

Permit Number: EPR/BR9383ID/V009  
Facility: Queensferry Mineral Fibre Works

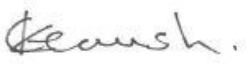
Operator: Knauf Insulation Ltd  
Form Number: Air1b

**Reporting of emissions to air for year 2018**

**Point A, Cupola After Oxidiser Stack**

Emission Point	Substance / Parameter	Emission Limit Value	Result 1	Sample Date and Time	Result 2	Sample Date and Time	Result 3	Sample date and Time
A	Chlorides (expressed as hydrogen chloride)	10 mg/m <sup>3</sup>	76.5	16/05/2018 10:35 to 11:05	2.8	16/05/2018 11:11 to 11:41	33.2	16/05/2018 11:53 to 12:23
A	Fluorides (expressed as hydrogen fluoride)	5 mg/m <sup>3</sup>	1.7	16/05/2018 10:40 to 11:10	2.6	16/05/2018 11:18 to 11:48	4.1	16/05/2018 12:00 to 12:30
A	Hydrogen sulphide	2 mg/m <sup>3</sup>	<0.32	15/05/2018 10:30 to 12:30	<0.36	15/05/2018 13:15 to 18:30	<0.29	16/05/2018 08:25 to 10:25
A	Metals (group 1)	1 mg/m <sup>3</sup>	0.27	15/05/2018 13:03 to 13:37	0.08	15/05/2018 13:52 to 14:26	0.25	15/05/2018 14:50 to 18:35
A	Metals (group 2)	2 mg/m <sup>3</sup>	0.32	15/05/2018 13:03 to 13:37	0.16	15/05/2018 13:52 to 14:26	0.32	15/05/2018 14:50 to 18:35

Note: The monitoring results recorded concentrations of Hydrogen Chloride (Run 1 & Run 2) in excess of the Emission Limit Values. This was reported as an un-authorized release on 19<sup>th</sup> July 2018 (Reference EP\_EX\_202).

Signed .....   
(Authorised to sign as representative of Operator)

Date.....19/09/2018

Permit Number: EPR/BR9383ID/V009

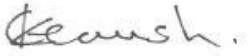
Operator: Knauf Insulation Ltd

Facility: Queensferry Mineral Fibre Works

Form Number: Air1c

**Reporting of emissions to air for the 6 month period for 1<sup>st</sup> January to 30<sup>th</sup> June 2018 Point C, Forming Stack**

Emission Point	Substance / Parameter	Emission Limit Value	Result 1	Sample Date and Time	Result 2	Sample Date and Time	Result 3	Sample date and Time
C	Particulate Matter	50 mg/m <sup>3</sup>	27.1	15/05/2018 09:00 to 10:05	10.4	15/05/2018 10:15 to 11:20	18.0	15/05/2018 11:30 to 12:35
C	Volatile Organic Compounds as C	30 mg/m <sup>3</sup>	16.3	14/05/2018 16:45 to 17:15	21.3	14/05/2018 17:20 to 17:50	21.7	14/05/2018 17:55 to 18:25
C	Ammonia	50 mg/m <sup>3</sup>	27.6	15/05/2018 09:00 to 10:05	34.8	15/05/2018 10:15 to 11:20	37.9	15/05/2018 11:30 to 12:35
C	Formaldehyde	5 mg/m <sup>3</sup>	2.6	14/05/2018 14:31 to 15:01	3.0	14/05/2018 15:20 to 15:50	2.0	14/05/2018 16:05 to 16:35
C	Phenol	10 mg/m <sup>3</sup>	<0.43	14/05/2018 17:10 to 17:40	<0.41	14/05/2018 17:45 to 18:15	<0.41	14/05/2018 18:20 to 18:50
C	Amines	3 mg/m <sup>3</sup>	<2.7	14/05/2018 13:50 to 14:50	<2.7	14/05/2018 14:55 to 15:55	<2.8	14/05/2018 16:00 to 17:00

Signed .....   
(Authorised to sign as representative of Operator)

Date.....19/09/2018

Permit Number: EPR/BR9383ID/V009

Operator: Knauf Insulation Ltd

Facility: Queensferry Mineral Fibre Works

Form Number: Air1c

**Reporting of emissions to air for the 6 month period for 1<sup>st</sup> July to 31<sup>st</sup> December 2018 Point C, Forming Stack**

