

Attachment E.3

- Drain Integrity Testing Report 2013, drain repair.
- List I List II Analysis Aqueous Sample

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T.E. LABORATORIES LIMITED
Trading as

TelLab 

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CERTIFICATE OF ANALYSIS

Page 1 of 3

Project Description:

Analysis of Aqueous Sample

Attention:

Ms. Noeleen Donegan

Lab ID:

114636

Company:

Bruss GMBH

Date Sampled:

11.04.2014

Address:

Finisklin Road,
Sligo

Certificate No:

L/14/0697

Date Rec'd:

14.04.2014

Issue Date:

25.04.2014

Our Ref:

14-03783

Project Summary:

One sample was analysed for a range of determinands.
Please see page 2-3 for results. Terms & Conditions and methods
used are outlined in the attached appendix.

No. of Pages:

Results page 2-3 plus 4 page appendix

Peter O'Byrne
Mr. Peter O'Byrne
Quality Manager

Breda Moore
Ms Breda Moore
Technical Manager



ANALYSIS OF AQUEOUS SAMPLE.

Date Sampled: 11.04.2014
 Date Received: 14.04.2014
 Date Analysis Commenced: 15.04.2014
 Our Ref: 14-03783
 Certificate No. L/14/0697

Volatile Organic Compounds ++

Determinand	Client ID LAB ID	SE 1 114636
Dichlorodifluoromethane	ug/l	< 1
Chloromethane	ug/l	< 1
Vinyl Chloride	ug/l	< 1
Bromomethane	ug/l	< 1
Chloroethane	ug/l	< 1
Trichlorofluoromethane	ug/l	< 1
1,1-dichloroethylene	ug/l	< 1
Trans-1,2-dichloroethylene	ug/l	< 1
1,1-dichloroethane	ug/l	< 1
cis-1,2-dichloroethylene	ug/l	< 1
2,2-dichloropropane	ug/l	< 2
Bromochloromethane	ug/l	< 4
Chloroform	ug/l	2
1,1,1-trichloroethane	ug/l	< 1
1,1-dichloropropene	ug/l	< 1
Carbon tetrachloride	ug/l	< 1
Benzene	ug/l	< 1
1,2-dichloroethane	ug/l	< 1
Trichloroethylene	ug/l	< 1
1,2-dichloropropene	ug/l	< 1
Dibromomethane	ug/l	< 1
Bromodichloromethane	ug/l	< 4
cis-1,3-dichloropropene	ug/l	< 1
Toluene	ug/l	< 1
trans-1,3-dichloropropene	ug/l	< 1
1,1,2-trichloroethylene	ug/l	< 1
Tetrachloroethylene	ug/l	< 1
1,3-dichloropropane	ug/l	< 1
Dibromochloromethane	ug/l	< 1
1,2-dibromoethane	ug/l	< 1
Chlorobenzene	ug/l	< 1
1,1,1,2-tetrachloroethane	ug/l	< 1
Ethylbenzene	ug/l	< 1
m,p-Xylene	ug/l	< 2
o-Xylene	ug/l	< 1
Styrene	ug/l	< 1
Bromoform	ug/l	< 1
Isopropylbenzene	ug/l	< 1
1,1,2,2-tetrachloroethane	ug/l	< 1
Bromobenzene	ug/l	< 1
1,2,3-trichloropropane	ug/l	< 1
n-propylbenzene	ug/l	< 1
2-chlorotoluene	ug/l	< 1
1,3,5-trimethylbenzene	ug/l	< 1
4-chlorotoluene	ug/l	< 1
Tert-butylbenzene	ug/l	< 1
1,2,4-trimethylbenzene	ug/l	< 1
sec-butylbenzene	ug/l	< 1
p-isopropyltoluene	ug/l	< 1
1,3-dichlorobenzene	ug/l	< 2
1,4-dichlorobenzene	ug/l	< 1
n-butylbenzene	ug/l	< 1
1,2-dichlorobenzene	ug/l	< 1
1,2-dibromo-3-chloropropane	ug/l	< 1
1,2,4-trichlorobenzene	ug/l	< 1
Hexachlorobutadiene	ug/l	< 1
Naphthalene	ug/l	< 1
1,2,3-trichlorobenzene	ug/l	< 1

Concentrations expressed as ug/l (ppb)

unless stated otherwise

** = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

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ANALYSIS OF AQUEOUS SAMPLE.

