

RELEASES TO AIR

Operational summary for quarter ending 31-Dec-19

Operator: Tata Steel UK Ltd

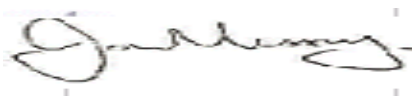
Location: Port Talbot Works

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	11614		
	Month 2	12499		
	Month 3	10493		
A13A BOS convertor 2 gas flare	Month 1	23229		
	Month 2	24998		
	Month 3	20986		
A33 Blast furnace gas flare stack no.1	Month 1	49345		
	Month 2	44828		
	Month 3	90094		
A33C Blast furnace gas flare stack no.2	Month 1	68892		
	Month 2	58473		
	Month 3	94256		
A33A Blast furnace gas main number 4 bleeder	Month 1		5	
	Month 2		5	
	Month 3		115	
A33B Blast furnace gas main number 5 bleeder	Month 1		65	
	Month 2		65	
	Month 3		840	
A59 Coke oven gas triple flare	Month 1	46618		
	Month 2	69022		
	Month 3	37744		
Blast furnaces 4 and 5	Month 1			1526926
	Month 2			1348932
	Month 3			1415321
Coke ovens	Month 1			488331
	Month 2			473551
	Month 3			453189
BOS Plant	Month 1			198422
	Month 2			178192
	Month 3			181778

Signed on behalf of the Operator



Dated 25/02/20

Form Installation gas

WASTE PRODUCTION

Operational summary for quarter ending 31-Dec-19

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	Oct	31659	3409					
	Nov	42787	1300					
	Dec	19453	3544					
Iron and steel installation	Oct			0.8	2126			
	Nov			1.2	301			
	Dec			3.7	451			
BF4 tapholes	Oct					33867		
	Nov					29183		
	Dec					40385		
BF5 tapholes	Oct					34890		
	Nov					32053		
	Dec					38094		
BF5	Oct							
	Nov							
	Dec							
Coke ovens	Oct						149	**
	Nov						Data to be supplied	**
	Dec							**

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

** WID compliant Oil.

Signed on behalf of the Operator



Dated 28/02/20

Form Waste 1

RELEASES INTO AIR

Operational summary for quarter ending

31-Dec-19

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)	2179	2203	2094	2182	2208	2203	2176
Mean load (%MCR)	48.0	59.1	38.9	87.6	84.0	67.2	57.6
Mean flue gas flow (Nm ³ /hr)	68668	119309	42019	216786	249280	121594	145330
Heavy Fuel Oil							
Average net CV (GJ/t)	40.9	40.9	40.9	40.9	40.9	40.9	
Max. sulphur content (g/Kg)	10	10	10	10	10	10	
Max. asphaltene content (g/Kg)	46	46	46	46	46	46	
Ave.%wt Sulphur	0.995	0.995	0.995	0.995	0.995	0.995	
NOx factor	0.1	0.1	0.1	0.1	0.1	0.1	
Coke Oven Gas							
Average net CV (GJ/km ³)	17.11	17.11	17.11	17.11	17.11	17.11	
Sulphur content (g/m ³)	2.84	2.84	2.84	2.84	2.84	2.84	
NOx factor	0.04	0.04	0.04	0.04	0.04	0.04	
Blast Furnace Gas							
Average net CV (GJ/km ³)	3.61	3.61	3.61	3.61	3.61	3.61	3.61
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/km ³)	37.22	36.7	36.7	36.7	36.7	36.7	36.7
NOx factor	0.04	0.04	0.04	0.04	0.04	0.04	0.04

Signed on behalf of the Operator

Dated

25/02/20

RELEASES INTO AIR

Operational summary for quarter ending

31-Dec-19

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	17/07/2019 14:05	26/11/2019 10:44	19/05/2019 11:45	19/05/2019 15:11	12-Apr-19 09:28	14/05/2019 10:00
Flowrate (Nm ³ /hr)	6518	129936	74,036	52,473	18460	41,913
NO _x measured** conc. (mg/Nm ³)	94 (+/-4.1)	101 (+/-4.3)	197 (+/-12.7)	120 (+/-5.5)	429 (+/-36.4)	18 (+/-1.78)
NO _x limit (mg/NM ³)	300 BFG/COG	300 BFG/COG	300 BFG/COG	300 BFG/COG	300 BFG/COG	200 BFG&NG
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	0		29	86		3
Fuel usages over the sampling period						
Natural gas (%)	0%	0%	0%	9%	4%	9%
BF gas (%)	54%	82%	85%	79%	80%	91%
Coke oven gas (%)	46%	18%	15%	12%	5%	
Heavy fuel oil (%)	0%	0%	0%	0%	0%	

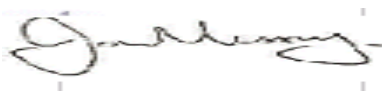
A52A, A52B and A62 (Boiler 3) have an annual monitoring requirement. A50A/A50B has a six monthly monitoring requirement. CEMS subject to QAL2 in 2013

