

RELEASES INTO AIR

Operational Summary for the month Mar-2016

Operator: Tata Steel UK Ltd

Permit: BL7108 / RP3730BV

Location: Port Talbot Works

Release Point: A1

Day	% max throughput	% data capture	% EP availability	% UIT availability	Sinter Blend			Particulate Matter (mg/m3)								
								Daily average	4 hour rolling average				Hourly average			
					Mean sulphur % w/w	Mean chloride % w/w	Mean reverts % w/w		Maximum	Mean	Minimum	Standard deviation	Maximum	Mean	Minimum	Standard deviation
01-Mar-16	54	100%	100%	91%	0.034	0.016	11.46	54	84	56	43	12	114	54	0	22
02-Mar-16	58	100%	100%	47%	0.034	0.016	11.46	61	107	61	42	19	192	61	39	32
03-Mar-16	59	100%	100%	99%	0.034	0.016	11.46	48	65	48	41	7	87	48	40	11
04-Mar-16	60	100%	100%	100%	0.034	0.016	11.46	68	98	67	49	17	158	68	45	28
05-Mar-16	57	100%	100%	100%	0.034	0.016	11.46	71	110	71	51	18	190	71	48	33
06-Mar-16	53	100%	100%	100%	0.035	0.018	11.45	66	77	66	54	7	125	66	50	14
07-Mar-16	50	100%	100%	100%	0.035	0.018	11.45	74	88	73	60	9	100	74	60	12
08-Mar-16	51	100%	100%	100%	0.035	0.018	11.45	83	108	81	66	13	135	83	58	22
09-Mar-16	35	100%	100%	100%	0.035	0.018	11.45	80	164	81	23	37	262	80	0	54
10-Mar-16	52	100%	100%	100%	0.035	0.018	11.45	60	83	61	43	11	156	60	11	25
11-Mar-16	58	100%	100%	100%	0.035	0.018	11.45	66	115	67	48	19	186	66	40	29
12-Mar-16	58	100%	100%	100%	0.043	0.016	11.74	79	117	77	50	19	186	79	53	28
13-Mar-16	54	100%	100%	100%	0.043	0.016	11.74	73	103	74	61	11	124	73	56	17
14-Mar-16	53	100%	100%	100%	0.043	0.016	11.74	89	149	88	70	23	215	89	50	36
15-Mar-16	48	100%	100%	97%	0.043	0.016	11.74	105	125	103	72	16	171	105	54	26
16-Mar-16	53	100%	100%	56%	0.043	0.016	11.74	99	152	101	60	26	264	99	29	47
17-Mar-16	2	100%	100%	100%	0.043	0.016	11.74	7	98	12	0	29	175	7	0	36
18-Mar-16	32	100%	100%	83%	0.043	0.016	11.74	120	187	117	0	54	268	120	0	73
19-Mar-16	49	100%	100%	100%	0.043	0.012	11.49	71	84	70	56	8	138	71	16	26
20-Mar-16	51	100%	100%	100%	0.043	0.012	11.49	67	111	65	36	23	136	67	25	35
21-Mar-16	48	100%	100%	100%	0.043	0.012	11.49	42	88	46	29	16	98	42	23	17
22-Mar-16	46	100%	100%	99%	0.043	0.012	11.49	34	55	34	20	11	114	34	13	20
23-Mar-16	48	100%	100%	100%	0.043	0.012	11.49	39	61	40	27	11	101	39	21	23
24-Mar-16	41	100%	100%	100%	0.043	0.012	11.49	39	71	39	16	15	105	39	0	25
25-Mar-16	47	100%	100%	100%	0.044	0.016	11.56	33	57	33	18	11	96	33	16	22
26-Mar-16	48	100%	100%	100%	0.044	0.016	11.56	20	28	20	12	5	52	20	10	10
27-Mar-16	46	100%	100%	100%	0.044	0.016	11.56	21	33	21	12	8	77	21	11	15
28-Mar-16	45	100%	100%	99%	0.044	0.016	11.56	20	35	18	11	6	67	20	11	13
29-Mar-16	47	100%	100%	100%	0.044	0.016	11.56	19	35	20	15	5	43	19	12	7
30-Mar-16	47	100%	100%	100%	0.044	0.016	11.56	24	34	25	16	7	70	24	14	15
31-Mar-16	47	100%	100%	100%	0.044	0.016	11.56	29	73	30	16	16	138	29	15	21
Month ave	-	100%	100%	96%	0.04	0.02	11.5	57	-	57	-	-	-	57	-	-
Month max.	60	-	-	-	0.04	0.02	11.7	120	187	-	-	-	268	-	-	-
Limit	-	-	-	-	0.06	-	-	40	-	-	-	-	-	-	-	-

*Notifications sent to NRW of breaches see notifications S5N_16_05/06/07/09A

Signed on behalf of the Operator



Dated 04/05/2016

Form Sinter CEMS

RELEASES TO AIR

Operational summary for quarter ending 31-Mar-16

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108 / BL7108IM (V009)

