

Tubbergen 7; Tubbergen Mander 1 & 2; Rossum Weerseloo 2, 3, 5 & 6

Rapportage tbv Wet Milieubeheer vergunning en ontheffing in het kader van het Lozings besluit

Dit rapport is bedoelt om aan de rapportage eisen te voldoen van de Wet Milieubeheer vergunning en ontheffing in het kader van het lozings besluit.

Hoeveelheid afvalstoffen verwerkt per reservoir

Installatie	Injectieput	2011 [m3]
Rossum Weerselo 2	ROSSUM-WEERSELO- 2	65.318
	ROSSUM-WEERSELO- 7A	100.581
Rossum Weerselo 3	ROSSUM-WEERSELO- 3	14.798
	ROSSUM-WEERSELO- 4	50.785
Rossum Weerselo 5	ROSSUM-WEERSELO- 5	41.327
Rossum Weerselo 6	ROSSUM-WEERSELO- 9	61.845
Tubbergen 7	TUBBERGEN- 7	58.610
	TUBBERGEN-10	94.701
Tubbergen Mander 1	TUBBERGEN-MANDER- 1	46.557
Tubbergen Mander 2	TUBBERGEN-MANDER- 2	9.845
	TUBBERGEN-MANDER- 3C	26.603
Grand Total		570.970

* Totale toegestane activiteiten ROW-2 volgens vergunning: 19,1 miljoen m³ produktie water.

* Totale toegestane activiteiten ROW-3 volgens vergunning: 7,8 miljoen m³ produktie water.

* Totale toegestane activiteiten ROW-5 volgens vergunning: 6,59 miljoen m³ produktie water.

* Totale toegestane activiteiten ROW-6 volgens vergunning: 1,61 miljoen m³ produktie water.

* Totale toegestane activiteiten TUB-7 volgens vergunning: 9,8 miljoen m³ produktie water.

* Totale toegestane activiteiten TUM-1 volgens vergunning: 1,57 miljoen m³ produktie water.

* Totale toegestane activiteiten TUM-2 volgens vergunning: 2,2 miljoen m³ produktie water.

Geinjecteerde hoeveelheid chemicalien

		Van	Tot			
		1-1-2011	31-12-2011			
Tank	Chemical	Function	remark	Injectiepunt	flowmeter	Liters
T-3300	Cortron UCA 622	Biocide	batch dosing in V-2001	V2001	SCH.330FQISA001	1216
T3320/3325	X8161	Demulsifier SCH1000	based on net oil	T1002	SCH.332FISA001	2432
T3320/3325	X8161	Demulsifier SCH3100	based on net oil	T1202	SCH.332FIA002	13940
T-3330	Cortron CK941-G	Corr. Inhibitor	in suction P-1102A/B	P1102A/B	SCH.333FFICSA001	was toen nog niet aanwezig
T-3350	K157	H2S scavenger	liter/kg H2S	V2001 V2005 A2002A/B	SCH.335FFICSA001	810
T-3360	AF340	Antifoam	based on net oil	V1001	SCH.336FISA001	2261
T-3360	AF340	Antifoam	based on net oil	V5001	SCH.336FIA002	694
T-3370	Cortron CK941-G	Corr. Inhibitor water export	in suction P-1201A/B	P1201A/B	SCH.337FFICSA001	16696
T-3380	OS19	Oxygen Scavenger water export	in suction P- 1201A/B	P1201A/B	SCH.338FFICSA001	8773
T-3390	Gyptron SA 3440	Scale inhibitor water export	injection upstream V-1001	V1001 E1001 P1201	SCH.339FFICSA001	18936

Analyse resultaten van geïnjecteerd water

Gedurende het jaar is in het injectiewater een verlaging van de hoeveelheid ionen die van nature in het Schoonebeek formatie water aanwezig zijn geobserveerd. Deze verlaging is het resultaat van de productie van meer gecondenseerde stoom.