Emission Point	Substance / Parameter	Emission Limit Value	Result [1]	Sample Date and Times	Result [2]	Sample Date and Times	Result [3]	Sample Date and Times
C	Particulate Matter	50 mg / m3	60.7 (*)	18/10/2018 09:05 – 09:20 09:23 – 09:38 09:41 – 09:56 09:59 – 10:14	41.3	18/10/2018 11:00 – 11:15 11:17 – 11:32 11:35 – 11:50 11:52 – 12:07	62.8 (*)	18/10/2018 12:17 – 12:32 12:35 – 12:50 12:53 – 13:08 13:11 – 13:26
C	Volatile Organic Compounds as C	30 mg / m3	25.1	17/10/2018 17:00 – 17:30	26.7	17/10/2018 17:31 – 18:01	27.0	17/10/2018 18:02 – 18:32
C	Ammonia	50 mg / m3	16.0	18/10/2018 09:05 – 09:20 09:23 – 09:38 09:41 – 09:56 09:59 – 10:14	13.2	18/10/2018 11:00 – 11:15 11:17 – 11:32 11:35 – 11:50 11:52 – 12:07	21.9	18/10/2018 12:17 – 12:32 12:35 – 12:50 12:53 – 13:08 13:11 – 13:26
C	Formaldehyde	5 mg / m3	1.3	17/10/2018 14:40 – 15:10	1.5	17/10/2018 15:20 – 15:50	1.8	17/10/2018 16:20 – 16:50
C	Phenol	10 mg / m3	< 0.16	18/10/2018 08:45 – 09:45	< 0.16	18/10/2018 09:50 – 11:20	< 0.16	18/10/2018 11:30 – 12:30
C	Amines	3 mg/m3	< 1.3	18/10/2019 08:45 – 09:45	< 1.3	18/10/2018 09:50 – 11:25	< 1.3	18/10/2018 11:30 – 12:30

Note: All results are expressed in mg/Nm<sup>3</sup> without correction for water vapour.

Note: (\*) Particulate matter limit exceeded EP\_EX\_217 refers.

Signed .....



Date.....24/1/2019

(Authorised to sign as representative of Operator)

Permit Number: EPR/BR9383ID/V009

Operator: Knauf Insulation Ltd

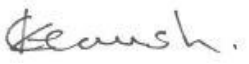
Facility: Queensferry Mineral Fibre Works

Form Number: Air1d

**Reporting of emissions to air for the year 2018**

**Point D, Binder Fume Plant Extraction**

Emission Point	Substance / Parameter	Emission Limit Value	Result 1	Sample Date and Time	Result 2	Sample Date and Time	Result 3	Sample date and Time
D	Particulate Matter	N/A	0.89	16/05/2018 14:45 to 18:05	0.35	17/05/2018 08:46 to 09:46	1.6	17/05/2018 09:51 to 10:51
D	Volatile Organic Compounds as C	N/A	3.4	17/05/2018 08:50 to 09:20	3.5	17/05/2018 09:25 to 09:55	3.5	17/05/2018 10:00 to 10:30
D	Ammonia	N/A	18.2	16/05/2018 14:45 to 18:05	1.5	17/05/2018 08:46 to 09:46	2.0	17/05/2018 09:51 to 10:51
D	Formaldehyde	N/A	3.7	16/05/2018 14:50 to 15:20	3.5	16/05/2018 17:50 to 18:20	1.8	16/05/2018 18:25 to 18:55
D	Phenol	N/A	<0.42	17/05/2018 08:50 to 09:20	<0.42	17/05/2018 09:25 to 09:55	<0.43	17/05/2018 10:00 to 10:30
D	Amines	N/A	<2.7	16/05/2018 14:05 to 15:05	<2.7	16/05/2018 17:20 to 18:20	<2.8	16/05/2018 18:25 to 19:25

Signed .....   
(Authorised to sign as representative of Operator)