Unable to sample Mitchell boiler due to safety

* EC - electrochemical cell

** Mitchell boiler unable to sample due to safety issues.

Signed on behalf of the Operator



Dated

25/02/20

RELEASES INTO AIR

Operational summary for quarter ending

31-Dec-19

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	17/07/2019 14:05	26/11/2019 10:44	19/05/2019 11:45	19/05/2019 15:11	12-Apr-19 09:28	14/05/2019 10:00
Flowrate (Nm ³ /hr)	6518	129936	74,036	52,473	18460	41,913
SO ₂ measured conc. (mg/Nm ³)	209 (+/-8.8)	79 (+/- 4.2)	156 (+/-8.5)	219 (+/-15.2)	803 (+/- 67.7)	114 (+/- 6.74)
SO ₂ limit (mg/NM ³)	800 BFG/COG	800 BFG/COG	800 BFG/COG	800 BFG/COG	800 BFG/COG	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	0		99	102		10.1
Fuel usages over the sampling period						
Natural gas (%)	0%	0%	0%	9%	4%	9%
BF gas (%)	54%	82%	85%	79%	80%	91%
Coke oven gas (%)	46%	18%	15%	12%	5%	
Heavy fuel oil (%)	0%	0%	0%	0%	0%	

A52A, A52B and A62 (Boiler 3) have an annual monitoring requirement. A50A/A50B have a six monthly monitoring requirement.

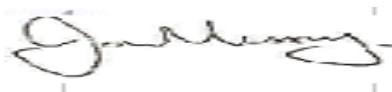
CEMS subject to QAL2 in 2013

Unable to test Mitchell boiler due to safety issues.

* EC - electrochemical cell

** Mitchell boiler unable to sample due to safety issues.

Signed on behalf of the Operator



Dated

25/02/20

Form LCPD DCM SO₂

RELEASES INTO AIR

Operational summary for quarter ending

31-Dec-19

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	O	0	25814	45123	4908		75845
	N	0	29229	35706	4050		68985
	D	0	26914	38701	4151		69767
A50B Service Boiler 5	O	0	46778	49670	3100		99547
	N	0	45413	38339	3078		86829
	D	0	29988	46261	4483		80732
A51 Boiler A5	O	0	6208	39698	989	142	47036
	N	986	4926	35725	1817	77	43531
	D	0	3490	50537	1784	252	56064
A52A Boiler 6	O	1974	62870	230547	21897	28905	346193
	N	3576	71098	217698	28066	25619	346056
	D	3057	65023	223693	33163	21281	346218
A52B Boiler 7	O	428	50160	235994	17246	29576	333403
	N	2591	48890	222395	30940	26173	330989
	D	3182	59608	226668	33077	21569	344104
A53 Mitchell	O	76	4856	137415	3047		145394
	N	109	7015	130507	2826		140457
	D	1319	6727	133005	4497		145548
A62 Boiler 3	O			129678	14734	682	145095
	N			112963	22165	451	135580
	D			148492	16507	694	165694
Total	O	2478	196686	868125	65920	59305	1192514
	N	7262	206570	793334	92942	52320	1152427
	D	7559	191749	867359	97663	43796	1208126

Signed on behalf of the Operator

Dated 25/02/20

Form LCPD Fuels

RELEASES INTO AIR

Operational summary for quarter ending

31-Dec-19

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	Maximum hourly mean	Date & time of maximum value	Minimum hourly mean	Standard deviation of hourly means	% data capture over month
A50A & A50B Service Boilers LIMIT 40	Oct	6.7	56.4	26/10/19 11:00	0.3	7.1	100%
	Nov	14.8	51.7	27/11/19 11:00	1.7	7.3	100%
	Dec	14.9	149.3	03/12/19 14:00	2.8	7.1	100%
A51 Boiler A5 LIMIT 20	Oct	1.1	14.5	03/10/19 17:00	0.5	0.9	100%
	Nov	2.2	71.5	08/11/19 12:00	0.6	5.1	99%
	Dec	1.2	33.8	03/12/19 15:00	0.5	1.7	100%
A52A Boiler 6 LIMIT 25	Oct	1.9	20.6	03/10/19 11:00	1.0	1.8	100%
	Nov	2.7	23.1	21/11/19 05:00	1.7	3.0	100%
	Dec	2.9	28.4	11/12/19 21:00	1.7	2.9	100%
A52B Boiler 7 LIMIT 25	Oct	7.7	33.5	03/10/19 17:00	0.7	7.2	100%
	Nov	1.1	5.8	21/11/19 09:00	0.6	0.7	100%
	Dec	1.6	21.0	11/12/19 22:00	0.6	1.9	100%
A53 Mitchell limit 20	Oct	2.7	107.7	03/10/19 14:00	0.9	6.6	100%
	Nov	2.0	0.0	21/11/19 11:00	4.7	56.0	99%
	Dec	4.7	56.0	13/12/19 00:00	1.5	8.9	100%