Table 1: Wekelijkse analyse resultaten volgens tabel 6 (deel 1)

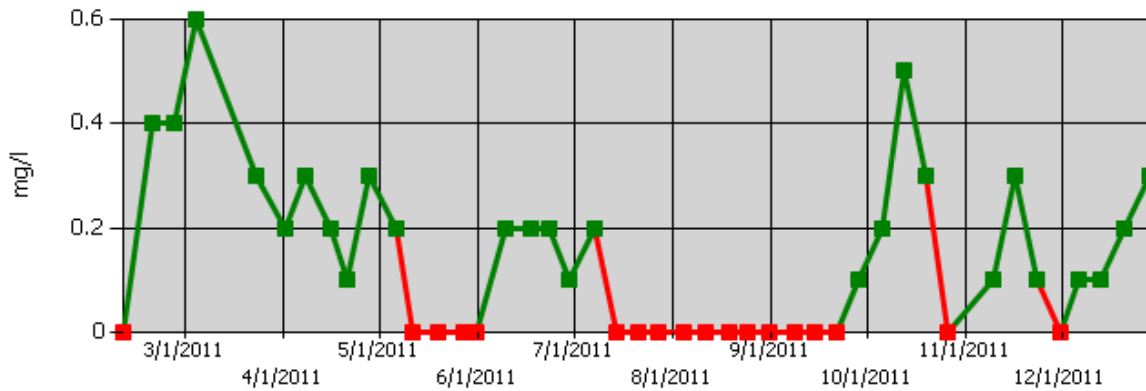
Sample Date	Sample Number	Sulphide, S ²⁻ (mg/l)	pH	Sulphate, SO ₄ (mg/l)	Sodium chloride, NaCl (calc) (mg/l)	Barium, Ba (mg/l)	Calcium, Ca (mg/l)
09/02/11 09:30	SN-2011-2-00130	<0.1	6.5	<19	79129	38	4700
18/02/11 15:00	SN-2011-2-00249	0.4	6.8	<25	83000	38	4600
25/02/11 10:00	SN-2011-2-00296	0.4	6.3	<19	81000	38	4600
04/03/11 09:45	SN-2011-3-00075	0.6	6.5	<19	80000	37	4600
11/03/11 09:25	SN-2011-3-00151		6.1	<19	78000	42	4500
23/03/11 10:00	SN-2011-3-00253	0.3	5.8	<19	78000	43	4500
01/04/11 13:50	SN-2011-04-0020	0.2	6.3	<19	81000	45	4700
07/04/11 13:40	SN-2011-04-0087	0.3	6.4	<19	80000	45	4600
15/04/11 09:20	SN-2011-04-0189	0.2	6.0	120	81000	35	4600
20/04/11 14:34	SN-2011-04-0267	0.1	6.6	42	83000	38	4500
27/04/11 08:45	SN-2011-04-0339	0.3	6.3	<19	81000	36	4100
06/05/11 11:30	SN-2011-05-0040	0.2		<19	83000	38	4500
11/05/11 10:00	SN-2011-05-0089	< 0.1	6.3	<25	82000	38	4100
19/05/11 12:15	SN-2011-05-0185	<0.1	6.3	<25	84000	43	4800
27/05/11 09:55	SN-2011-05-0275	< 0.1	6.4	<25	85000	43	4900
31/05/11 11:20	SN-2011-05-0294	<0.1		<25	87000	45	5000
09/06/11 15:00	SN-2011-06-0071	0.2		<25	87000	45	5000
17/06/11 13:00	SN-2011-06-0118	0.2	6.4	<25	85000	43	4700
23/06/11 09:45	SN-2011-06-0165	0.2	6.6	<19	80000	39	4300
29/06/11 14:05	SN-2011-06-0224	0.1	6.5	<19	82000	40	4500
07/07/11 16:25	SN-2011-07-0083	0.2	6.3	<25	85000	42	4500
