

**FORM – V (See rule – 14 )**  
**Environmental Statement for the financial year ending the 31<sup>st</sup> March -2014**  
**Kalimela Open Cast Project**

**PART – A**

<b>1.Name and address of the owner/ occupier of the : industry/ operation or process</b>	<b>Kalimela Open Cast Project</b>
<b>Agent</b> :	<b>Mr. Pinaki Saha</b> Head(Kalimela Open Cast Project) Tata Steel Ltd., P.O.- Jamadoba Dist.- Dhanbad, Jharkhand-828112
<b>Nominated Owner</b> :	<b>Mr. T.V.Narendran</b> Managing Director, Tata Steel Ltd (India and South East Asia) Jamshedpur, Dist- East Singhbhum Jharkhand – 831 001
<b>2.Industry category: Primary (STC Code) Secondary (STC Code)</b>	--
<b>3.Production Capacity – Units</b>	0.34 MTPA – Raw coal
<b>4.Year of Establishment</b>	October'2009
<b>5.Date of the last environmental statement submitted</b>	30 <sup>th</sup> September' 2013 (Vide Letter No.S&E/ENV/ESSA/05/959/13)

**PART – B**

**Water and Raw Material Consumption**

**1. Water Consumption M<sup>3</sup> / day.**

	<b>Water consumption in 2013-2014</b>
<b>Process</b>	Not Applicable
<b>Industrial</b>	48.54 M <sup>3</sup> /day
<b>Domestic</b>	Not Applicable
<b>Other</b>	Not Applicable

Sl. No	Name of the products	<b>Process water consumption per unit of product output.</b>	
		<b>During the previous financial year 2012-2013</b>	<b>During the current financial year 2013-2014</b>
1.	Raw Coal	Not Applicable	Not Applicable

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**2. Raw Material Consumption**

Sl. No	Name of the Raw Material	Name of the product	Raw Materials consumption per unit production output.	
			During the previous financial year 2012-2013	During the current financial year 2013-2014
1.	Explosives	Raw Coal	2.17 Kg/Tonne	2.45 Kg/Tonne

\*Industries may use codes if disclosing details of raw materials would violate contractual obligation, otherwise all industries have to name the raw materials used.

**PART – C**

**Pollution discharged to environment / unit of output.**

(Parameter as prescribed in the consent issued)

Sl. No	Pollution	Quantity of pollutants discharged (mass/ day)		Concentration of pollutants in discharges (Mass/Volume)		Percentage of variation from prescribed standard with reason.
A.	AIR	SPM Level : 24 Hourly Limit- 700µg/m <sup>3</sup>	RPM Level : 24 Hourly Limit- 300µg/m <sup>3</sup>	SO <sub>2</sub> Level: 24 Hourly Limit- 120µg/m <sup>3</sup>	NO <sub>x</sub> Level: 24 Hourly Limit- 120µg/m <sup>3</sup>	All values are within limits.
		<i>(As per Air Quality Standards for Jharia Coal Mines vide notification G.S.R.742(E), dated 25.9.2000)</i>				
		279.99	143.08	10.75	15.43	
B.	WATER	Zero water discharge (Closed water circuit system). The analysis of water in the settling tank is as follows:				All values are within limits.
		<b>Parameter</b>	<b>Results</b>	<b>Measurement</b>	<b>Limit</b>	
		pH	7.0	pH	5.5-9.0	
		Total Suspended Solid	27	mg/ltr.	100	
		Total Dissolved Solid	645	mg/ltr.	2100	
		Biological Oxygen Demand	4.0	mg/ltr.	30	
		Chemical Oxygen Demand	37	mg/ltr.	250	
		Oil & Grease	0.59	mg/ltr.	10	

The open cast project does not have any single point source of air pollution. Hence, quantitative estimation of air pollutants discharged in Kg/day cannot be ascertained.

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**PART – D**  
**Hazardous Wastes**  
 (as specified under Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008)

Sl No	Hazardous Waste	Total Quantity (Kg.)	
		During the previous financial year 2012-2013	During the current financial year 2013-2014
1.	From process Used Oil	1050 Litres	6720 Litres
2.	From pollution control facility	-	-

**PART – E**  
**Solid Wastes**

Sl No	Solid Wastes	Total Quantity ( Kg.)	
		During the previous financial year 2012-2013	During the current financial year 2013-2014
1.	Overburden	721925 m3	485935 m3
2.	Quantity recycled or reutilized within the unit/ sold/ disposed	OB has been dumped in an external dump area of 12 Ha which will later be used for backfilling purpose.	

**PART – F**

Please specify the characterization (in term of composition and quantum) of hazardous as well as solid wastes and indicate disposal practices adopted for both these categories of wastes.

Category of Waste	Characteristics	Quantity	Disposal Practice
<b>Solid Waste</b> 1. Overburden	Solid	485935 m <sup>3</sup>	Overburden is dumped at earmarked sites within the leasehold area as per Environmental Clearance conditions. They will be reclaimed to stabilize the dumps.
<b>Hazardous Waste</b> 1. Used Oil	Used Oil (Liquid)	6720 Litres	Hazardous wastes are disposed off to registered recyclers according to applicable Hazardous Wastes Management Rules.

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**PART – G**

**Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.**

Top soil management done to conserve the top soil. Grasses and shrubs have been planted on the dumps to stabilize it.

Adequate dust suppression arrangement is made in haul roads.

A Continuous Ambient Air Quality Monitoring Station has been installed at Jamadoba for online monitoring with data transfer to JSPCB, Ranchi. Cost incurred for this system is 60 lakhs.

Rs. 2,50,000 incurred annually for plantation activities, etc. for entire Jharia Division.

Rs. 4.5 lakhs incurred for Water sprinkling activities.

Rs. 7 Lakhs incurred for cleaning and maintenance of Garland drains and retention wall.

**PART – H**

**Additional measures/ investment proposals for environmental protection including abatement of pollution, prevention of pollution**

Backfilling of the mine voids will begin and OB from the external dump will be used for this purpose. The area will be reclaimed and then plantation would be done on the reclaimed area.

**PART – I**

**Any other particulars for improving the quality of environment**

1. We are providing safe drinking water from our water treatment plant & MADA to our employees.
2. We are regularly sprinkling water in an around the units, to suppress dust.
3. We provide dust mask to our employees to prevent dust in open cast mining.
4. Our welfare department arranges to clean the domestic garbages from our colonies to provide better environment.
5. We also reimburse the cost of LPG cylinder refilling cost to the employees to avoid coal burning.
6. Regular monitoring of Air Quality by our separate environment management cell.
7. We have already done the tree plantation job and this is a continuous process in company leasehold areas.
8. Regular thrust on Environment awareness conducting training classes at P.T.I., Jamadoba.
9. Controlled blasting done and wet drilling practiced in mines.

**Name of Unit – Kalimela Open Cast Project**

**Head, OCP Kalimela**  
**TATA STEEL LIMITED**