/dm ³	30	100	48.9	46.1	48.2	46.1
Arsenic content	µg/dm ³	10	30	1.5	1.2	0.9	1.7
Ferrous content /total/	µg/dm ³	50	200	660	277	130	70
Cadmium content	µg/dm ³	1	5	< 1	< 1	< 1	< 1
Mangan. /total/	µg/dm ³	20	50	56	48	39	35
Copper content	µg/dm ³	30	100	4	3	2	7
Nikel content	µg/dm ³	20	100	2	< 1	2	1
Lead content	µg/dm ³	30	200	< 5	< 5	< 5	< 5
Chrome /tot/ content	µg/dm ³	5	50	< 5	< 5	< 5	6
Zink content	µg/dm ³	200	1000	25	40	39	28
Cobalt content	µg/dm ³	5	100	< 1	< 1	< 1	< 1
Mercury content	µg/dm ³	0.5	2	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-7 Results from samples test from test pit No 944 (comparative, new).

SUMMARIZED RESULTS FROM PHYSICAL AND CHEMICAL TESTS OF WASTE AND GROUNDWATER OF THE REPOSITORY FOR CONVENTIONAL MUNICIPAL AND INDUSTRIAL WASTES (RCMIW) REGION FOR 2007

Monitored indicator	Unit	Limit envir.content	Contamination limit	I-st trimestre	II-nd trimestre
pH	-	7.41	7.09	8.05	7.88
Suspended solids	mg/dm ³	72	84	63	30
Oil products content	mg/dm ³	0.139	0.15	0.274	0.308
Ferrous /total/ content	mg/dm ³	0.52	0.53	0.249	3.4
Copper content	mg/dm ³	0.016	0.009	0.005	0.012
Chrome /total/ content	mg/dm ³	< 0.01	0.012	< 0.01	0.011
Zinc content	mg/dm ³	0.061	0.061	0.021	0.049

Table 18-8 Results from samples test from inspection pit (IP) – 4 (leachate)

Monitored indicator	Unit	Limit envir.content	Contamination limit	I-st trimestre	II-nd trimestre
pH	-	7.63	7.58	8.21	8.32
Suspended solids	mg/dm ³	68	63	70	36
Oil products content	mg/dm ³	0.277	0.35	0.321	0.266
Ferrous /total/ content	mg/dm ³	0.175	0.18	0.095	1.86
Copper content	mg/dm ³	0.006	0.004	0.009	0.01
Chrome /total/ content	mg/dm ³	< 0.01	< 0.01	< 0.01	< 0.01
Zinc content	mg/dm ³	0.022	< 0.005	0.034	0.043

Table 18-9 Results from samples test from inspection pit (IP) – 7 (RCMIW site)

Monitored indicator	Unit	Limit envir.content	Contami- nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	-	2.24	2.5	2.5	2.3
Temperature	°C	-	-	9.8	16	-	-
pH	-	≥ 6,5 and ≤ 9,5	-	7.38	7.25	8.02	7.56
Amonia-ion content	mg/dm ³	0.12	1.2	0.021	0.016	0.026	0.025
Nitrates content	mg/dm ³	10	30	20.9	14.6	0.352	9.2
Nitrites content	mg/dm ³	0.025	0.125	0.005	0.127	0.11	0.004
Dissolved solids	mg/dm ³	500	1000	581	595	690	581
Sulphate-ions content	mg/dm ³	50	150	43.9	46.6	34.7	47.9
Phosphates content	mg/dm ³	0.1	1	0.055	0.027	0.23	0.306
Chlorine-ions content	mg/dm ³	30	100	29.7	31.9	70.9	31.9
Arsenic content	µg/dm ³	10	30	0.8	0.2	0.6	0.4
Ferrous content /total/	µg/dm ³	50	200	60	80	61.4	55
Cadmium content	µg/dm ³	1	5	< 1	< 1	< 1	< 1
Mangan. /total/	µg/dm ³	20	50	< 5	< 5	37	< 5
Copper content	µg/dm ³	30	100	3	7	6	6
Nikel content	µg/dm ³	20	100	2	4	4	4
Lead content	µg/dm ³	30	200	< 5	< 5	< 5	< 5
Chrome /tot/ content	µg/dm ³	5	50	< 5	< 5	6	< 5
Zink content	µg/dm ³	200	1000	15	< 5	9	12
Cobalt content	µg/dm ³	5	100	< 1	< 1	< 1	< 1

Monitored indicator	Unit	Limit enviro.content	Contami-nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Mercury content	µg/dm ³	0.5	2	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-10 Results from samples test from test pit No 1.

Monitored indicator	Unit	Limit enviro.content	Contami-nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	-	2	2.9	3	2.1
Temperature	°C	-	-	10	15.8	-	-
pH	-	≥ 6.5 and ≤ 9.5		7.44	8.55	8.18	7.48
Amonia-ion content	mg/dm ³	0.12	1.2	0.079	0.043	0.056	0.02
Nitrates content	mg/dm ³	10	30	1.64	9.72	< 0.003	1.41
Nitrites content	mg/dm ³	0.025	0.125	0.008	0.011	0.034	0.052
Dissolved solids	mg/dm ³	500	1000	516	550	678	511
Sulphate-ions content	mg/dm ³	50	150	17.9	29.9	77.3	17.1
Phosphates content	mg/dm ³	0.1	1	0.033	< 0.001	< 0.005	0.360
Chlorine-ions content	mg/dm ³	30	100	48.2	49.6	45.4	49.6
Arsenic content	µg/dm ³	10	30	2.2	0.6	2.4	2
Ferrous content /total/	µg/dm ³	50	200	< 50	220	< 50	277
Cadmium content	µg/dm ³	1	5	< 1	< 1	< 1	< 1
Mangan. /total/	µg/dm ³	20	50	94	57	36	28
Copper content	µg/dm ³	30	100	5	3	6	6
Nikel content	µg/dm ³	20	100	4	1	3	< 1
Lead content	µg/dm ³	30	200	< 5	< 5	< 5	< 5
Chrome /tot/ content	µg/dm ³	5	50	< 5	< 5	< 5	< 5
Zink content	µg/dm ³	200	1000	15	< 5	10	29
Cobalt content	µg/dm ³	5	100	< 1	< 1	< 1	< 1
Mercury content	µg/dm ³	0.5	2	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-11 Results from samples test from test pit No 2.

