

Synthèse des analyses sur les eaux souterraines

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Tableau 1 – Synthèse des analyses 2016-2020 sur PZ1 (source : GEOSCOP)

Piézomètre	PZ1							
				Aval				
Position	2015	2016	2017	2018	2019	2019	2020	2020
Année	16-sept	12-oct	07-juin	19-oct	12-avr	25-oct	13-mai	13-oct
Date de prélèvement								
Température (°C)		15.86		15.8	15.7	16.1	15.7	16.1
Potentiel d'oxydo-réduction (mV)				153.0	21.8	50.1	148.0	141
pH	7		6.6	7	7	6.9	7.1	7
Conductivité (µS/cm)				2340	2050	2130	2210	2290
Hydrogénocarbonates (mg/l)				508	498	499	535	522
Matières en suspension (mg/l)	175	2	18	46.0	58.0	13.0	150.0	4.9
Ammonium (mg/l NH4)	9.78	3.1		27.300	20.700	21.200	21.800	23.400
Azote ammoniacal (mg/l N)				21.294	16.146	16.536	17.222	18.252
Azote Kjeldahl (mg/l N)		33		21.200	17.600	18.000	17.800	19.400
Nitrites (mg/l NO2)	0.263	<0.5		<0.040	<0.040	<0.040	0.050	<0.040
Azote nitreux (mg/l N)				<0.010	<0.010	0.010	0.010	<0.010
Nitrates (mg/l NO3)	1.96	2.4		1.610	<1.000	3.770	<1.000	<1.000
Azote nitrique (mg/l N)				0.360	<0.200	0.850	<0.200	<0.200
Azote global (mg/l N)	8.9	34		21.5	17.7	18.860	17.9	19.5
Phosphates (mg/l)	<0.1	0.83		<0.10	<0.10	<0.10	<0.10	<0.10
Chlorures (mg/l)				317.00	240.00	251.00	264.00	271.00
Sulfates (mg/l)				325.00	282.00	310.00	275.00	370.00
DCO (mg/l O2)	<30	59	70	25	13	20	15	20
DBO5 (mg/l O2)	<0.5	<0.5	<0.5	<3.0	<3.0	<3.0	<3.0	<3.0
COT (mg/l C)	3.13	8.8	9.7	6.10	6.00	7.90	6.40	7.30
Indice phénols (µg/l)		<0.1		<10.0	<10.0	<10.0	<10.0	<10.0
Cyanures totaux (µg/l)	<5	<10.0	<5	<10.0	<10.0	<10.0	<10.0	<10.0
Phosphore (µg/l)	40	<100	20	9.0	<5.0	7.0	14.0	11.0
Fluorures (mg/l)	0.4	0.59	0.25	0.25	0.23	0.29	0.30	0.28
Calcium (mg/l)				180.00	160.00	174.00	165.00	192.00
Magnésium (mg/l)				52.20	42.70	43.20	37.60	47.60
Sodium (mg/l)				93.40	111.00	127.00	166.00	140.00
Potassium (mg/l)				60.50	64.60	72.30	81.00	54.60
Fer (µg/l)				1940.0	1680.0	1550.0	2200.0	1690.0
Aluminium (µg/l)				<50.0	<50.0	<50.0	<50.0	<50.0
Manganèse (µg/l)	19	60.0		14.0	13.0	13.0	18.0	14.0
Plomb (µg/l)	4.8	<10	1.3	<5.0	<5.0	<5.0	<5.0	<5.0
Cuivre (µg/l)	10	5.3	0.8	<10.0	<10.0	<10.0	<10.0	<10.0
Zinc (µg/l)	19	27	4.2	<20.0	<20.0	<20.0	<20.0	<20.0
Cadmium (µg/l)	0.07	<1	0.35	<5.0	<5.0	<5.0	<5.0	<5.0
Chrome (µg/l)	<5	<2	1.2	<5.0	<5.0	<5.0	<5.0	<5.0
Chrome hexavalent (µg/l)		<5		<10.0	<20.0	<10.0	<10.0	<10.0
Etain (µg/l)				<20.0	<20.0	<20.0	<20.0	<20.0
Mercure (µg/l)	<0.015	<0.1	1.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel (µg/l)		9.5	12.6	6.0	6.0	7.0	8.0	7.0
Arsenic (µg/l)		52	29.4	14.0	16.0	16.0	18.0	11.0
Indice hydrocarbures C10-C40 (mg/l)	<0.1	<0.1	<0.1	<0.030	<0.030	<0.030	<0.030	<0.030
AOX (µg/l)	101	80	150	<10.0	20.0	100.0	100.0	110.0

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Tableau 2 – Synthèse des analyses 2015-2020 sur PZ2