14/07/11 14:00	SN-2011-07-0134	<0.1	6.5	<25	83000	44	4500
21/07/11 09:10	SN-2011-07-0220	<0.1	6.4	<19	82000	41	4500
27/07/11 14:30	SN-2011-07-0278	<0.1		<25	82000	43	4500
04/08/11 09:30	SN-2011-08-0114	<0.1	6.5	<25	82000	43	4500
11/08/11 10:00	SN-2011-08-0190	<0.1	6.4	<25	82000	43	4500
18/08/11 11:15	SN-2011-08-0261	<0.1		<19	81000	41	4400
24/08/11 14:00	SN-2011-08-0320	<0.1	6.4	<19	80000	39	4300
31/08/11 08:55	SN-2011-09-0003	<0.1		<19	81000	43	4300
08/09/11 12:20	SN-2011-09-0088	< 0.1	6.6	<19	79000	41	4300
14/09/11 09:00	SN-2011-09-0154	<0.1	6.3	<19	79000	42	4200
21/09/11 09:40	SN-2011-09-0232	<0.1	6.4	<19	78000	42	4200
28/09/11 12:30	SN-2011-09-0284	0.1	6.3	<19	79000	46	4400
05/10/11 11:55	SN-2011-10-0088	0.2	6.5	<19	73000	41	4000
12/10/11 15:15	SN-2011-10-0162	0.5	6.5	<19	70000	37	3900
19/10/11 13:15	SN-2011-10-0267	0.3	6.5	<19	74000	44	4100
26/10/11 09:15	SN-2011-10-0375	<0.1	6.5	<19	75000	46	4000
02/11/11 09:55	SN-2011-11-0019		6.6		77000		4300
09/11/11 09:10	SN-2011-11-0116	0.1	6.5	<19	76000	45	4100
16/11/11 14:40	SN-2011-11-0223	0.3	6.5	<19	74000	48	4000
23/11/11 09:15	SN-2011-11-0282	0.1	6.5	<19	75000	47	4100
30/11/11 09:15	SN-2011-11-0386	<0.1	6.4	<19	73000	46	4000
06/12/11 09:15	SN-2011-12-0072	0.1	6.6	<19	70000	37	3900
13/12/11 10:25	SN-2011-12-0151	0.1	6.4	<19	71000	39	3900
20/12/11 08:50	SN-2011-12-0236	0.2	6.3	<19	69000	38	3800
28/12/11 12:30	SN-2011-12-0337	0.3	6.2	<19	71000	36	3900