Monitored indicator	Unit	Limit enviro.content	Contami-nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	-	2.1	-	-	-
Temperature	°C	-	-	10.7	15.7	-	-
pH	-	≥ 6.5 and ≤ 9.5		7.75	8.83	-	-
Amonia-ion content	mg/dm ³	0.12	1.2	0.039	0.622	-	-
Nitrates content	mg/dm ³	10	30	7.75	6.17	-	-
Nitrites content	mg/dm ³	0.025	0.125	0.037	0.149	-	-
Dissolved solids	mg/dm ³	500	1000	254	533	-	-
Sulphate-ions content	mg/dm ³	50	150	12.4	30.7	-	-
Phosphates content	mg/dm ³	0.1	1	0.154	0.069	-	-

Monitored indicator	Unit	Limit enviro.content	Contami-nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Chlorine-ions content	mg/dm ³	30	100	24.8	14.2	-	-
Arsenic content	µg/dm ³	10	30	1.9	0.7	-	-
Ferrous content /total/	µg/dm ³	50	200	80	230	-	-
Cadmium content	µg/dm ³	1	5	< 1	< 1	-	-
Mangan. /total/	µg/dm ³	20	50	8	575	-	-
Copper content	µg/dm ³	30	100	9	2	-	-
Nikel content	µg/dm ³	20	100	2	1	-	-
Lead content	µg/dm ³	30	200	< 5	7	-	-
Chrome /tot/ content	µg/dm ³	5	50	< 5	< 5	-	-
Zink content	µg/dm ³	200	1000	22	18	-	-
Cobalt content	µg/dm ³	5	100	< 1	< 1	-	-
Mercury content	µg/dm ³	0.5	2	< 0.3	< 0.3	-	-

Table 18-12 Results from samples test from test pit No 3.

Monitored indicator	Unit	Limit enviro.content	Contami-nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	-	2.6	2.4	2.7	2.5
Temperature	°C	-	-	10.1	16.4	-	-
pH	-	≥ 6.5 and ≤ 9.5	-	7.34	8.84	8.09	8.03
Amonia-ion content	mg/dm ³	0.12	1.2	0.089	0.141	< 0.003	0.01
Nitrates content	mg/dm ³	10	30	0.573	3.26	4.65	14.9
Nitrites content	mg/dm ³	0.025	0.125	0.013	0.069	0.008	0.009
Dissolved solids	mg/dm ³	500	1000	602	696	497	694
Sulphate-ions content	mg/dm ³	50	150	44.2	53.5	19.4	75.7
Phosphates content	mg/dm ³	0.1	1	0.046	0.019	0.021	0.35
Chlorine-ions content	mg/dm ³	30	100	40.4	37.6	53.2	45.4
Arsenic content	µg/dm ³	10	30	1.2	1	1.5	1.5
Ferrous content /total/	µg/dm ³	50	200	110	110	< 50	172
Cadmium content	µg/dm ³	1	5	< 1	< 1	< 1	< 1
Mangan. /total/	µg/dm ³	20	50	65	204	8	97
Copper content	µg/dm ³	30	100	2	2	8	6
Nikel content	µg/dm ³	20	100	4	2	3	3
Lead content	µg/dm ³	30	200	< 5	< 5	< 5	< 5
Chrome /tot/ content	µg/dm ³	5	50	< 5	< 5	< 5	< 5
Zink content	µg/dm ³	200	1000	19	7	23	14
Cobalt content	µg/dm ³	5	100	< 1	< 1	< 1	< 1
Mercury content	µg/dm ³	0.5	2	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-13 Results from samples test from test pit No 4.

Monitored indicator	Unit	Limit enviro.content	Contami-nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	-	2.27	2.6	2.9	2.2
Temperature	°C	-	-	10.4	17.1	-	-
pH	-	≥ 6.5 and ≤ 9.5		7.45	8.78	8.16	7.61
Amonia-ion content	mg/dm ³	0.12	1.2	0.438	0.042	< 0.003	0.022
Nitrates content	mg/dm ³	10	30	0.850	1.1	1.17	7.46
Nitrites content	mg/dm ³	0.025	0.125	0.013	0.054	0.04	0.011
Dissolved solids	mg/dm ³	500	1000	516	576	553	513
Sulphate-ions content	mg/dm ³	50	150	19.8	31	50.7	21.2
Phosphates content	mg/dm ³	0.1	1	0.018	0.008	0.042	0.328
Chlorine-ions content	mg/dm ³	30	100	46.1	50.3	36.2	48.9
Arsenic content	µg/dm ³	10	30	1.9	1.2	1.5	2.2
Ferrous content /total/	µg/dm ³	50	200	150	290	147	334
Cadmium content	µg/dm ³	1	5	< 1	< 1	< 1	< 1
Mangan. /total/	µg/dm ³	20	50	65	90	< 5	40
Copper content	µg/dm ³	30	100	5	3	10	3
Nikel content	µg/dm ³	20	100	3	2	5	7
Lead content	µg/dm ³	30	200	< 5	< 5	< 5	< 5
Chrome /tot/ content	µg/dm ³	5	50	< 5	< 5	< 5	< 5
Zink content	µg/dm ³	200	1000	12	14	6	18
Cobalt content	µg/dm ³	5	100	< 1	< 1	< 1	< 1
Mercury content	µg/dm ³	0.5	2	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-14 Results from samples test from test pit No 5.

Monitored indicator	Unit	Limit enviro.content	Contami-nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	-	-	-	-	8.6
pH	-	≥ 6.5 and ≤ 9.5		-	-	-	7.69
Amonia-ion content	mg/dm ³	0.12	1.2	-	-	-	< 0.003
Nitrates content	mg/dm ³	10	30	-	-	-	0.009
Nitrites content	mg/dm ³	0.025	0.125	-	-	-	32.9
Dissolved solids	mg/dm ³	500	1000	-	-	-	869
Sulphate-ions content	mg/dm ³	50	150	-	-	-	39.3
Phosphates content	mg/dm ³	0.1	1	-	-	-	0.327
Chlorine-ions content	mg/dm ³	30	100	-	-	-	9.93
Oxidation by permanganate	mg/dm ³	-	-				1.77
Total β-activity	Bq/ dm ³	2					0.130
Arsenic content	µg/dm ³	10	30	-	-	-	1

Monitored indicator	Unit	Limit enviro.content	Contami-nation limit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Ferrous content /total/	µg/dm ³	50	200	-	-	-	< 50
Cadmium content	µg/dm ³	1	5	-	-	-	< 1
Mangan. /total/	µg/dm ³	20	50	-	-	-	< 5
Copper content	µg/dm ³	30	100	-	-	-	4
Nikel content	µg/dm ³	20	100	-	-	-	3
Lead content	µg/dm ³	30	200	-	-	-	< 5
Chrome /tot/ content	µg/dm ³	5	50	-	-	-	7
Zink content	µg/dm ³	200	1000	-	-	-	12
Cobalt content	µg/dm ³	5	100	-	-	-	< 1
Mercury content	µg/dm ³	0.5	2	-	-	-	< 0.3

Table 18-15 Results from samples test from test pit No 944 (comparative, new) .