Signed on behalf of the Operator

Dated

25/02/20

Form LCPD CEM Parts

RELEASES INTO AIR

Operational summary for quarter ending

31-Dec-19

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	Oct						0%
	Nov	101.3	718.6	21/11/2019 7:00	16.6	79.6	99%
	Dec	117.3	453.8	13/12/2019 15:00	-0.1	55.7	100%
A52B Boiler 7	Oct	142.9	157.1	19/10/2019 7:00	52.9	17.4	100%
	Nov	140.6	156.5	24/11/2019 2:00	45.2	17.8	99%
	Dec	124.9	502.4	03/12/2019 19:00	23.1	35.2	62%
A50A & A50B Service Boilers	Oct	169.6	371.9	22/10/2017 13:00	8.8	61.6	100%
	Nov	226.2	506.9	25/11/2017 11:00	12.2	112.1	100%
	Dec	264.2	506.3	13/12/2017 14:00	21.2	109.5	100%
SULPHUR DIOXIDE (mg/Nm3) - CONTINUOUS EMISSIONS MONITORING							
Release point	Month	Month mean LIMITS: BFG/COG=500	Maximum hourly mean	Date & time of maximum value	Minimum hourly mean	Standard deviation of hourly means	% data capture over month
A52A Boiler 6	Oct						0%
	Nov	225.1	828.8	21/11/2019 6:00	10.3	91.5	99%
	Dec	254.4	2426.3	04/12/2019 20:00	1.1	199.9	100%
A52B Boiler 7	Oct	268.2	667.0	03/10/2019 11:00	123.6	88.8	100%
	Nov	286.5	1148.1	21/11/2019 14:00	103.4	116.1	99%
	Dec	295.9	640.4	03/12/2019 19:00	79.7	90.5	100%
A50A & A50B Service Boilers	Oct	172.9	879.0	03/10/2017 17:00	4.0	168.3	100%
	Nov	464.3	1512.0	15/11/2017 3:00	4.1	391.6	100%
	Dec	706.6	1883.6	01/12/2017 23:00	29.2	374.9	100%

Signed on behalf of the Operator

Dated 25/02/20

Form LCPD CEMS SO2 & NOx

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)	40	500	500	
Measured conc. according to condition 10.1.3b	42 (+/- 4.1)	399 (+/- 37.3)	149 (+/-14.0)	6250 (+/- 527.8)
Measured oxygen content (%)	16.6	16.6	16.6	16.6
Measured conc. according to condition 10.1.3a (17%O2)	27	362	135	5669
Sampling method used	BS EN 13284	BS 6069	ISO 10849	BS ISO 12039
Analytical method used	Gravimetric	*EC	*EC	*EC
Date of sampling	22-Oct-19	22-Oct-19	22-Oct-19	22-Oct-19
Sample start time	10:48	10:43	10:43	10:43
Sample end time	12:59	11:43	11:43	11:43
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	18.9			
Process status at the time of sampling				
Mean sulphur content of sinter blend in use (%)	0.022	0.022	0.022	0.022
Reverts content of sinter blend in use (%)	0.1	0.1	0.1	0.1
Mean chloride content of sinter blend in use (%)	0.02	0.02	0.02	0.02
Throughput during sampling period (% of maximum)	60.0	60.0	60.0	60.0

* EC - electrochemical cell

Signed on behalf of the Operator



Dated

25/02/20

RELEASES INTO AIR

Operational summary for quarter ending

31-Dec-19

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	15.0	15.0	3.9	32.2	32.2	5.7	0.7	5.6	5.6	1.5	21.4	21.4	3.1	5.7	0.0	0.0	0.03	0.3	0.3	0.1	0.20	
February	6.7	6.7	4.8	27.9	27.9	5.0	2.7	3.6	3.6	1.5	19.0	19.0	3.9	8.0	0.1	0.1	0.04	0.3	0.3	0.1	0.25	
March	10.1	10.1	4.1	28.9	28.9	4.5	4.4	4.3	4.3	1.7	19.0	19.0	4.0	6.2	0.0	0.0	0.04	0.4	0.4	0.2	0.18	
April	12.7	12.7	5.2	18.6	18.6	5.1	4.2	5.8	5.8	1.8	20.3	20.3	3.9	6.5	0.1	0.1	0.05	0.4	0.4	0.2	0.20	
May	13.7	13.7	4.4	22.2	22.2	3.7	4.5	6.6	6.6	1.7	26.0	26.0	4.2	6.4	0.1	0.1	0.07	0.3	0.3	0.3	0.16	
June	13.0	13.0	3.5	37.5	37.5	3.9	0.3	6.5	6.5	1.6	19.3	19.3	4.2	1.6	0.1	0.1	0.09	0.3	0.3	0.2	0.07	
July	14.3	14.3	3.4	33.1	33.1	4.1	2.7	6.6	6.6	1.5	15.6	15.6	3.7	5.6	0.1	0.1	0.19	1.3	1.3	0.2	0.11	
August	11.1	11.1	4.0	24.0	24.0	4.5	2.4	5.8	5.8	1.3	11.1	11.1	2.6	4.9	0.1	0.1	0.13	1.1	1.1	0.1	0.11	
September	12.9	12.9	2.6	29.3	29.3	3.2	1.8	6.1	6.1	1.2	14.8	14.8	3.1	4.8	0.1	0.1	0.13	1.1	1.1	0.1	0.12	
October	13.8	13.8	2.6	33.5	33.5	3.4	1.6	6.4	6.4	1.3	16.0	16.0	3.8	6.2	0.2	0.2	0.01	0.7	0.7	0.1	0.18	
November	13.8	13.8	2.3	37.0	37.0	3.6	1.4	5.9	5.9	1.3	17.3	17.3	3.7	5.8	0.3	0.3	0.05	0.3	0.3	0.1	0.18	
December	13.4	13.4	1.7	40.6	40.6	4.5	2.7	6.8	6.8	1.5	15.0	15.0	3.9	4.2	0.4	0.4	0.03	0.3	0.3	0.2	0.21	
Totals	151	151	43	365	365	51	29	70	70	18	215	215	44	66	1.5	1.5	0.9	6.7	6.7	2.0	2.0	
	1154							697							21							
	Service	A5	Margam C	Mit	3	Service	A5	Mgm C	Mit	3	Service	A5	Mgm C	Mit	3	Service	A5	Mgm C	Mit	3		
Boiler Plant Totals	301	43	729	51	29	139	18	429	44	66	3	1	13	2	2							
TNP Annual Limit (T)	161	79	675	157		192	115	923	231		10	4	10	8								