Piézomètre	PZ2							
				Amont				
Position				2018	2019	2019	2020	2020
Année	2015	2016	2017	2018	2019	2019	2020	2020
Date de prélèvement	16-sept	12-oct	07-juin	19-oct	12-avr	25-oct	13-mai	13-oct
Laboratoire	EUROFINS	AUREA	AUREA	EUROFINS	EUROFINS	EUROFINS	EUROFINS	EUROFINS
Niveau piézométrique (m/TN)		-17.15		-17.32	-15.98	-17.30	-15.10	-16.88
Température (°C)		15.78	15.1	15.6	15.2	15.5	15.3	15.4
Potentiel d'oxydo-réduction (mV)				83.9	78.0	18.9	115.0	86.5
pH	7.1		6.7	7.30	7.10	6.90	7.30	7.10
Conductivité (µS/cm)				1280	1190	1200	1200	1160
Hydrogénocarbonates (mg/l)				357	385	377	384	387
Matières en suspension (mg/l)	2350	11	10	5200.0	4700.0	730.0	200.0	73.0
Ammonium (mg/l NH4)		0.39		2.330	1.430	1.180	1.400	1.530
Azote ammoniacal (mg/l N)	0.496			1.817	1.115	0.920	1.092	1.193
Azote Kjeldahl (mg/l N)		0.64		2.000	2.800	1.300	2.100	2.100
Nitrites (mg/l NO2)	0.012	<0.05		<0.040	<0.040	<0.040	<0.040	<0.040
Azote nitreux (mg/l N)				<0.010	<0.010	<0.010	<0.010	<0.010
Nitrates (mg/l NO3)	<0.25	<1		<1.000	<1.000	<1.000	<1.000	<1.000
Azote nitrique (mg/l N)				<0.200	<0.200	<0.200	<0.200	0.220
Azote global (mg/l N)	1.7	0.64		2.1	2.9	1.4	2.2	2.3
Phosphates (mg/l)	<0.1	<0.1		<0.10	<0.10	<0.10	<0.10	<0.10
Chlorures (mg/l)				121.00	73.50	77.40	74.00	76.90
Sulfates (mg/l)				210.00	207.00	219.00	192.00	199.00
DCO (mg/l O2)	60	30	<30	240	160	58	<10	14
DBO5 (mg/l O2)	<0.5	<0.5	<0.5	<3.0	<3.0	<3.0	<3.0	<3.0
COT (mg/l C)	3.35	2.6	6.2	3.20	4.80	21.00	5.80	26.00
Indice phénols (µg/l)		<0.1		<10.0	<10.0	<10.0	<10.0	<10.0
Cyanures totaux (µg/l)	<5	<10*	<5	<10.0	<10.0	<10.0	<10.0	<10.0
Phosphore (µg/l)	30	<100	<10	7.0	<5.0	<5.0	12.0	9.0
Fluorures (mg/l)	0.17	0.12	0.11	0.42	0.11	0.14	0.14	0.13
Calcium (mg/l)				215.00	199.00	207.00	204.00	196.00
Magnésium (mg/l)				15.90	16.20	16.00	14.40	14.60
Sodium (mg/l)				16.80	25.20	31.30	36.50	19.10
Potassium (mg/l)				8.75	10.30	10.20	9.11	8.16
Fer (µg/l)				1090.0	1280.0	1060.0	1600.0	1650.0
Aluminium (µg/l)				<50.0	<50.0	<50.0	<50.0	<50.0
Manganèse (µg/l)	82	35		49.0	56.0	57.0	58.0	58
Plomb (µg/l)	3	11	0.5	<5.0	<5.0	<5.0	<5.0	<5.0
Cuivre (µg/l)	2.5	<2	<0.5	<10.0	<10.0	<10.0	<10.0	<10.0
Zinc (µg/l)	20	11	3.3	<20.0	<20.0	<20.0	<20.0	<20.0
Cadmium (µg/l)	0.05	<1	0.18	<5.0	<5.0	<5.0	<5.0	<5.0
Chrome (µg/l)	<5	7.3	1.7	<5.0	<5.0	<5.0	<5.0	<5.0
Chrome hexavalent (µg/l)		<5		<10.0	<10.0	<10.0	<10.0	<10.0
Etain (µg/l)				<20.0	<20.0	<20.0	<20.0	<20.0
Mercure (µg/l)	<0.015	<0.1	1.1	<0.2	<0.2	<0.2	<0.2	<0.20
Nickel (µg/l)	9.3	<3	1.8	<5.0	<5.0	<5.0	<5.0	<5.0
Arsenic (µg/l)	4.2	6.7	2.3	<5.0	11.0	10.0	<5.0	8.0
Indice hydrocarbures C10-C40 (mg/l)	<0.1	<0.1	<0.1	<0.030	<0.030	<0.030	<0.030	<0.030
AOX (µg/l)	31	88	57	40.0	60.0	<50.0	60.0	80.0

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Tableau 3 – Synthèse des analyses 2015-2020 sur PZ3