Date Sampled: 11.04.2014
 Date Received: 14.04.2014
 Date Analysis Commenced: 15.04.2014
 Our Ref: 14-03783
 Certificate No. L/14/0697

Semi-Volatile Organic Compounds ++

Determinand	Client ID LAB ID	SE 1 114636
Phenol	ug/l	< 1.0
Aniline	ug/l	< 1.0
2-Chlorophenol	ug/l	< 1.0
Benzyl Alcohol	ug/l	< 1.0
2-Methylphenol	ug/l	< 1.0
Bis(2-chloroisopropyl)ether	ug/l	< 1.0
3&4-Methylphenol	ug/l	< 1.0
Bis(2-chloroethoxy)methane	ug/l	< 1.0
2,4-Dimethylphenol	ug/l	< 1.0
2,4-Dichlorophenol	ug/l	< 1.0
1,2,4-Trichlorobenzene	ug/l	< 1.0
4-Chloro-3-methylphenol	ug/l	< 1.0
2-Methylnaphthalene	ug/l	< 1.0
1,2-Dinitrotoluene	ug/l	< 1.0
Hexachlorocyclopentadiene	ug/l	< 1.0
2,4,6-Trichlorophenol	ug/l	< 1.0
2,4,5-Trichlorophenol	ug/l	< 1.0
2-Chloronaphthalene	ug/l	< 1.0
2-Nitroaniline	ug/l	< 1.0
2,4-Dinitrotoluene	ug/l	< 1.0
Acenaphthylene	ug/l	< 1.0
3-Nitroaniline	ug/l	< 1.0
Acenaphthene	ug/l	< 1.0
4-Nitrophenol	ug/l	< 1.0
Dibenzofuran	ug/l	< 1.0
2,6-Dinitrotoluene	ug/l	< 1.0
2,3,4,6-Tetrachlorophenol	ug/l	< 1.0
Diethylphthalate	ug/l	< 1.0
4-Chlorophenylphenylether	ug/l	< 1.0
Fluorene	ug/l	< 1.0
4-Nitroaniline	ug/l	< 1.0
Diphenylamine	ug/l	< 1.0
4-Bromophenylphenylether	ug/l	< 1.0
Hexachlorobenzene	ug/l	< 1.0
Bis(2-ethylhexyl)ether	ug/l	< 1.0
Pentachlorophenol	ug/l	< 1.0
Phenanthrene	ug/l	< 1.0
Anthracene	ug/l	< 1.0
Di-n-butylphthalate	ug/l	< 1.0
Fluoranthene	ug/l	< 1.0
Pyrene	ug/l	< 1.0
Butylbenzylphthalate	ug/l	< 1.0
Benzo(a)anthracene	ug/l	< 1.0
Chrysene	ug/l	< 1.0
Bis(2-ethylhexyl)phthalate	ug/l	< 1.0
Di-n-octylphthalate	ug/l	< 1.0
Benzo(b)fluoranthene	ug/l	< 1.0
Benzo(k)fluoranthene	ug/l	< 1.0
Benzo(a)pyrene	ug/l	< 1.0
Indeno(123cd)pyrene	ug/l	< 1.0
Dibenzo(ah)anthracene	ug/l	< 1.0
Benzo(ghi)perylene	ug/l	< 1.0
1,4-Dinitrobenzene	ug/l	< 1.0
Dimethylphthalate	ug/l	< 1.0
1,3-Dinitrobenzene	ug/l	< 1.0
2,3,5,6-Tetrachlorophenol	ug/l	< 1.0
Azobenzene	ug/l	< 1.0
Carbazole	ug/l	< 1.0

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 unless stated otherwise

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Methods of analysis INAB Accredited tests

DETERMINAND	TECHNIQUE	DETECTION LIMIT	METHOD REFERENCE
Cadmium	Direct aspiration/flame AAS	0.03 ppm	TP001
Cadmium	Graphite Furnace AAS	0.1 ppb	TP007
Calcium	Ion Chromatography	2.5 ppm	TP004
Chloride	Ion chromatography	0.5 ppm	TP002
Chromium	Direct aspiration/flame AAS	0.05 ppm	TP001
Chromium	Graphite Furnace AAS	1ppb	TP007
Cobalt	Direct aspiration/flame AAS	0.12 ppm	TP001
Conductivity	Electrometry	5 μ S/cm @ 20°C	TP005
Copper	Direct aspiration/flame AAS	0.05 ppm	TP001
Fluoride	Ion chromatography	0.1 ppm	TP002
Iron	Direct aspiration/flame AAS	0.05 ppm	TP001
Lead	Direct aspiration/flame AAS	0.20 ppm	TP001
Lead	Graphite Furnace AAS	2 ppb	TP007
Magnesium	Ion Chromatography	1 ppm	TP004
Manganese	Direct aspiration/flame AAS	0.03 ppm	TP001
Nickel	Direct aspiration/flame AAS	0.10 ppm	TP001
Nitrate	Ion chromatography	0.5 ppm	TP002
Nitrate as N		0.11 ppm	
Nitrite	Ion chromatography	0.2 ppm	TP002
Nitrite as N		0.06 ppm	
Orthophosphates	Ion chromatography	1.0 ppm	TP002
Orthophosphate as P		0.33 ppm	
pH	Hydrogen ion selective electrode	2-12 pH Units	TP003
Potassium	Ion Chromatography	1 ppm	TP004
Sodium	Ion chromatograohy	1 ppm	TP004
Sulphate	Ion chromatography	0.25 ppm	TP002
TON	Sum of Nitrate & Nitrite	0.17 ppm	TP002
Total Hardness	Calculation based on calcium & magnesium results	10ppm	TP004
Zinc	Direct aspiration/flame AAS	0.01 ppm	TP001