Spink Quarry, Knockbaun, Abbeyleix, Co. Laois

Spink Quarry

Environmental Impact Assessment Report

Appendix 7.5

Laboratory Certificates of Analysis

2021



Prepared by:

J Sheils Planning & Environmental Ltd

31 Athlumney Castle, Navan, Co. Meath



CERTIFICATE OF ANALYSIS

Client

Dr. Pamela Bartley

HYDRO-G 50 Henry Street

Galway Galway Report No.

435140

Date of Receipt Start Date of Analysis 17/12/2020 17/12/2020

Date of Report Order Number

30/12/2020

Sample taken by Client

Lab No	Sample Description	Test	Ref.	Result	Units
1116151	1. 20-SP-01	BOD	I,R	<1	mg/l
	16/12/20	Suspended Solids	I,R	419	mg/l
		COD	I,R	<10	mg/l
		pH	I,R	7.7	pH Units
		Conductivity @20C	I,R	308	uS/cm
		Nitrate as N	I,R	0.404	mg/l
		Nitrite as N	I,R	<0.005	mg/l
		Total Phosphorus as P	I,R	0.44	mg/l
		Ammonium as NH4-N	I,R	0.012	// mg/l
		PRO Water (C5-C12) by GC-FID	I,R	<10	ug/l
		Extractable Hydrocarbons Water (C8-C40, Diesel Range and Lube Oil) by GC-FID	I,R	47 **Unknown pattern	ug/l
		Molybdate Reactive Phosphorus (MRP unfiltered) as PO4-P	I,R	0.126	mg/l



Approved by:

Luiza Singh

Operations Supervisor

See below for test specifications and accreditation status. This report only relates to items tested and shall not be reproduced but in full with the permission of CLS.

est. is an estimated count. CLS will test food, water and swabs samples within 24 hours of receipt. Where samples have been taken by the Client, results apply to the samples as received.

Page 1 of 2 of Report 435140

Complete Laboratory Solutions, Ros Muc, Connemara, Co. Galway

Complete Laboratory Solutions, MedPharma Division, Unit 3a, Small Business Park, Mervue, Galway



In-House Test	Specification	Measurement of Uncertainty	17025	GMP/FDA*	ISO*
BOD	CLS 12	+/- 9.33 %	Yes	No	Yes
Suspended Solids	CLS 13	+/- 43 @ 500 mg/l	Yes	No	Yes
COD	CLS 52	+/- 4.48 %	Yes	No	Yes
pH	CLS 26	+/- 0.133 pH units	Yes	No	Yes
Conductivity @20C	CLS 67	+/- 4.92 %	Yes	No	Yes
Nitrate as N	Konelab CLS 39	+/- 0.45 @ 4 mg/l NO3-N	Yes	No	Yes
Nitrite as N	Konelab CLS 37	+/- 7.55 %	Yes	No	Yes
Total Phosphorus as P	CLS 151	+/- 10.53 %	Yes	No	Yes
Ammonium as NH4-N	Konelab CLS 40	+/- 0.016 @ 0.31 mg/l NH3-N	Yes	No	Yes
PRO Water (C5-C12) by GC-FID	CLS 148	+/- 29.7ug/l @ 200ug/l	Yes	No	Yes
Extractable Hydrocarbons Water (C8-C40, Diesel Range and Lube Oil) by GC-FID	CLS 147	+/- 26.37@200ug/l	Yes	No	Yes
Molybdate Reactive Phosphorus (MRP unfiltered) as PO4-P	Konelab CLS 35	+/- 0.04 @ 0.3 mg/l PO4	Yes	No	Yes

^{*}Analysis carried out in a GMP approved, FDA inspected facility (MedPharma site only).

**Laboratory Analysis, Sampling, Food Safety Monitoring and Analysts on Contract are all ISO 9001 certified.

Lab No	Sample ID	Sample Condition on Receipt	Sampling Date	
1116151	1. 20-SP-01 16/12/20	Good condition	16/12/2020	

Page 2 of 2 of Report 435140

Complete Laboratory Solutions, Ros Muc, Connemara, Co. Galway

Complete Laboratory Solutions, MedPharma Division, Unit 3a, Small Business Park, Mervue, Galway



CERTIFICATE OF ANALYSIS

Client Dr. Pamela Bartley

HYDRO-G 50 Henry Street Galway

Galway

Report No. 435141

Date of Receipt Start Date of Analysis Date of Report

17/12/2020 17/12/2020 30/12/2020

Order Number Client Sample taken by

Lab No	Sample Description	Test	Ref.	Result	Units
1116152	2. 20-SP-04	BOD	I,R	<1	mg/l
	16/12/20	Suspended Solids	I,R	11	mg/l
		COD	I,R	12	mg/l
		рН	I,R	6.2	pH Units
		Conductivity @20C	I,R	119	uS/cm
		Nitrate as N	I,R	0.681	mg/l
		Nitrite as N	I,R	<0.005	mg/l
		Total Phosphorus as P	I,R	0.08	mg/l
		Ammonium as NH4-N	I,R	0.01	mg/l
		PRO Water (C5-C12) by GC-FID	I,R	<10	ug/l
		Extractable Hydrocarbons Water (C8-C40, Diesel Range and Lube Oil) by GC-FID	I,R	67 **Unknown pattern	ug/i
		Molybdate Reactive Phosphorus (MRP unfiltered) as PO4-P	I,R	<0.01	mg/l



Approved by:

Luiza Singh

Operations Supervisor

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est. is an estimated count. CLS will test food, water and swabs samples within 24 hours of receipt. Where samples have been taken by the Client, results apply to the samples as received.

Page 1 of 2 of Report 435141

Complete Laboratory Solutions, Ros Muc, Connemara, Co. Galway

Complete Laboratory Solutions, MedPharma Division, Unit 3a, Small Business Park, Mervue, Galway



In-House Test	Specification	Measurement of Uncertainty	17025	GMP/FDA*	ISO*
BOD	CLS 12	+/- 9.33 %	Yes	No	Yes
Suspended Solids	CLS 13	+/- 43 @ 500 mg/l	Yes	No	Yes
COD	CLS 52	+/- 4.48 %	Yes	No	Yes
pH	CLS 26	+/- 0.133 pH units	Yes	No	Yes
Conductivity @20C	CLS 67	+/- 4.92 %	Yes	No	Yes
Nitrate as N	Konelab CLS 39	+/- 0.45 @ 4 mg/l NO3-N	Yes	No	Yes
Nitrite as N	Konelab CLS 37	+/- 7.55 %	Yes	No	Yes
Total Phosphorus as P	CLS 151	+/- 10.53 %	Yes	No	Yes
Ammonium as NH4-N	Konelab CLS 40	+/- 0.016 @ 0.31 mg/l NH3- N	Yes	No	Yes
PRO Water (C5-C12) by GC-FID	CLS 148	+/- 29.7ug/l @ 200ug/l	Yes	No	Yes
Extractable Hydrocarbons Water (C8-C40, Diesel Range and Lube Oil) by GC-FID	CLS 147	+/- 26.37@200ug/l	Yes	No	Yes
Molybdate Reactive Phosphorus (MRP unfiltered) as PO4-P	Konelab CLS 35	+/- 0.04 @ 0.3 mg/l PO4	Yes	No	Yes

^{*}Analysis carried out in a GMP approved, FDA inspected facility (MedPharma site only).
**Laboratory Analysis, Sampling, Food Safety Monitoring and Analysts on Contract are all ISO 9001 certified.