Piézomètre	PZ3								
				Amont					
Position									
Année	2015	2016	2017	2018	2019	2019	2020	2020	2020
Date de prélèvement	16-sept	12-oct	07-juin	19-oct	12-avr	25-oct	13-mai	13-oct	13-oct
Laboratoire	EUROFINS	AUREA	AUREA	EUROFINS	EUROFINS	EUROFINS	EUROFINS	EUROFINS	EUROFINS
Niveau piézométrique (m/TN)		-15.11		-15.54	-14.72	-16.58	-12.37	-14.35	
Température (°C)		14.77	14.6	15.7	15.0	16.3	15.4	16.3	
Potentiel d'oxydo-réduction (mV)				132.0	50.6	-8.2	107.0	112.0	
pH	7		6.9	7.50	7.40	7.30	7.50	7.40	
Conductivité (µS/cm)				898	870	835	853	825	
Hydrogénocarbonates (mg/l)				366.0	357.0	339.0	343.0	334.0	
Matières en suspension (mg/l)	8460	15	20	4400.0	3300.0	370.0	130.0	20.0	
Ammonium (mg/l NH4)	17.1	3.1		27.000	26.300	28.700	26.800	28.200	
Azote ammoniacal (mg/l N)				21.060	20.514	22.386	21.172	21.996	
Azote Kjeldahl (mg/l N)		23		22.000	21.500	23.800	22.000	22.400	
Nitrites (mg/l NO2)	0.022	<0.05		<0.040	<0.040	<0.040	<0.040	<0.040	
Azote nitreux (mg/l N)				<0.010	<0.010	<0.010	<0.010	<0.010	
Nitrates (mg/l NO3)	<0.25	<1		<1.000	<1.000	<1.000	<1.000	1.800	
Azote nitrique (mg/l N)				<0.200	<0.200	<0.200	<0.200	0.410	
Azote global (mg/l N)	16.9	23		22.1	21.5	23.9	22.1	22.8	
Phosphates (mg/l)	<0.1	<0.1		<0.10	<0.10	<0.10	<0.10	<0.10	
Chlorures (mg/l)				58.70	59.50	57.20	55.10	56.20	
Sulfates (mg/l)				19.30	21.40	7.86	22.90	12.90	
DCO (mg/l O2)	338	39		270	150	44	27	30	
DBO5 (mg/l O2)	<0.5	1	<0.5	13.0	<3.0	4.0	<3.0	<3.0	
COT (mg/l C)	7.4	11	10	6.90	8.40	14.00	9.60	18.00	
Indice phénols (µg/l)				<10.0	<10.0	<10.0	<10.0	<10.0	
Cyanures totaux (µg/l)	<5	<10*	<5	<10.0	<10.0	<10.0	<10.0	<10.0	
Phosphore (µg/l)	41	<100	<10	6.0	<5.0	6.0	<5.0	<5.0	
Fluorures (mg/l)	0.28	0.31	0.28	0.37	0.36	0.45	0.47	0.51	
Calcium (mg/l)				84.70	83.20	73.20	75.70	63.90	
Magnésium (mg/l)				10.80	9.75	8.32	10.40	7.57	
Sodium (mg/l)				13.90	22.00	26.90	30.40	16.40	
Potassium (mg/l)				34.40	31.40	33.00	28.70	27.30	
Fer (µg/l)				1990.0	810.0	720.0	2060.0	1990.0	
Aluminium (µg/l)				<50.0	<50.0	<50.0	<50.0	<50.0	
Manganèse (µg/l)	610	17		9.0	7.0	6.0	14.0	9	
Plomb (µg/l)	<0.5	10	0.5	<5.0	<5.0	<5.0	<5.0	<5.0	
Cuivre (µg/l)	1.8	3.5	<0.5	<10.0	<10.0	<10.0	<10.0	<10.0	
Zinc (µg/l)	18	9.3	2.1	<20.0	<20.0	<20.0	<20.0	<20.0	
Cadmium (µg/l)	0.17	<1	0.17	<5.0	<5.0	<5.0	<5.0	<5.0	
Chrome (µg/l)	<5	<2	1.8	<5.0	<5.0	<5.0	<5.0	<5.0	
Chrome hexavalent (µg/l)		<5		<10.0	<10.0	<10.0	<10.0	<10.0	
Etain (µg/l)				<20.0	<20.0	<20.0	<20.0	<20.0	
Mercuré (µg/l)	<0.015	<0.1	1.4	<0.2	<0.2	<0.2	<0.2	<0.2	
Nickel (µg/l)	21.8	13	12.8	6.0	6.0	<5.0	8.0	8.0	
Arsenic (µg/l)	33.3	95	28.3	37.0	25.0	20.0	36.0	36.0	
Indice hydrocarbures C10-C40 (mg/l)	<0.1	<0.1	<0.1	<0.030	<0.030	<0.030	<0.030	<0.030	
AOX (µg/l)	<10	160	170	40.0	10.0	70.0	30.0	130.0	

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Tableau 4 – Synthèse des analyses 2015-2020 sur PZ4

Piézomètre Position	PZ4						
	aval						
	2016	2017	2018	2019	2019	2020	2020
Année	2016	2017	2018	2019	2019	2020	2020
Date de prélèvement	12-oct	07-juin	19-oct	12-avr	25-oct	13-mai	13-oct
Laboratoire	AUREA	AUREA	EUROFINS	EUROFINS	EUROFINS	EUROFINS	EUROFINS
Niveau piézométrique (m/TN)	-13.19		-13.12	-11.25	-13.29	-10.15	-12.69
Température (°C)	16.3	17.2	17.8	17.2	17.5	16.5	17.3
Potentiel d'oxydo-réduction (mV)			120.0	134.0	13.6	139.0	158.0
pH		6.8	7.20	7.10	6.90	7.20	7.10
Conductivité (µS/cm)			3230	3400	2730	3420	2660
Hydrogencarbonates (mg/l)			956.0	1090.0	923.0	1050.0	960.0
Matières en suspension (mg/l)	5	16	8.2	12.0	11.0	14.0	10.0
Ammonium (mg/l NH4)	3.1		62.300	89.900	62.900	71.400	61.100
Azote ammoniacal (mg/l N)			48.594	70.122	49.062	56.406	47.658
Azote Kjeldahl (mg/l N)	25		49.900	70.800	44.900	56.100	51.200
Nitrites (mg/l NO2)	11		<0.040	<0.040	<0.040	0.110	<0.040
Azote nitreux (mg/l N)			<0.010	<0.010	<0.010	0.030	<0.010
Nitrates (mg/l NO3)	22		<1.000	<1.000	<1.000	<1.000	2.440
Azote nitrique (mg/l N)			<0.200	<0.200	<0.200	<0.200	0.550
Azote global (mg/l N)	33		50	70.9	45	56.2	51.7
Phosphates (mg/l)	0.2		<0.10	<0.10	<0.10	<0.10	<0.10
Chlorures (mg/l)			468.00	497.00	357.00	477.00	323.00
Sulfates (mg/l)			92.20	70.70	90.30	97.20	91.70
DCO (mg/l O2)	74	74	38	<10	37	39	35
DBO5 (mg/l O2)	1.4	<0.5	4.0	<3.0	<3.0	<3.0	<3.0
COT (mg/l C)	14	18	11.00	15.00	15.00	15.00	21.00
Indice phénols (µg/l)			<10.0	<10.0	<10.0	<10.0	<10.0
Cyanures totaux (µg/l)	<10*	<5	<10.0	<10.0	<10.0	<10.0	<10.0
Phosphore (µg/l)	<100	50	130.0	106.0	119.0	116.0	134.0
Fluorures (mg/l)	<0.1	0.4	0.36	0.39	0.40	0.47	0.39
Calcium (mg/l)			111.00	95.90	114.00	109.00	119.00
Magnésium (mg/l)			24.70	25.60	23.00	23.00	23.30
Sodium (mg/l)			162.00	274.00	233.00	357.00	222.00
Potassium (mg/l)			145.00	156.00	160.00	162.00	110.00
Fer (µg/l)			4710.0	2910.0	4230.0	3760.0	3620.0
Aluminium (µg/l)			<50.0	<50.0	<50.0	<50.0	<50.0
Manganèse (µg/l)	230		112.0	73.0	116.0	84.0	104
Plomb (µg/l)	<10	0.2	<5.0	<5.0	<5.0	<5.0	<5.0
Cuivre (µg/l)	2.5	0.8	<10.0	<10.0	<10.0	<10.0	<10.0
Zinc (µg/l)	30	3	<20.0	<20.0	<20.0	<20.0	<20.0
Cadmium (µg/l)	1	0.34	<5.0	<5.0	<5.0	<5.0	<5.0
Chrome (µg/l)	<2	1.4	<5.0	<5.0	<5.0	<5.0	<5.0
Chrome hexavalent (µg/l)	<5		<10.0	<10.0	<10.0	<10.0	<10.0
Etain (µg/l)			<20.0	<20.0	<20.0	<20.0	<20.0
Mercuré (µg/l)	<0.1	0.91	<0.2	<0.2	<0.2	<0.2	<0.20
Nickel (µg/l)	3.4	5.5	<5.0	<5.0	5.0	5.0	<5.0
Arsenic (µg/l)	11	31.1	35.0	27.0	40.0	29.0	32.0
Indice hydrocarbures C10-C40 (mg/l)	0.7	<0.1	0.043	<0.030	<0.030	<0.030	<0.030
AOX (µg/l)	150	110	70.0	80.0	60.0	80.0	<100

