

**Permit Reference Number:** BS3905

**Operator:** Tata Steel UK

**Installation:** Llanwern Steel Works

**Form Number:** A1/1

**Date of Form:** 01/09/09

| Reporting of Emissions to Air for the period from 01/06/15 to 30/09/15 |                       |                      |                 |                                              |                             |                               |                          |      |
|------------------------------------------------------------------------|-----------------------|----------------------|-----------------|----------------------------------------------|-----------------------------|-------------------------------|--------------------------|------|
| Emission Point                                                         | Substance / Parameter | Emission Limit Value | Result (mg/Nm3) | Test Method                                  | Sample Date and Times       | Accreditation / Certification | Uncertainty (+/- mg/Nm3) |      |
| A1<br>SRF No1                                                          | NOx (as NO2)          | 400 mg/m3            | 259.0           | Electrochemical Cell - BSEN15058 & BSEN14792 | 17/09/2015<br>10:35 - 10:50 | Level 2 Mcerts                | 8.7                      |      |
|                                                                        | CO                    | None                 | <0.1            |                                              |                             |                               | 1.1                      |      |
| A2<br>SRF No2                                                          | NOx (as NO2)          | 400 mg/m3            | ---             |                                              | ---                         |                               |                          | ---  |
|                                                                        | CO                    | None                 | ---             |                                              |                             |                               |                          | ---  |
| A3<br>SRF No3                                                          | NOx (as NO2)          | 400 mg/m3            | ---             |                                              | ---                         |                               |                          | ---  |
|                                                                        | CO                    | None                 | ---             |                                              |                             |                               |                          | ---  |
| A4<br>SRF No4                                                          | NOx (as NO2)          | 400 mg/m3            | ---             |                                              | ---                         |                               |                          | ---  |
|                                                                        | CO                    | None                 | ---             |                                              |                             |                               |                          | ---  |
| A5<br>SRF No5                                                          | NOx (as NO2)          | 400 mg/m3            | 392.7           |                                              | 17/09/2015<br>10:16 - 10:31 |                               |                          | 13.2 |
|                                                                        | CO                    | None                 | <0.1            |                                              |                             |                               |                          | 1.2  |
| None                                                                   | Gas oil sulphur       | 0.2 w/w              | ---             | ---                                          | ---                         | ---                           | ---                      |      |

Signed .....  .....

(authorised to sign as representative of the Operator)

Date .....27/10/2015.....

Permit Reference Number: BS3905

Operator: Tata Steel UK

Installation: Llanwern Steel Works

Form Number: A1/2

Date of Form: 01/09/09

| Reporting of Emissions to Air for the period from 01/06/15 to 30/09/15 |                       |              |                      |                 |                                              |                           |                          |
|------------------------------------------------------------------------|-----------------------|--------------|----------------------|-----------------|----------------------------------------------|---------------------------|--------------------------|
| Emission Point                                                         | Substance / Parameter |              | Emission Limit Value | Result (mg/Nm3) | Test Method                                  | Sample Date and Times     | Uncertainty (+/- mg/Nm3) |
| A11<br>Zodiac Furnace                                                  | NOx (as NO2)          |              | 350 mg/m3            | 118.4           | Electrochemical Cell - BSEN15058 & BSEN14792 | 24/09/15<br>10:23 - 10:38 | 8.1                      |
|                                                                        | CO                    |              | None                 | 107.6           |                                              | ---                       | 7.7                      |
| A14<br>Boiler No1                                                      | Gas Oil               | NOx (as NO2) | 200 mg/m3            | ---             |                                              | ---                       | ---                      |
|                                                                        |                       | CO           | None                 | ---             |                                              | ---                       | ---                      |
|                                                                        | Natural Gas           | NOx (as NO2) | 140 mg/m3            | 97.0            |                                              | 26/08/15<br>12:02 - 12:17 | 3.4                      |
|                                                                        |                       | CO           | None                 | 0.4             |                                              | ---                       | 1.1                      |
| A15<br>Boiler No2                                                      | Gas Oil               | NOx (as NO2) | 200 mg/m3            | ---             |                                              | ---                       | ---                      |
|                                                                        |                       | CO           | None                 | ---             |                                              | ---                       | ---                      |
|                                                                        | Natural Gas           | NOx (as NO2) | 140 mg/m3            | 109.6           |                                              | 26/08/15<br>12:20 - 12:35 | 3.8                      |
|                                                                        |                       | CO           | None                 | <0.1            |                                              | ---                       | 1.1                      |
| A16<br>Boiler No3                                                      | Gas Oil               | NOx (as NO2) | 200 mg/m3            | ---             |                                              | ---                       | ---                      |
|                                                                        |                       | CO           | None                 | ---             |                                              | ---                       | ---                      |
|                                                                        | Natural Gas           | NOx (as NO2) | 140 mg/m3            | ---             |                                              | ---                       | ---                      |
|                                                                        |                       | CO           | None                 | ---             |                                              | ---                       | ---                      |

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

Date .....27/10/2015.....