SUMMARIZED RESULTS FROM PHYSICAL AND CHEMICAL TESTS OF WASTE AND GROUNDWATER OF THE REPOSITORY FOR CONVENTIONAL MUNICIPAL AND INDUSTRIAL WASTES (RCMIW) REGION FOR 2008

Indicators	Unit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
pH	-	7.57	7.15	7.31	8.22
Suspended solids	mg/dm ³	24	250	145	47
Oil products	mg/dm ³	0.3	0.32	0.14	0.7
Ferrous /total/ content	mg/dm ³	0.471	1.86	1.06	2.83
Copper content	mg/dm ³	0.0071	0.0107	0.0129	0.0084
Chrome /total/ content	mg/dm ³	< 0.001	< 0.001	< 0.001	< 0.001
Zink content	mg/dm ³	0.043	0.024	0.14	0.046

Table 18-16 Results from samples test from inspection pit (IP) – 4 (leachate).

Indicators	Unit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
pH	-	7.42	7.76	7.8	7.73
Suspended solids	mg/dm ³	41	57	68	40
Oil products	mg/dm ³	0.55	0.24	0.1	1.25
Ferrous /total/ content	mg/dm ³	1.76	0.245	0.182	0.989
Copper content	mg/dm ³	0.0052	0.0054	0.0085	0.0081
Chrome /total/ content	mg/dm ³	0.012	< 0.001	< 0.001	< 0.001
Zink content	mg/dm ³	0.026	< 0.005	0.059	0.067

Table 18-17 Results from samples test from inspection pit (IP) – 7 (RCMIW site).

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	2.3	2.5	2.8	2.7
Temperature	-	≥ 6.5 and ≤ 9.5	7.38	8.47	7.35	8.13
pH	mg/dm ³	0.50	0.016	0.09	0.002	< 0.0075
Amonia-ion content	mg/dm ³	50	12.7	12.4	19.9	14.2
Nitrates content	mg/dm ³	0.5	0.01	0.023	0.103	0.024
Nitrites content	mg/dm ³	-	721	541	1181	505
Dissolved solids	mg/dm ³	250	48.3	53.4	67.9	50.4
Sulphate-ions content	mg/dm ³	0.5	0.058	0.099	0.009	0.014
Phosphates content	mg/dm ³	250	34	26.8	28.4	26.2
Chlorine-ions content	μg/dm ³	50	0.6	0.7	0.7	0.6
Arsenic content	μg/dm ³	200	91.8	22	68.4	189
Ferrous content /total/	μg/dm ³	5	< 1	< 1	< 1	< 1
Cadmium content	μg/dm ³	50	< 5	< 5	8.1	< 5
Mangan. /total/	μg/dm ³	200	3.5	4	5.2	4.5
Copper content	μg/dm ³	20	2.7	4	3.9	13
Nikel content	μg/dm ³	10	< 5	< 5	< 5	< 5
Lead content	μg/dm ³	10	< 5	< 5	< 5	< 5
Chrome /tot/ content	μg/dm ³	500	30	11	58	80
Zink content	μg/dm ³	-	1.9	< 1	< 1	< 1
Cobalt content	μg/dm ³	1	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-18 Results from samples test from test pit No 1.

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	1.9	2.3	3.15	2.5

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Temperature	-	≥ 6.5 and ≤ 9.5	7.23	8.36	7.68	7.85
pH	mg/dm ³	0.50	0.035	0.163	0.122	0.078
Amonia-ion content	mg/dm ³	50	4.72	1.9	2.67	0.874
Nitrates content	mg/dm ³	0.5	0.017	0.036	0.104	0.024
Nitrites content	mg/dm ³	-	536	487	1064	475
Dissolved solids	mg/dm ³	250	41.1	21	39.5	18.8
Sulphate-ions content	mg/dm ³	0.5	0.028	0.095	0.064	0.007
Phosphates content	mg/dm ³	250	46.1	52.1	53.9	51.7
Chlorine-ions content	μg/dm ³	50	1.3	1.6	3.2	1.1
Arsenic content	μg/dm ³	200	430	763	745	271
Ferrous content /total/	μg/dm ³	5	< 1	< 1	< 1	< 1
Cadmium content	μg/dm ³	50	123	60	146	29.1
Mangan. /total/	μg/dm ³	200	2.6	3	1.8	4.6
Copper content	μg/dm ³	20	3.1	2	2.1	< 1
Nikel content	μg/dm ³	10	< 5	< 5	< 5	< 5
Lead content	μg/dm ³	10	< 5	< 5	< 5	< 5
Chrome /tot/ content	μg/dm ³	500	20	7	65	62
Zink content	μg/dm ³	-	< 1	< 1	< 1	< 1
Cobalt content	μg/dm ³	1	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-19 Results from samples test from test pit No 2.

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	2.5	2.6	2.8	3.0
Temperature	-	≥ 6.5 and ≤ 9.5	7.01	8.87	7.83	7.84
pH	mg/dm ³	0.50	0.018	0.54	0.02	0.514
Amonia-ion content	mg/dm ³	50	6.44	1.51	2.69	12
Nitrates content	mg/dm ³	0.5	0.008	0.018	0.077	0.014
Nitrites content	mg/dm ³	-	265	432	1222	542
Dissolved solids	mg/dm ³	250	81.5	35.1	74.2	43.5
Sulphate-ions content	mg/dm ³	0.5	0.046	0.099	0.024	0.026
Phosphates content	mg/dm ³	250	36.8	15.8	38.9	41.8
Chlorine-ions content	μg/dm ³	50	0.9	1.9	1	1.3
Arsenic content	μg/dm ³	200	115	387	118	202
Ferrous content /total/	μg/dm ³	5	< 1	< 1	< 1	< 1
Cadmium content	μg/dm ³	50	67	97	4.2	35.6
Mangan. /total/	μg/dm ³	200	3.4	8.6	1.7	4.3
Copper content	μg/dm ³	20	4.4	3.8	3.4	< 1
Nikel content	μg/dm ³	10	< 5	< 5	< 5	< 5
Lead content	μg/dm ³	10	< 5	< 5	< 5	< 5
Chrome /tot/ content	μg/dm ³	500	23	< 5	100	42
Zink content	μg/dm ³	-	< 1	< 1	< 1	< 1
Cobalt content	μg/dm ³	1	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-20 Results from samples test from test pit No 4.