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Tableau 5 – Synthèse des analyses 2016-2020 sur PZ5

Piézomètre Position	PZ5							
			Latéral					
	2016	2017	2018	2019	2019	2020	2020	
Date de prélèvement	12-oct	07-juin	19-oct	12-avr	25-oct	13-mai	13-oct	
Laboratoire	AUREA	AUREA	EUROFINS	EUROFINS	EUROFINS	EUROFINS	EUROFINS	
Niveau piézométrique (m/TN)	-12.5		-12.55	-11.40	-12.72	-10.65	-12.48	
Température (°C)	16.3	15.2	15.7	15.7	15.8	15.2	15.4	
Potentiel d'oxydo-réduction (mV)			-35.2	98.0	-31.8	-83.3	139.0	
pH		7.2	7.60	7.50	7.40	7.50	7.40	
Conductivité (µS/cm)			4510	4370	3910	3870	4120	
Hydrogénocarbonates (mg/l)			2320.0	2320.0	2150.0	1490.0	1640.0	
Matières en suspension (mg/l)	7	7	6.4	<2.0	2.1	2.4	<2.0	
Ammonium (mg/l NH4)	380		<0.050	<0.050	<0.010	0.070	0.150	
Azote ammoniacal (mg/l N)			<0.039	<0.039	<0.008	0.055	0.117	
Azote Kjeldahl (mg/l N)	350		481.000	393.000	331.000	339.000	401.000	
Nitrites (mg/l NO2)	<68		<0.040	<0.040	<0.040	<0.040	<0.040	
Azote nitreux (mg/l N)			<0.010	<0.010	<0.010	<0.010	<0.010	
Nitrates (mg/l NO3)	<1		<1.000	<1.000	<1.000	<1.000	15.200	
Azote nitrique (mg/l N)			<0.200	<0.200	<0.200	<0.200	3.430	
Azote global (mg/l N)	350		481.1	393	331	339	404	
Phosphates (mg/l)	<0.1		0.33	0.42	0.28	0.30	0.22	
Chlorures (mg/l)			146.00	115.00	104.00	90.00	100.00	
Sulfates (mg/l)			70.20	204.00	69.90	194.00	61.00	
DCO (mg/l O2)	2850	225	210	<10	130	119	138	
DBO5 (mg/l O2)	1.4	14	17.0	5.0	4.0	<3.0	<3.0	
COT (mg/l C)	750	110	64.00	56.00	54.00	50.00	72.00	
Indice phénols (µg/l)	12000		<10.0	<10.0	<10.0	<10.0	<10.0	
Cyanures totaux (µg/l)	<10*	<5	<10.0	<10.0	<10.0	<10.0	<10.0	
Phosphore (µg/l)	<100	40	121.0	127.0	112.0	114.0	112.0	
Fluorures (mg/l)	<0.05	1.2	1.30	1.10	1.10	0.83	1.00	
Calcium (mg/l)			25.60	54.90	50.00	101.00	68.20	
Magnésium (mg/l)			27.20	51.20	24.90	42.20	28.50	
Sodium (mg/l)			66.80	50.80	50.60	57.00	56.70	
Potassium (mg/l)			128.00	157.00	143.00	114.00	136.00	
Fer (µg/l)			320.0	130.0	230.0	140.0	230.0	
Aluminium (µg/l)			<50.0	<50.0	<50.0	<50.0	<50.0	
Manganèse (µg/l)	26		8.0	<5.0	7.0	9.0	8	
Plomb (µg/l)	10	0.2	<5.0	<5.0	<5.0	<5.0	<5.0	
Cuivre (µg/l)	7.3	1	<10.0	<10.0	<10.0	<10.0	<10.0	
Zinc (µg/l)	51	2	<20.0	<20.0	<20.0	<20.0	<20.0	
Cadmium (µg/l)	<1	0.12	<5.0	<5.0	<5.0	<5.0	<5.0	
Chrome (µg/l)	<2	2.1	<5.0	<5.0	<5.0	<5.0	<5.0	
Chrome hexavalent (µg/l)	<5		<10.0	<10.0	<10.0	<10.0	<10.0	
Etain (µg/l)			<20.0	<20.0	<20.0	<20.0	<20.0	
Mercurure (µg/l)	0.11	0.9	<0.2	<0.2	<0.2	<0.2	<0.2	
Nickel (µg/l)	110	125	115.0	115.0	91.0	70.0	92.0	
Arsenic (µg/l)	100	451	248.0	156.0	164.0	108.0	127.0	
Indice hydrocarbures C10-C40 (mg/l)	140	<0.1	0.194	0.108	0.053	<0.030	<0.030	
AOX (µg/l)	160	220	140.0	120.0	<100.0	60.0	500.0	