Lab No Sample ID		Sample Condition on Receipt	
1116152	2. 20-SP-04 16/12/20	Good condition	16/12/2020

Page 2 of 2 of Report 435141

Complete Laboratory Solutions, Ros Muc, Connemara, Co. Galway

Complete Laboratory Solutions, MedPharma Division, Unit 3a, Small Business Park, Mervue, Galway



CERTIFICATE OF ANALYSIS

Client Dr. Pamela Bartley

HYDRO-G 50 Henry Street Galway Galway

Report No. Date of Receipt

Start Date of Analysis Date of Report 30/12/2020 Order Number Sample taken by

435142 17/12/2020 17/12/2020

Client

Lab No	Sample Description	Test	Ref.	Result	Units
1116153 3. Mtn Str @ SP04		BOD	I,R	<1	mg/l
	16/12/20	Suspended Solids	I,R	2	mg/l
		COD	I,R	31	mg/l
		рH	I,R	5.9	pH Units
		Conductivity @20C	I,R	82.3	uS/cm
		Nitrate as N	I,R	0.915	mg/l
		Nitrite as N	I,R	<0.005	mg/l
		Total Phosphorus as P	I,R	<0.05	mg/l
		Ammonium as NH4-N	I,R	0.018	mg/l
		PRO Water (C5-C12) by GC-FID	I,R	<10	// ug/l
		Extractable Hydrocarbons Water (C8-C40, Diesel Range and Lube Oil) by GC-FID	I,R	76 **Unknown pattern	ug/l
		Molybdate Reactive Phosphorus (MRP unfiltered) as PO4-P	I,R	<0.01	mg/l



Approved by:

Luiza Singh

Operations Supervisor

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Page 1 of 2 of Report 435142

Complete Laboratory Solutions, Ros Muc, Connemara, Co. Galway

Complete Laboratory Solutions, MedPharma Division, Unit 3a, Small Business Park, Mervue, Galway



In-House Test	Specification	Measurement of Uncertainty	17025	GMP/FDA ³	ISO*
BOD	CLS 12	+/- 9.33 %	Yes	No	Yes
Suspended Solids	CLS 13	+/- 43 @ 500 mg/l	Yes	No	Yes
COD	CLS 52	+/- 4.48 %	Yes	No	Yes
pH	CLS 26	+/- 0.133 pH units	Yes	No	Yes
Conductivity @20C	CLS 67	+/- 4.92 %	Yes	No	Yes
Nitrate as N	Konelab CLS 39	+/- 0.45 @ 4 mg/l NO3-N	Yes	No O	Yes
Nitrite as N	Konelab CLS 37	+/- 7.55 %	Yes	No	Yes
Total Phosphorus as P	CLS 151	+/- 10.53 %	Yes	No	Yes
Ammonium as NH4-N	Konelab CLS 40	+/- 0.016 @ 0.31 mg/l NH3-N	Yes	No	Yes
PRO Water (C5-C12) by GC-FID	CLS 148	+/- 29.7ug/l @ 200ug/l	Yes	No	Yes
Extractable Hydrocarbons Water (C8-C40, Diesel Range and Lube Oil) by GC-FID	CLS 147	+/- 26.37@200ug/l	Yes	No	Yes
Molybdate Reactive Phosphorus (MRP unfiltered) as PO4-P	Konelab CLS 35	+/- 0.04 @ 0.3 mg/l PO4	Yes	No	Yes

^{*}Analysis carried out in a GMP approved, FDA inspected facility (MedPharma site only).

**Laboratory Analysis, Sampling, Food Safety Monitoring and Analysts on Contract are all ISO 9001 certified.

Lab No Sample ID		Sample Condition on Receipt	Sampling Date	
1116153	3. Mtn Str @ SP04 16/12/20	Good condition	16/12/2020	

Page 2 of 2 of Report 435142

Complete Laboratory Solutions, Ros Muc, Connemara, Co. Galway

Complete Laboratory Solutions, MedPharma Division, Unit 3a, Small Business Park, Mervue, Galway



CERTIFICATE OF ANALYSIS

Client Dr. Pamela Bartley

HYDRO-G 50 Henry Street Galway Galway

435143

17/12/2020 Date of Receipt Start Date of Analysis 17/12/2020 30/12/2020 Date of Report Order Number

Client Sample taken by

Lab No	Sample Description	Test	Ref.	Result	Units
1116154	4. Floor Spink	BOD	I,R	<1	mg/l
	16/12/20	Suspended Solids	I,R	2	mg/l
	' '	COD	I,R	<10	mg/l
		pH	I,R	8.0	pH Units
		Conductivity @20C	I,R	250	uS/cm
		Nitrate as N	I,R	0.405	mg/l
		Nitrite as N	I,R	< 0.005	mg/l
		Total Phosphorus as P	I,R	<0.05	mg/l
		Ammonium as NH4-N	I,R	0.01	mg/l
		PRO Water (C5-C12) by GC-FID	I,R	<10	ug/l
		Extractable Hydrocarbons Water (C8-C40, Diesel Range and Lube Oil) by GC-FID	I,R	52 **Unknown pattern	ug/l
		Molybdate Reactive Phosphorus (MRP unfiltered) as PQ4-	I,R	<0.01	mg/l

DETAILED IN SCOPE REG NO. 108

Approved by:

Luiza Singh **Operations Supervisor**

See below for test specifications and accreditation status.

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est. is an estimated count.

CLS will test food, water and swabs samples within 24 hours of receipt.

Where samples have been taken by the Client, results apply to the samples as received.

