

**Head Office :**

19/A, Abdul Hamid Street  
1st Floor, Kolkata - 700 069  
Ph : 033-2231-5653  
Fax : 033-2231-5652  
e-mail: info@serajuddinmines.com

**Ref No: BBIM-SC/SPCB/ES/2016-17/131****Date: 01.07.2016**

✓ The Member Secretary,  
State Pollution Control Board, Odisha,  
PariveshBhawan, A/118,  
Nilakantha Nagar, Unit-VIII,  
Bhubaneswar-751012.

**Sub: Environmental Statement of "Balda Block Iron Ore Mines of M/s Serajuddin and Co." located in Village(s) Balda, Bada-Kalimati and Nayagarh, Tehsil-Barbil, Dist.: Keonjhar" for the year ending March, 2016.**

Dear Sir,

With reference to the above, we are herewith submitting the "Environmental Statement" for the financial year ending **March, 2016 (2015-16)** in Form-V as per rule-14 under Environment (Protection) Rules, 1986 of Balda Block Iron Mines.

This is for your kind information, please.

Thanking You,

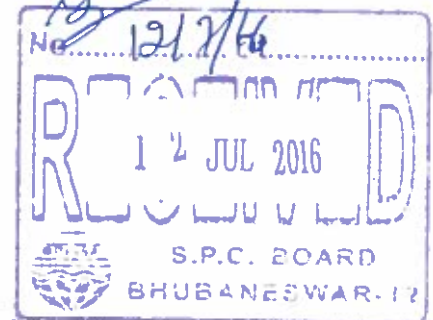
Yours Sincerely,  
For Balda Block Iron Mines,

Mines Manager

Encl. As above.

Copy to: The Regional Officer, State Pollution Control Board, Regional Office, College Road, Dist.: Keonjhar, Odisha.

Received



*(Signature)*  
Mines Manager  
BALDA BLOCK IRON MINES  
M/s. SERAJUDDIN & Co.

**Regd. Office :**

72, Bentick Street,  
1st floor, Kolkata - 700 001

**Balda Block Iron Ore Mines :**

AT/PO- Balda  
PS-Bamebari, Police Station  
Dist-Konjhar, Odisha-758034

**Guruda Block Manganese Mines :**

AT/PO- Guruda  
PS-Bamebari, Police Station  
Dist-Konjhar, Odisha-758034

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**[FORM-V]**

**(See Rule 14)**

**Environment Statement for the financial year ending the 31<sup>st</sup> March 2015**

**PART-A**

(1) Name and address of the owner / Occupier of the industry, Operation or process: - M/s. Serajuddin and Co.  
Balda Block Iron Mines  
Works Office: At/Po: Balda, Bamebari, Dist. Keonjhar, Odisha-758 086

(2) Industry category Primary - (STC CODE) Secondary-(SIC Code)  
(3) Production capacity Units - 15.15 MTPA (ROM)  
(4) Year of establishment - 11-12-1962 (Year of commencement of iron ore production).  
(5) Date of the last Environmental Statement Submitted - 09.09.2015

**PART-B**

Water and Raw material Consumption:

(1) Water Consumption m<sup>3</sup>/day - 500 m<sup>3</sup>/ Day  
Process - NA  
Cooling (Water sprinkling on Haul roads) - 430 m<sup>3</sup>/ Day  
Domestic (Drinking purpose) - 70 m<sup>3</sup>/ Day

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Name of Product	Process water consumption per unit of output	
<b>Sized Iron Ore</b>	<b>NA</b>	
	During the previous	During
the current	Financial year	financial year
	(1)	(2)
(1)		
(2)		
(3)		

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1. Substituted by rule 2 (b) of the environment (Protection) amendment rules, 1993 notified vide G.S.R vide G.S.R 3'6 (E) dated 22.04.1993.

(ii) Raw material consumption - **Not applicable**

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Name of raw Material	Name of Products	Consumption of raw material Per unit of out put
	During the previous	during the current
	Financial year	Financial year

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\*Industry may use codes if disclosing details or raw material would violate contractual obligations, otherwise all industries have to name the raw materials used.

**PART-C**

Pollution discharged to environment /unit of output - **Not Applicable**  
(Parameter as specified in the consent issued)

**A) Water:**

(Parameter as specified in the consent issued)

Pollutants	Quantity of Pollutants Discharged ( Mass / day)	Conc. of Pollutants Discharged ( Mass / Volume)	% of variation from prescribed standard with reasons
<b><u>Water (ETP Discharge) : 5 M<sup>3</sup>/Day</u></b>			
pH	NA	6.67	Within the Range
TSS	0.297 kg /day	59.53 mg/ lit	40.47 % below the norm
Oil & Grease	0.016 kg /day	3.20 mg/ lit	68.0 % below the norm

**Water (S.T.P. Discharge) 40 M3 / D**

pH	NA	6.51	Within the Range
T.S.S	2.555 kg /day	31.94 mg/ lit	84.03 % below the norm
B.O.D	2.571 kg / day	32.14 mg/ lit	67.86 % below the norm

**Mines Surface runoff water Quality Report**

pH	NA	6.44	Within the Range
T.S.S	84.0 kg /day	15.75 mg/ lit	84.25 % below the norm
Iron	4.0 kg / day	0.80 mg/lit	73.33 % below the norm

**Air: Not Applicable**

Note: Present is no such trade effluent and source emissions, expect surface run - off discharge