Arrêt du four

Tableau 6 – Synthèse des analyses 2015

	PZ2	PZ3	PZ1
Piézomètre			
Position	Amont	Amont	Aval
Année	2015	2015	2015
Date de prélèvement	16-sept	16-sept	16-sept
Laboratoire	EUROFINS	EUROFINS	EUROFINS
Niveau piézométrique (m/TN)			
Température (°C)			
Potentiel d'oxydo-réduction (mV)			
pH	7.1	7	7
Conductivité (µS/cm)			
Hydrogénocarbonates (mg/l)			
Matières en suspension (mg/l)	2350	8460	175
Ammonium (mg/l NH4)		17.1	9.78
Azote ammoniacal (mg/l N)	0.496		
Azote Kjeldahl (mg/l N)			
Nitrites (mg/l NO2)	0.012	0.022	0.263
Azote nitreux (mg/l N)			
Nitrates (mg/l NO3)	<0.25	<0.25	1.96
Azote nitrique (mg/l N)			0.263
Azote global (mg/l N)	1.7	16.9	8.9
Phosphates (mg/l)	<0.1	<0.1	<0.1
Chlorures (mg/l)			
Sulfates (mg/l)			
DCO (mg/l O2)	60	338	<30
DBO5 (mg/l O2)	<0.5	<0.5	<0.5
COT (mg/l C)	3.35	7.4	3.13
Indice phénols (µg/l)			
Cyanures totaux (µg/l)	<5	<5	<5
Phosphore (µg/l)	30	41	40
Fluorures (mg/l)	0.17	0.28	0.4
Calcium (mg/l)			
Magnésium (mg/l)			
Sodium (mg/l)			
Potassium (mg/l)			
Fer (µg/l)			
Aluminium (µg/l)			
Manganèse (µg/l)	82	610	19
Plomb (µg/l)	3	<0.5	4.8
Cuivre (µg/l)	2.5	1.8	10
Zinc (µg/l)	20	18	19
Cadmium (µg/l)	0.05	0.17	0.07
Chrome (µg/l)	<5	<5	<5
Chrome hexavalent (µg/l)			
Etain (µg/l)			
Mercure (µg/l)	<0.015	<0.015	<0.015
Nickel (µg/l)	9.3	21.8	
Arsenic (µg/l)	4.2	33.3	4.66
Indice hydrocarbures C10-C40 (mg/l)	<0.1	<0.1	<0.1
AOX (µg/l)	31	<10	101

Tableau 7 – Synthèse des analyses 2016

Piézomètre	PZ2	PZ3	PZ5	PZ1	PZ4
Position	Amont	Amont	Latéral	aval	aval
Année	2016	2016	2016	2016	2016
Date de prélèvement	12-oct	12-oct	12-oct	12-oct	12-oct
Laboratoire	AUREA	AUREA	AUREA	AUREA	AUREA
Niveau piézométrique (m/TN)	-17.15	-15.11	-12.5	-12.5	-13.19
Température (°C)	15.78	14.77	16.3	15.86	16.3
Potentiel d'oxydo-réduction (mV)					
pH					
Conductivité (µS/cm)					
Hydrogénocarbonates (mg/l)					
Matières en suspension (mg/l)	11	15	7	2	5
Ammonium (mg/l NH4)	0.39	3.1	380	3.1	3.1
Azote ammoniacal (mg/l N)					
Azote Kjeldahl (mg/l N)	0.64	23	350	33	25
Nitrites (mg/l NO2)	<0.05	<0.05	<68	<0.5	11
Azote nitreux (mg/l N)					
Nitrates (mg/l NO3)	<1	<1	<1	2.4	22
Azote nitrique (mg/l N)					
Azote global (mg/l N)	0.64	23	350	34	33
Phosphates (mg/l)	<0.1	<0.1	<0.1	0.83	0.2
Chlorures (mg/l)					
Sulfates (mg/l)					
DCO (mg/l O2)	30	39	2850	59	74
DBO5 (mg/l O2)	<0.5	1	1.4	<0.5	1.4
COT (mg/l C)	2.6	11	750	8.8	14
Indice phénols (µg/l)	<0.1		12000	<0.1	
Cyanures totaux (µg/l)	<10*	<10*	<10*	<10.0	<10*
Phosphore (µg/l)	<100	<100	<100	<100	<100
Fluorures (mg/l)	0.12	0.31	<0.05	0.59	<0.1
Calcium (mg/l)					
Magnésium (mg/l)					
Sodium (mg/l)					
Potassium (mg/l)					
Fer (µg/l)					
Aluminium (µg/l)					
Manganèse (µg/l)	35	17	26	60.0	230
Plomb (µg/l)	11	10	10	<10	<10
Cuivre (µg/l)	<2	3.5	7.3	5.3	2.5
Zinc (µg/l)	11	9.3	51	27	30
Cadmium (µg/l)	<1	<1	<1	<1	1
Chrome (µg/l)	7.3	<2	<2	<2	<2
Chrome hexavalent (µg/l)	<5	<5	<5	<5	<5
Etain (µg/l)					
Mercure (µg/l)	<0.1	<0.1	0.11	<0.1	<0.1
Nickel (µg/l)	<3	13	110	9.5	3.4
Arsenic (µg/l)	6.7	95	100	52	11
Indice hydrocarbures C10-C40 (mg/l)	<0.1	<0.1	140	<0.1	0.7
AOX (µg/l)	88	160	160	80	150