Page 1 of 2 of Report 435143

Complete Laboratory Solutions, Ros Muc, Connemara, Co. Galway

Complete Laboratory Solutions, MedPharma Division, Unit 3a, Small Business Park, Mervue, Galway



In-House Test	Specification	Measurement of Uncertainty	17025	GMP/FDA*	ISO*
BOD	CLS 12	+/- 9.33 %	Yes	No	Yes
Suspended Solids	CLS 13	+/- 43 @ 500 mg/l	Yes	No	Yes
COD	CLS 52	+/- 4.48 %	Yes	No	Yes
pH	CLS 26	+/- 0.133 pH units	Yes	No	Yes
Conductivity @20C	CLS 67	+/- 4.92 %	Yes	No	Yes
Nitrate as N	Konelab CLS 39	+/- 0.45 @ 4 mg/l NO3-N	Yes	No O	Yes
Nitrite as N	Konelab CLS 37	+/- 7.55 %	Yes	No	Yes
Total Phosphorus as P	CLS 151	+/- 10.53 %	Yes	No	Yes
Ammonium as NH4-N	Konelab CLS 40	+/- 0.016 @ 0.31 mg/l NH3-N	Yes	No	Yes
PRO Water (C5-C12) by GC-FID	CLS 148	+/- 29.7ug/l @ 200ug/l	Yes	No	Yes
Extractable Hydrocarbons Water (C8-C40, Diesel Range and Lube Oil) by GC-FID	CLS 147	+/- 26.37@200ug/l	Yes	No	Yes
Molybdate Reactive Phosphorus (MRP unfiltered) as PO4-P	Konelab CLS 35	+/- 0.04 @ 0.3 mg/l PO4	Yes	No	Yes

^{*}Analysis carried out in a GMP approved, FDA inspected facility (MedPharma site only).
**Laboratory Analysis, Sampling, Food Safety Monitoring and Analysts on Contract are all ISO 9001 certified.

Lab No Sample ID		Sample Condition on Receipt	Sampling Date
1116154	4. Floor Spink 16/12/20	Good condition	16/12/2020

Page 2 of 2 of Report 435143

Complete Laboratory Solutions, Ros Muc, Connemara, Co. Galway

Complete Laboratory Solutions, MedPharma Division, Unit 3a, Small Business Park, Mervue, Galway



Unit 3 Deeside Point

Zone 3

Deeside Industrial Park

Deeside CH5 2UA P: +44 (0) 1244 833780

F: +44 (0) 1244 833781

W: www.element.com

Envirologic Ltd 78 St Peters Terrace Howth Co Dublin Ireland





Attention:

Pat Breheny

Date:

8th April, 2021

Your reference :

1890

Our reference:

Test Report 21/4569 Batch 1

Location:

Spink

Date samples received :

29th March, 2021

Status:

Final report

Issue:

1

One sample was received for analysis on 29th March, 2021 of which one was scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:

Phil Sommerton BSc Senior Project Manager

Please include all sections of this report if it is reproduced

Client Name: Envirologic Ltd

1890 Reference: Location: Spink

Contact: Pat Breheny

EMT Job No: 21/4569 Report: Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

EMT Job No:	21/4569						H=H ₂ SO ₄ ,	Z=ZnAc, N=	NaOH, HN	HNO₃			
EMT Sample No.	1-8										1		
Sample ID	PW1												
Depth											Please se	e attached r	otes for all
COC No / misc											abbrevi	ations and a	cronyms
Containers	V H HN P BOD G												0,5
Sample Date	26/03/2021 13:00											C	
Sample Type												\sim O.	
32												0	_
Batch Number											LOD/LOR	Units	Method No.
Date of Receipt												Barrier	
Total Aluminium	13.7										<1.5	ug/l	TM170/PM14
Total Cadmium	<0.03										<0.03	ug/l	TM170/PM14
Total Iron Total Manganese	16.0 425.0									11.	<4.7	ug/t	TM170/PM14
Total Mercury	<0.5								1.	7.	<1.5 <0.5	ug/i	TM170/PM14 TM170/PM14
Total Phosphorus	6								0		<0.5 <5	ug/i ug/i	TM170/PM14
Total Zinc	2.3										<1.5	ug/l	TM170/PM14
									7				- Council Halled Charles
Total Calcium	47.5 _{AA}							114			<0.2	mg/l	TM30/PM14
Total Magnesium	18.6 _{AA}						1.3	(2)			<0.1	mg/l	TM30/PM14
Total Potassium	<1.0 _{AA}										<0.1	mg/l	TM30/PM14
Total Sodium	8.9 _{AA}						\mathcal{L}				<0.1	mg/l	TM30/PM14
Total Hardness Dissolved (as CaCO3)	191										<1	mg/l	TM30/PM14
PAH MS			, L										
Naphthalene#	<0.1										<0.1	uall	TM4/PM30
Acenaphthylene#	<0.013					\					<0.013	ug/l ug/l	TM4/PM30
Acenaphthene #	<0.013										<0.013	ug/i	TM4/PM30
Fluorene *	<0.014										<0.014	ug/i	TM4/PM30
Phenanthrene *	<0.011										<0.011	ug/l	TM4/PM30
Anthracene *	<0.013										<0.013	ug/l	TM4/PM30
Fluoranthene	<0.012			0							<0.012	ug/l	TM4/PM30
Pyrene *	<0.013										<0.013	ug/l	TM4/PM30
Benzo(a)anthracene	<0.015	•									<0.015	ug/l	TM4/PM30
Chrysene #	<0.011										<0.011	ug/l	TM4/PM30
Benzo(bk)fluoranthene	<0.018	~~									<0.018	ug/l	TM4/PM30
Benzo(a)pyrene	<0.016										<0.016	ug/ł	TM4/PM30
Indeno(123cd)pyrene	<0.011	5									<0.011	ug/i	TM4/PM30
Dibenzo(ah)anthracene * Benzo(ghi)perylene *	<0.01 <0.011										<0.01	ug/i	TM4/PM30
PAH 16 Total *	<0.195										<0.011 <0.195	ug/l	TM4/PM30 TM4/PM30
Benzo(b)fluoranthene	<0.01										<0.195	ug/l ug/l	TM4/PM30
Benzo(k)fluoranthene	<0.01										<0.01	ug/l	TM4/PM30
PAH Surrogate % Recovery	88										<0	%	TM4/PM30
~ O							1						
MTBE*	<5						- 1				<5	ug/t	TM36/PM12
Benzene *	<5								1		<5	ug/l	TM36/PM12
Toluene *	<5							- 1			<5	ug/l	TM36/PM12
Ethylbenzene	<5							- 1			<5	ug/l	TM36/PM12
m/p-Xylene	<5							- 1			<5	ug/l	TM36/PM12
o-Xylene [#]	<5										<5	ug/l	TM36/PM12
								- 1					

Client Name:

Envirologic Ltd

Reference:

1890

Location:

Spink

Contact:

Pat Breheny

Report: Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle H=H-5Q₄, Z=ZnAc, N=NaOH, HN=HN0₂