**Permit Reference Number:** BS3905

**Operator:** Tata Steel UK

**Installation:** Llanwern Steel Works

**Form Number:** A1/3

**Date of Form:** 01/09/09

| Reporting of Emissions to Air for the period from 01/06/15 to 30/09/15 [plus annual info] |                       |                      |                 |             |                           |                               |                          |
|-------------------------------------------------------------------------------------------|-----------------------|----------------------|-----------------|-------------|---------------------------|-------------------------------|--------------------------|
| Emission Point                                                                            | Substance / Parameter | Emission Limit Value | Result (mg/Nm3) | Test Method | Sample Date and Times     | Accreditation / Certification | Uncertainty (+/- mg/Nm3) |
| A6<br>Pickle Line No1                                                                     | HCl                   | 10 mg/m3             | ---             | BS EN 1911  | ---                       | Level 2 Mcerts                | ---                      |
| A7<br>Pickle Line No2                                                                     | HCl                   | 10 mg/m3             | 24.0 [*1]       |             | 15/09/15<br>11:58 - 13:05 |                               | 9.6                      |
| A8<br>Pickle Line Roof Vent                                                               | HCl                   | 5 mg/m3              | ---             |             |                           |                               |                          |
| A9<br>Cold Mill Oil Mist Vent                                                             | Oil mist              | 15 mg/m3             | ---             |             |                           |                               |                          |
| A10<br>Zodiac Cleaner                                                                     | Particulate matter    | 5 mg/m3              | 2.3             | BS EN 13284 | 25/03/15<br>10:37 - 12:27 | Level 2 Mcerts                | 1.8                      |
| A12<br>Zodiac Chromate                                                                    | Particulate matter    | 5 mg/m3              | ---             |             | ---                       |                               | ---                      |
| A13<br>Welder Stack                                                                       | Particulate matter    | 5 mg/m3              | 1.5             |             | 08/06/15<br>11:14 - 13:27 |                               | 0.9                      |
| A17<br>Pickle Line Scalemaster                                                            | Particulate matter    | 5 mg/m3              | 1.0             |             | 17/03/15<br>10:56 - 12:44 |                               | 0.8                      |

[\*1] Unauthorised Release Submitted

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

Date .....27/10/2015.....

**Permit Reference Number:** BS3905

**Operator:** Tata Steel UK

**Installation:** Llanwern Steel Works

**Form Number:** W1

**Date of Form:** 01/09/09

| Reporting of Emissions to Water for the period from 01/06/15 to 30/09/15 |                            |           |            |
|--------------------------------------------------------------------------|----------------------------|-----------|------------|
| Parameter                                                                | Limit                      | Daily Max | Daily Mean |
| Flow Rate                                                                | 28000 m3/day (dry weather) | ---       | 9,247.5    |
| pH min                                                                   | 6                          | 6.9       | 8.9        |
| pH max                                                                   | 12                         | 11.4      |            |
| Total Hydrocarbon Oil                                                    | 5 mg/l                     | 6.7       | 1.0        |
| Suspended solids                                                         | 100 mg/l                   | 226       | 30.1       |
| Dissolved iron                                                           | 10 mg/l                    | 0.11      | 0.02       |
| Total chromium                                                           | 0.2 mg/l                   | 0.01      | 0.01       |
| Dissolved nickel                                                         | 0.2 mg/l                   | 0.03      | 0.01       |
| Zinc                                                                     | 2 mg/l                     | 0.08      | 0.02       |
| Copper                                                                   | 0.1 mg/l                   | 0.02      | 0.01       |
| Lead                                                                     | 0.8 mg/l                   | 0.15      | 0.02       |
| Cadmium                                                                  | 0.05 mg/l                  | 0.01      | 0.01       |
| Mercury                                                                  | 0.05 mg/l                  | [*1]      | [*1]       |
| Ammoniacal Nitrogen                                                      | None                       | 1.20      | 0.39       |

[\*1] Data pending - sent for external laboratory analysis

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

Date .....27/10/2015.....