Operational parameters: Raw materials - Gas production and usage

Release point	Month	Gas flared (GJ)	Gas vented (GJ)	Gas produced (GJ)
A12A BOS convertor 1 gas flare	Month 1	12401		
	Month 2	11806		
	Month 3	12913		
A13A BOS convertor 2 gas flare	Month 1	24802		
	Month 2	23613		
	Month 3	25826		
A33 Blast furnace gas flare stack no.1	Month 1	84938		
	Month 2	65789		
	Month 3	37215		
A33C Blast furnace gas flare stack no.2	Month 1	201036		
	Month 2	140146		
	Month 3	148865		
A33A Blast furnace gas main number 4 bleeder	Month 1		10	
	Month 2		22	
	Month 3		9	
A33B Blast furnace gas main number 5 bleeder	Month 1		121	
	Month 2		149	
	Month 3		144	
A59 Coke oven gas triple flare	Month 1	14413		
	Month 2	79715		
	Month 3	87090		
Blast furnaces 4 and 5	Month 1			1327940
	Month 2			1255083
	Month 3			1678474
Coke ovens	Month 1			438119
	Month 2			431033
	Month 3			603475
BOS Plant	Month 1			164326
	Month 2			157652
	Month 3			220058

Signed on behalf of the Operator

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Dated

04/05/16

Form Installation gas

WASTE PRODUCTION

Operational summary for quarter ending 31-Mar-16

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108

Release point	Month	Steel slag (tonnes)	Desulph slag (tonnes)	Hazardous waste * (tonnes)	Non hazard waste * (tonnes)	BF slag (tonnes)	Oil used in coke ovens (tonnes)	Waste oil reductant (tonnes)
BOS	Jan	28990	6428					
	Feb	21779	2316					
	Mar	24791	2269					
Iron and steel installation	Jan			2	603			
	Feb			1	1037			
	Mar			1	1430			
BF4 tapholes	Jan					31241		
	Feb					29303		
	Mar					34120		
BF5 tapholes	Jan					30334		
	Feb					27588		
	Mar					31467		
BF5	Jan							0
	Feb							0
	Mar							0
Coke ovens	Jan						60	**
	Feb						75	**
	Mar						185	**

* Disposal to Morfa landfill site non-hazardous and hazardous cells.

** WID compliant Oil.

Signed on behalf of the Operator



Dated 10/05/16

Form Waste 1

RELEASES INTO AIR

Operational summary for quarter ending 31-Mar-16

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108

Release Points: A50, A51, A52A, A52B, A53 & A62

Operating details	BOILERS						
	A50A Service 4	A50B Service 5	A51 A5	A52A No.6	A52B No.7	A53 Mitchell	A62 No.3
Operating time (hours)	2181	1842	2007	1929	2169	2031	511
Mean load (%MCR)	60.1	58.0	55.4	97.1	93.6	66.5	79.2
Mean flue gas flow (Nm ³ /hr)	97879	94350	59090	225609	244005	172347	60789
Heavy Fuel Oil							
Average net CV (GJ/te)	40.9	40.9	40.9	40.9	40.9	40.9	
Max. sulphur content (g/Kg)	9.9	9.9	9.9	9.9	9.9	9.9	
Max. asphaltene content (g/Kg)	57	57	57	57	57	57	
Ave.%wt Sulphur	0.985	0.985	0.985	0.985	0.985	0.985	
NOx factor	0.1	0.1	0.1	0.1	0.1	0.1	
Coke Oven Gas							
Average net CV (GJ/km ³)	42.5	42.5	42.5	42.5	42.5	42.5	
Sulphur content (g/te)	3.35	3.35	3.35	3.35	3.35	3.35	
NOx factor	0.04	0.04	0.04	0.04	0.04	0.04	
Blast Furnace Gas							
Average net CV (GJ/te)	2.53	2.53	2.53	2.53	2.53	2.53	2.53
Sulphur content (g/Nm ³)	0.024	0.024	0.024	0.024	0.024	0.024	0.024
NOx factor	0.025	0.025	0.025	0.025	0.025	0.025	0.025
Natural Gas							
Average net CV (GJ/te)	51.5	51.5	51.5	51.5	51.5	51.5	51.5
NOx factor	0.04	0.04	0.04	0.04	0.04	0.04	0.04

Signed on behalf of the Operator 

Dated 04/05/16

Form LCPD Operating 1

RELEASES INTO AIR

Operational summary for quarter ending

31-Mar-16

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108

Release Points: A50A/A50B, A51, A52A, A52B, A53 & A62

OXIDES OF NITROGEN - NO _x (DISCONTINUOUS MONITORING)						
Release Point	A50A&B Service 4&5	A51 A5	A52A No.6	A52B No.7	A53 Mitchell	A62 No.3
Time and date of sampling	-	03-Feb-16	-	-	11-Feb-16	-
	-	10:38	-	-	14:05	-
Flowrate (Nm ³ /hr)	-	64862	-	-	256071	-
NO _x measured conc. (mg/Nm ³)	-	38	-	-	9	-
NO _x limit (mg/NM ³)	300 BFG/COG 450 HFO	300 BFG/COG 450 HFO	300 BFG/COG 450 HFO	300 BFG/COG 450 HFO	300 BFG/COG 450 HFO	200 BFG&NG 450 HFO
Sampling method used	ISO 10849	ISO 10849	ISO 10849	ISO 10849	ISO 10849	ISO 10849
Analytical method used	EC*	EC*	EC*	EC*	EC*	EC*
Continuous hourly monitoring result over the period	-		-	-		-
Fuel usages over the sampling period						
Natural gas (%)	-	4%	-	-	9%	-
BF gas (%)	-	80%	-	-	86%	-
Coke oven gas (%)	-	17%	-	-	5%	
Heavy fuel oil (%)	-	0%	-	-	0%	

