

## Reporting of Monitoring and Performance Data

Permit Reference Number : BX64211Y

Operator : REHAU Ltd , Amlwch

Installation : Amlwch Plastics Installation

Form Number : A1

**Reporting of Emissions to Air for the period from 01.07.14 to 31.12.14**

| Emission Point | Substance/Parameter | Emission Limit Value | Test Method <sup>[2]</sup> | Result (mg/m <sup>3</sup> ) <sup>[1]</sup> | Sample date and time <sup>[3]</sup> | Accreditation / Certification <sup>[4]</sup> | Uncertainty <sup>[5]</sup> | Number of breaches of limit over period <sup>[6]</sup> |
|----------------|---------------------|----------------------|----------------------------|--|-------------------------------------|--|----------------------------|--|
| A1             | Lead                | 2mg/m <sup>3</sup>   | BS EN 14385                | 0  | 23.10.14                            | MCERTS                                       | 0                          | 0  |
| A1             | Particulate         | 20mg/m <sup>3</sup>  | BS EN 13284-1              | 0.8  | 23.10.14                            | MCERTS                                       | 0.45                       | 0  |

- [1] Where only one measurement is required for a specific substance/parameter over the reporting period, the value should be entered in this column.
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. colorimetry.
- [3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements, or flow/time proportional samples, the percentage of the process operating time covered by the monitoring is given.
- [4] The accreditation status of the equipment and/or the monitoring organisation shall be as agreed according to condition 2.10.7, and shall apply for the methods used for both sampling and analysis.
- [5] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.
- [6] The number of breaches is intended as a summary only and is in addition to the operators need to notify these to the Agency according to the conditions in Section 5 of the permit.

Signed :   
 (authorised to sign as representative of the Operator)

Date: 01/2006

Date : 28.05.15

## Reporting of Monitoring and Performance Data

Permit Reference Number : BX64211Y

Operator : REHAU Ltd, Amlwch

Installation : Amlwch Plastics Installation

Form Number : R1

### Reporting of Waste Disposal and Recovery for the Year 2014

| Waste Description                               | Disposal Route | Tonnes      | Recovery Tonnes |
|---|----------------|-------------|-----------------|
| 1) Hazardous Wastes                             |                |             |                 |
| Bag filter waste containing Pb stabiliser       | Land           | 0           |                 |
| Plasticiser Waste                               | Incineration   | 0           |                 |
| 2) Non-Hazardous Waste                          |                |             |                 |
| General Waste                                   | Land           | 13.4        | 10              |
| Bag filter & CVS waste containing Pb stabiliser | Recovery       |             | 38.4            |
| <b>TOTAL WASTE</b>                              |                | <b>13.4</b> | <b>48.4</b>     |

| Year | Trends in Waste Disposal and Recovery     |                                |                           |
|------|---|--------------------------------|---------------------------|
|      | Parameter                                 | Total hazardous Non waste (te) | Total Hazardous Waste(te) |
| 2005 | Plasticiser Waste                         | 433                            | 440                       |
| 2006 | Bag filter waste containing Pb stabiliser | 336.9                          | 343                       |
| 2007 |   | 465                            | 497                       |
| 2008 |   | 323.25                         | 465.35                    |
| 2009 |   | 121                            | 146.6                     |
| 2010 |   | 79                             |                           |
| 2011 |   | 73.154                         |                           |
| 2012 |   | 56.842                         |                           |
| 2013 |   | 69.57                          |                           |

**Operator's Comments:-** The bag filter waste as lead based PVC Compound from the extractor and CVS system were removed as a free waste stream to World Wide Polymers Ltd , Bolton . General waste is slightly higher than in 2013 , but we are streaming the majority into a recovery stream . Our waste champions are actively looking at the prevention of waste.