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	2.1	2.2	2.95	2.3
Temperature	-	≥ 6.5 and ≤ 9.5	7.04	8.28	7.4	7.93
pH	mg/dm ³	0.50	0.049	0.155	0.26	0.576
Amonia-ion content	mg/dm ³	50	3.28	< 0.013	1.81	3.59
Nitrates content	mg/dm ³	0.5	0.001	0.05	0.6	0.012
Nitrites content	mg/dm ³	-	348	529	1138	498
Dissolved solids	mg/dm ³	250	38.1	11.6	38.2	22.1
Sulphate-ions content	mg/dm ³	0.5	0.055	0.07	0.055	0.016
Phosphates content	mg/dm ³	250	51	55.3	54.6	55.3
Chlorine-ions content	µg/dm ³	50	1.4	1.8	2.8	1.5
Arsenic content	µg/dm ³	200	364	464	354	1164
Ferrous content /total/	µg/dm ³	5	< 1	< 1	< 1	< 1
Cadmium content	µg/dm ³	50	106	51	113	11.1
Mangan. /total/	µg/dm ³	200	2.1	2.8	3.1	5
Copper content	µg/dm ³	20	< 1	< 1	4.6	< 1
Nikel content	µg/dm ³	10	< 5	< 5	< 5	< 5
Lead content	µg/dm ³	10	< 5	< 5	< 5	< 5
Chrome /total/ content	µg/dm ³	500	12	< 5	3.1	29
Zink content	µg/dm ³	-	< 1	< 1	< 1	< 1
Cobalt content	µg/dm ³	1	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-21 Results from samples test from test pit No 5.

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	-	9.0	-	9.2
Temperature	-	≥ 6.5 and ≤ 9.5	-	7.82	7.84	7.94
pH	mg/dm3	0.5	-	0.032	0.073	0.101
Amonia-ion content	mg/dm3	50	-	29.2	8.2	40.5
Nitrates content	mg/dm3	0.5	-	0.007	0.134	0.009
Nitrites content	mg/dm3	-	-	857	1695	777
Dissolved solids	mg/dm3	250	-	35.6	55.1	35.3
Sulphate-ions content	mg/dm3	0.5	-	0.036	0.021	0.025
Phosphates content	mg/dm3	250	-	14.2	10.6	13.5
Chlorine-ions content	µg/dm3	50	-	0.9	0.9	0.9
Arsenic content	µg/dm3	200	-	< 20	74.3	135
Ferrous content /total/	µg/dm3	5	-	< 1	< 1	< 1
Cadmium content	µg/dm3	50	-	< 5	< 5	< 5
Mangan. /total/	µg/dm3	200	-	2.4	6.1	6.1
Copper content	µg/dm3	20	-	< 1	2.2	< 1
Nikel content	µg/dm3	10	-	< 5	< 5	< 5
Lead content	µg/dm3	10	-	7.8	7	5.8
Chrome /tot/ content	µg/dm3	500	-	< 5	2.7	58
Zink content	µg/dm3	-	-	< 1	< 1	< 1
Cobalt content	µg/dm ³	1	-	< 0.3	< 0.3	< 0.3

Table 18-22 Results from samples test from test pit No 944 (comparative, new).

SUMMARIZED RESULTS FROM PHYSICAL AND CHEMICAL TESTS OF WASTE AND GROUNDWATER OF THE REPOSITORY FOR CONVENTIONAL MUNICIPAL AND INDUSTRIAL WASTES (RCMIW) REGION FOR 2009

Indicators	Unit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
pH	-	7.86	7.6	7.88	8.18
Suspended solids	mg/dm ³	75	24	100	39
Oil products content	mg/dm ³	1.2	0.5	0.1	0.3
Ferrous /total/ content	mg/dm ³	2.37	0.95	0.440	0.380
Copper content	mg/dm ³	0.005	0.008	0.0024	0.0075
Chrome /total/ content	mg/dm ³	< 0.01	< 0.01	< 0.01	0.0175
Zinc content	mg/dm ³	0.021	0.042	0.033	0.052

Table 18-23 Results from samples test from inspection pit (IP) – 4 (leachate from RCMIW)

Indicators	Unit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
pH	-	8.00	7.84	8.09	8.43
Suspended solids	mg/dm ³	26	15	9	36
Oil products content	mg/dm ³	0.5	0.6	0.2	1.9
Ferrous /total/ content	mg/dm ³	0.14	0.1	0.06	0.52
Copper content	mg/dm ³	0.0058	0.0082	0.0013	0.0095
Chrome /total/ content	mg/dm ³	< 0.01	< 0.01	< 0.01	< 0.01
Zinc content	mg/dm ³	0.031	0.028	0.014	0.034

Table 18-24 Results from samples test from inspection pit (IP) – 7 (municipal and surface water from the RCMIW site)

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	2.20	2.65	2.50	2.30
Amonia-ion content	mg/dm ³	0.5	< 0.007	0.227	0.026	0.554
Nitrates content	mg/dm ³	50	20.6	12.3	11.3	3.97
Nitrites content	mg/dm ³	0.5	< 0.008	0.034	0.042	1.59
Dissolved solids	mg/dm ³	-	537	598	517	504
Sulphate-ions content	mg/dm ³	250	65.1	43.4	49.1	49.7
Phosphates content	mg/dm ³	0.5	0.165	0.02	0.087	0.019
Chlorine-ions content	mg/dm ³	250	25.5	34	24.8	29.8
Arsenic content	mg/dm ³	0.01	0.0015	0.0006	0.0007	0.0009
Ferrous content /total/	mg/dm ³	200	190	10	< 50	< 30
Cadmium content	mg/dm ³	5	< 1	< 1	< 1	< 1
Mangan. /total/	mg/dm ³	50	5.1	< 5	< 5	23.5
Copper content	mg/dm ³	0.2	0.0032	0.0055	0.0022	0.0042
Nikel content	mg/dm ³	20	3.1	2.9	1.8	3.5
Lead content	mg/dm ³	10	< 5	< 5	< 5	< 5
Chrome /tot/ content	mg/dm ³	50	< 5	< 5	< 5	6.3

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Zink content	mg/dm ³	1	< 5	0.009	0.021	0.015
Cobalt content	mg/dm ³	-	< 1	< 1	< 1	< 1
Mercury content	mg/dm ³	1	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-25 Results from samples test from test pit N 1 next to RCMIW

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	2.25	2.35	2.50	2.10
Amonia-ion content	mg/dm ³	0.5	0.031	0.247	0.102	0.064
Nitrates content	mg/dm ³	50	0.592	1.3	2.31	1.31
Nitrites content	mg/dm ³	0.5	< 0.008	0.025	0.212	0.062
Dissolved solids	mg/dm ³	-	457	544	518	496
Sulphate-ions content	mg/dm ³	250	35.1	27.2	26.4	31.8
Phosphates content	mg/dm ³	0.5	< 0.005	0.009	0.055	0.5
Chlorine-ions content	mg/dm ³	250	52.5	46.8	53.8	49.6
Arsenic content	mg/dm ³	0.01	0.0024	0.001	0.0018	0.0012
Ferrous content /total/	mg/dm ³	200	750	250	350	420
Cadmium content	mg/dm ³	5	< 1	< 1	< 1	< 1
Mangan. /total/	mg/dm ³	50	103	9.4	193	75
Copper content	mg/dm ³	0.2	0.0036	0.0045	0.0018	0.0043
Nikel content	mg/dm ³	20	2.8	1.9	< 1	3.8
Lead content	mg/dm ³	10	< 5	< 5	< 5	< 5
Chrome /total/ content	mg/dm ³	50	< 5	< 5	< 5	5.7
Zink content	mg/dm ³	1	< 5	0.009	0.016	0.020
Cobalt content	mg/dm ³	-	< 1	< 1	< 1	< 1
Mercury content	mg/dm ³	1	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-26 Results from samples test from test pit N 2 next to RCMIW.