A52A, A52B and A62 (Boiler 3) have an annual monitoring requirement. A50A/A50B has a six monthly monitoring requirement.
CEMS subject to QAL2 in 2013

* EC - electrochemical cell

Signed on behalf of the Operator

Dated 04/05/16

Form LCPD DCM NO_x

RELEASES INTO AIR

Operational summary for quarter ending

31-Mar-16

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108 / NP3938GZ

Release Points: A50A/A50B, A51, A52A, A52B, A53 & A62

SULPHUR DIOXIDE - SO ₂ (DISCONTINUOUS MONITORING)						
Release Point	A50A&B Service 4&5	A51 A5	A52A No.6	A52B No.7	A53 Mitchell	A62 No.3
Time and date of sampling	-	03-Feb-16	-	-	11-Feb-16	-
	-	10:38	-	-	14:05	-
Flowrate (Nm ³ /hr)	-	64862	-	-	256071	-
SO ₂ measured conc. (mg/Nm ³)	-	78	-	-	11	-
SO ₂ limit (mg/NM ³)	800 BFG/COG 1700 HFO	800 BFG/COG 1700 HFO	800 BFG/COG 1700 HFO	800 BFG/COG 1700 HFO	800 BFG/COG 1700 HFO	400 BFG&NG -
Sampling method used	BS 6069	BS 6069	BS 6069	BS 6069	BS 6069	BS 6069
Analytical method used	EC*	EC*	EC*	EC*	EC*	EC*
Continuous hourly monitoring result over the period	-		-	-		-
Fuel usages over the sampling period						
Natural gas (%)	-	4%	-	-	9%	-
BF gas (%)	-	80%	-	-	86%	-
Coke oven gas (%)	-	17%	-	-	5%	
Heavy fuel oil (%)	-	0%	-	-	0%	

A52A, A52B and A62 (Boiler 3) have an annual monitoring requirement. A50A/A50B have a six monthly monitoring requirement. CEMS subject to QAL2 in 2013

* EC - electrochemical cell

Signed on behalf of the Operator



Dated 04/05/16

Form LCPD DCM SO₂

RELEASES INTO AIR

Operational summary for quarter ending

31-Mar-16

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108

Release Points: A50A, A50B, A51, A52A, A52B, A53 & A62

Release point	Month	Fuel oil (GJ)	Coke oven gas (GJ)	Blast furnace gas (GJ)	Natural gas (GJ)	BOS gas (GJ)	All fuels (GJ)
A50A Service Boiler 4	Jan	0	27339	46946	3853		78137
	Feb	0	18194	49360	4589		72142
	Mar	0	49654	61011	8208		118872
A50B Service Boiler 5	Jan	0	38541	44271	0		82811
	Feb	2706	32618	36905	0		72229
	Mar	0	25876	38408	0		64284
A51 Boiler A5	Jan	244	4980	40908	1797	1210	49139
	Feb	852	6045	55761	3035	70	65763
	Mar	0	6871	75884	2427	55	85237
A52A Boiler 6	Jan	2503	32877	219337	74053	65866	394636
	Feb	394	33428	189775	51840	24286	299724
	Mar	0	39156	236856	41967	6147	324126
A52B Boiler 7	Jan	1763	48064	216963	54850	65661	387302
	Feb	4322	48600	201599	45044	24500	324065
	Mar	1189	58624	265643	60198	6158	391812
A53 Mitchell	Jan	83	7319	89295	7905		104601
	Feb	735	9609	104143	9836		124323
	Mar	61	10675	144346	9882		164964
A62 Boiler 3	Jan			125787	13881	4039	143706
	Feb			0	0	249	249
	Mar			0	0	198	198
Total	Jan	4593	159118	783507	156338	136776	1240332
	Feb	9009	148494	637542	114345	49106	958495
	Mar	1250	190855	822148	122682	12559	1149494

Signed on behalf of the Operator



Dated 04/05/16

Form LCPD Fuels

RELEASES INTO AIR

Operational summary for quarter ending

31-Mar-16

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108

Release Points: A50A, A50B, A51, A52A, A52B & A53

PARTICULATE MATTER (mg/Nm3) - CONTINUOUS EMISSIONS MONITORING							
Release point	Month	Monthly mean LIMIT=50	Maximum hourly mean	Date & time of maximum value	Minimum hourly mean	Standard deviation of hourly means	% data capture over month
A50A & A50B Service Boilers 4&5	Jan	4.5	31.8	05/01/16 14:00	1.0	3.4	100%
	Feb	8.3	201.1	25/02/16 18:00	1.0	16.5	100%
	Mar	6.9	348.7	20/03/16 21:00	1.1	14.8	100%
A51 Boiler A5	Jan	1.3	27.0	18/01/2016 11:00	0.0	2.7	100%
	Feb	1.9	40.0	11/02/16 16:00	0.0	4.2	100%
	Mar	1.3	66.6	20/03/16 22:00	0.1	3.4	100%
A52A Boiler 6	Jan	2.7	36.9	18/1/2016 10:00	1.8	3.5	100%
	Feb	2.7	55.6	14/2/2016 21:00	0.0	3.9	100%
	Mar	2.0	9.6	07/03/16 13:00	0.0	1.1	100%
A52B Boiler 7	Jan	1.1	36.2	05/01/16 14:00	0.0	3.0	100%
	Feb	1.4	30.5	11/02/16 22:00	0.0	4.2	100%
	Mar	0.9	45.3	21/03/16 08:00	0.0	2.9	100%
A53 Mitchell	Jan	2.8	25.5	01/01/16 17:00	0.0	2.5	100%
	Feb	3.0	186.3	12/02/16 10:00	0.0	7.0	100%
	Mar	2.8	26.4	21/03/16 01:00	1.0	1.8	100%