Table 2: Wekelijkse analyses volgens tabel 6 (deel 2)

Sample Date	Sample Number	Magnesium, Mg (mg/l)	Strontium, Sr (mg/l)	Iron (total) (mg/l)	Bicarbonate, HCO ₃ (mg/l)	Carbon dioxide, CO ₂	Potassium, K (mg/l)	Sodium, Na (mg/l)	Chloride (mg/l)
09/02/11 09:30	SN-2011-2-00130	920	570	30	260	140	880	24000	48000
18/02/11 15:00	SN-2011-2-00249	1000	600	30	360	230	480	25000	51000
25/02/11 10:00	SN-2011-2-00296	1000	620	25	570	590	300	24000	49000
04/03/11 09:45	SN-2011-3-00075	990	620	25	340	220	290	23000	49000
11/03/11 09:25	SN-2011-3-00151	1000	630	20	200	260	250	25000	47000
23/03/11 10:00	SN-2011-3-00253	970	590	25	270	350	260	23000	47000
01/04/11 13:50	SN-2011-04-0020	970	590	30	310	260	290	24000	49000
07/04/11 13:40	SN-2011-04-0087	980	620	20	310	330	240	24000	48000
15/04/11 09:20	SN-2011-04-0189	1000	590	20	190	310	250	24000	49000
20/04/11 14:34	SN-2011-04-0267	950	600	20	250	100	310	25000	50000
27/04/11 08:45	SN-2011-04-0339	950	570	10	440	230	240	24000	49000
06/05/11 11:30	SN-2011-05-0040	1000	620	20	230	150	210	24000	50000
11/05/11 10:00	SN-2011-05-0089	1000	580	20	350	180	210	25000	50000
19/05/11 12:15	SN-2011-05-0185	1000	630	25	350	230	190	25000	51000
27/05/11 09:55	SN-2011-05-0275	1100	640	25	350	290	200	25000	52000
31/05/11 11:20	SN-2011-05-0294	1100	650	15	350	290	200	26000	53000
09/06/11 15:00	SN-2011-06-0071	1000	650	20	300	200	210	26000	53000
17/06/11 13:00	SN-2011-06-0118	1100	640	20	300	200	210	26000	51000
23/06/11 09:45	SN-2011-06-0165	980	590	20	290	150	210	24000	48000
29/06/11 14:05	SN-2011-06-0224	1000	620	20	300	160	200	25000	50000
07/07/11 16:25	SN-2011-07-0083	1000	620	20	280	230	210	25000	52000
14/07/11 14:00	SN-2011-07-0134	980	620	15	280	230	190	25000	50000
21/07/11 09:10	SN-2011-07-0220	1000	620	20	520	340	200	25000	50000
27/07/11 14:30	SN-2011-07-0278	1000	610	15	400	210	190	25000	50000
04/08/11 09:30	SN-2011-08-0114	1000	630	25	310	260	190	25000	50000
11/08/11 10:00	SN-2011-08-0190	990	610	20	320	260	200	24000	50000
18/08/11 11:15	SN-2011-08-0261	980	600	20	390	260	200	24000	49000
24/08/11 14:00	SN-2011-08-0320	1000	600	20	300	200	190	24000	48000
31/08/11 08:55	SN-2011-09-0003	970	610	20	270	220	180	24000	49000
08/09/11 12:20	SN-2011-09-0088	950	590	15	310	250	180	23000	48000
14/09/11 09:00	SN-2011-09-0154	930	560	15	300	310	180	24000	48000
21/09/11 09:40	SN-2011-09-0232	910	560	20	270	220	170	23000	47000
28/09/11 12:30	SN-2011-09-0284	910	590	15	364	379	180	24000	48000
05/10/11 11:55	SN-2011-10-0088	850	550	20	473	297	230	22000	44000
12/10/11 15:15	SN-2011-10-0162	820	530	30	499	261	320	21000	43000
19/10/11 13:15	SN-2011-10-0267	850	540	20	489	287	240	22000	45000
26/10/11 09:15	SN-2011-10-0375	860	530	15	524	274	200	23000	45000
02/11/11 09:55	SN-2011-11-0019	860	540	15	508	265	180	23000	47000
09/11/11 09:10	SN-2011-11-0116	860	530	20	517	340	170	23000	46000
16/11/11 14:40	SN-2011-11-0223	820	530	15	510	420	180	22000	45000
23/11/11 09:15	SN-2011-11-0282	850	540	15	340	280	200	23000	46000
30/11/11 09:15	SN-2011-11-0386	840	530	20	370	250	200	22000	44000
06/12/11 09:15	SN-2011-12-0072	820	490	20	330	220	170	21000	42000
13/12/11 10:25	SN-2011-12-0151	850	510	15	380	250	170	22000	43000
20/12/11 08:50	SN-2011-12-0236	840	520	15	350	360	200	22000	42000
28/12/11 12:30	SN-2011-12-0337	850	510	15	260	430	170	21000	43000