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	2.60	2.80	3.10	2.50
Amonia-ion content	mg/dm ³	0.5	0.029	0.239	0.441	< 0.007
Nitrates content	mg/dm ³	50	2.09	10.5	12.5	4.75
Nitrites content	mg/dm ³	0.5	0.012	0.02	0.035	0.022
Dissolved solids	mg/dm ³	-	826	647	381	492
Sulphate-ions content	mg/dm ³	250	118	40.3	23.9	38.3
Phosphates content	mg/dm ³	0.5	0.029	0.012	0.203	< 0.005
Chlorine-ions content	mg/dm ³	250	31.9	36.9	21.3	43.9
Arsenic content	mg/dm ³	0.01	0.0013	0.001	0.0018	0.0014
Ferrous content /total/	mg/dm ³	200	440	90	80	70
Cadmium content	mg/dm ³	5	< 1	< 1	< 1	< 1

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Mangan. /total/	mg/dm ³	50	65	87	5850	23.8
Copper content	mg/dm ³	0.2	0.0038	0.0053	0.0021	0.0047
Nikel content	mg/dm ³	20	2.7	2.6	6.1	4.3
Lead content	mg/dm ³	10	< 5	< 5	< 5	< 5
Chrome /total/ content	mg/dm ³	50	< 5	< 5	< 5	< 5
Zink content	mg/dm ³	1	10	0.011	0.023	0.018
Cobalt content	mg/dm ³	-	< 1	< 1	< 1	< 1
Mercury content	mg/dm ³	1	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-27 Results from samples test from test pit N 4 next to RCMIW

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	2.50	2.45	2.75	2.20
Amonia-ion content	mg/dm ³	0.5	0.102	0.344	0.052	< 0.007
Nitrates content	mg/dm ³	50	< 0.013	1.04	< 0.013	7.98
Nitrites content	mg/dm ³	0.5	0.008	0.039	0.092	0.009
Dissolved solids	mg/dm ³	-	446	524	497	482
Sulphate-ions content	mg/dm ³	250	34.8	28.5	28.3	32.1
Phosphates content	mg/dm ³	0.5	0.209	0.036	0.290	0.008
Chlorine-ions content	mg/dm ³	250	48.9	49.6	50.3	55.3
Arsenic content	mg/dm ³	0.01	0.0023	0.0019	0.0016	0.0021
Ferrous content /total/	mg/dm ³	200	680	460	190	80
Cadmium content	mg/dm ³	5	< 1	< 1	< 1	< 1
Mangan. /total/	mg/dm ³	50	101	96	351	52
Copper content	mg/dm ³	0.2	0.0025	0.0034	0.0033	0.0075
Nikel content	mg/dm ³	20	< 1	5.9	< 1	4.3
Lead content	mg/dm ³	10	< 5	< 5	< 5	< 5
Chrome /total/ content	mg/dm ³	50	< 5	< 5	< 5	< 5
Zink content	mg/dm ³	1	< 5	0.01	0.024	0.02
Cobalt content	mg/dm ³	-	< 1	< 1	< 1	< 1
Mercury content	mg/dm ³	1	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-28 Results from samples test from test pit N 5 next to RCMIW

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	8.60	9.10	8.70	8.60
Amonia-ion content	mg/dm ³	0.5	0.039	0.154	0.046	0.022
Nitrates content	mg/dm ³	50	35.9	34.2	24.9	8.81
Nitrites content	mg/dm ³	0.5	0.022	0.033	0.017	0.009
Dissolved solids	mg/dm ³	-	726	860	796	778
Sulphate-ions content	mg/dm ³	250	51.8	31.9	46.1	37.8

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Phosphates content	mg/dm ³	0.5	0.055	0.029	0.078	0.054
Chlorine-ions content	mg/dm ³	250	6.38	12.8	9.93	15.6
Arsenic content	mg/dm ³	0.01	0.0016	0.0011	0.0014	0.0006
Ferrous content /total/	mg/dm ³	200	80	20	50	< 30
Cadmium content	mg/dm ³	5	< 1	< 1	< 1	< 1
Mangan. /total/	mg/dm ³	50	< 5	< 5	< 5	< 5
Copper content	mg/dm ³	0.2	0.0041	0.0044	0.0038	0.0046
Nikel content	mg/dm ³	20	1.8	3.2	1.2	4
Lead content	mg/dm ³	10	< 5	< 5	< 5	< 5
Chrome /total/ content	mg/dm ³	50	< 5	< 5	13.9	12.1
Zink content	mg/dm ³	1	< 0.005	0.013	0.049	14
Cobalt content	mg/dm ³	-	< 1	< 1	< 1	< 1
Mercury content	mg/dm ³	1	< 0.3	< 0.3	< 0.3	< 0.3

Table 18-29 Results from samples test from test pit No 944 (upstream the RCMIW on the site for RAW storage).

SUMMARIZED RESULTS FROM PHYSICAL AND CHEMICAL TESTS OF WASTE AND GROUNDWATER OF THE REPOSITORY FOR CONVENTIONAL MUNICIPAL AND INDUSTRIAL WASTES (RCMIW) REGION FOR 2010

Indicators	Unit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
pH	-	7.72	7.91	8.08	7.87
Suspended solids	mg/dm ³	22	37	23	17
Oil products content	mg/dm ³	0.1	0.1	0.1	0.4
Ferrous /total/ content	mg/dm ³	0.44017	0.46761	0.21869	0.13672
Copper content	mg/dm ³	0.00947	0.00578	0.00765	0.00779
Chrome /total/ content	mg/dm ³	0.00512	0.00451	0.00377	<0.00041
Zinc content	mg/dm ³	0.00693	0.00463	0.00326	0.00338

Table 18-30 Results for samples test from inspection pit (IP) – 4 (leachate from RCMIW)