Tableau 8 – Synthèse des analyses 2017

	PZ2	PZ3	PZ5	PZ1	PZ4
Piézomètre					
Position	Amont	Amont	Latéral	aval	aval
Année	2017	2017	2017	2017	2017
Date de prélèvement	07-juin	07-juin	07-juin	07-juin	07-juin
Laboratoire	AUREA	AUREA	AUREA	AUREA	AUREA
Niveau piézométrique (m/TN)					
Température (°C)	15.1	14.6	15.2		17.2
Potentiel d'oxydo-réduction (mV)					
pH	6.7	6.9	7.2	6.6	6.8
Conductivité (µS/cm)					
Hydrogénocarbonates (mg/l)					
Matières en suspension (mg/l)	10	20	7	18	16
Ammonium (mg/l NH4)					
Azote ammoniacal (mg/l N)					
Azote Kjeldahl (mg/l N)					
Nitrites (mg/l NO2)					
Azote nitreux (mg/l N)					
Nitrates (mg/l NO3)					
Azote nitrique (mg/l N)					
Azote global (mg/l N)					
Phosphates (mg/l)					
Chlorures (mg/l)					
Sulfates (mg/l)					
DCO (mg/l O2)	<30		225	70	74
DBO5 (mg/l O2)	<0.5	<0.5	14	<0.5	<0.5
COT (mg/l C)	6.2	10	110	9.7	18
Indice phénols (µg/l)					
Cyanures totaux (µg/l)	<5	<5	<5	<5	<5
Phosphore (µg/l)	<10	<10	40	20	50
Fluorures (mg/l)	0.11	0.28	1.2	0.25	0.4
Calcium (mg/l)					
Magnésium (mg/l)					
Sodium (mg/l)					
Potassium (mg/l)					
Fer (µg/l)					
Aluminium (µg/l)					
Manganèse (µg/l)					
Plomb (µg/l)	0.5	0.5	0.2	1.3	0.2
Cuivre (µg/l)	<0.5	<0.5	1	0.8	0.8
Zinc (µg/l)	3.3	2.1	2	4.2	3
Cadmium (µg/l)	0.18	0.17	0.12	0.35	0.34
Chrome (µg/l)	1.7	1.8	2.1	1.2	1.4
Chrome hexavalent (µg/l)					
Etain (µg/l)					
Mercure (µg/l)	1.1	1.4	0.9	1.2	0.91
Nickel (µg/l)	1.8	12.8	125	12.6	5.5
Arsenic (µg/l)	2.3	28.3	451	29.4	31.1
Indice hydrocarbures C10-C40 (mg/l)	<0.1	<0.1	<0.1	<0.1	<0.1
AOX (µg/l)	57	170	220	150	110

Tableau 9 – Synthèse des analyses 2018

	PZ2	PZ3	PZ5	PZ1	PZ4
Piézomètre					
Position	Amont	Amont	Latéral	aval	aval
Année	2018	2018	2018	2018	2018
Date de prélèvement	19-oct	19-oct	19-oct	19-oct	19-oct
Laboratoire	EUROFINS	EUROFINS	EUROFINS	EUROFINS	EUROFINS
Niveau piézométrique (m/TN)	-17.32	-15.54	-12.55	-12.88	-13.12
Température (°C)	15.6	15.7	15.7	15.8	17.8
Potentiel d'oxydo-réduction (mV)	83.9	132.0	-35.2	153.0	120.0
pH	7.30	7.50	7.60	7	7.20
Conductivité (µS/cm)	1280	898	4510	2340	3230
Hydrogénocarbonates (mg/l)	357	366.0	2320.0	508	956.0
Matières en suspension (mg/l)	5200.0	4400.0	6.4	46.0	8.2
Ammonium (mg/l NH4)	2.330	27.000	<0.050	27.300	62.300
Azote ammoniacal (mg/l N)	1.817	21.060	<0.039	21.294	48.594
Azote Kjeldahl (mg/l N)	2.000	22.000	481.000	21.200	49.900
Nitrites (mg/l NO2)	<0.040	<0.040	<0.040	<0.040	<0.040
Azote nitreux (mg/l N)	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrates (mg/l NO3)	<1.000	<1.000	<1.000	1.610	<1.000
Azote nitrique (mg/l N)	<0.200	<0.200	<0.200	0.360	<0.200
Azote global (mg/l N)	2.1	22.1	481.1	21.5	50
Phosphates (mg/l)	<0.10	<0.10	0.33	<0.10	<0.10
Chlorures (mg/l)	121.00	58.70	146.00	317.00	468.00
Sulfates (mg/l)	210.00	19.30	70.20	325.00	92.20
DCO (mg/l O2)	240	270	210	25	38
DBO5 (mg/l O2)	<3.0	13.0	17.0	<3.0	4.0
COT (mg/l C)	3.20	6.90	64.00	6.10	11.00
Indice phénols (µg/l)	<10.0	<10.0	<10.0	<10.0	<10.0
Cyanures totaux (µg/l)	<10.0	<10.0	<10.0	<10.0	<10.0
Phosphore (µg/l)	7.0	6.0	121.0	9.0	130.0
Fluorures (mg/l)	0.42	0.37	1.30	0.25	0.36
Calcium (mg/l)	215.00	84.70	25.60	180.00	111.00
Magnésium (mg/l)	15.90	10.80	27.20	52.20	24.70
Sodium (mg/l)	16.80	13.90	66.80	93.40	162.00
Potassium (mg/l)	8.75	34.40	128.00	60.50	145.00
Fer (µg/l)	1090.0	1990.0	320.0	1940.0	4710.0
Aluminium (µg/l)	<50.0	<50.0	<50.0	<50.0	<50.0
Manganèse (µg/l)	49.0	9.0	8.0	14.0	112.0
Plomb (µg/l)	<5.0	<5.0	<5.0	<5.0	<5.0
Cuivre (µg/l)	<10.0	<10.0	<10.0	<10.0	<10.0
Zinc (µg/l)	<20.0	<20.0	<20.0	<20.0	<20.0
Cadmium (µg/l)	<5.0	<5.0	<5.0	<5.0	<5.0
Chrome (µg/l)	<5.0	<5.0	<5.0	<5.0	<5.0
Chrome hexavalent (µg/l)	<10.0	<10.0	<10.0	<10.0	<10.0
Etain (µg/l)	<20.0	<20.0	<20.0	<20.0	<20.0
Mercure (µg/l)	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel (µg/l)	<5.0	6.0	115.0	6.0	<5.0
Arsenic (µg/l)	<5.0	37.0	248.0	14.0	35.0
Indice hydrocarbures C10-C40 (mg/l)	<0.030	<0.030	0.194	<0.030	0.043
AOX (µg/l)	40.0	40.0	140.0	<10.0	70.0