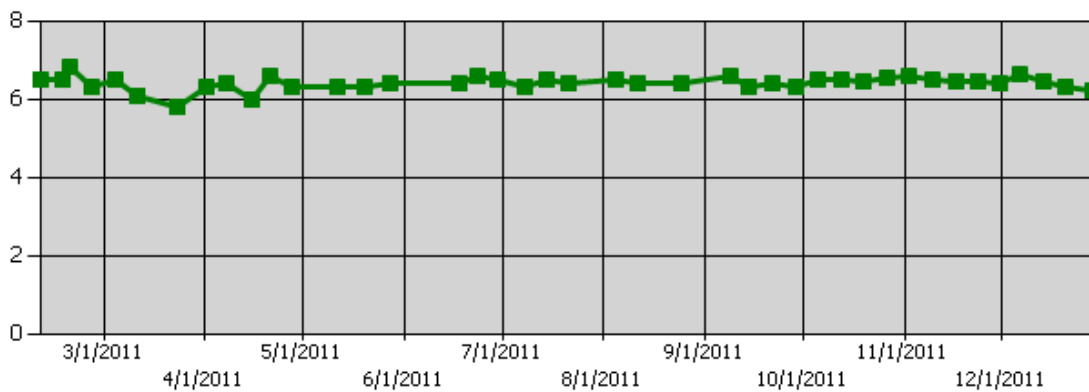
Grafische weergave van de analyse resultaten

Sulphide, S²⁻



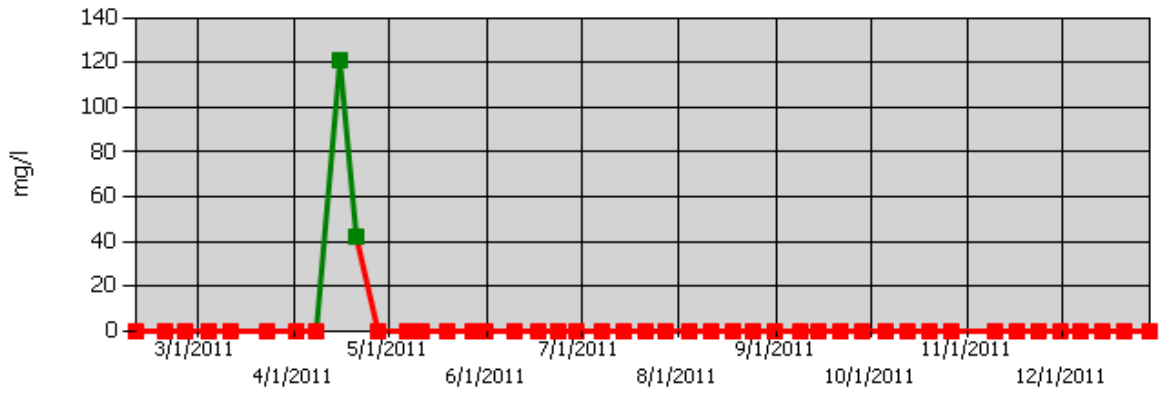
A value of 0 means < result, for the actual result see the table with the Trend Results

pH



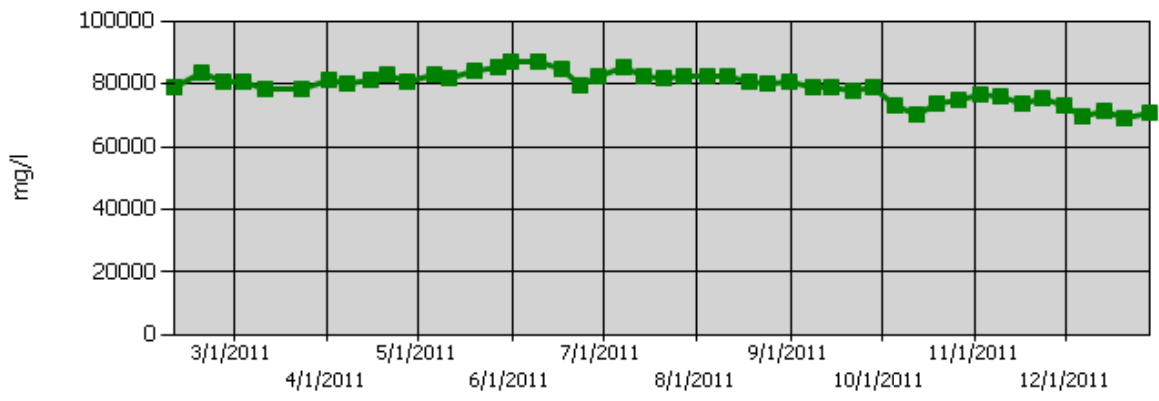
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Sulphate, SO4