Indicators	Unit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
pH	-	7.38	7.34	7.31	7.8
Suspended solids	mg/dm ³	47	20	16	176
Oil products content	mg/dm ³	0.4	0.2	0.8	1.6
Ferrous /total/ content	mg/dm ³	0.04589	0.06612	0.02447	0.60266
Copper content	mg/dm ³	0.00857	0.0079	0.00278	0.0059
Chrome /total/ content	mg/dm ³	0.01341	<0.00041	<0.00041	<0.00041
Zinc content	mg/dm ³	0.01644	0.01556	0.00358	0.00434

Table 18-31. Results from samples test from inspection pit (IP) – 7 (municipal and surface water from the RCMIW site)

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	2.10	2.20	2.60	2.60
Amonia-ion content	mg/dm ³	0.5	<0.009	0.018	0.017	0.023
Nitrates content	mg/dm ³	50	16.6	14.4	15.9	15.2
Nitrites content	mg/dm ³	0.5	<0.036	0.052	0.622	<0.026
Dissolved solids	mg/dm ³	-	516	519	535	496
Sulphate-ions content	mg/dm ³	250	74.2	26.5	250	31.6
Phosphates content	mg/dm ³	0.5	0.074	0.01	0.052	0.135
Chlorine-ions content	mg/dm ³	250	29.8	22.7	24.1	14.2
Arsenic content	mg/dm ³	0.01	<0.00297	<0.00297	<0.00297	0.00681
Ferrous content /total/	mg/dm ³	0.200	0.00965	0.01149	0.02954	0.02761
Cadmium content	mg/dm ³	0.005	<0.00014	0.00029	<0.00014	<0.00014
Mangan. /total/	mg/dm ³	0.050	0.01788	0.02469	0.00242	0.00781
Copper content	mg/dm ³	0.0002	0.00246	0.00289	<0.00063	<0.00063
Nikel content	mg/dm ³	0.020	0.00563	0.01189	0.00505	0.00746
Lead content	mg/dm ³	0.010	<0.00207	<0.00029	<0.00207	<0.00207
Chrome /total/ content	mg/dm ³	0.050	0.0039	0.00463	0.00232	0.00225
Zink content	mg/dm ³	0.001	0.00165	0.00137	0.0081	0.00158

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Cobalt content	mg/dm ³	-	<0.00046	<0.00046	<0.00046	<0.00046
Mercury content	mg/dm ³	0.001	<0.00265	<0.00265	<0.00265	<0.00265

Table 18-32 Results from samples test from test pit N 1 next to RCMIW

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	1.90	1.90	2.30	2.20
Amonia-ion content	mg/dm ³	0.5	0.025	0.016	<0.009	0.057
Nitrates content	mg/dm ³	50	3.62	0.747	<0.043	4.3
Nitrites content	mg/dm ³	0.5	0.12	0.026	0.063	<0.026
Dissolved solids	mg/dm ³	-	551	516	552	463
Sulphate-ions content	mg/dm ³	250	54.1	30	31.8	19.8
Phosphates content	mg/dm ³	0.5	0.018	0.021	0.037	0.037
Chlorine-ions content	mg/dm ³	250	50.3	22.7	54.6	26.2
Arsenic content	mg/dm ³	0.01	<0.00297	<0.00297	<0.00297	<0.00297
Ferrous content /total/	mg/dm ³	0.200	0.01679	0.01722	0.01367	0.15482
Cadmium content	mg/dm ³	0.005	<0.00014	0.00029	<0.00014	0.00022
Mangan. /total/	mg/dm ³	0.050	0.16887	0.14896	0.01408	0.04675
Copper content	mg/dm ³	0.0002	0.00402	0.00563	0.0016	<0.00063
Nikel content	mg/dm ³	0.020	0.00451	0.04009	0.00531	0.00743
Lead content	mg/dm ³	0.010	<0.00297	<0.00297	<0.00297	<0.00297
Chrome /total/ content	mg/dm ³	0.050	0.00093	<0.00041	<0.00041	<0.00041
Zink content	mg/dm ³	0.001	0.00212	0.00217	0.0016	0.00238
Cobalt content	mg/dm ³	-	<0.00046	0.00061	<0.00046	<0.00046
Mercury content	mg/dm ³	0.001	<0.00265	<0.00265	<0.00265	<0.00265

Table 18-33 Results from samples test from test pit N 2 next to RCMIW

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	2.60	2.60	2.95	2.90
Amonia-ion content	mg/dm ³	0.5	0.019	0.012	0.02	0.078
Nitrates content	mg/dm ³	50	3.89	1.04	2.69	2.91
Nitrites content	mg/dm ³	0.5	<0.036	0.037	0.062	<0.026
Dissolved solids	mg/dm ³	-	825	824	528	540
Sulphate-ions content	mg/dm ³	250	119	73.5	33.4	27.4
Phosphates content	mg/dm ³	0.5	0.031	0.016	0.027	0.212
Chlorine-ions content	mg/dm ³	250	29,1	45.4	46.1	24.1
Arsenic content	mg/dm ³	0.01	<0.00297	<0.00297	<0.00297	<0.00297
Ferrous content /total/	mg/dm ³	0.200	0.01224	0.00878	0.0112	0.0899
Cadmium content	mg/dm ³	0.005	0.00016	0.00041	0.00045	0.0003
Mangan. /total/	mg/dm ³	0.050	0.05443	0.0679	0.03398	0.05028

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Copper content	mg/dm ³	0.0002	0.00393	0.00311	0.00202	<0.00063
Nikel content	mg/dm ³	0.020	0.00496	0.00676	0.0058	0.00694
Lead content	mg/dm ³	0.010	<0.00207	<0.00207	2.98	<0.00207
Chrome /total/ content	mg/dm ³	0.050	<0.00041	<0.00041	<0.00041	<0.00041
Zink content	mg/dm ³	0.001	0.00351	0.0014	0.00181	0.0028
Cobalt content	mg/dm ³	-	<0.00046	<0.00046	<0.00046	<0.00046
Mercury content	mg/dm ³	0.001	<0.00265	<0.00265	<0.00265	<0.00265

Table 18-34 Results from samples test from test pit N 4 next to RCMIW

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	2.10	2.20	2.56	2.60
Amonia-ion content	mg/dm ³	0.5	0.05	0.106	<0.009	0.069
Nitrates content	mg/dm ³	50	3.67	<0.043	1.69	3.25
Nitrites content	mg/dm ³	0.5	<0.036	0.145	0.068	<0.026
Dissolved solids	mg/dm ³	-	441	457	526	531
Sulphate-ions content	mg/dm ³	250	23.9	21.7	30.4	22.7
Phosphates content	mg/dm ³	0.5	0.032	0.11	0.048	0.087
Chlorine-ions content	mg/dm ³	250	48.2	56.7	51	26.9
Arsenic content	mg/dm ³	0.01	<0.00297	-	<0.00297	0.01367
Ferrous content /total/	mg/dm ³	0.200	0.02142	-	0.0136	0.0269
Cadmium content	mg/dm ³	0.005	0.0004	-	0.0006	0.00046
Mangan. /total/	mg/dm ³	0.050	0.00012	-	0.02853	0.06324
Copper content	mg/dm ³	0.0002	0.00187	-	0.00238	<0.00063
Nikel content	mg/dm ³	0.020	0.00335	-	0.00493	0.00748
Lead content	mg/dm ³	0.010	<0.00207	-	<0.00207	<0.00207
Chrome /total/ content	mg/dm ³	0.050	<0.00041	-	<0.00041	<0.00041
Zink content	mg/dm ³	0.001	0.00063	-	0.0025	0.00139
Cobalt content	mg/dm ³	-	<0.00046	-	<0.00046	<0.00046
Mercury content	mg/dm ³	0.001	<0.00265	-	<0.00265	<0.00265