Signed on behalf of the Operator

Dated

25/02/20

Form LCPD Monthly 1

RELEASES INTO AIR

Operational summary for quarter ending

31-Dec-19

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 - NOx (DISCONTINUOUS MONITORING)								
Release Point	A6	A7	A30	A31	A32	A34A	A34B	A39 #
Time and date of sampling	15-Oct-19 10:53	05-Nov-19 10:01				17/10/2019 12:15	17/10/2019 11:19	11-Dec-19 10:49
Flowrate (Nm3/hr)	121008	169,051				140294	188125	30,635
NOx measured conc.(mg/Nm3) **	73 (+/-2.5)	53 (+/-1.6)				442 (+/- 16.3)	465 (+/-51.7)	31 (+/-0.7)
Oxygen content (%)	4.7							
NOx limits (mg/Nm3)	100	100				1800	1800	115
Sampling method used	ISO 10849	ISO 10849				ISO 10849	ISO 10849	ISO 10849
Analytical method used	EC *	EC *				EC *	EC *	EC *
Continuous hourly monitoring result over the period								
Fuel usages over the sampling period								
Natural gas (%)	3%	36%				98%	99%	100%
BF gas (%)	69%	64%						0%
Coke oven gas (%)	7%	0%				2%	1%	
BOS Gas (%)	22%							

* EC - electrochemical cell

A30, A31 & A32 are no longer a permit requirement/ non operational

A39 has a 6 monthly monitoring requirement.

Signed on behalf of the Operator

Dated 25/02/20

Form I&S DCM NOx

RELEASES INTO AIR

Operational summary for quarter ending

31-Dec-19

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	15-Oct-19 10:53	05-Nov-19 10:01	17/10/2019 12:15	17/10/2019 11:19	11-Dec-19 10:49
Flowrate (Nm ³ /hr)	121008	169051	140294	188125	30,635
SO ₂ measured conc.(mg/Nm ³)	188.0 (+/- 6.2)	93.3 (+/- 3.6)	0 (+/-2.3)	0 (+/-2.2)	0 (+/- 0.0)
SO ₂ limits (mg/Nm ³)	200	200	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 (%)	3%	36%	98%	99%	100%
BF gas (%)	69%	64%			0%
Coke oven gas (%)	7%	0%	2%	1%	
BOS Gas (%)	22%				

* EC - electrochemical cell

A39 has a 6 monthly monitoring requirement

Signed on behalf of the Operator



Dated 25/02/20

Form I&S DCM SO₂

RELEASES INTO AIR

Operational summary for quarter ending 31-Dec-19

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108 / PP3738SQ

Release Points: A6, A7, A21, A22, A24 & A46

VARIOUS DISCONTINUOUS MONITORING					
Release Point	A21/A22	A6	A7	A39 # (6 Monthly)	A46* (annual)
Parameter	Chloride (as HCl)	Carbon monoxide			Oxides of nitrogen
Time and date of sampling	12-Jun-19 11:52	15-Oct-19 11:07	05-Nov-19 10:01	11-Dec-19 10:49	- -
Flowrate (Nm3/hr)	18,176	121008	169051	30,635	-
Measured conc.(mg/Nm3)	0.24 (+/-0.12)	6250	6250	259 (+/-5.5)	-
Emission limits (mg/Nm3)	5				
Sampling method used	Isokinetic	BS ISO 12039	BS ISO 12039	BS ISO 12039	ISO 10849
Analytical method used	BSEN1911	EC *	EC *	EC *	EC *
Fuel usages over the sampling period					
Natural gas (%)		3%	36%		
BF gas (%)		69%	64%		
Coke oven gas (%)		7%	0%		
BOS Gas (%)		22%			

* EC - electrochemical cell

* No limit for A46 in new permit.