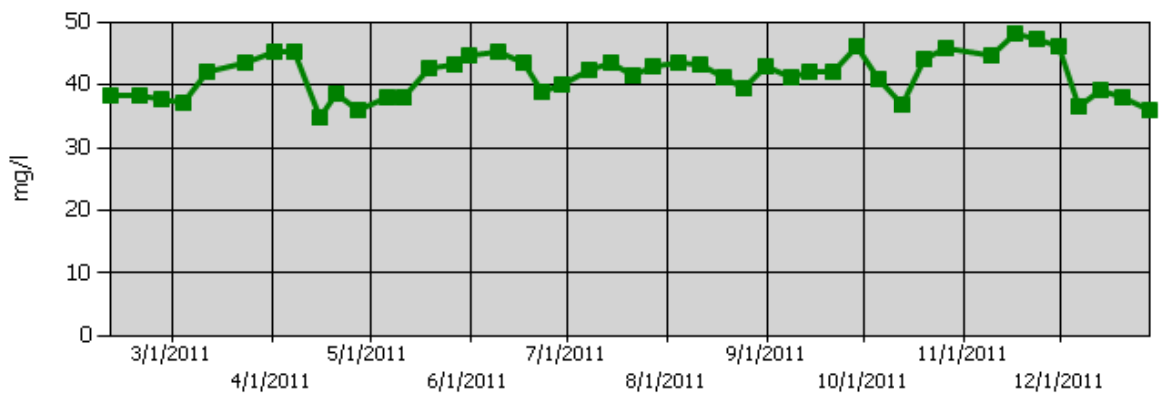
A value of 0 means < result, for the actual result see the table with the Trend Results

Sodium chloride, NaCl (calc)



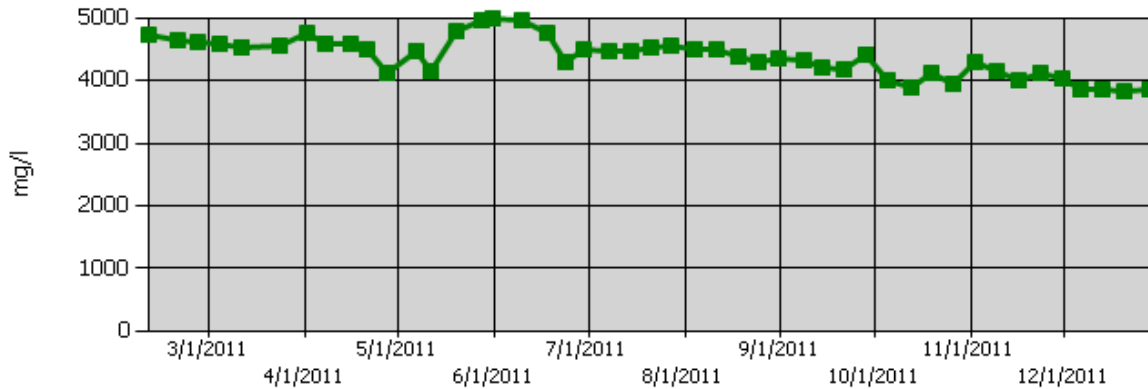
A value of 0 means < result, for the actual result see the table with the Trend Results