Signed on behalf of the Operator

Dated 04/05/16

Form LCPD CEM Parts

RELEASES INTO AIR

Operational summary for quarter ending

31-Mar-16

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108 / BL7108IM (V009)

Release Points: A50, A52A & A52B

OXIDES OF NITROGEN (mg/Nm3) - CONTINUOUS EMISSIONS MONITORING							
Release point	Month	Month mean LIMITS: BFG/COG=300	Maximum hourly mean	Date & time of maximum value	Minimum hourly mean	Standard deviation of hourly means	% data capture over month
A52A Boiler 6	Jan	46.0	259.5	05/01/2016 13:00	3.1	33.4	96%
	Feb	53.9	413.0	14/2/2016 21:00	0.0	41.3	84%
	Mar	37.4	125.1	07/03/2016 12:00	0.0	23.8	96%
A52B Boiler 7	Jan	53.0	209.0	18/01/2015 5:00	4.7	30.8	100%
	Feb	50.5	386.7	12/02/2016 2:00	0.0	51.6	100%
	Mar	45.5	328.0	21/03/2016 5:00	0.0	38.0	100%
A50A & A50B Service Boilers	Jan	50.3	83.4	21/01/2016 22:00	35.7	9.9	100%
	Feb	70.2	159.1	22/02/2016 3:00	35.4	19.4	100%
	Mar	64.2	110.5	20/03/2016 23:00	36.3	15.3	100%
SULPHUR DIOXIDE (mg/Nm3) - CONTINUOUS EMISSIONS MONITORING							
Release point	Month	Month mean LIMITS: BFG/COG=800	Maximum hourly mean	Date & time of maximum value	Minimum hourly mean	Standard deviation of hourly means	% data capture over month
A52A Boiler 6	Jan	72.3	527.1	18/1/2016 9:00	30.7	61.5	100%
	Feb	73.6	399.8	25/2/2016 18:00	0.0	52.6	88%
	Mar	46.8	140.7	19/03/2016 0:00	0.0	32.9	100%
A52B Boiler 7	Jan	88.0	695.7	18/01/2016 8:00	0.0	112.5	100%
	Feb	91.0	766.0	11/02/2016 22:00	0.0	120.1	100%
	Mar	88.2	756.1	21/03/2016 10:00	0.0	80.9	100%
A50A & A50B Service Boilers	Jan	276.1	1109.1	22/01/2016 0:00	21.3	194.8	100%
	Feb	309.5	994.5	13/02/2016 12:00	0.0	206.4	100%
	Mar	246.3	656.7	20/03/2016 23:00	1.8	125.8	100%

Signed on behalf of the Operator

Dated 04/05/16

Form LCPD CEMS SO2 & NOx

RELEASES INTO AIR

Operational summary for quarter ending

31-Mar-16

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108 / NP3938GZ

Release Point: A62

PARTICULATE MATTER (mg/Nm3) - CONTINUOUS EMISSIONS MONITORING							
Release point	Month	Maximum daily mean LIMIT=30	Monthly mean	Date & time of maximum value	Minimum daily mean	Standard deviation of daily means	% data capture
A62 Boiler 3	Jan	4.9	2.3	01-Jan-16	0.0	1.4	100.00%
	Feb	0.0	0.0	01-Feb-16	0.0	0.0	100.00%
	Mar	0.0	0.0	01-Mar-16	0.0	0.0	100.00%
SULPHUR DIOXIDE (mg/Nm3) - CONTINUOUS EMISSIONS MONITORING							
Release point	Month	Maximum daily mean LIMIT=400	Monthly mean	Date & time of maximum value	Minimum daily mean	Standard deviation of daily means	% data capture
A62 Boiler 3	Jan	84.9	17.6	09-Jan-16	0.0	19.1	100.00%
	Feb	0.0	0.0	01-Feb-16	0.0	0.0	100.00%
	Mar	0.0	0.0	01-Mar-16	0.0	0.0	100.00%
OXIDES OF NITROGEN (mg/Nm3) - CONTINUOUS EMISSIONS MONITORING							
Release point	Month	Maximum daily mean LIMIT=200	Monthly mean	Date & time of maximum value	Minimum daily mean	Standard deviation of daily means	% data capture
A62 Boiler 3	Jan	98.4	31.3	01-Jan-16	0.0	24.8	100.00%
	Feb	0.0	0.0	01-Feb-16	0.0	0.0	100.00%
	Mar	0.0	0.0	01-Mar-16	0.0	0.0	100.00%