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 (authorised to sign as representative of the Operator)

Date : 28.05.15

## Performance of Monitoring and Performance Data

Permit Reference Number : BX64211Y

Operator : REHAU Ltd, Amlwch

Installation : Amlwch Plastics Installation

Form Number : WU1

### Reporting of Water Usage for the Year 2014

| Water Source | Usage (m³) |
|--------------|------------|
| Mains water  | 3973       |
|              |            |
|              |            |
|              |            |
|              |            |

| Trends in Water Usage<br>Year | Parameter   |
|-------------------------------|-------------|
|                               | Mains Water |
| 2007                          | 11457       |
| 2008                          | 12412       |
| 2009                          | 5200        |
| 2010                          | 2989        |
| 2011                          | 2509        |
| 2012                          | 2525        |
| 2013                          | 1696        |

**Operator's comments:** There was an increase in the water usage during 2014 due to bacterial growth and fungal growth in sump and supply pipe work made it necessary to discharge water to maintain production. Water treatment chemical dosing changed to Bromine which has eliminated both problems.

Signed :   
 (authorised to sign as representative of the Operator)

Date : 28.05.15

## Performance of Monitoring and Performance Data

Permit Reference Number : BX64211Y

Operator : REHAU Ltd, Amlwch

Installation : Amlwch Plastics Installation

Form Number : E1

### Reporting of Energy Usage for the Year 2014

| Energy Source | Energy Usage Quantity | Primary Energy (MWh) | CO <sub>2</sub> Produced (Tonnes) |
|---------------|-----------------------|----------------------|-----------------------------------|
| Electricity*  | 5684                  | 14778.4              | 2504.939                          |
| Natural Gas*  | 2805                  | 2805                 | 532.95                            |
|               |                       |                      |                                   |
|               |                       |                      |                                   |
|               |                       |                      |                                   |
|               |                       |                      |                                   |
|               |                       |                      |                                   |
|               |                       |                      |                                   |
| <b>TOTAL</b>  |                       | <b>17583.4</b>       | <b>3037.889</b>                   |

| Year | Trends in Energy Usage               |                                   |
|------|--------------------------------------|-----------------------------------|
|      | Parameter Primary Energy usage (MWh) | CO <sub>2</sub> Produced (Tonnes) |
| 2006 | 12192                                | 2366.97                           |
| 2007 | 14847                                | 2497.4                            |
| 2008 | 16324                                | 2557.14                           |
| 2009 | 14892                                | 2514.02                           |
| 2010 | 15092                                | 2515.77                           |
| 2011 | 14341.4                              | 2455.89                           |
| 2012 | 14326.2                              | 2496.71                           |
| 2013 | 15565                                | 2673.794                          |

- \* Conversion factor for delivered electricity to primary energy = 2.6
- \* CO2 Conversion factor for primary electricity = 0.1695
- \* CO2 Conversion factor for primary natural gas = 0.19
- \* CO2 Conversion factor for primary gas oil = 0.25

**Operator's comments:- During 2014 there was a 7% increase in Production. The Natural Gas is used for the Regenerative Thermal Oxidiser under the LAPPc Permit with Isle of Anglesey County Council and for-Factory Heating.**

Signed :  Date : 28.05.15  
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## Reporting of Monitoring and Performance Data

Permit Reference Number : BX64211Y

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Installation : Amlwch Plastics Installation

Form Number : P11

### Reporting of Performance Indicators for the Year : 2014

| Table P11(a): Reporting of Annual Production/Treatment |  |
|--|--|
| None Required  |  |

| Environmental Performance Indicators |  |                                     |  |
|--------------------------------------|--|-------------------------------------|--|
| Parameter                            | Usage<br>(tonne/tonne)(on<br>annual basis) | Trends in Environmental Performance |  |
|                                      |  | Year                                | Lead stabiliser usage per unit<br>production(uPVC) - (te/te on an annual<br>basis) |
| Lead                                 | 0.0063                                     | 2006                                | 0.01<br>t/uPVC Product   |
|                                      |  | 2007                                | 0.01   |
|                                      |  | 2008                                | 0.007  |
|                                      |  | 2009                                | 0.015  |
|                                      |  | 2010                                | 0.015  |
|                                      |  | 2011                                | 0.016  |
|                                      |  | 2012                                | 0.016  |
|                                      |  | 2013                                | 0.014  |

**Operator's comments :-** The gradual change over from lead to calcium zinc continued during 2014. By the end of the year all articles had been converted however a small stock of lead remains on site, this will either be transferred to another REHAU site or will be disposed of as hazardous waste. The site will become lead free during 2015

Signed :  Date: 28.05.15  
 (authorised to sign as representative of the Operator)