EMT Job No:	21/4569						H=H ₂ SO ₄ ,	Z=ZnAc, N=	NaOH, HN=	HN0 ₃			
EMT Sample No.	1-8												
Sample ID	PW1				-								
			181										
Depth		E.										attached n	
COC No / misc											abbreva	ations and ad	ronyms
Containers	V H HN P BOD G												
Sample Date			11							5 1	l)
	1 1												
Sample Type	Ground Water		- E									V	
Batch Number	1										LOD/LOR	Units	Method
Date of Receipt	29/03/2021												No.
PH CWG		and Citab	L.L.	1	and State of		la kronia	Anda Card	ole best Cas				
Aliphatics													
C5-C6*	<10			1			- 2				<10	ug/l	TM36/PM12
C6-C8*	<10								1	7	<10	ug/l	TM36/PM12
C8-C10*	<10								0.		<10	ug/l	TM36/PM12
C10-C12*	<5										<5	ug/l	TM5/PM16/PM30
C12-C16 ⁸	<10					1			7		<10	ug/l	TM5/PM16/PM30
C16-C21 ⁶	<10										<10	ug/l	TM5/PM16/PM30
C21-C35*	<10			1		1		No			<10	ug/l	TM5/PM16/PM30
otal aliphatics C5-35*	<10					1		(~)			<10	rg/l	ТМЕГМЫРЫ:2/РМ:6/РМО
Aromatics						1							
C5-EC7*	<10										<10	ug/i	TM36/PM12
EC7-EC8*	<10							1			<10	ug/l	TM36/PM12
EC8-EC10*	<10									1	<10	ug/l	TM36/PM12 TM5/PM16/PM30
EC10-EC12*	<5				-						<5 <10	ug/l ug/l	TM5/PM16/PM30
EC12-EC16*	<10									1	<10	ug/l	TM5/PM16/PM30
EC16-EC21* EC21-EC35*	<10 <10				7	2 1	2	-			<10	ug/l	TM5/PM16/PM30
otal aromatics C5-35 *	<10			-							<10	ug/l	тистижеритеритерите
otal aliphatics and aromatics(C5-35)	<10				•			1			<10	ug/l	TMS/TAGGPM/2/PM/GPMG
otal aliphatics and aromatics(C3-33)	"			1			7						
Sulphate as SO4*	12.7			90				1			<0.5	mg/l	TM38/PM0
Chloride *	16.7					1					<0.3	mg/l	TM38/PM0
litrate as NO3 *	2.7										<0.2	mg/l	TM38/PM0
litrite as NO2#	<0.02							1			<0.02	mg/l	TM38/PM0
Ortho Phosphate as PO4	<0.03	1									<0.03	mg/l	TM38/PM0
MRP Ortho Phosphate as PO4	<0.06										<0.06	mg/l	TM38/PM0
mmoniacal Nitrogen as NH4*	0.03		0								<0.03	mg/l	TM38/PM0
THE PARTY OF THE P					1						l !		T1475 101 10
otal Alkalinity as CaCO3	186										<1	mg/i	TM75/PM0
icarbonate Alkalinity as CaCO3 (water soluble)	186				1						<1	mg/l	TM75/PM0
	440			-	H			-	-		<2	uS/cm	TM76/PM0
lectrical Conductivity @25C	412										<0.01	pH units	TM73/PM0
H [*] Cotal Corpus Corpus	7.63										<2	mg/l	TM60/PM0
otal Organic Carbon otal Suspended Solids	<10										<10	mg/l	TM37/PM0
otal ouspended solids	100	-										,	
a star of the			1 -	-	-		-	-	-				
	1 7	2 2 2	1					-		-			
		3 9			1								
								1 1					Ī
													1

Envirologic Ltd 1890 Client Name:

Reference:

Spink Pat Breheny Location:

Contact:

	Reason													C
	Analysis	No deviating sample report results for job 21/4569	3/	O					4					2
'-	Sample No.											4	11	
H	Depth	A STATE OF THE PARTY OF THE PAR												
	Sample ID	Str. orași, de la constituci												
- 13	Batch													
EMT	No. ob	Section 1												

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.



ALS Environmental Ltd Torrington Avenue Coventry CV4 9GU

T: +44 (0)24 7642 1213 F: +44 (0)24 7685 6575 www.alsenvironmental.co.uk

Mr Breheny Envirologic Envirologic Ltd. 78 St Peters Terrace Howth Dublin D13 HO08 South Dublin

07 April 2021

Test Report: COV/2110988/2021

Dear Mr Breheny

Analysis of your sample(s) received on 26 March 2021 is now complete and we have pleasure in enclosing the appropriate test report(s).

An invoice for the analysis carried out will be sent under separate cover.

Should you have any queries regarding this report(s) or any part of our service, please contact Customer Services on +44 (0)24 7642 1213 who will be happy to discuss your requirements.

If you would like to arrange any further analysis, please contact Customer Services. To arrange container delivery or sample collection, please call the Couriers Department directly on 024 7685 6562.

Thank you for using ALS Environmental Ltd and we look forward to receiving your next samples.

Yours Sincerely

Signed:

Name: B. Paige

Title:

Microbiology Team Leader







This communication has been sent to you by ALS Environmental Ltd. Registered in England and Wales. Registration No.02148934. Registered Office: ALS Environmental Limited, Torrington Avenue, Coventry, CV4 9GU.

Report Summary

Mr Patrick Breheny Envirologic Envirologic Ltd. 78 St Peters Terrace Howth Dublin South Dublin D13 HO08





Date of Issue: 07 April 2021

Report Number: COV/2110988/2021

ssue

This issue replaces all previous issues

Job Description:

Micro analysis

Job Location:

1890 Spink

Number of Samples

included in this report

Job Received:

26 March 2021

Number of Test Results

included in this report

Analysis Commenced: 29 March 2021

Signed:

Name:

B. Paige

Date: 07 April 2021

Title:

Microbiology Team Leader

ALS Environmental Ltd was not responsible for sampling unless otherwise stated.

Information on the methods of analysis and performance characteristics are available on request.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation. The results relate only to the items tested and where relevant sampled.

Tests marked 'Not UKAS Accredited' in this Report/Certificate are not included in the UKAS Accreditation Schedule for our laboratory. This test report is not a statement of conformity to any specification or standard.

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ANALYSED BY



Report Number:

COV/2110988/2021

Laboratory Number:

20276306

Sample Source:

Envirologic

Sample Point Description:

Sample Description:

Sample Matrix:

Not Specified

Sample Date/Time:

26 March 2021 26 March 2021

Sample Received: Analysis Complete:

06 April 2021

Test Description	Result	Units	Analysis Date	Accreditation	Method
BODS + ATU	<2	mg/l O2	06/04/2021	N S	SUBCON
Total Coliforms (Colilert)	0	mpn/100ml	29/03/2021	N S	SUBCON
Faecal Coliforms (Colilert)	0	mpn/100ml	29/03/2021	N S	SUBCON
TOC as C	1.1	mg/l	30/03/2021	N Cov	WAS005

Analyst Comments for 20276306:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: CHE = Chester(CH5 3US), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2RU), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG), F = Data supplied by customer.