Date.....19/09/2018


Permit Number: EPR/BR9383ID/V009  
 Facility: Queensferry Mineral Fibre Works

Operator: Knauf Insulation Ltd  
 Form Number: Air1e

**Reporting of emissions to air for the year 2018**

**Point F, Curing Oven Stack**

Emission Point	Substance / Parameter	Emission Limit Value	Result 1	Sample Date and Time	Result 2	Sample Date and Time	Result 3	Sample date and Time
F	Particulate Matter	10 mg/m <sup>3</sup>	1.1	17/10/2018 09:52 – 10:52	0.46	17/10/2018 11:03 – 12:03	0.68	17/10/2018 12:15 – 13:15
F	Volatile Organic Compounds as C	10 mg/m <sup>3</sup>	4.7	16/10/2018 09:20 – 09:50	4.7	16/10/2018 09:51 – 10:21	4.9	16/10/2018 10:22 – 10:52
F	Ammonia	10 mg/m <sup>3</sup>	14.5	17/10/2018 09:52 – 10:52	9.8	17/10/2018 11:03 – 12:03	4.2	17/10/2018 12:15 – 13:15
F	Formaldehyde	5 mg/m <sup>3</sup>	0.74	16/10/2018 16:27 – 16:57	0.29	16/10/2018 17:02 – 17:32	0.26	16/10/2018 17:38 – 18:08
F	Phenol	5 mg/m <sup>3</sup>	< 0.16	17/10/2018 09:20 – 11:20	< 0.16	17/10/2018 11:23 – 13:23	< 0.16	17/10/2018 13:27 – 15:27
F	Amines	2 mg/m <sup>3</sup>	< 1.3	16/10/2018 11:15 – 13:15	< 1.3	16/10/2018 13:20 – 15:20	< 1.2	16/10/2018 15:25 – 17:25
F	Nitrogen Dioxide	200 mg/m <sup>3</sup>	24.0	16/10/2018 22:00 – 22:30	25.4	16/10/2018 22:31 – 23:01	26.1	16/10/2018 23:02 – 23:32

Signed .....   
 (Authorised to sign as representative of Operator)

Date.....24/1/2019

Permit Number: EPR/BR9383ID/V009

Operator: Knauf Insulation Ltd

Facility: Queensferry Mineral Fibre Works

Form Number: Air1c

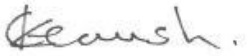
Reporting of emissions to air for the 3 month period for 1<sup>st</sup> January to 31<sup>st</sup> March 2018

Point G, Cooling Zone Stack

Emission Point	Substance / Parameter	Emission Limit Value	Result 1	Sample Date and Time	Result 2	Sample Date and Time	Result 3	Sample date and Time
G	Particulate Matter	10 mg/m <sup>3</sup>	11.1*	05/02/2018 14:40 to 16:22	5.8	05/02/2018 16:26 to 18:30	10.7**	06/02/2018 08:01 to 09:45
G	Ammonia	10 mg/m <sup>3</sup>	14.5	05/02/2018 14:40 to 16:22	6.9	05/02/2018 16:26 to 18:30	12.9	06/02/2018 08:01 to 09:45

Note: The monitoring results recorded concentrations of Ammonia (Run 1 & Run 3) in excess of the Emission Limit Values. This was reported as an un-authorised release on 20<sup>th</sup> July 2018 (Reference EP\_EX\_203).

With respect to Particulate Matter and in accordance with TGN M2, the results for Run 1 and Run 3 were reported on 20<sup>th</sup> July 2018 ((Reference EP\_EX\_203) as an approach to limit given that the adjusted value is below the ELV.

Signed .....   
(Authorised to sign as representative of Operator)

Date.....19/09/2018

Permit Number: EPR/BR9383ID/V009

Operator: Knauf Insulation Ltd

Facility: Queensferry Mineral Fibre Works

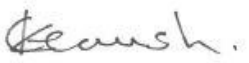
Form Number: Air1c

Reporting of emissions to air for the 3 month period for 1<sup>st</sup> April to 30<sup>th</sup> June 2018

Point G, Cooling Zone Stack

Emission Point	Substance / Parameter	Emission Limit Value	Result 1	Sample Date and Time	Result 2	Sample Date and Time	Result 3	Sample date and Time
G	Particulate Matter	10 mg/m <sup>3</sup>	30.6	17/05/2018 11:53 to 12:55	17.6	17/05/2018 13:03 to 14:05	9.4	17/05/2018 14:12 to 15:14
G	Ammonia	10 mg/m <sup>3</sup>	15.0	17/05/2018 11:53 to 12:55	17.3	17/05/2018 13:03 to 14:05	18.8	17/05/2018 14:12 to 15:14

Note: The monitoring results recorded concentrations of Particulate Matter (Run 1 & Run 2) and Ammonia (all results) in excess of the Emission Limit Values. This was reported as an un-authorized release on 20<sup>th</sup> July 2018 (Reference EP\_EX\_203).