A39 has a 6 monthly monitoring requirement - no yet taken for HY2

Signed on behalf of the Operator

Dated

25/02/20



Form I&S DCM Misc

RELEASES INTO AIR

Operational summary for quarter ending 31-Dec-19

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

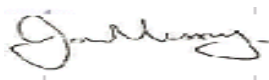
Permit: BL7108

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	Oct	15	2	0.8	0.2	3.4	0.7	0.3	2.5	100%	100%
	Nov		1	0.3	0.1	1.5	0.1	0.2	0.8	100%	100%
	Dec		3	1.8	0.2	6.2	1.5	0.4	2.2	100%	100%
A8B	Oct	15	42	8.0	7.4	80.7	1.5	11.5	10.5	100%	100%
	Nov		19	3.0	3.8	40.8	1.3	6.5	11.9	100%	100%
	Dec		26	12.9	3.3	56.4	4.1	7.4	18.2	100%	100%
A9	Oct	15	6	0.0	1.6	11.6	0.3	2.0	0.6	100%	100%
	Nov		2	0.0	0.5	12.0	0.2	1.8	0.2	100%	100%
	Dec		0	0.0	0.0	0.0	0.0	0.0	0.0	100%	100%
A2*	Oct	30	45	0.5	11.2	67.6	0.0	15.2	27.3	100%	100%
	Nov		63	6.7	14.9	197.8	0.0	21.6	27.8	100%	100%
	Dec		30	0.4	7.0	39.5	0.0	10.2	13.8	100%	100%
A10	Oct	15	8	0.3	1.7	15.1	0.9	3.1	4.0	100%	100%
	Nov		6	1.1	1.2	9.4	2.4	1.7	3.1	100%	100%
	Dec		5	0.7	1.6	16.1	1.0	2.8	3.4	100%	100%
A14	Oct	15	4	2.4	0.3	4.6	3.3	0.4	3.0	100%	100%
	Nov		3	0.4	1.0	4.1	0.5	1.2	1.7	100%	100%
	Dec		4	1.4	0.8	6.5	0.0	1.2	2.8	100%	100%
A15	Oct	15	4	1.8	0.5	6.9	2.8	1.0	3.0	100%	100%
	Nov		7	1.7	1.2	13.1	2.6	2.3	3.3	100%	100%
	Dec		8	1.4	1.5	10.2	0.0	2.0	4.4	100%	100%
A16	Oct	15	24	0.5	4.9	44.4	1.0	11.3	4.0	100%	100%
	Nov		17	0.5	4.3	32.1	0.5	7.9	7.3	100%	100%
	Dec		4	0.3	0.7	44.1	0.0	8.2	0.8	100%	100%

*A2 ELV discussed with NRW as derogation

Signed on behalf of the Operator



Dated

25/02/20

Form I&S CEMS Parts 1 & 2

RELEASES INTO AIR

Operational summary for quarter ending 31-Dec-19

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

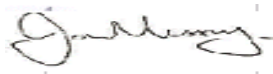
Permit: BL7108 / RP3730BV / BL7108IM (V009)

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	Oct	15	1.3	0.6	1.7	15.1	0.7	2.8	0.8	100%	100%
	Nov	Daily mean	1.0	0.7	1.2	9.4	0.8	0.2	0.8	100%	100%
	Dec		1.0	0.7	1.6	16.1	0.8	0.2	0.8	100%	100%
A63	Oct	25	Inconsistent data during the period - to be investigated.								
	Nov	Hourly mean									
	Dec										

Signed on behalf of the Operator

Dated 25/02/20



Form I&S CEMS Part 3

RELEASES INTO AIR

Operational summary for quarter ending

31-Dec-19

Operator: Port Talbot Works

Location: Port Talbot Works

Permit: BL7108 / RP3730BV

	NOx (tonnes)	Lead (tonnes)	PM10 (tonnes)	CO2 (k tonnes)
Morfa	422			
Iron & Steel	729	0.5	353	1380
Total	1151	0.5	353	1380

Signed on behalf of the Operator

Dated 26/02/20



Form KPI

RELEASES INTO AIR

Operational Summary for quarter ending 31-Dec-19

Operator: Tata Steel Strip Products UK

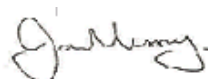
Location: Port Talbot Works

Permit: BL7108

Release Points:

PARTICULATE MATTER (DISCONTINUOUS MONITORING)		
Release Point	A6	A7
Time and date of sampling	15-Oct-19 11:11	05-Nov-19 11:24
Flowrate (Nm3/hr)	218,350	201,039
Particulate measured conc. (mg/Nm3)	2.7 (+/-0.8)	2.6 (+/-0.5)
Particulate limit (mg/Nm3)	10	10
Sampling method used	BS EN 13284	BS EN 13284
Analytical method used	Gravimetric	Gravimetric
Fuel Usage		
Natural gas (%)	3%	0%
BF gas (%)	69%	96%
Coke oven gas (%)	7%	4%
BOS (%)	22%	

