



The Regional Officer,
Odisha State Pollution Control Board
JCDL Campus, Pankapal,
Kalinganagar Industrial Complex,
Dist- Jajpur, Odisha.

KPO/Env/C-05/139 /2016
September 20, 2016.

Dear Sir,

Reg: Environmental Statement for the Period 2015-16 for 6 MTPA Steel Plant at Kalinganagar Industrial Complex by, Tata Steel Limited

We are enclosing the "Environmental Statement" for the year 2015-2016 for 6 MTPA Steel Plant at Kalinganagar Industrial Complex, Dist- Jajpur, Odisha, by Tata Steel for your kind consideration. The different units were commissioned in FY 2015-16 after obtaining first time consent to operate for respective units from OSPCB.

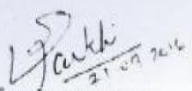
We wish to mention that necessary control measures have been installed and adopted to minimize the impact on environment.

We trust that you will find the above in order.

Thanking you and assuring you of our best attention.

Yours faithfully,

For Tata Steel Limited


Head, Environment
Kalinganagar Project.

Encl: a/a.

Copy to: The Member Secretary, OSPCB, BBSR

TATA STEEL KALINGANAGAR

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**ENVIRONMENTAL STATEMENT
FOR THE YEAR 2015-16**

6 MTPA STEEL PLANT AT KLAINGANAGAR INDUSTRIAL COMPLEX, ODISHA

TATA STEEL LIMITED

**ENVIRONMENTAL DEPARTMENT
KALINGANAGAR PROJECT,
TATA STEEL LIMITED**

FORM-V

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2014-15

**Tata Steel Limited
6.0 MTPA Steel Plant, Kalinganagar Project**

PART-A

i)	Name and address of the owner/ occupier of the industry, operation or process	:	Rajiv Kumar VP, Operations Tata Steel Limited, Block-2, General Admin office Kalinga Nagar Industrial Complex Duburi-755026 Dist- Jajpur, Odisha.
ii)	Industry Category Primary/(STC code) Secondary (STC code)	:	Large Metallurgical Industry —
iii)	Production Capacity	:	6.0 MTPA Crude Steel Production Factory under construction/ commissioning.
iv)	Year of Establishment	:	Commercial Production started on June, 2016
v)	Date of Last Environmental /Audit Report submitted	:	26.09.2015

PART-B

WATER AND RAW MATERIAL CONSUMPTION

i)	Total Water consumed (m³/day)	
	Process	23319.82 m ³ /day
	Cooling	(mainly for
	Domestic	construction, trial, domestic and spraying
		} (Construction & Spraying on roads) (Drinking purpose at site)

Name of the product	Process water consumption per unit of product Output	
	During the previous Financial Year 2014-2015	During the current Financial Year 2015-2016
Steel	Not Applicable as construction is in progress	Not accessed as the commissioning of different units was successively done. Trialing of different units was going on and overall plant stabilization was in progress.

ii) Raw material consumption:			
Name of Raw Material	Name of the Products	Consumption of raw material	
		2014-15	2015-16
		MT/Yr.	MT/Yr.
Coaking Coal	Steel	Not Applicable	392129
Iron Ore			181289
Lime stone			18829
Dolomite			15033
Pyroxinite			4810
Wurtzite			1261

PART-C

POLLUTION DISCHARGED TO ENVIRONMENT/ UNIT OF OUTPUT
(PARAMETERS AS SPECIFIED IN THE CONSENT ISSUED)

Note: Please refer Annexure-I for Ambient Air Quality

SI No.	Pollutants	Quantity of Pollutants discharged (mass/day)		Concentration of Pollutants discharged (mass/volume)		Percentage of variation from prescribed standard with reasons
		Kg/day		mg/lit		
a)	WATER	FY: 2014-15	FY: 2015-16	FY: 2014-15	FY: 2015-16	-
		Not Applicable	Not Applicable	Not Applicable	Not Applicable	-
b)	AIR	Kg/day		mg/Nm ³		Complied. Stack emissions were Within the stipulated limits.
	PM emission from Stack of	FY: 2014-15	FY: 2015-16	FY: 2014-15	FY: 2015-16	
	Coke oven Battery-2		374.33		39.04	
	DG Sets	Not Applicable	For Power Back-up only	Not Applicable	55	

PART-D

HAZARDOUS WASTES

(AS SPECIFIED UNDER HAZARDOUS WASTES (MANAGEMENT, HANDLING AND TRANS BOUNDARY MOVEMENT RULES, 2008)

Sl. No as per Schedule-I	Hazardous Wastes	Total Quantity (Tonne/year)	
		2014-15	2015-16
5.2	Waste Oil	Nil	9900 KG

PART-E
SOLID WASTE

Sl. No.	Solid waste	Total Quantity Generated	
		2014-2015	2015-2016
a.	From process BF Slag	Nil	3474.90 MT
b.	From Pollution Control facilities	Nil	Nil
c.	Quantity recycled within the unit	Nil	Nil

PART-F

Characteristics of Hazardous as well as Solid wastes and their method of disposal:

Hazardous/ Solid Wastes	Characteristics	Method of disposal
Waste oil (Hazardous waste)	oily	Sold to authorised recycler
BF Slag	Solid	Sold to cement industry