Barium, Ba



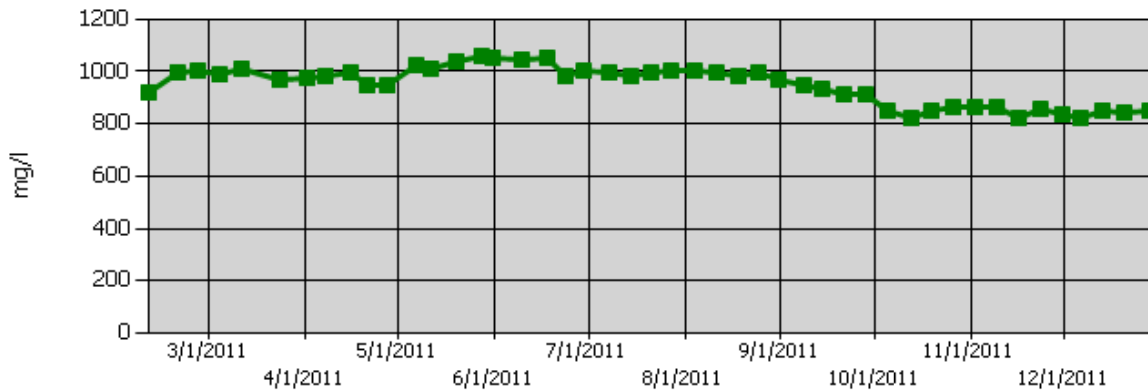
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Calcium, Ca



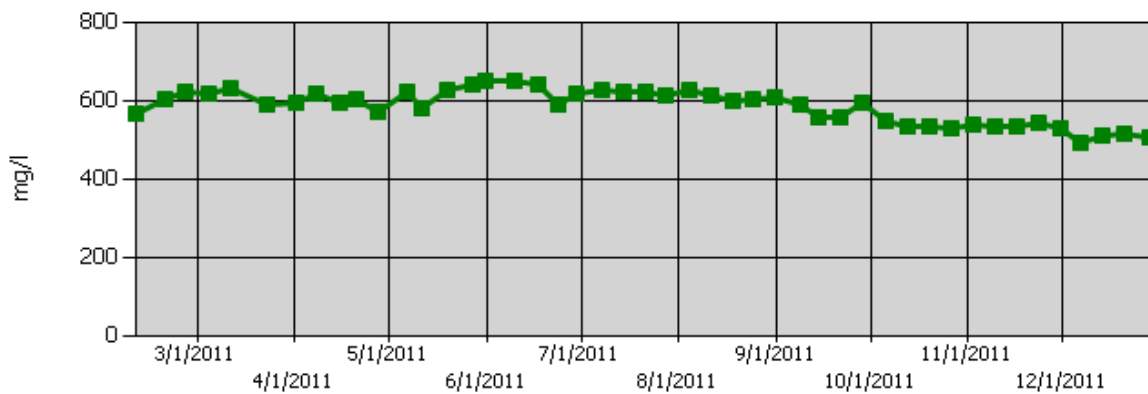
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Magnesium, Mg



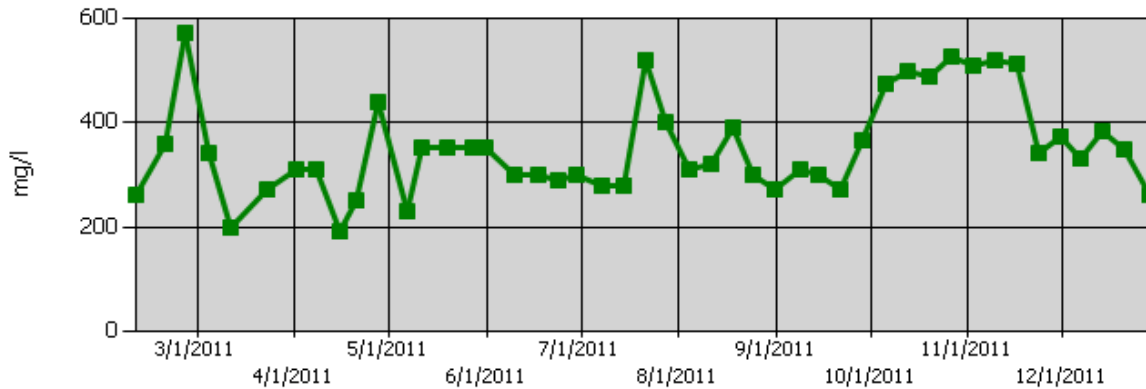
A value of 0 means < result, for the actual result see the table with the Trend Results