Tableau 10 – Synthèse des analyses 2019

Piézomètre	PZ2		PZ3		PZ5		PZ1		PZ4	
	Amont		Amont		Latéral		aval		aval	
Position										
Date de prélèvement	12-avr	25-oct	12-avr	25-oct	12-avr	25-oct	12-avr	25-oct	12-avr	25-oct
Niveau piézométrique (m/TN)	-15.98	-17.30	-14.72	-16.58	-11.40	-12.72	-11.65	-12.89	-11.25	-13.29
Température (°C)	15.2	15.5	15.0	16.3	15.7	15.8	15.7	16.1	17.2	17.5
Potentiel d'oxydo-réduction (mV)	78.0	18.9	50.6	-8.2	98.0	-31.8	21.8	50.1	134.0	13.6
pH	7.10	6.90	7.40	7.30	7.50	7.40	7	6.9	7.10	6.90
Conductivité (µS/cm)	1190	1200	870	835	4370	3910	2050	2130	3400	2730
Hydrogénocarbonates (mg/l)	385	377	357.0	339.0	2320.0	2150.0	498	499	1090.0	923.0
Matières en suspension (mg/l)	4700.0	730.0	3300.0	370.0	<2.0	2.1	58.0	13.0	12.0	11.0
Ammonium (mg/l NH4)	1.430	1.180	26.300	28.700	<0.050	<0.010	20.700	21.200	89.900	62.900
Azote ammoniacal (mg/l N)	1.115	0.920	20.514	22.386	<0.039	<0.008	16.146	16.536	70.122	49.062
Azote Kjeldahl (mg/l N)	2.800	1.300	21.500	23.800	393.000	331.000	17.600	18.000	70.800	44.900
Nitrites (mg/l NO2)	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Azote nitreux (mg/l N)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	<0.010	<0.010
Nitrates (mg/l NO3)	<1.000	<1.000	<1.000	<1.000	<1.000	<1.000	<1.000	3.770	<1.000	<1.000
Azote nitrique (mg/l N)	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	0.850	<0.200	<0.200
Azote global (mg/l N)	2.9	1.4	21.5	23.9	393	331	17.7	18.860	70.9	45
Phosphates (mg/l)	<0.10	<0.10	<0.10	<0.10	0.42	0.28	<0.10	<0.10	<0.10	<0.10
Chlorures (mg/l)	73.50	77.40	59.50	57.20	115.00	104.00	240.00	251.00	497.00	357.00
Sulfates (mg/l)	207.00	219.00	21.40	7.86	204.00	69.90	282.00	310.00	70.70	90.30
DCO (mg/l O2)	160	58	150	44	<10	130	13	20	<10	37
DBO5 (mg/l O2)	<3.0	<3.0	<3.0	4.0	5.0	4.0	<3.0	<3.0	<3.0	<3.0
COT (mg/l C)	4.80	21.00	8.40	14.00	56.00	54.00	6.00	7.90	15.00	15.00
Indice phénols (µg/l)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Cyanures totaux (µg/l)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Phosphore (µg/l)	<5.0	<5.0	<5.0	6.0	127.0	112.0	<5.0	7.0	106.0	119.0
Fluorures (mg/l)	0.11	0.14	0.36	0.45	1.10	1.10	0.23	0.29	0.39	0.40
Calcium (mg/l)	199.00	207.00	83.20	73.20	54.90	50.00	160.00	174.00	95.90	114.00
Magnésium (mg/l)	16.20	16.00	9.75	8.32	51.20	24.90	42.70	43.20	25.60	23.00
Sodium (mg/l)	25.20	31.30	22.00	26.90	50.80	50.60	111.00	127.00	274.00	233.00
Potassium (mg/l)	10.30	10.20	31.40	33.00	157.00	143.00	64.60	72.30	156.00	160.00
Fer (µg/l)	1280.0	1060.0	810.0	720.0	130.0	230.0	1680.0	1550.0	2910.0	4230.0
Aluminium (µg/l)	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
Manganèse (µg/l)	56.0	57.0	7.0	6.0	<5.0	7.0	13.0	13.0	73.0	116.0
Plomb (µg/l)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Cuivre (µg/l)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Zinc (µg/l)	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Cadmium (µg/l)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chrome (µg/l)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chrome hexavalent (µg/l)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<20.0	<10.0	<10.0	<10.0
Etain (µg/l)	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Mercuré (µg/l)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel (µg/l)	<5.0	<5.0	6.0	<5.0	115.0	91.0	6.0	7.0	<5.0	5.0
Arsenic (µg/l)	11.0	10.0	25.0	20.0	156.0	164.0	16.0	16.0	27.0	40.0
Indice hydrocarbures C10-C40 (mg/l)	<0.030	<0.030	<0.030	<0.030	0.108	0.053	<0.030	<0.030	<0.030	<0.030
AOX (µg/l)	60.0	<50.0	10.0	70.0	120.0	<100.0	20.0	100.0	80.0	60.0