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered.

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name:

B. Paige

Date: 07 April 2021

Issue

Sample

Title:

Microbiology Team Leader



Unit 3 Deeside Point

Deeside Industrial Park

Deeside

CH5 2UA

P: +44 (0) 1244 833780

F: +44 (0) 1244 833781

W: www.element.com

Envirologic Ltd 78 St Peters Terrace Howth Co Dublin Ireland





Attention:

Pat Breheny

Date:

19th April, 2021

Your reference:

1890

Our reference:

Test Report 21/5240 Batch 1

Location:

Spink

Date samples received:

9th April, 2021

Status:

Final report

Issue:

1

Seven samples were received for analysis on 9th April, 2021 of which seven were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:

Phil Sommerton BSc Senior Project Manager

Please include all sections of this report if it is reproduced

Client Name:

Envirologic Ltd

1890

Reference: Location:

Spink

Contact: EMT Job No: Pat Breheny

21/5240

Report: Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle

H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

EMT Sample No.	1-5	6-10	11-15	16-20	21-25	26-30	31-35				1		
Sample ID	PW2	PW3	SUMP	OUTFALL.	SW-WEST	SW-EAST	SW2						
Depth										- 112			
COC No / misc												attached n itions and a	
Containers	HHNPG	HHNPG	HHNPG	HHNPG	H HN P G	HHNPG	HHNPG						.0
Sample Date	-					08/04/2021 15:50	08/04/2021 15:50						2
Sample Type												2	
15.6											1	-	
Batch Number	1	1	1	1	1	1	1				LOD/LOR	Units	Method No.
Date of Receipt			09/04/2021	09/04/2021	09/04/2021		09/04/2021				VAS-101		A STATE OF
otal Aluminium	22.3	72.5	33.6	21.9	41.9	181.0	100.2				<1.5	ug/l	TM170/PM
otal Cadmium	<0.03	<0.03	<0.03	<0.03	<0.03	0.06	<0.03				<0.03	ug/l	TM170/PM
otal fron	84.7	215.8	21.1	50.7	97.3	282.1	158.0				<4.7	ug/l	TM170/PM
otal Manganese	41.6	17.0	4.6	143.0	7.1	18.0	18.4		-7	9	<1.5	ug/l	TM170/PM
otal Mercury	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		.(2)		<0.5	ug/l	TM170/PM
otal Phosphorus	11	12	11	12	31	18	27				<5	ug/l	TM170/PM
otal Zìnc	5.5	4.1	3.9	4.2	3.8	5.4	4.1		7		<1.5	ug/l	IM170/PM
otal Calcium	42.2	41.0	25.0	46.0	45.5	36.4	28.6	10			<0.2	mg/l	TM30/PM
otal Magnesium	10.9	11.2	9.6	13.0	4.3	5.2	5.9	67			<0.1	mg/l	TM30/PM
otal Potassium	1.6	0.6	1.8	1.9	1.4	1.3	2.3				<0.1	mg/l	TM30/PM
otal Sodium	8.4	11.0	8.4	8.8	7.3	8.1	13.3				<0.1	mg/l	TM30/PM
tal Hardness Dissolved (as CaCO3)	152	165	109	178	149	108	93				<1	mg/l	TM30/PM
AH MS													
aphthalene*	<0.1	<0.1	<0.1	<0.1	Alexander Council	-		No. of Concession, Name of Street, or other Designation, or other		A1	<0.1	ug/l	TM4/PM3
cenaphthylene *	<0.013	<0.013	<0.013	<0.013							<0.013	ug/l	TM4/PM3
cenaphthene #	<0.013	<0.013	<0.013	<0.013			_				<0.013	ug/l	TM4/PM3
luorene#	<0.014	<0.014	<0.014	<0.014							<0.014	ug/I	TM4/PM3
henanthrene *	<0.011	<0.011	<0.011	<0.011	_	_					<0.011	ug/l	TM4/PM3
nthracene ⁴	<0.013	<0.013	<0.013	<0.013	_	_	_				<0.013	ug/l	TM4/PM3
luoranthene #	<0.012	<0.012	<0.012	<0.012		_	-				<0.012	ug/l	TM4/PM3
yrene *	<0.012	<0.013	<0.012	<0.013							<0.013	ug/l	TM4/PM3
enzo(a)anthracene#	<0.015	<0.015	<0.015	<0.015		_	_				<0.015	ug/l	TM4/PM3
hrysene *	<0.011	<0.011	<0.011	<0.011			_			8	<0.011	ug/l	TM4/PM3
enzo(bk)fluoranthene#	<0.018	<0.018	<0.018	<0.018							<0.018	ug/l	TM4/PM
enzo(a)pyrene #	<0.016	<0.016	<0.016	<0.016	-	-					<0.016	ug/l	TM4/PM3
ndeno(123cd)pyrene	<0.011	<0.011	<0.011	<0.011	-						<0.011	ug/l	TM4/PM
ibenzo(ah)anthracene *	<0.01	<0.01	<0.01	<0.01			-				<0.01	ug/l	TM4/PM3
enzo(ghi)perylene	<0.011	<0.011	<0.011	<0.011			-				<0.011	ug/l	TM4/PM
AH 16 Total*	<0.195	<0.195	<0.195	<0.195			-				<0.195	ug/l	TM4/PM
enzo(b)fluoranthene	<0.01	<0.01	<0.01	<0.01		_	-				<0.01	ug/l	TM4/PM
enzo(k)fluoranthene	<0.01	<0.01	<0.01	<0.01							<0.01	ug/l	TM4/PM
AH Surrogate % Recovery	88	85	92	80	-	-	-				<0	%	TM4/PM
тве."	< 5	<5	<5	<5	55		-				<5	ug/l	TM36/PM
enzene*	<5	<5	<5	<5		.					<5	ug/l	TM36/PM
oluene *	<5	<5	<5	<5	-	_					<5	ug/l	TM36/PM
thylbenzene*	<5	<5	<5	<5		-					<5	ug/l	TM36/PM
n/p-Xylene	~ <5	<5	<5	<5		_					<5	ug/l	TM36/PM
	_	<5	<5	<5				1		1	<5	ug/l	TM36/PM

Client Name:

Envirologic Ltd

Reference: Location:

1890

Spink

Contact: EMT Job No: Pat Breheny

Report: Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle

Contact: EMT Job No:	Pat Brehe 21/5240	eny							:40ml vial, 0 :NaOH, HN=		le, P=plastic	bottle	
EMT Sample No.	1-5	6-10	11-15	16-20	21-25	26-30	31-35						
Sample ID	PW2	PW3	SUMP	OUTFALL	SW-WEST	SW-EAST	SW2						
Depth											Planca ca	e attached n	oton for all
COC No / misc												ations and a	
Containers		HHNPG	HHNPG	HHNPG	HHNPG	HHNPG	HIMEDO						0,0
100000							HHNPG					C	
Sample Date	08/04/2021 15:50	08/04/2021 15:50	08/04/2021 15:50	08/04/2021 15:50	08/04/2021 15:50	08/04/2021 15:50	08/04/2021 15:50						
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Surface Water	Surface Water	Surface Water					0	
Batch Number	1	1	1	1	1	1	1				L CDI CD	11-11-	Method
Date of Receipt	09/04/2021	09/04/2021	09/04/2021	09/04/2021	09/04/2021	09/04/2021	09/04/2021				LOD/LOR	Units	No.
TPH CWG		-		22.00				March Land		Barrie A			
Aliphatics													
>C5-C6*	<10	<10	<10	<10	-	-	-				<10	ug/l	TM36/PM12
>C6-C8*	<10	<10	<10	<10	-	-	-				<10	ug/i	TM36/PM12
>C8-C10	<10	<10	<10	<10	-	-	-				<10	ug/l	TM36/PM12
>C10-C12*	<5	<5	<5	<5	-	-	-		10		<5	ug/f	TM5/PM16/PM30
>C12-C16 *	<10	<10	<10	<10	-	-	-				<10	ug/l	TM5/PM16/PM30
>C16-C21	<10	<10	<10	<10	-	-	-				<10	ug/l	TM5/PM16/PM30
>C21-C35 *	<10	<10	<10	<10	-	-	-	20			<10	ug/t	TM5/PM16/PM30
Total aliphatics C5-35*	<10	<10	<10	<10	-	-					<10	ug/i	TMSTM6FM12FM16FM9
Aromatics >C5-EC7 ⁸	-10	-40		-40							-40	. n	TAROGEDARA
>C5-EC7" >EC7-EC8#	<10 <10	<10 <10	<10 <10	<10 <10	-	-	~O				<10	ug/l	TM36/PM12
>EC8-EC10*	<10	<10	<10	<10							<10 <10	ug/i	TM36/PM12 TM36/PM12
>EC10-EC12*	<5	<5	<5	<5							<5	ug/l ug/l	TM5/PM16/PM30
>EC12-EC16*	<10	<10	<10	<10			_				<10	ug/i	TM5/PM16/PM30
>EC16-EC21	<10	<10	<10	<10			_				<10	ug/i	TM5/PM16/PM30
>EC21-EC35	<10	<10	<10	<10	7	-	_				<10	ug/l	TM5/PM16/PM30
Total aromatics C5-35*	<10	<10	<10	<10		-					<10	ug/l	TMS/TMS6FW12/PM16FW3
Total aliphatics and aromatics(C5-35)	<10	<10	<10	<10		-	-				<10	ug/l	ТМБТМОБРИГДЕЧИТЬЕРМО
Sulphate as SO4	45.3	70.7	27.5	58.3	8.6	28.9	7.6				<0.5	mg/l	TM38/PM0
Chloride #	12.9	15.5	13.8	13.4	12.2	11.4	20.9				<0.3	mg/l	TM38/PM0
Nitrate as NO3#	4.0	3.1	2.4	<0.2	0.9	1.5	7.0				<0.2	mg/l	TM38/PM0
Nitrite as NO2*	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02				<0.02	mg/l	TM38/PM0
Ortho Phosphate as PO4	<0.03	<0.03	<0.03	<0.03	0.05	<0.03	0.04				<0.03	mg/l	TM38/PM0
MRP Ortho Phosphate as PO4	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06				<0.06	mg/l	TM38/PM0
Ammoniacal Nitrogen as NH4	0.02	0.02	0.02	0.03	0.03	0.03	0.03				<0.01	mg/i	TM38/PM0
Total Alkalinity as CaCO3	110	102	86	121	149	87	89				<1	mg/l	TM75/PM0
Bicarbonate Alkelinity as CeCO3 (water echable)	110	102	86	121	134	87	89				<1	mg/l	TM75/PM0
Total Organic Carbon	<2	<2	<2	<2	5	5	5				<2	mg/l	TM60/PM0
Total Suspended Solids *	<10	<10	<10	<10	<10	<10	<10				<10	mg/l	TM37/PM0
Ca		l l											
2													
* 1													
2 21													
4 4 .			1										
													L

Envirologic Ltd 1890 Client Name:

Reference:

Spink Location:

Pat Breheny Contact:

Job Batch Sample ID Do	Depth Sample No.	Analysis	Reason
	Commence of the Commence of th	No deviating sample report results for job 21/5240	The second secon
		2/	
		4	

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

QF-PM 3.1 /3

41.



ALS Environmental Ltd Torrington Avenue Coventry CV4 9GU

T: +44 (0)24 7642 1213 F: +44 (0)24 7685 6575 www.alsenvironmental.co.uk

16 April 2021

Test Report: COV/2115972/2021

Dear Mr Breheny

Mr Breheny Envirologic

Howth

Envirologic Ltd.

Dublin D13 HO08 South Dublin

78 St Peters Terrace

Analysis of your sample(s) received on 08 April 2021 is now complete and we have pleasure in enclosing the appropriate test report(s).

An invoice for the analysis carried out will be sent under separate cover.

Should you have any queries regarding this report(s) or any part of our service, please contact Customer Services on +44 (0)24 7642 1213 who will be happy to discuss your requirements.

If you would like to arrange any further analysis, please contact Customer Services. To arrange container delivery or sample collection, please call the Couriers Department directly on 024 7685 6562.

Thank you for using ALS Environmental Ltd and we look forward to receiving your next samples.

Yours Sincerely

Signed:

Name: R. Stocks

Title:







Report Summary

Mr Patrick Brehenv **Envirologic** Envirologic Ltd. 78 St Peters Terrace Howth Dublin South Dublin D13 HO08





Date of Issue: 16 April 2021

Report Number: COV/2115972/2021

Issue 1

This issue replaces all previous issues

Job Description:

Micro analysis

Number of Samples included in this report Job Received:

08 April 2021

Number of Test Results included in this report

Analysis Commenced: 12 April 2021

Signed: V

Name: R. Stocks Date: 16 April 2021

Title: Inorganic Team Leader

ALS Environmental Ltd was not responsible for sampling unless otherwise stated.

Information on the methods of analysis and performance characteristics are available on request.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation. The results relate only to the items tested and where relevant sampled.

Tests marked 'Not UKAS Accredited' in this Report/Certificate are not included in the UKAS Accreditation Schedule for our laboratory. This test report is not a statement of conformity to any specification or standard.