Signed on behalf of the Operator



Dated 04/05/16

Form LCPD CEM A62

Operational summary for quarter ending 31-Mar-16

Release Points: A50A, A50B, A51, A52A, A52B, A53 & A62

Form LCPD CEMS LOG

RELEASES INTO AIR

Operational summary for quarter ending

31-Mar-16

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108 / NP3938GZ

Release Point: A1

Substance	Particulates	Sulphur Dioxide	Oxides of Nitrogen	Carbon Monoxide
Permit limit (mg/Nm3)	115	500	275	
Measured conc. according to condition 10.1.3b	36	465	180	6250
Measured oxygen content (%)	17.3	17.7	17.7	17.7
Measured conc. according to condition 10.1.3a (17%O2)	39	558	216	7500
Sampling method used	BS EN 13284	BS 6069	ISO 10849	BS ISO 12039
Analytical method used	Gravimetric	*EC	*EC	*EC
Date of sampling	19-Jan-16	19-Jan-16	19-Jan-16	19-Jan-16
Sample start time	09:47	09:47	09:47	09:47
Sample end time	10:47	10:47	10:47	10:47
Sample duration (mins)	60	60	60	60
Limit of detection	0.96	1.6	1.4	0.0
Continuous monitor result over the sampling period	58.5			
Process status at the time of sampling				
Mean sulphur content of sinter blend in use (%)	0.049	0.049	0.049	0.049
Reverts content of sinter blend in use (%)	14.0	14.0	14.0	14.0
Mean chloride content of sinter blend in use (%)	0.01	0.01	0.01	0.01
Throughput during sampling period (% of maximum)	51.0	51.0	51.0	51.0

* EC - electrochemical cell

Signed on behalf of the Operator



Dated 04/05/16

RELEASES INTO AIR

Operational summary for quarter ending

31-Mar-16

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108 / AP3330BE

Release Points: A50A, A50B, A51, A52A, A52B, A53 & A62

Month	Sulphur Dioxide (tonnes)							Oxides of Nitrogen (tonnes)							Particulates (tonnes)						
	A50A	A50B	A51	A52A	A52B	A53	A62	A50A	A50B	A51	A52A	A52B	A53	A62	A50A	A50B	A51	A52A	A52B	A53	A62
January	10.5	10.5	0.0	0.0	0.0	0.0	0.6	4.1	4.1	0.0	0.0	0.0	0.0	1.0	0.1	0.1	0.0	0.3	0.2	0.1	0.1
February	8.0	8.0	0.0	0.0	0.0	0.0	0.0	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.2	0.4	0.0
March	7.8	7.8	3.4	16.0	23.6	5.4	0.0	3.2	3.2	2.3	9.8	12.2	4.4	0.0	0.1	0.1	0.0	0.3	0.2	0.1	0.0
April																					
May																					
June																					
July																					
August																					
September																					
October																					
November																					
December																					
Totals	26	26	3	16	24	5	1	46	46	2	10	12	4	8	1.5	1.5	0.1	0.9	0.6	0.7	1.0
	102							130							6						
	Service	A5	Margam C	Mit	3			Service	A5	Mgm C	Mit	3			Service	A5	Mgm C	Mit	3		
Boiler Plant Totals	53	3	40	5	1			93	2	22	4	8			3	0	2	1	1		
NERP Annual Limit (T)	686	251	2219	575				252	96	929	212				20	4	56	10			

Signed on behalf of the Operator

Dated 04/05/16

Form LCPD Monthly 1

RELEASES INTO AIR

Operational summary for quarter ending

31-Mar-16

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108 / NP3938GZ

Release Points: A6, A7, A30, A31, A32, A34A, A34B & A39

OXIDES OF NITROGEN - NO _x (DISCONTINUOUS MONITORING)								
Release Point	A6	A7	A30	A31 ***	A32 ***	A34A	A34B	A39 #
Time and date of sampling	31-Mar-16 10:55	18-Feb-16 10:15	11-Mar-15 10:50	-	-	23-Mar-16 09:54	23-Mar-16 09:57	-
Flowrate (Nm ³ /hr)	121286	136035	113574	-	-	646876	248282	-
NO _x measured conc.(mg/Nm ³) **	60	56	11	-	-	116	367	-
Oxygen content (%)			20.82	-	-			
NO _x limits (mg/Nm ³)	145	145	475	475	475	1800	1800	115
Sampling method used	ISO 10849	ISO 10849	ISO 10849	-	-	ISO 10849	ISO 10849	ISO 10849
Analytical method used	EC *	EC *	EC *	-	-	EC *	EC *	EC *
Continuous hourly monitoring result over the period								
Fuel usages over the sampling period								
Natural gas (%)	12%	0%	100%	-	-	53%	58%	-
BF gas (%)	74%	100%						-
Coke oven gas (%)	14%	0%				47%	42%	
BOS Gas (%)	0%							

* EC - electrochemical cell

** A30, A31 & A32 corrected to 10.1.3b

A39 has a 6 monthly monitoring requirement.

*** A31 & A32 are not operational

Signed on behalf of the Operator



Dated 04/05/16

Form I&S DCM NO_x

RELEASES INTO AIR

Operational summary for quarter ending

31-Mar-16

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108 / NP3938GZ

Release Points: A6, A7, A34A & A34B

SULPHUR DIOXIDE - SO ₂ (DISCONTINUOUS MONITORING)					
Release Point	A6	A7	A34A	A34B	A39 #
Time and date of sampling	31-Mar-16 10:55	18-Feb-16 10:15	23-Mar-16 09:54	23-Mar-16 09:57	- -
Flowrate (Nm ³ /hr)	121286	136035	646876	248282	-
SO ₂ measured conc.(mg/Nm ³)	88	47	197	419	-
SO ₂ limits (mg/Nm ³)	370	370	1400	1400	260
Sampling method used	BS6069	BS6069	BS6069	BS6069	BS6069
Analytical method used	EC *	EC *	EC *	EC *	EC *
Continuous hourly monitoring result over the period					
Fuel usages over the sampling period					
Natural gas (%)	12%	0%	53%	58%	-
BF gas (%)	74%	100%			-
Coke oven gas (%)	14%	0%	47%	42%	
BOS Gas (%)	0%				