PART-G

Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production	<ul style="list-style-type: none">• Construction, erection & commissioning of plant facilities are undertaken such a way that minimum adverse impact is on Environment.• A reservoir having capacity of 39,000 m³ has been constructed which is used for collection of surface run off during monsoon.• A bund on the surface water
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	<p>drain has been provided to create catchment to ensure settling of solids before surface run-off goes out.</p> <ul style="list-style-type: none"> • Highly efficient pollution control equipments have been installed at all the operation units. • Raw material handling systems are equipped with efficient Dust suppression control measures. • Around 10050 KL of water sprinkling were done on internal roads for road dust suppression • Tree plantation is being undertaken in & around site. Till 2015-16, 164346 nos. of trees planted in and around the site
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PART-H

Additional investment proposal for environmental protection including abatement of pollution

- Investment of more than Rs. 1500 Crores has been made for pollution control equipments and other environmental protection measures, which includes:
 - ESPs, Bag filters, Dust suppression, Water sprinklers, dry fogging system, Fume extraction system etc.
 - WWTP at each individual plant and CETP is under final stage of commissioning for maximum recover, recycle & reuse of treated water.
 - Solid waste management is being carried out at site including municipal solid waste.
 - For Management of Hazardous Waste, Agreement has been made with Common Hazardous Waste Treatment, Storage and Disposal Facility at Sukinda.
 - Afforestation as per Green Belt development plan as well as avenue plantation in the periphery.
- These facilities are developed along with plant facilities.
- Tree plantation is being carried out in & around KPO site. 164346 tree saplings have planted till 2015-16.

PART-I

(ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT)

<p>Any other particulars for improving the quality of environment</p>	<ul style="list-style-type: none"> • Tree plantation is undertaken in and around the site <p><u>Details of tree saplings planted:</u></p>	
	<p>2009-10: 792 nos. 2010-11: 1130 nos. 2011-12: 4800 nos. 2012-13: 12622 nos.</p>	<p>2013-14: 29888 nos. 2014-15: 35437 nos. 2015-16: 78730 nos.</p>
	<p>Avenue plantation is being taken up at Jajpur town, Kalinganagar and Bhubaneswar</p> <ul style="list-style-type: none"> • 5025 Kms of road-width covered for water spraying to contain dust on roads of project site. • Regular monitoring of ambient air, surface water, ground water and ambient noise is carried out. Please refer to Annexure-I. • Four Online AAQM stations commissioned along with Environmental Display Board and data linkage provided for continuous display of data (photograph of digital display board installed at Main gate- enclosed) • Consent to Operate (CTO) for 3 MTPA integrated steel plant including 5X8.769 MW DG sets granted by OSPCB on 28.03.2016. • About 9800 Sq. meter of Garden has been added at various locations inside project site such as HSM, SMS, MRSS, Training Center, Blast Furnace, etc. • 33480 sq. meter of garden landscape are being maintained in & around KLNR 	

Annexure-I

Ambient Air Quality Monitoring around KPO site:

Location	PM10 (or size <10 µm) µg/m3	PM2.5 (or size <2.5µm) µg/m3	SO2 (µg/m3)	NOx (µg/m3)	CO (mg/m3)
Khandiaposhi	59.78	34.1	11.57	14.46	0.32
Khurunti	53.83	30.88	10.81	13.61	0.26
Jakhapura	65.75	37.82	12.25	15.37	0.36
Trijanga	46.73	26.86	10.28	11.35	0.19
Belohari	47.19	27.3	9.73	12.47	0.2
Gobarghati Medical	58.25	32.6	11.68	13.93	0.24
Coke Plant Area	68.67	38.95	13.73	16.37	0.44
Standard	60	40	50	40	2

Surface & Groundwater Monitoring around KPO

Surface water/ Station	Frequency of test	pH	DO, mg/l	TSS, mg/l	BOD, mg/l	COD, mg/l	Iron, mg/l	Cr+6, mg/l	Mn, mg/l	Coliform MPN/100ml
LIMIT (IS 2296, Class C)	-	6.5-8.5	4	--	3	-	50	0.05	-	5000
Gonda Nalla	Monthly	7.14	7.36	76.4	1.19	3.94	0.53	0.01	0.05	498
Ground water/ Station	Frequency of test	pH	Turbidity NTU	Hardness, mg/l	TDS, mg/l	Iron, mg/l	Cr+6 mg/l	Zn, mg/l	Fluorides	Coliform MPN/100ml
LIMIT (BIS10500)	-	6.5-8.5	5	300	500	0.3	0.05	5	1	-
Duburi Jn	Monthly	6.8	0.72	63.6	172.2	0.18	BDL	0.37	0.19	ND

Some Photographs of Plant



Aerial View of Tata Steel Kalinganagar



Captive Power Plant



DG Sets



Bag Filter for Coke Ovens



Raw Material Conveyor belt



Coke oven battery with stamping, charging cum pushing machine



Sinter Plant



Waste Gas ESP of Sinter Plant



Blast Furnace



Blast Furnace Stock House ESP



Blast Furnace Cast House ESP



Secondary Emission Control System of Steel Melting Shop



Water Filtration System at Hot Strip Mill



CAAQMS inside plant



CAAQMS outside plant



Plantation inside plant premises



Raw Water Treatment Plant



Digital Display of Environmental Information at Main gate

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