This communication has been sent to you by ALS Environmental Ltd. Registered in England and Wales. Registration No. 02148934. Registered Office: ALS Environmental Limited, Torrington Avenue, Coventry, CV4 9GU.

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ANALYSED BY



Report Number:

COV/2115972/2021

Laboratory Number:

20311024

Sample Source:

Envirologic

Sample Point Description:

Sample Description:

SW East

Sample Matrix:

Surface Water

Sample Date/Time:

08 April 2021

Sample Received: Analysis Complete: 08 April 2021 16 April 2021

Test Description	Result	Units	Analysis Date	Accreditation	Method
BODS + ATU	<1	mg/l O2	16/04/2021	N S	SUBCON
COD	<5	mg/l	16/04/2021	N S	SUBCON
Total Coliforms (Colilert)	488	mpn/100ml	12/04/2021	N S	SUBCON
Faecal Coliforms (Colilert)	488	mpn/100ml	12/04/2021	N S	SUBCON

Analyst Comments for 20311024:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: CHE = Chester(CH5 3US), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2RU), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG), F = Data supplied by customer.

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered.

US=Insufficient sample For soil/studge samples: AR=As received, DW=Dry weight.

Name:

R. Stocks

Date: 16 April 2021

Issue

Sample

Title: **Inorganic Team Leader**

ANALYSED BY



Report Number:

COV/2115972/2021

Laboratory Number:

20311025

Sample Source:

Envirologic

Sample Point Description:

Sample Description:

SW West

Sample Matrix:

Surface Water

Sample Date/Time:

08 April 2021

Sample Received: Analysis Complete: 08 April 2021 16 April 2021

Test Description	Result	Units	Analysis Date	Accreditation	Method
BODS + ATU	<1	mg/l O2	16/04/2021	N S	SUBCON
COD	<5	mg/l	16/04/2021	N S	SUBCON
Total Coliforms (Colilert)	68	mpn/100ml	12/04/2021	N S	SUBCON
Faecal Coliforms (Colilert)	42	mpn/100ml	12/04/2021	N S	SUBCON

Analyst Comments for 20311025:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: CHE = Chester(CH5 3US), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2RU), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG), F = Data supplied by customer.

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered.

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Name:

R. Stocks

Date: 16 April 2021

Issue

Sample

Signed: LL

Title:

ANALYSED BY



Report Number:

COV/2115972/2021

Laboratory Number:

20311026

Sample Source:

Envirologic

Sample Point Description:

Sample Description:

Outfall

Sample Matrix:

Surface Water

Sample Date/Time:

08 April 2021

Sample Received:

08 April 2021

Analysis Complete:

16 April 2021

Test Description	Result	Units	Analysis Date	Accreditation	Method
BODS + ATU	2	mg/l O2	16/04/2021	N S	SUBCON
COD	<5	mg/l	16/04/2021	N S	SUBCON
Total Coliforms (Colilert)	86	mpn/100ml	12/04/2021	N S	SUBCON
Faecal Coliforms (Colilert)	0	mpn/100ml	12/04/2021	N S	SUBCON

Analyst Comments for 20311026:

No Analyst Comment

This issue replaces all previous issues
Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.
Analysed at: CHE = Chester(CH5 3US), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2RU), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG),

Analyses at the Experience of search 1997 - Social Society of Social Society of Social Society of Social Society of Social Socia

Name: R. Stocks

Date: 16 April 2021

issue

Sample

Title:



Unit 3 Deeside Point

Zone 3

Deeside Industrial Park

Deeside

CH5 2UA

P: +44 (0) 1244 833780

F: +44 (0) 1244 833781

W: www.element.com

Envirologic Ltd 78 St Peters Terrace Howth Co Dublin Ireland





Attention:

Pat Breheny

Date:

13th May, 2021

Your reference :

1890

Our reference :

Test Report 21/6737 Batch 1

Location:

Spink

Date samples received :

6th May, 2021

Status:

Final report

Issue:

1

Three samples were received for analysis on 6th May, 2021 of which three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:

Bruce Leslie Project Manager

Please include all sections of this report if it is reproduced

Client Name:

Envirologic Ltd

Reference:

1890

Location:

Spink

Contact: EMT Job No: Pat Brehen 21/6737

Report: Liquid

Pat Breheny

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle

H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

EMT Job No:	21/6737						H=H ₂ SO ₄ ,	Z≃ZnAc, N≃	NaOH, HN=	-HN0 ₃			
EMT Sample No.	1-5	6-10	11-15										
Sample ID	OUTFALL	SW-EAST	SW-WEST										
Depth													
COC No / misc												e attached nations and a	
		H HN BOD C	H HN BOD G										00
												C	
Sample Date		10 10 11 10										O.	
Sample Type												0	
Batch Number		1	1								LOD/LOR	Units	Method
Date of Receipt		06/05/2021	06/05/2021										No.
Total Aluminium	79.4	584.7	53.0								<1.5	ug/l	TM170/PM14
Total Cadmium Total Iron	<0.03 76.0	0.08 626.1	<0.03 108.7								<0.03	ug/l	TM170/PM14 TM170/PM14
Total Manganese	44.9	16.4	7.5							11.	<4.7 <1.5	ug/l ug/l	TM170/PM14
Total Mercury	<0.5	<0.5	<0.5						2	7.	<0.5	ug/l	TM170/PM14
Total Phosphorus	13	32	37						.0		<5	ug/l	TM170/PM14
Total Zinc	1.6	4.6	1.8								<1.5	ug/l	TM170/PM14
Total Calcium	53.8 _{AA}	31.3 _{AA}	54.8 _{AA}								<0.2	mg/l	TM30/PM14
Total Magnesium	17.6 _{AA}	5.1 _{AA}	6.3 _{AA}				• 3	$\mathcal{A}_{\mathcal{A}}$			<0.1	mg/l	TM30/PM14
Total Potassium	2.4 _{AA}	2.2 _{AA}	2.7 _{AA}								<0.1	mg/l	TM30/PM14
Total Sodium	11.6 _{AA}	8.4 _{AA}	11.6 _{AA}				7O,				<0.1	mg/l	TM30/PM14
Total Hardness Dissolved (as CaCO3)	185	99	151								<1	mg/i	TM30/PM14
Sulphate as SO4#	60.4	23.3	8.3								<0.5	mg/l	TM38/PM0
Chloride *	13.9	13.4	17.8			Y .					<0.3	mg/l	TM38/PM0
Nitrate as NO3	0.4	2.3	2.3		1-0	Ť					<0.2	mg/l	TM38/PM0
Nitrite as NO2#	<0.02	<0.02	<0.02	•	100						<0.02	mg/l	TM38/PM0
Ortho Phosphate as PO4 MRP Ortho Phosphate as PO4	<0.03 <0.06	<0.03 <0.06	0.05 <0.06	•							<0.03 <0.06	mg/l	TM38/PM0
Initia Olaio i licopilato as i O4	10.00	40.00	40.00								\0.00	mg/l	TM38/PM0
Ammoniacal Nitrogen as NH4	0.02	0.03	0.03	(D)							<0.01	mg/l	TM38/PM0
Total Alkalinity as CaCO3*	142	85	152								<1	mg/l	TM75/PM0
Bicarbonate Alkalinity as CaCO3 (water schuble)	142	85	139								<1	mg/l	TM75/PM0
Total Organic Carbon	<2	g	5								<2	mg/l	TM60/PM0
Total Suspended Solids	<10	<10	<10								<10	mg/l	TM37/PM0
	\sim C												
6.9													
COUNTY			1										
5													