* EC - electrochemical cell

A39 has a 6 monthly monitoring requirement

Signed on behalf of the Operator



Dated 04/05/16

Form I&S DCM SO₂

Operational summary for quarter ending 31-Mar-16

Release Points: Iron plating continued

Form I&S Operational 1

Operational summary for quarter ending 31-Mar-16

Release Points: A4A, A5A, & iron plating

Liquid Iron Plating Operations (Iron Plating Pit)			
Date	Time	Tonnes	Reason
31/03/16	06:13	218	Metallurgy Reasons
31/03/16	05:17	169	Metallurgy Reasons
31/03/16	05:11	268	Metallurgy Reasons
26/03/16	09:21	217	Metallurgy Reasons
26/03/16	01:15	247	Metallurgy Reasons
24/03/16	05:22	100	Metallurgy Reasons
16/03/16	23:12	180	Metallurgy Reasons
16/03/16	21:48	228	Metallurgy Reasons
11/03/16	11:44	288	Metallurgy Reasons
10/03/16	02:21	180	Metallurgy Reasons
26/02/16	12:06	217	Metallurgy Reasons
26/02/16	11:33	282	Metallurgy Reasons
24/02/16	01:46	229	Metallurgy Reasons
24/02/16	00:35	257	Metallurgy Reasons
23/02/16	03:03	190	Metallurgy Reasons
Total		3270	

Dated 04/05/16

RELEASES INTO AIR

Operational summary for quarter ending 31-Mar-16

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108

Release Points: A2, A8A, A8B, A9, A10, A14, A15 & A16

PARTICULATE MATTER (mg/Nm3) - CONTINUOUS EMISSIONS MONITORING											
Release point	Month	Limit	Maximum daily mean	Minimum daily mean	Standard deviation of daily means	Maximum hourly mean	Minimum hourly mean	Standard deviation of hour means	Monthly mean	abatement availability %	% data capture over month
A8A	Jan	15	2.8	2.4	0.1	3.2	2.3	0.1	2.6	100%	100%
	Feb		2.8	2.4	0.1	3.4	2.3	0.1	2.6	100%	100%
	Mar		2.8	2.3	0.1	3.3	2.2	0.2	2.5	100%	100%
A8B	Jan	15	2.2	1.6	0.1	6.1	1.5	0.3	7.5	100%	100%
	Feb		3.0	1.6	0.3	5.8	1.5	0.4	1.9	100%	100%
	Mar		2.8	1.6	0.2	10.5	1.4	0.4	1.8	100%	100%
A9	Jan	15	0.2	0.0	0.1	3.9	0.0	0.9	0.0	100%	100%
	Feb		1.9	0.0	0.5	3.5	0.0	0.7	0.2	100%	100%
	Mar		2.5	0.0	0.7	4.8	0.0	0.7	0.3	100%	100%
A2	Jan	30	41.3	7.5	9.6	126.7	0.0	13.0	27.2	100%	100%
	Feb		36.7	3.0	8.7	74.3	0.0	10.7	13.9	100%	100%
	Mar		39.4	2.4	10.1	93.4	0.0	13.2	18.5	100%	100%
A10	Jan	15	24.3	4.0	5.4	32.3	5.4	8.5	7.8	100%	100%
	Feb		34.6	2.4	8.9	66.3	4.2	17.6	9.0	100%	100%
	Mar		29.6	0.0	5.7	74.4	0.0	13.6	7.7	100%	100%
A14	Jan	15	14.3	5.6	2.4	19.4	7.7	3.3	9.8	100%	100%
	Feb		28.8	8.4	4.6	34.7	10.2	6.0	14.7	100%	100%
	Mar		23.9	9.2	3.9	36.1	11.3	5.8	16.2	100%	100%
A15	Jan	15	6.2	0.5	1.5	8.7	0.6	2.5	1.7	100%	100%
	Feb		1.7	0.5	0.3	3.7	0.6	0.7	1.0	100%	100%
	Mar		1.6	0.5	0.3	2.4	0.6	0.6	0.9	100%	100%
A16	Jan	15	12.3	4.4	1.9	20.6	7.2	3.2	7.9	100%	100%
	Feb		27.7	6.0	4.5	43.2	7.9	7.5	11.7	100%	100%
	Mar		17.6	5.3	3.3	27.8	8.7	4.8	12.0	100%	100%

* A10 breach notified to NRW see notification S5N_16_15A

** A2 ELV discussed with NRW as derogation

*** A14/16 breaches reported to NRW see notifications S5N_16_13/14A

**** ELV stated are from March onwards.

Signed on behalf of the Operator

Dated 04/05/16

Form I&S CEMS Parts 1 & 2

RELEASES INTO AIR

Form Sinter Operational Cont.