Table 18-35 Results from samples test from test pit N 5 next to RCMIW

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-	9.40	8.70	9.20	9.20
Amonia-ion content	mg/dm ³	0.5	0.022	<0.009	0.026	0.045
Nitrates content	mg/dm ³	50	-	26.6	40.6	44.9
Nitrites content	mg/dm ³	0.5	<0.036	<0.056	0.064	<0.026
Dissolved solids	mg/dm ³	-	800	749	846	820
Sulphate-ions content	mg/dm ³	250	38.5	27.7	40	20.5
Chlorine-ions content	mg/dm ³	250	11.3	11.3	10.6	5.67

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Arsenic content	mg/dm ³	0.01	-	<0.00297	<0.00297	0.00670
Ferrous content /total/	mg/dm ³	0.200	-	0.02427	0.01256	0.0486
Cadmium content	mg/dm ³	0.005	-	<0.00014	0.00068	0.00065
Mangan. /total/	mg/dm ³	0.050	-	0.01133	0.00235	0.00171
Copper content	mg/dm ³	0.0002	-	0.00348	0.00278	0.00201
Nikel content	mg/dm ³	0.020	-	0.00084	0.0052	0.00683
Lead content	mg/dm ³	0.010	-	<0.00207	<0.00207	<0.00207
Chrome /total/ content	mg/dm ³	0.050	-	0.01131	0.0164	0.0217
Zink content	mg/dm ³	0.001	-	0.00189	0.00828	0.00575
Cobalt content	mg/dm ³	-	-	<0.00046	<0.00046	<0.00046
Mercury content	mg/dm ³	0.001	-	<0.00265	<0.00265	<0.00265

Table 18-36 Results from samples test from test pit No 944 (upstream the RCMIW on the site for RAW storage).

SUMMARIZED RESULTS FROM PHYSICAL AND CHEMICAL TESTS OF WASTE AND GROUNDWATER OF THE REPOSITORY FOR CONVENTIONAL MUNICIPAL AND INDUSTRIAL WASTES (RCMIW) REGION FOR 2011

Indicators	Unit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
pH	-	8.02	7.8	7.78	8.6
Suspended solids	mg/dm ³	30	20	63	57
Oil products content	mg/dm ³	0.4	0.4	0.5	<1.00
Ferrous /total/ content	mg/dm ³	0.24329	0.17423	0.24869	0.10872
Copper content	mg/dm ³	0.02307	0.00499	0.00531	0.00799
Chrome /total/ content	mg/dm ³	0.00514	0.00173	0.00227	0.0019
Zinc content	mg/dm ³	0.0107	0.00376	0.00341	0.00405

Table 18-37 Results for samples test from inspection pit (IP) – 4 (leachate from RCMIW)

Indicators	Unit	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
pH	-	7.78	7.85	7.85	7.43
Suspended solids	mg/dm ³	38	17	48	74
Oil products content	mg/dm ³	0.7	0.3	0.4	<1.00
Ferrous /total/ content	mg/dm ³	0.01502	0.00922	0.01824	0.08813
Copper content	mg/dm ³	0.01185	0.00676	0.01543	<0.00063
Chrome /total/ content	mg/dm ³	0.01933	<0.00041	0.00185	<0.00041
Zinc content	mg/dm ³	0.0007	0.01738	0.0072	0.00325

Table 18-38. Results from samples test from inspection pit (IP) – 7 (municipal and surface water from the RCMIW site)

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-				
pH	-		7.46	7.74	7.74	7.82
Amonia-ion content	mg/dm ³	0.5	<0.013	<0.012	0.146	0.026
Nitrates content	mg/dm ³	50	16.1	20.7	7.93	14.9
Nitrites content	mg/dm ³	0.5	<0.004	0.008	0.104	0.024
Dissolved solids	mg/dm ³	-	615	529	513	499
Sulphate-ions content	mg/dm ³	250	85.9	16.5	44.7	49.7
Phosphates content	mg/dm ³	0.5	0.101	0.024		
Chlorine-ions content	mg/dm ³	250	32.6	25.5	12	29.1
Arsenic content	mg/dm ³	0.01	<0.00297	<0.00297	<0.00297	<0.00297
Ferrous content /total/	mg/dm ³	0.200	0.0107	0.00365	0.0209	0.0214
Cadmium content	mg/dm ³	0.005	<0.00014	0.00026	0.00071	<0.00014
Mangan. /total/	mg/dm ³	0.050	0.00079	0.00056	0.00135	0.00083
Copper content	mg/dm ³	0.2	0.00225	0.00264	0.01332	0.00317
Nikel content	mg/dm ³	0.020	0.00367	0.00538	0.00365	0.00537
Lead content	mg/dm ³	0.010	0.00283	<0.00207	<0.00207	0.00301
Chrome /total/ content	mg/dm ³	0.050	0.00257	0.00455	0.00344	0.00334

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Zink content	mg/dm ³	1	0.0033	0.00167	0.0018	0.00265
Cobalt content	mg/dm ³	-	<0.00046	<0.00046	<0.00046	<0.00046
Mercury content	mg/dm ³	0.001	0.01298	<0.00265	<0.00265	<0.00265