Signed on behalf of the Operator



Dated

25/02/2020

Form Blast Furnace DCM Part

RELEASES INTO AIR

Operational Summary for the month Dec-2019

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			Daily average	Particulate Matter (mg/m3)							
					Mean sulphur % w/w	Mean chloride % w/w	Mean reverts % w/w		4 hour rolling average				Hourly average			
									Maximum	Mean	Minimum	Standard deviation	Maximum	Mean	Minimum	Standard deviation
01-Dec-19	59	100%	100%	100%	0.027	0.028	10.90%	55	74	55	35	12	145	55	27	26
02-Dec-19	59	100%	100%	100%	0.027	0.028	10.90%	51	90	50	16	25	123	51	0	34
03-Dec-19	61	100%	100%	100%	0.027	0.028	10.90%	45	57	46	30	7	82	45	0	16
04-Dec-19	46	100%	100%	100%	0.027	0.028	10.90%	44	74	44	16	17	114	44	0	30
05-Dec-19	49	100%	100%	100%	0.027	0.028	10.90%	28	51	28	0	16	67	28	0	19
06-Dec-19	58	100%	100%	100%	0.024	0.029	10.80%	45	66	44	10	15	74	45	0	22
07-Dec-19	46	100%	100%	100%	0.024	0.029	10.80%	21	66	23	0	24	76	21	0	28
08-Dec-19	39	100%	100%	100%	0.024	0.029	10.80%	11	27	10	0	10	55	11	0	16
09-Dec-19	39	100%	100%	100%	0.024	0.029	10.80%	21	37	20	0	11	68	21	0	20
10-Dec-19	11	100%	100%	100%	0.025	0.034	11.40%	7	36	8	0	11	46	7	0	12
11-Dec-19	47	100%	100%	100%	0.025	0.034	11.40%	26	42	25	6	10	74	26	0	19
12-Dec-19	51	100%	100%	100%	0.025	0.034	11.40%	51	92	51	0	19	140	51	0	35
13-Dec-19	39	100%	100%	100%	0.025	0.034	11.40%	31	47	32	12	9	109	31	0	25
14-Dec-19	1	100%	100%	100%	0.025	0.034	11.40%	1	30	3	0	8	17	1	0	4
15-Dec-19	36	100%	100%	100%	0.025	0.034	11.40%	49	114	48	0	33	226	49	0	59
16-Dec-19	52	100%	100%	100%	0.02	0.037	11.60%	47	79	42	0	29	82	47	0	30
17-Dec-19	59	100%	100%	100%	0.02	0.037	11.60%	60	86	63	34	16	90	60	7	21
18-Dec-19	34	100%	100%	100%	0.02	0.037	11.60%	15	37	16	1	11	65	15	0	17
19-Dec-19	6	100%	100%	100%	0.02	0.037	11.60%	2	13	3	0	4	17	2	0	4
20-Dec-19	57	100%	100%	100%	0.02	0.037	11.60%	22	31	20	0	8	47	22	0	10
21-Dec-19	59	100%	100%	100%	0.019	0.03	13.00%	25	33	25	13	5	46	25	0	10
22-Dec-19	53	100%	100%	100%	0.019	0.03	13.00%	29	44	29	9	10	53	29	0	14
23-Dec-19	31	100%	100%	100%	0.019	0.03	13.00%	11	30	12	0	9	57	11	0	13
24-Dec-19	37	100%	100%	100%	0.019	0.03	13.00%	17	31	17	0	10	36	17	0	13
25-Dec-19	66	100%	100%	100%	0.019	0.03	13.00%	33	48	34	25	8	56	33	8	10
26-Dec-19	54	100%	100%	100%	0.018	0.028	12.70%	32	56	32	10	13	66	32	0	17
27-Dec-19	30	100%	100%	100%	0.018	0.028	12.70%	12	24	12	0	7	39	12	0	12
28-Dec-19	51	100%	100%	100%	0.018	0.028	12.70%	21	33	20	3	9	65	21	0	14
29-Dec-19	42	100%	100%	100%	0.018	0.028	12.70%	14	33	14	1	7	46	14	0	12
30-Dec-19	33	100%	100%	100%	0.021	0.032	12.70%	15	29	15	0	9	68	15	0	17
31-Dec-19	14	100%	100%	100%	0.021	0.032	12.70%	61	137	82	48	26	171	82	16	29
Month ave	43	100%	100%	100%	0.02	0.03	0.1	29	-	30	-	-	-	30	-	-
Month max.	66	-	-	-	0.03	0.04	0.1	61	137	-	-	-	226	-	-	-
Limit	-	-	-	-	0.06	-	-	40	-	-	-	-	-	-	-	-

* No data available.