Signed .....   
(Authorised to sign as representative of Operator)

Date.....19/09/2018

Permit Number: EPR/BR9383ID/V009

Operator: Knauf Insulation Ltd

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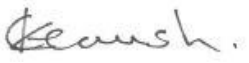
Form Number: Air1c

**Reporting of emissions to air for the 3 month period for 1<sup>st</sup> July to 30<sup>th</sup> September 2018**

**Point G, Cooling Zone Stack**

Emission Point	Substance / Parameter	Emission Limit Value	Result 1	Sample Date and Time	Result 2	Sample Date and Time	Result 3	Sample date and Time
G	Particulate Matter	10 mg/m <sup>3</sup>	6.6	10/07/2018 13:55 to 14:57	5.8	10/07/2018 15:10 to 16:13	13.7	11/07/2018 08:50 to 09:52
G	Ammonia	10 mg/m <sup>3</sup>	6.6	10/07/2018 13:55 to 14:57	6.5	10/07/2018 15:10 to 16:13	17.3	11/07/2018 08:50 to 09:52

Note: The monitoring results recorded concentrations of Particulate Matter & Ammonia (Run 3) in excess of the Emission Limit Values. This was reported as an un-authorized release on 19<sup>th</sup> September 2018 (Reference EP\_EX\_206).

Signed .....   
(Authorised to sign as representative of Operator)

Date.....19/09/2018

Permit Number: EPR/BR9383ID/V009

Operator: Knauf Insulation Ltd


Facility: Queensferry Mineral Fibre Works

Form Number: Air1c

**Reporting of emissions to air for the 3 month period for 1<sup>st</sup> October to 31<sup>st</sup> December 2018 Point G, Cooling Zone Stack**

Emission Point	Substance / Parameter	Emission Limit Value	Result 1	Sample Date and Time	Result 2	Sample Date and Time	Result 3	Sample date and Time
G	Particulate Matter	10 mg/m <sup>3</sup>	7.8	16/10/2018 09:40 – 10:10 10:12 – 10:42	7.1	16/10/2018 10:46 – 11:16 11:18 – 11:48	6.8	16/10/2018 11:51 – 12:21 12:23 – 12:53
G	Ammonia	10 mg/m <sup>3</sup>	15.8 (*)	16/10/2018 09:40 – 10:10 10:12 – 10:42	<0.03	16/10/2018 10:46 – 11:16 11:18 – 11:48	11.7 (*)	16/10/2018 11:51 – 12:21 12:23 – 12:53

Note: Ammonia emission limit exceeded EP\_EX\_219 refers.

Signed .....   
(Authorised to sign as representative of Operator)

Date.....24/1/2019

Permit Number: EPR/BR9383ID/V009

Operator: Knauf Insulation Ltd

Facility: Queensferry Mineral Fibre Works

Form Number: Air1e

**Reporting of emissions to air for the year 2018**

**Point G, Cooling Zone Stack**

Emission Point	Substance / Parameter	Emission Limit Value	Result 1	Sample Date and Time	Result 2	Sample Date and Time	Result 3	Sample date and Time
G	Volatile Organic Compounds as C	15 mg/m <sup>3</sup>	6.1	15/10/18 18:10 – 18:40	3.6	15/10/18 18:41 – 19:11	3.0	15/10/18 19:12 – 19:42
G	Formaldehyde	5 mg/m <sup>3</sup>	0.74	16/10/18 14:20 – 14:50	0.56	16/10/18 14:55 – 15:25	0.39	16/10/18 15:00 – 15:30
G	Phenol	5 mg/m <sup>3</sup>	< 0.20	15/10/2018 14:30 – 15:30	< 0.20	15/10/2018 15:35 – 16:35	< 0.21	15/10/2018 16:40 – 17:40
G	Amines	5 mg/m <sup>3</sup>	< 1.4	15/10/18 14:30 – 15:30	< 1.3	15/10/18 15:35 – 16:35	< 1.4	15/10/18 16:40 – 17:40

Signed .....  
(Authorised to sign as representative of Operator)



Date.....24/1/2019

Permit Number: EPR/BR9383ID/V009

Operator: Knauf Insulation Ltd

Facility: Queensferry Mineral Fibre Works

Form Number: Air1c

**Reporting of emissions to air for the 3 month period for 1<sup>st</sup> January to 31<sup>st</sup> March 2018 Point Y, Cold End Dust Extraction No.2**

Emission Point	Substance / Parameter	Emission Limit Value	Result 1	Sample Date and Time	Result 2	Sample Date and Time	Result 3	Sample date and Time
Y	Particulate Matter	10 mg/m <sup>3</sup>	1.1	05/02/2018 14:00 to 16:00	0.52	05/02/2018 16:15 to 18:15	0.52	06/02/2018 12:22 to 13:30

Signed ..... *Knauf*  
(Authorised to sign as representative of Operator)

Date.....19/09/2018

Permit Number: EPR/BR9383ID/V009

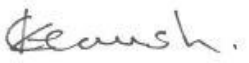
Operator: Knauf Insulation Ltd

Facility: Queensferry Mineral Fibre Works

Form Number: Air1c

**Reporting of emissions to air for the 3 month period for 1<sup>st</sup> April to 30<sup>th</sup> June 2018 Point Y, Cold End Dust Extraction No.2**