Table 18-39 Results from samples test from test pit N 1 next to RCMIW

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-				
pH	-		7.27	7.7	7.37	7.33
Amonia-ion content	mg/dm ³	0.5	<0.013	0.024	0.2	<0.013
Nitrates content	mg/dm ³	50	6.37	1.09	0.37	4.99
Nitrites content	mg/dm ³	0.5	0.006	0.053	0.064	0.023
Dissolved solids	mg/dm ³	-	656	552	588	607
Sulphate-ions content	mg/dm ³	250	237	11.9	36.4	47.7
Phosphates content	mg/dm ³	0.5	0.08	0.017		
Chlorine-ions content	mg/dm ³	250	50.3	48.2	29.8	46.8
Arsenic content	mg/dm ³	0.01	<0.00297	<0.00297	<0.00297	<0.00297
Ferrous content /total/	mg/dm ³	0.200	0.03205	0.01019	0.03223	0.02296
Cadmium content	mg/dm ³	0.005	<0.00014	0.00049	0.00084	<0.00014
Mangan. /total/	mg/dm ³	0.050	0.20145	0.03995	0.00328	0.01732
Copper content	mg/dm ³	0.2	0.00203	0.003	0.01009	0.00201
Nikel content	mg/dm ³	0.020	0.00576	0.0028	0.00395	<0.00084
Lead content	mg/dm ³	0.010	<0.00207	0.00526	<0.00207	0.00668
Chrome /total/ content	mg/dm ³	0.050	<0.00041	<0.00041	<0.00041	<0.00041
Zink content	mg/dm ³	1	0.00487	0.00172	0.00131	0.00126
Cobalt content	mg/dm ³	-	<0.00046	<0.00046	<0.00046	<0.00046
Mercury content	mg/dm ³	0.001	0.00977	<0.00265	<0.00265	<0.00265

Table 18-40 Results from samples test from test pit N 2 next to RCMIW

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-				
pH	-		7.16	7.58	7.13	7.33
Amonia-ion content	mg/dm ³	0.5	<0.013	<0,012	0.038	<0.013
Nitrates content	mg/dm ³	50	2.09	3.78	2.14	1.96
Nitrites content	mg/dm ³	0.5	0.004	0.009	0.026	0.092
Dissolved solids	mg/dm ³	-	943	614	651	551
Sulphate-ions content	mg/dm ³	250	199	13.4	50.3	36.9
Phosphates content	mg/dm ³	0.5	0.066	0.033		
Chlorine-ions content	mg/dm ³	250	31.2	46.8	21.9	51
Arsenic content	mg/dm ³	0.01	<0.00297	<0.00297	<0.00297	<0.00297

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Ferrous content /total/	mg/dm ³	0.200	0.0132	0.00166	0.01897	0.01728
Cadmium content	mg/dm ³	0.005	<0.00014	0.00025	0.00107	<0.00014
Mangan. /total/	mg/dm ³	0.050	0.06849	0.00127	0.01766	0.03897
Copper content	mg/dm ³	0.2	0.00372	0.00625	0.00937	0.00241
Nikel content	mg/dm ³	0.020	0.00393	0.00509	0.00359	<0.00084
Lead content	mg/dm ³	0.010	<0.00207	<0.00207	<0.00207	<0.00207
Chrome /total/ content	mg/dm ³	0.050	0.00082	<0.00041	0.00068	<0.00041
Zink content	mg/dm ³	1	0.00467	0.00315	0.00102	0.00147
Cobalt content	mg/dm ³	-	<0.00046	<0.00046	<0.00046	<0.00046
Mercury content	mg/dm ³	0.001	0.00743	<0.00265	<0.00265	<0.00265

Table 18-41 Results from samples test from test pit N 4 next to RCMIW

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-				
pH	-		7.3	7.61	7.00	7.22
Amonia-ion content	mg/dm ³	0.5	<0.013	0.073	0.014	<0.013
Nitrates content	mg/dm ³	50	<0.036	1.17	1.07	0.981
Nitrites content	mg/dm ³	0.5	<0.004	0.007	<0.013	0.021
Dissolved solids	mg/dm ³	-	606	528	733	603
Sulphate-ions content	mg/dm ³	250	233	12.4	33.9	36.2
Phosphates content	mg/dm ³	0.5	0.102	0.138		
Chlorine-ions content	mg/dm ³	250	56.7	51.8	33.3	56
Arsenic content	mg/dm ³	0.01	<0.00297	<0.00297	<0.00297	<0.00297
Ferrous content /total/	mg/dm ³	0.200	0.01744	0.02206	0.01767	0.01251
Cadmium content	mg/dm ³	0.005	<0.00014	0.00078	0.00109	<0.00014
Mangan. /total/	mg/dm ³	0.050	0.15234	0.12308	0.00284	0.05789
Copper content	mg/dm ³	0.2	0.0031	0.0045	0.00921	0.00269
Nikel content	mg/dm ³	0.020	0.00421	0.00238	0.00341	<0.00084
Lead content	mg/dm ³	0.010	<0.00207	<0.00207	<0.00207	<0.00207
Chrome /total/ content	mg/dm ³	0.050	<0.00041	<0.00041	<0.00041	<0.00041
Zink content	mg/dm ³	1	0.00432	0.00187	0.00161	0.00169
Cobalt content	mg/dm ³	-	<0.00046	<0.00046	<0.00046	<0.00046
Mercury content	mg/dm ³	0.001	0.00688	<0.00265	<0.00265	<0.00265

Table 18-42 Results from samples test from test pit N 5 next to RCMIW

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Water table	m	-				
pH	-		7.73	7.88	7.49	7.61
Amonia-ion content	mg/dm ³	0.5	<0.013	0.02	0.089	<0.013

Monitored indicator	Unit	Quality standard setpoint	I-st trimestre	II-nd trimestre	III-rd trimestre	IV-th trimestre
Nitrates content	mg/dm ³	50	44.5	44.8	8.43	41.3
Nitrites content	mg/dm ³	0.5	0.004	0.011	0.015	0.014
Dissolved solids	mg/dm ³	-	835	861	857	855
Sulphate-ions content	mg/dm ³	250	115	18.9	44.6	40.7
Phosphates content	mg/dm ³	0.5	0.09	0.091		
Chlorine-ions content	mg/dm ³	250	51.8	19.1	5.67	18.4
Arsenic content	mg/dm ³	0.01	<0.00297	<0.00297	<0.00297	<0.00297
Ferrous content /total/	mg/dm ³	0.200	0.01036	0.00295	0.0208	0.00667
Cadmium content	mg/dm ³	0.005	<0.00014	<0.00014	0.00064	0.00032
Mangan. /total/	mg/dm ³	0.050	<0.00011	0.00033	0.00103	<0.00011
Copper content	mg/dm ³	0.2	0.00082	0.01358	0.01163	0.00369
Nikel content	mg/dm ³	0.020	0.00347	0.00298	0.00365	<0.00084
Lead content	mg/dm ³	0.010	<0.00207	<0.00207	<0.00207	0.00532
Chrome /total/ content	mg/dm ³	0.050	0.02288	0.01635	0.01615	0.0167
Zink content	mg/dm ³	1	<0.00031	0.00221	<0.00031	0.00179
Cobalt content	mg/dm ³	-	<0.00046	<0.00046	<0.00046	<0.00046
Mercury content	mg/dm ³	0.001	<0.00265	<0.00265	<0.00265	<0.00265

Table 18-43 Results from samples test from test pit No 944 (upstream the RCMIW on the site for RAW storage).