Tableau 11 – Synthèse des analyses 2020

Piézomètre	PZ2		PZ3		PZ5		PZ1		PZ4	
	Amont		Amont		Latéral		aval		aval	
Position										
Date de prélèvement	13-mai	13-oct	13-mai	13-oct	13-mai	13-oct	13-mai	13-oct	13-mai	13-oct
Niveau piézométrique (m/TN)	-15.10	-16.88	-12.37	-14.35	-10.65	-12.48	-10.78	-12.46	-10.15	-12.69
Température (°C)	15.3	15.4	15.4	16.3	15.2	15.4	15.7	16.1	16.5	17.3
Potentiel d'oxydo-réduction (mV)	115.0	86.5	107.0	112.0	-83.3	139.0	148.0	141	139.0	158.0
pH	7.30	7.10	7.50	7.40	7.50	7.40	7.1	7	7.20	7.10
Conductivité (µS/cm)	1200	1160	853	825	3870	4120	2210	2290	3420	2660
Hydrogénocarbonates (mg/l)	384	387	343.0	334.0	1490.0	1640.0	535	522	1050.0	960.0
Matières en suspension (mg/l)	200.0	73.0	130.0	20.0	2.4	<2.0	150.0	4.9	14.0	10.0
Ammonium (mg/l NH4)	1.400	1.530	26.800	28.200	0.070	0.150	21.800	23.400	71.400	61.100
Azote ammoniacal (mg/l N)	1.092	1.193	21.172	21.996	0.055	0.117	17.222	18.252	56.406	47.658
Azote Kjeldahl (mg/l N)	2.100	2.100	22.000	22.400	339.000	401.000	17.800	19.400	56.100	51.200
Nitrites (mg/l NO2)	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.050	<0.040	0.110	<0.040
Azote nitreux (mg/l N)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	<0.010	0.030	<0.010
Nitrates (mg/l NO3)	<1.000	<1.000	<1.000	1.800	<1.000	15.200	<1.000	<1.000	<1.000	2.440
Azote nitrique (mg/l N)	<0.200	0.220	<0.200	0.410	<0.200	3.430	<0.200	<0.200	<0.200	0.550
Azote global (mg/l N)	2.2	2.3	22.1	22.8	339	404	17.9	19.5	56.2	51.7
Phosphates (mg/l)	<0.10	<0.10	<0.10	<0.10	0.30	0.22	<0.10	<0.10	<0.10	<0.10
Chlorures (mg/l)	74.00	76.90	55.10	56.20	90.00	100.00	264.00	271.00	477.00	323.00
Sulfates (mg/l)	192.00	199.00	22.90	12.90	194.00	61.00	275.00	370.00	97.20	91.70
DCO (mg/l O2)	<10	14	27	30	119	138	15	20	39	35
DBO5 (mg/l O2)	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
COT (mg/l C)	5.80	26.00	9.60	18.00	50.00	72.00	6.40	7.30	15.00	21.00
Indice phénols (µg/l)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Cyanures totaux (µg/l)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Phosphore (µg/l)	12.0	9.0	<5.0	<5.0	114.0	112.0	14.0	11.0	116.0	134.0
Fluorures (mg/l)	0.14	0.13	0.47	0.51	0.83	1.00	0.30	0.28	0.47	0.39
Calcium (mg/l)	204.00	196.00	75.70	63.90	101.00	68.20	165.00	192.00	109.00	119.00
Magnésium (mg/l)	14.40	14.60	10.40	7.57	42.20	28.50	37.60	47.60	23.00	23.30
Sodium (mg/l)	36.50	19.10	30.40	16.40	57.00	56.70	166.00	140.00	357.00	222.00
Potassium (mg/l)	9.11	8.16	28.70	27.30	114.00	136.00	81.00	54.60	162.00	110.00
Fer (µg/l)	1600.0	1650.0	2060.0	1990.0	140.0	230.0	2200.0	1690.0	3760.0	3620.0
Aluminium (µg/l)	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
Manganèse (µg/l)	58.0	58	14.0	9	9.0	8	18.0	14.0	84.0	104
Plomb (µg/l)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Cuivre (µg/l)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Zinc (µg/l)	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Cadmium (µg/l)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chrome (µg/l)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chrome hexavalent (µg/l)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Etain (µg/l)	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Mercuré (µg/l)	<0.2	<0.20	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20
Nickel (µg/l)	<5.0	<5.0	8.0	8.0	70.0	92.0	8.0	7.0	5.0	<5.0
Arsenic (µg/l)	<5.0	8.0	36.0	36.0	108.0	127.0	18.0	11.0	29.0	32.0
Indice hydrocarbures C10-C40 (mg/l)	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
AOX (µg/l)	60.0	80.0	30.0	130.0	60.0	500.0	100.0	110.0	80.0	<100