Signed on behalf of the Operator

Dated 25/02/2020

Form Sinter CEMS

RELEASES INTO AIR

Operational Summary for the month Nov-2019

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			Daily average	Particulate Matter (mg/m3)							
					Mean sulphur % w/w	Mean chloride % w/w	Mean reverts % w/w		4 hour rolling average				Hourly average			
									Maximum	Mean	Minimum	Standard deviation	Maximum	Mean	Minimum	Standard deviation
01-Nov-19	69	100%	100%	100%	0.023	0.078	13.60%	24	42	24	19	6	68	24	0	13
02-Nov-19	78	100%	100%	100%	0.023	0.078	13.60%	32	47	30	20	8	66	32	20	12
03-Nov-19	70	100%	100%	100%	0.023	0.078	13.60%	39	53	38	27	7	98	39	0	18
04-Nov-19	62	100%	100%	100%	0.023	0.078	13.60%	35	64	37	2	14	73	35	0	21
05-Nov-19	63	100%	100%	100%	0.024	0.012	12.80%	31	59	32	0	13	78	31	0	21
06-Nov-19	78	100%	100%	100%	0.024	0.012	12.80%	35	44	34	23	7	51	35	22	9
07-Nov-19	68	100%	100%	100%	0.024	0.012	12.80%	20	52	23	0	23	71	20	0	25
08-Nov-19	45	100%	100%	100%	0.024	0.012	12.80%	11	37	9	0	13	72	11	0	17
09-Nov-19	76	100%	100%	100%	0.023	0.039	12.60%	35	47	35	23	7	62	35	25	9
10-Nov-19	81	100%	100%	100%	0.023	0.039	12.60%	45	54	45	35	6	56	45	35	7
11-Nov-19	69	100%	100%	100%	0.023	0.039	12.60%	52	72	51	30	12	115	52	0	24
12-Nov-19	61	100%	100%	100%	0.023	0.039	12.60%	48	70	48	18	14	90	48	0	24
13-Nov-19	75	100%	100%	100%	0.023	0.039	12.60%	58	73	57	45	8	82	58	43	12
14-Nov-19	51	100%	100%	100%	0.022	0.025	12.40%	60	126	61	0	34	188	60	0	52
15-Nov-19	73	100%	100%	100%	0.022	0.025	12.40%	40	62	42	27	8	61	40	19	9
16-Nov-19	38	100%	100%	100%	0.022	0.025	12.40%	30	76	30	0	25	114	30	0	32
17-Nov-19	20	100%	100%	100%	0.022	0.025	12.40%	20	66	18	0	23	132	20	0	35
18-Nov-19	60	100%	100%	100%	0.022	0.025	12.40%	25	47	27	17	6	47	25	0	11
19-Nov-19	55	100%	100%	100%	0.021	0.029	13.10%	30	41	29	8	10	66	30	0	16
20-Nov-19	38	100%	100%	100%	0.021	0.029	13.10%	18	42	20	0	15	50	18	0	17
21-Nov-19	57	100%	100%	100%	0.021	0.029	13.10%	55	115	53	0	29	246	55	0	48
22-Nov-19	51	100%	100%	100%	0.021	0.029	13.10%	33	52	32	14	11	63	33	0	20
23-Nov-19	66	100%	100%	100%	0.021	0.029	13.10%	60	128	61	39	24	160	60	7	39
24-Nov-19	56	100%	100%	100%	0.021	0.029	13.10%	52	136	52	21	34	182	52	0	53
25-Nov-19	74	100%	100%	100%	0.022	0.031	10.70%	29	36	28	20	6	42	29	19	6
26-Nov-19	70	100%	100%	100%	0.022	0.031	10.70%	34	50	34	20	8	70	34	2	13
27-Nov-19	10	100%	100%	100%	0.022	0.031	10.70%	20	117	22	0	40	270	20	0	58
28-Nov-19	30	100%	100%	100%	0.022	0.031	10.70%	85	192	85	0	69	281	85	0	89
29-Nov-19	35	100%	100%	100%	0.022	0.031	10.70%	30	54	29	0	20	73	30	0	24
30-Nov-19	65	100%	100%	100%	0.022	0.031	10.70%	39	56	37	1	15	66	39	0	18
Month ave	58	100%	100%	100%	0.02	0.03	0.1	37	-	37	-	-	-	37	-	-
Month max.	81	-	-	-	0.02	0.08	0.1	85	192	-	-	-	281	-	-	-
Limit	-	-	-	-	0.06	-	-	40	-	-	-	-	-	-	-	-

* No data available.

Signed on behalf of the Operator

Dated 26/02/2020

Form Sinter CEMS

RELEASES INTO AIR

Operational Summary for the month Oct-2019

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-Oct-19	0	100%	100%	88%	0.02	0.055	7.70%	1	4	0	0	1	16	1	0	3
02-Oct-19	36	100%	100%	71%	0.022	0.035	9.00%	62	126	59	23	33	245	62	14	58
03-Oct-19	49	100%	100%	47%	0.022	0.035	9.00%	20	45	21	12	10	44	20	0	10
04-Oct-19	54	100%	100%	22%	0.022	0.035	9.00%	26	40	26	13	8	55	26	0	12
05-Oct-19	73	100%	100%	100%	0.022	0.035	9.00%	25	58	26	12	14	87	25	9	20
06-Oct-19	71	100%	100%	100%	0.022	0.035	9.00%	21	25	21	16	3	36	21	15	6
07-Oct-19	77	100%	100%	100%	0.022	0.035	9.00%	11	40	12	0	15	40	11	0	15
08-Oct-19	80	100%	100%	99%	0.024	0.02	15.80%	20	37	18	0	14	56	20	0	17
09-Oct-19	86	100%	100%	100%	0.024	0.02	15.80%	51	85	51	28	18	122	51	27	27
10-Oct-19	75	100%	100%	100%	0.024	0.02	15.80%	30	44	31	22	6	52	30	0	11
11-Oct-19	82	100%	100%	100%	0.024	0.024	13.60%	32	41	31	20	5	56	32	18	9
12-Oct-19	77	100%	100%	100%	0.024	0.024	13.60%	29	45	29	19	8	78	29	19	12
13-Oct-19	61	100%	100%	100%	0.024	0.024	13.60%	21	30	21	0	9	40	21	0	11
14-Oct-19	69	100%	100%	100%	0.024	0.024	13.60%	25	39	27	0	9	53	25	0	15
15-Oct-19	0	100%	100%	100%	0.022	0.021	14.10%	1	5	1	0	2	21	1	0	4
16-Oct-19	7	100%	100%	100%	0.022	0.021	14.10%	11	54	13	0	18	78	11	0	21
17-Oct-19	43	100%	100%	100%	0.022	0.021	14.10%	15	38	14	5	9	75	15	0	16
18-Oct-19	67	100%	100%	100%	0.022	0.021	14.10%	12	21	12	8	4	28	12	7	5
19-Oct-19	69	100%	100%	100%	0.022	0.021	14.10%	18	21	18	14	2	31	18	13	4
20-Oct-19	25	100%	100%	100%	0.022	0.021	14.10%	9	33	9	0	11	67	9	0	15
21-Oct-19	53	100%	100%	100%	0.022	0.021	14.10%	20	39	20	0	9	75	20	0	17
22-Oct-19	67	100%	100%	100%	0.022	0.021	14.10%	17	27	16	10	4	37	17	0	8
23-Oct-19	53	100%	100%	100%	0.023	0.035	12.60%	15	30	17	0	9	36	15	0	11
24-Oct-19	70	100%	100%	100%	0.023	0.035	12.60%	20	29	19	14	4	60	20	2	12
25-Oct-19	62	100%	100%	100%	0.023	0.035	12.60%	17	24	17	6	5	30	17	0	8
26-Oct-19	72	100%	100%	100%	0.023	0.035	12.60%	24	34	24	16	5	47	24	15	9
27-Oct-19	67	100%	100%	100%	0.023	0.088	12.80%	36	75	36	23	17	183	36	0	34
28-Oct-19	70	100%	100%	100%	0.023	0.088	12.80%	31	41	30	21	7	72	31	18	14
29-Oct-19	71	100%	100%	100%	0.023	0.088	12.80%	32	48	32	22	8	84	32	22	14
30-Oct-19	76	100%	100%	100%	0.023	0.088	12.80%	57	92	57	31	16	153	57	32	30
31-Oct-19	64	100%	100%	100%	0.023	0.078	13.60%	57	73	50	33	13	89	50	23	16
Month ave	59	100%	100%	94%	0.02	0.04	0.1	25	-	24	-	-	-	24	-	-
Month max.	86	-	-	-	0.02	0.09	0.2	62	126	-	-	-	245	-	-	-
Limit	-	-	-	-	0.06	-	-	40	-	-	-	-	-	-	-	-