Client Name: Envirologic Ltd

Reference: 1890

Location: Spink

Contact: Pat Breheny

Reason					
Analysis	No deviating sample report results for job 21/6737	ninop	Jihorii	y, ies	NINO PUITY
EMT Sample No.			+		
Depth	A CALLED MANAGEMENT				
Sample ID					
Batch					
Sob No.					

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met. 37,3



ALS Environmental Ltd Torrington Avenue Coventry CV4 9GU

T: +44 (0)24 7642 1213 F: +44 (0)24 7685 6575

www.alsenvironmental.co.uk

14 May 2021

Test Report: COV/2129120/2021

Dear Mr Breheny

Mr Breheny **Envirologic**

Howth

Envirologic Ltd.

Dublin D13 HO08 South Dublin

78 St Peters Terrace

Analysis of your sample(s) received on 05 May 2021 is now complete and we have pleasure in enclosing the appropriate test report(s).

An invoice for the analysis carried out will be sent under separate cover.

Should you have any queries regarding this report(s) or any part of our service, please contact Customer Services on +44 (0)24 7642 1213 who will be happy to discuss your requirements.

If you would like to arrange any further analysis, please contact Customer Services. To arrange container delivery or sample collection, please call the Couriers Department directly on 024 7685 6562.

Thank you for using ALS Environmental Ltd and we look forward to receiving your next samples.

Yours Sincerely,

Signed:

Name: R. Stocks

Title:

Inorganic Team Leader







OHS 542058

Report Summary

Mr Patrick Brehenv **Envirologic** Envirologic Ltd. 78 St Peters Terrace Howth Dublin South Dublin D13 HO08





Date of Issue: 14 May 2021

Report Number: COV/2129120/2021

Issue 1

This issue replaces all previous issues

Job Description:

Micro analysis

Number of Samples included in this report Job Received:

05 May 2021

Number of Test Results included in this report

Analysis Commenced: 07 May 2021

Signed: /

Name: R. Stocks

Date: 14 May 2021

Title:

Inorganic Team Leader

ALS Environmental Ltd was not responsible for sampling unless otherwise stated.

Information on the methods of analysis and performance characteristics are available on request.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation. The results relate only to the items tested and where relevant sampled.

Tests marked 'Not UKAS Accredited' in this Report/Certificate are not included in the UKAS Accreditation Schedule for our laboratory. This test report is not a statement of conformity to any specification or standard.

This communication has been sent to you by ALS Environmental Ltd. Registered in England and Wales. Registration No. 02148934. Registered Office: ALS Environmental Limited, Torrington Avenue, Coventry, CV4 9GU.

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ANALYSED BY



Report Number:

COV/2129120/2021

Laboratory Number:

20398865

					00	unpic	1 01 3
Sample Source: Sample Point Description:	Envirologic						S
Sample Description:	Outfall						0
Sample Matrix:	Surface Water						
Sample Date/Time:	05 May 2021						
Sample Received:	05 May 2021						
Analysis Complete:	14 May 2021						
					\sim		
1							
				N			
				1.0			
Test Descr	iption	Result	Units	Analysis Date	Accred	tation	Method
BODS + ATU		3	mg/l O2	14/05/2021	N	S	SUBCON
COD		10	mg/l	14/05/2021	N	S	SUBCON
Total Coliforms (Colilert)		122	mpn/100ml	07/05/2021	N	S	SUBCON
Faecal Coliforms (Colilert)		6	mpn/100ml	07/05/2021	N	S	SUBCON

Analyst Comments for 20398865:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: CHE = Chester(CH5 3US), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2RU), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG), All all sets and the Constant of the Constant

gois Count

Name: R. Stocks

Date: 14 May 2021

Issue

Sample

Title:

ANALYSED BY



Report Number:

COV/2129120/2021

Laboratory Number:

20398866

Sample Source:

Envirologic

Sample Point Description:

Sample Description:

SW East

Sample Matrix:

Surface Water

Sample Date/Time:

05 May 2021

Sample Received: Analysis Complete: 05 May 2021 14 May 2021

Test Description	Result	Units	Analysis Date	Accreditation	Method			
BODS + ATU	<1	mg/I O2	14/05/2021	N S	SUBCON			
COD	25	mg/l	14/05/2021	N S	SUBCON			
Total Coliforms (Colilert)	1046	mpn/100ml	07/05/2021	N S	SUBCON			
Faecal Coliforms (Colilert)	461	mpn/100ml	07/05/2021	N S	SUBCON			

Analyst Comments for 20398866:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: CHE = Chester(CH5 3US), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2RU), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG), F = Data supplied by customer.

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered.

US=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed: LL

Name: R. Stocks Date: 14 May 2021

Issue

Sample

Title:

ANALYSED BY



Report Number:

COV/2129120/2021

Laboratory Number:

20398867

Sample Source:

Envirologic

Sample Point Description:

Sample Description:

SW West

Sample Matrix:

Surface Water

Sample Date/Time:

05 May 2021

Sample Received:

05 May 2021

Analysis Complete:

14 May 2021

Test Description	Result	Units	Analysis Date	Accreditation	Method	
BODS + ATU	<1	mg/l O2	14/05/2021	N S	SUBCON	
COD	18	mg/l	14/05/2021	N S	SUBCON	
Total Coliforms (Colilert)	1120	mpn/100ml	07/05/2021	N S	SUBCON	
Faecal Coliforms (Colilert)	727	mpn/100ml	07/05/2021	N S	SUBCON	

Analyst Comments for 20398867:

No Analyst Comment

This issue replaces all previous issues
Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.
Analysed at: CHE = Chester(CH5 3US), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2RU), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG), F = Data supplied by customer.
For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered.

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Name:

R. Stocks

Date: 14 May 2021

Issue

Sample

Title:

Ladis County Council Planning Authority, Viewing Purposes Only, Viewing Purpose Only, Viewing Purposes Only, Viewing Purpose Only, Viewing Purpos