Operational summary for quarter ending 31-Mar-16

Operator: Tata Steel UK Ltd
Location: Port Talbot Works
Permit: BL7108 / RP3730BV

Iron Ore Sintering - Record of strand stoppages > 30 minutes				
Date	Time		Planned/ Unplanned	Reason
	Start	Duration (mins)		
05-Feb-16	15:32	24m	Unplanned	Pallet change due to hole North side
05-Feb-16	16:14	25m	Unplanned	Pallet change due to damaged pressure bearing south side.
08-Feb-16	02:34	21m	Unplanned	Hole in pallet center.pallet ON 10 OFF 138 @ 02:34-02:55
08-Feb-16	14:20	37m	Unplanned	x5 springs u/s on 1020. Stop to replace.
09-Feb-16	16:32	54m	Unplanned	Stopped to patch hole on north dust seal area on 1020 screen that was
10-Feb-16	17:20	1h 32m	Unplanned	00:00
11-Feb-16	07:47	15h 9m	Unplanned	Loss of electrical power to site. low voltage power lighting restored at
12-Feb-16	01:42	1h 42m	Unplanned	Strand stopped to avoid going over consented wg dust limits.
12-Feb-16	09:00	7h 0m	Unplanned	Power issues following yesterdays power outage.
12-Feb-16	19:01	1h 39m	Unplanned	1049 Chain dropping out, chute blocked above DDV due to holes in
12-Feb-16	21:36	1h 15m	Unplanned	1048 DDV blocked due to holes in precipitator/windmain.
13-Feb-16	08:12	33m	Unplanned	DDV blocked with wet material due to holes in precipitator/windmain.
12-Feb-16	16:40	25m	Unplanned	Stop - 16.40 - 17.05 (25min) Sinter through
14-Feb-16	22:07	24m	Unplanned	82 on, 96 off. see sinter comments.
15-Feb-16	14:31	2h 39m	Unplanned	Head end drive drum bearing replaced due to failure
15-Feb-16	17:20	1h 24m	Unplanned	Load management called for 17:30 - 18:44
17-Feb-16	07:42	23m	Unplanned	e-stop activated on roll feeder which needed resetting from contactor
17-Feb-16	17:24	1h 42m	Unplanned	load management called ofr 17:30 - 18:30
18-Feb-16	04:06	18h 44m	Planned	Planned maintainance stop 18 hours
19-Feb-16	03:06	1h 24m	Unplanned	plant stopped due to high WG PCME readings as part od PM when
				restarting plant after strand emptied.
19-Feb-16	05:13	1h 31m	Unplanned	Removing south waste gas blanks
19-Feb-16	15:06	2h 14m	Unplanned	Plnt stop to unblock 1047, 1048, 1049 ddv's Full of fine damp/wet dust.
				covers removed vax used to help clean blockages
19-Feb-16	18:03	1h 55m	Unplanned	1049 DDV blocked with wet/damp material.
20-Feb-16	21:35	23m	Unplanned	3 consecutive burners failed
20-Feb-16	16:40	5h 19m	Unplanned	Belt parted
18-Feb-16	23:49	53m	Planned	Stopped to sinter through as part of PM start up.
21-Feb-16	23:31	26m	Unplanned	Two lage mixer lumps blocking 1005/1006 chute, lumps knocked through
				and removed. plant re-started
23-Feb-16	15:46	32m	Unplanned	change pallet and inspect lifting wheel drive 108 off and Number 60 on.
25-Feb-16	17:55	1h 20m	Unplanned	Load Management period during which No 2 field dedust split and strand
				drive coupling change
23-Feb-16	19:42	22m	Unplanned	Pallet Change @ 19:42 - 20:04 - OFF 121 / ON 108
27-Feb-16	01:07	25m	Unplanned	Hole in south side of pallet 67, pallet 67 off and pallet 89 on.
27-Feb-16	08:33	21m	Unplanned	Checking operation of denver sampler,plant stopped due to dust in area.
				sampler stopped in 1026 chute, issue with stop button, sample take
				please monitor during sampling
29-Feb-16	13:00	47m	Unplanned	cleaning strand dead weights
03-Mar-16	14:28	44m	Unplanned	changing rollers on 1027 - cleaning 1005 head end chute - cleaning
				spider legs
03-Mar-16	23:59	27m	Unplanned	hood tripped due to hood cooling water flow minimum, reset of slam shut
				also required
04-Mar-16	03:46	28m	Unplanned	Pallet change for hole, 109 off, and 138 on.
29-Feb-16	22:56	3h 4m	Unplanned	No 5 BF off and stock full.
09-Mar-16	04:23	1h 47m	Unplanned	Cooler stopped showing underspeed fault, drive not moving forward or
				reverse. cooler had to be pulled with strand crane to get it to move.
				Traced to guide wheels u/s.

Signed on behalf of the Operator

Dated 04/05/16



Form Sinter Operational

RELEASES INTO AIR Form Sinter Operational Cont.

Form Sinter Operational Cont.

Iron Ore Sintering - Record of strand stop 00-Jan-00

Operator: Tata Steel UK Ltd
Location: Port Talbot Works
Permit: BL7108 / RP3730BV

[illegible]

Signed on behalf of the operator
Dated: 04-May-16

[Signature]

RELEASES INTO AIR

Operational summary for quarter ending 31-Mar-16

NOT UPDATING PROPERLY

Operator: Tata Steel UK Ltd
Location: Port Talbot Works
Permit: BL7108 / RP3730BV