* No data available.

Signed on behalf of the Operator

Dated 26/02/2020

Form Sinter CEMS

RELEASES INTO AIR

Operational summary for the six months to

31-Dec-18

Operator: Tata Steel UK Ltd

Release Point: A1

Location: Port Talbot Works

Permit: BL7108

Release Point	Sinter Main (A1)							
	Chloride (mg/Nm3)	Fluoride (mg/Nm3)	Lead (mg/Nm3)	VOC's (mg/Nm3)	PAH's * (ug/Nm3)	Dioxins** (ng/Nm3)	Dioxins *** (ng/Nm3)	Mercury (mg/Nm3)
Permit limit						0.4		50
Measured conc. according to condition 10.1.3b	No Longer a requirement in the permit				3.4 (+/- 0.65)	0.63 (+/- 0.10)	0.30 (+/- 0.05)	13.30 (+/- 4.36)
Measured oxygen (%)					17.0	17.0	17.0	17.0
Measured conc. according to condition 10.1.3a (17%O2)					3.4	0.6	0.3	13.30
Cogeners<LoD at zero						0.63	0.30	
Cogeners<LoD at LoD						0.63	0.30	
Analytical method used					BS ISO 11338	BS EN 1948	BS EN 1948	BS EN 13211
Date of sampling					05-Dec-19	05-Dec-19	05-Dec-19	05-Dec-19
Sample start time					11:46	09:18	09:18	10:44
Sample end time					17:20	11:18	11:18	00:54
Limit of detection					0.6	0.001	0.001	0.090
Continuous particulate result during sampling (hourly mean)					8	8	8	12
Process status at time of sam								
Mean sulphur content of sinter blend in use (%)					0.027	0.027	0.027	0.027
Reverts content of sinter blend in use (%)					10.9	10.9	10.9	10.9
Mean chloride content of sinter blend in use (%)					0.028	0.028	0.028	0.028
Throughput during sampling period (% of maximum)					58	58	58	58

* PAH's as B[a]P

** Dioxins and furans as iTEQ

*** Dioxins and furans as WHO TEQ

- Data not available from labs as samples were not received for analysis. This has been investigated and an improvement has been put in place to resolve this issue.

Nb: Dioxins and Furans iTEQ ng/m3 Limit on average of all extractive spot sample carried out by the operator during a single calendar year.
Average of all extractive spot samples in 2016 - 0.3875ng/Nm3

Signed on behalf of the Operator

Dated

25/02/2020

Form Sinter DCM 2

RELEASES INTO AIR

Operational summary for the six months to 31/12/2018

Operator: Tata Steel Strip Products UK

Location: Port Talbot Works

Permit: BL7108 / RP3730BV

Release Points: A39

PARTICULATE MATTER (DISCONTINUOUS MONITORING)		
Release Point	A39 HY2	A39 HY2
Time and date of sampling	23-May-19 13:29	12-Nov-19 09:49
Flowrate (Nm3/hr)	28379	24139
Particulate measured conc. (mg/Nm3)	8	5
Particulate limit (mg/Nm3)	25	25
Sampling method used	BS EN 13284	BS EN 13284
Analytical method used	Gravimetric	Gravimetric

Form GCI DCM Part

Signed on behalf of the Operator

Dated 25/02/2020