Strontium, Sr



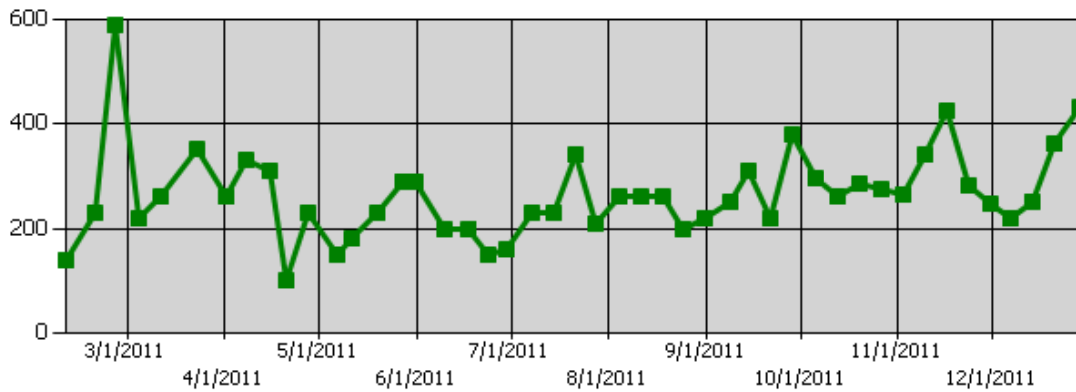
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Bicarbonate, HCO₃



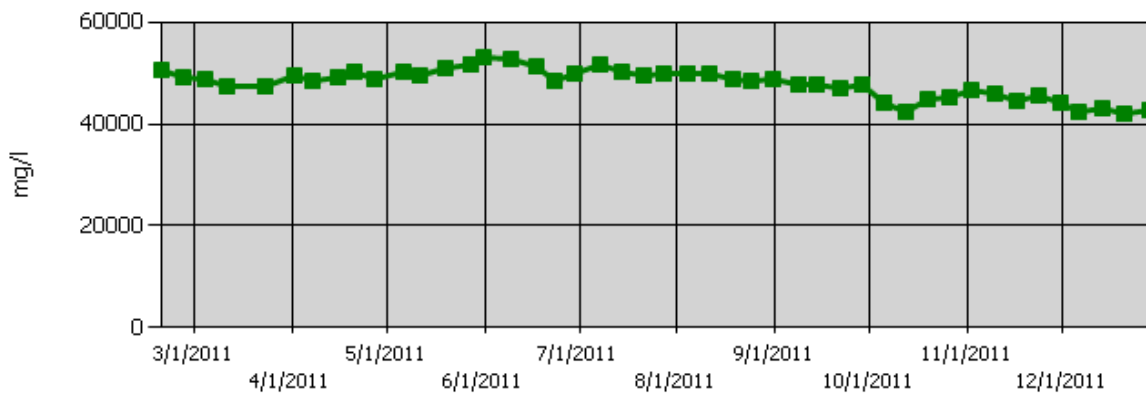
A value of 0 means < result, for the actual result see the table with the Trend Results

Carbon dioxide, CO₂



A value of 0 means < result, for the actual result see the table with the Trend Results

Chloride



A value of 0 means < result, for the actual result see the table with the Trend Results