Iron Ore Sintering - Record of strand stoppages > 30 minutes				
Date	Time		Planned/	Reason
	Start	Duration (mins)	Unplanned	
01-Jan-16	14:07	3h 12m	Unplanned	Both furnaces off line, stock pile full along with hi-line bunkers.
04-Jan-16	01:37	38m	Unplanned	Combustion air fan filters required cleaning.
04-Jan-16	13:00	1h 45m	Unplanned	Requirement stop due to No 5 BF off and stock full.
04-Jan-16	16:50	1h 0m	Unplanned	00:00
04-Jan-16	17:50	1h 10m	Unplanned	415 main supply isolation handle issue.
05-Jan-16	12:30	3h 40m	Unplanned	Requirement stop taken to replace springs on 1025 screen. Both BF's off
05-Jan-16	20:30	4h 10m	Unplanned	1031 Chute partially blocked with raw mix type material.
06-Jan-16	12:29	32m	Unplanned	Pallet change for wheel off, 82 off and 81 on
07-Jan-16	01:30	5h 46m	Unplanned	tail drum bearing failure.
07-Jan-16	07:16	6h 0m	Planned	Planned stop
10-Jan-16	19:54	29m	Unplanned	Pallet change carried out No10 taken off No 144 put on.
11-Jan-16	12:18	25m	Unplanned	Pallet change 111 on 89 off
12-Jan-16	16:50	1h 27m	Unplanned	load Management
13-Jan-16	19:45	31m	Unplanned	Pallet change
13-Jan-16	17:50	1h 7m	Unplanned	Load Management
14-Jan-16	07:50	6h 0m	Planned	6 hour PM
14-Jan-16	16:24	1h 36m	Unplanned	00:00
14-Jan-16	19:18	54m	Unplanned	Stop to sinter through after issues with wet return fines from leak on
14-Jan-16	20:24	21m	Unplanned	Cooler wheel hit limit
15-Jan-16	00:38	29m	Unplanned	Pallet change
15-Jan-16	12:56	57m	Unplanned	Rachel Lloyd tripped out hood ,then unable to start back up.stuck on step
16-Jan-16	19:20	21m	Unplanned	pallet change 78 off 3 on.
11-Jan-16	16:50	1h 3m	Unplanned	Load Management
14-Jan-16	13:50	1h 48m	Unplanned	Patching hole in 1007 conveyor
18-Jan-16	07:01	6h 0m	Unplanned	6 hour Planned Maintenance.
19-Jan-16	16:48	1h 36m	Unplanned	Stop 16:49 - 18:00 load management
20-Jan-16	16:50	1h 30m	Unplanned	00:00
18-Jan-16	13:01	8h 17m	Unplanned	Cooler south drive friction wheel bearing failure.
27-Jan-16	20:42	34m	Unplanned	High waste gas 4hr average.plant stopped to prevent breach
27-Jan-16	21:51	44m	Unplanned	Cold crusher jamming on hard large sinter lumps.
28-Jan-16	02:39	1h 8m	Unplanned	High waste gas 4hrs average high, stopped to prevent breach
27-Jan-16	05:35	13h 26m	Planned	12 hour planned maint.
29-Jan-16	03:45	29m	Unplanned	Pallet change 52 off 135 on..
29-Jan-16	04:21	7h 6m	Unplanned	Conveyor full of material and motor fault
31-Jan-16	06:48	3h 2m	Unplanned	Cooler stopped taking plant out early in shift, on investigation found tray
02-Feb-16	14:50	1h 41m	Unplanned	Wheel sheered on pallet 32 south side, wheel jammed between pallet
02-Feb-16	17:27	34m	Unplanned	Pallet change No32 off No 75 on
02-Feb-16	21:29	46m	Unplanned	Hole in the south side of Pallet 50 changed with pallet 55
03-Feb-16	13:13	28m	Unplanned	North fan tripped on vibration
04-Feb-16	09:10	4h 46m	Unplanned	North fan maintenance

Signed on behalf of the Operator

Dated 04/05/16

Form Sinter Operational

RELEASES INTO AIR

Operational summary for quarter ending 31-Mar-16

*

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108 / RP3730BV / BL7108IM (V009)

Release Points: A10A & A63

PARTICULATE MATTER (mg/Nm3) - CONTINUOUS EMISSIONS MONITORING											
Release point	Month	Limit	Maximum daily mean	Minimum daily mean	Standard deviation of daily means	Maximum hourly mean	Minimum hourly mean	Standard deviation of hour means	Monthly mean	abatement availability %	% data capture over month
A10A	Jan	15	0.2	0.0	5.4	32.3	0.1	0.1	0.1	100%	100%
	Feb	Daily	0.2	0.1	8.9	66.3	0.1	0.1	0.1	100%	100%
	Mar	mean	0.2	0.0	5.7	74.4	0.0	0.1	0.1	100%	100%
A63*	Jan	25									
	Feb	Hourly									
	Mar	mean									

*A63 currently non-operational, see NRW email/ Subject: Permit BL7108 - Emissions into Air Monitoring/ Sent: 27/01/2014.

Signed on behalf of the Operator

Dated 04/05/16

Form I&S CEMS Part 3

31-Mar-16

Ship Discharge and Burdening

Form Burdening 1

RELEASES INTO AIR

Operational summary for quarter ending

31-Mar-16

Operator: Port Talbot Works

Location: Port Talbot Works

Permit: BL7108 / RP3730BV

	NOx (tonnes)	Lead (tonnes)	PM10 (tonnes)	CO2 (k tonnes)
Morfa	350			
Iron & Steel	659	7.8	485	1204
Total	1009	7.8	485	1204

Signed on behalf of the Operator



Dated 04/05/16

Form KPI