Emission Point	Substance / Parameter	Emission Limit Value	Result 1	Sample Date and Time	Result 2	Sample Date and Time	Result 3	Sample date and Time
Y	Particulate Matter	10 mg/m <sup>3</sup>	0.19	17/05/2018 15:31 to 16:33	0.33	17/05/2018 16:37 to 17:39	0.68	17/05/2018 17:45 to 18:47

Signed .....   
(Authorised to sign as representative of Operator)

Date.....19/09/2018

Permit Number: EPR/BR9383ID/V009

Operator: Knauf Insulation Ltd

Facility: Queensferry Mineral Fibre Works

Form Number: Air1c

**Reporting of emissions to air for the 3 month period for 1<sup>st</sup> July to 30<sup>th</sup> September 2018 Point Y, Cold End Dust Extraction No.2**

Emission Point	Substance / Parameter	Emission Limit Value	Result 1	Sample Date and Time	Result 2	Sample Date and Time	Result 3	Sample date and Time
Y	Particulate Matter	10 mg/m <sup>3</sup>	0.16	12/07/2018 09:25 to 10:27	0.15	12/07/2018 10:35 to 11:37	0.15	12/07/2018 11:43 to 12:45

Signed ..... *Keaush*  
(Authorised to sign as representative of Operator)

Date.....19/01/2018

Permit Number: EPR/BR9383ID/V009


Operator: Knauf Insulation Ltd

Facility: Queensferry Mineral Fibre Works

Form Number: Air1c

**Reporting of emissions to air for the 3 month period for 1<sup>st</sup> October to 31<sup>st</sup> December 2018 Point Y, Cold End Dust Extraction No.2**

Emission Point	Substance / Parameter	Emission Limit Value	Result 1	Sample Date and Time	Result 2	Sample Date and Time	Result 3	Sample date and Time
Y	Particulate Matter	10 mg/m <sup>3</sup>	0.39	15/10/18 14:05 - 14:35 14:37 - 15:07	1.63	15/10/18 15:11 - 15:41 15:43 - 16:13	0.40	15/10/2018 16:16 - 16:46 16:48 - 17:18

Signed .....   
(Authorised to sign as representative of Operator)

Date.....24/1/2019

Permit Number: EPR/BR9383ID/V009

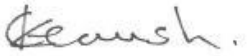
Operator: Knauf Insulation Ltd

Facility: Queensferry Mineral Fibre Works

Form Number: Water1

**Reporting of emissions to water (other than to sewer) for the six months from 1<sup>st</sup> January to 30<sup>th</sup> June 2018**

Emission Point	pH	Suspended Solids	COD	Sample Date	Sample Time
L3	7.65	12.2	34	13/07/18	11:20
L4	7.87	17	38.6	13/07/18	11:30
L5	7.49	262	226	13/07/18	10:35
L6	7.45	52.3	96.5	13/07/18	10:55

Signed .....   
(Authorised to sign as representative of Operator)

Date.....19/09/2018

Permit Number: EPR/BR9383ID/V009


Operator: Knauf Insulation Ltd

Facility: Queensferry Mineral Fibre Works

Form Number: Water1

**Reporting of emissions to water (other than to sewer) for the six months from 1<sup>st</sup> July to 31<sup>st</sup> December 2018**

Emission Point	pH	Suspended Solids	COD	Sample Date	Sample Time
L3	6.95	12.5	30.6	5/12/2018	09:40
L4	8.04	40.4	34.3	5/12/2018	09:20
L5	7.43	9.15	< 7	5/12/2018	08:40
L6	7.13	7.15	17.9	5/12/2018	08:30

Signed .....   
(Authorised to sign as representative of Operator)

Date.....20/12/2018

Permit Number: EPR/BR9383ID/V009

Operator: Knauf Insulation Ltd

Facility: Queensferry Mineral Fibre Works

Form Number: Water1

### Reporting of performance indicators for the year 2018

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<i>Total hours operating with by-pass stack open &amp; blast air on</i>	0.00	0.11	0.14	0.47	0.25	0.00	0.08	0.06	0.34	0.01	0.38	0.21

Energy	Primary Energy Imported MWh
Total Energy	123309.8

Water Source	Usage (m3/year)
Mains water	43056
Other water	n/a
TOTAL WATER USAGE	

Signed .....   
(Authorised to sign as representative of Operator)

Date.....25/1/2019