## PART – D

### Hazardous Wastes

(As specified under Hazardous Waste/ Management and Handling Rules, 1986)

Hazardous waste [Waste Oil]	Total Quantity [liters]	
	During the previous Financial year, 2014-15	During the Current financial year, 2015-16
1) From process	NA	NA
2) From Pollution Control FACILITY	NA	NA
3) Used Oil	36.12 KL	34.48 KL
4) Oil contaminate waste	1958 Kg	2500 KG

## PART-E

### Solid Waste

Financial Year	Total Quantity	
	During the previous Financial year, 2014-15	During the current Financial year, 2015-16
(a) From process: (Overburden and Intercalated Waste)	: 1569018.00 MT	1198996.00 MT
(b) From pollution control facility	: Not Applicable	
(c) (1) Quantity recycled or re-utilized within the unit	: Nil	
(2) Sold	: Nil	
(3) Disposed	: It is dumped at ear marked areas within the ML area.	

## PART-F

Please specify the characteristics (in terms of composition and quantum) of Hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

- There is no such hazardous waste is being generated, other than used oil, oil contaminated waste, etc.
- Overburden waste is being disposed at ear marked area inside the mine by following the proper sloping, terracing and further development of vegetation with plantation along with mixed grass and some parts are covered with coir mat applications. All the dumps have been provided with retaining wall followed by garland drain and settling at corner of the each dumps.
- There is no top soil generation during the reporting period, 2015-16 as the work is confined to already broken up area only.
- Used Oil: Collection in leak proof barrels and stored in isolated yards under shed with impervious floor having secondary containment pit at the corner for the temporary storage.
- Oil contaminated cotton waste: Compacted into small packages and stored under isolated area in the yard.

## PART-G

Impact of the pollution abatement measures taken on conservation of natural re-sources and on the cost of the production

### Air Quality Management:

- 10 nos. of mobile water tankers (1 no. 35 KL, 1 nos. 28 KL, 4 no. 18 KL, 3 nos. 12 KL) and One no. of mobile water tanker (12 KL) mounted with rain gun system have been provided at loading and unloading points, in & around the crusher and screening plants and other strategic dust generating areas including the mines haul and mineral dispatch roads.
- Apart from that fixed - auto water sprinkling arrangements of 6100 M length got provided at transfer points, mines haul roads and mineral dispatch roads including the other strategic locations which are prone to dust generations.
- Haul roads are being maintained properly with the help of grader to avoid generation of dust during movement of vehicles and ruts & potholes.
- Dust suppression system (dry fog system) and hoods over the conveyor belts have been provided for ore crushing, screening plants and transfer points to control fugitive dust emission from these sources. However, the 1500 TPH Screen plant has been equipped with dust extraction system towards dust suppression purposes.

### Waste Management & Plantation:

- Gap filling plantations, sapling of different varieties of native species was carried on the safety zone, OB dump, road side & peripheral area of ML area are going on to retain the soil captivity as well as to increase the water holding capacity of that area.
- Retaining walls have been constructed at the toe of OB& sub-grade dumps to protect the dumps from sliding and it's also followed by garland drains to prevent entering of mine run-off directly into nearby water bodies.
- The project has planted 16,940 nos. of saplings during the reporting period 2015-16 within the ML Area (safety zone, dump slopes, nallah safety zones etc.) and distributed free saplings of 1,01,862 nos. to the local villagers by celebrating the different awareness programs i.e. Wild Life Week, World Environment Day, International Day of Forest etc.
- Apart from those avenue plantation of 5002 numbers of saplings has been completed all along the road connecting from Champua to Rimuli under the guidelines of DFO, Keonjhar Division during the year 2015-16 and maintenance of the same is being also carried out during the current year also.

### Surface Run off Management :

- In this regard KRG RAIN WATER FOUNDATION, CHENNAI was engaged and the report got prepared in consultation with Regional Director, CGWB, and Bhubaneswar. Check weirs, check dams, de-silting cum percolation ponds/pits got provided at the strategic locations of the mines lease area.
- However, the most of the mines surface run off is being diverted to the mines quarry/pit, which is being percolated down during the rainy season and rest quantity is passing

through the proper channel i.e. check weir, check dam, settling cum percolation cum harvesting pit.

- Apart from that, suitable rain water harvesting measures along with roof top rain Water Harvesting Structures for the camp area got implemented. De-siltation of the village ponds surrounded by ML area has undertaken towards percolation cum rain water harvesting purposes and it is being de-silted before each monsoon

### PART-H

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

- Dry fogging along with bag filter systems, hoods over conveyor belts got provided for crusher and screen plants.
- Drilling machine with "Dust extraction system".
- ETP was constructed at service center for treatment of the work shop effluents.
- Suitable rain water harvesting measures along with roof top rain Water Harvesting Structures for the camp area got implemented to recharge the ground water as a major initiative on natural resources conservation.
- Green vegetation with grass seeds done over OB dumps for better stabilization of dumps.
- Plantation in safety zone, road side area and dump areas, etc.
- Construction of check dams & check weirs to protect natural water bodies from the mines run off.
- Construction of STP at camp location to further utilize the treated water in sprinkling, washing, plantation and agriculture purpose.
- Coir matting has been done over all fines dump for dump stabilization & protect from rain cut. Grass seeds spread over all fines dump which is covered with the coir mate.
- Construction of siltation pond for rainwater harvesting & ground water recharge. Further utilize in dust suppression, plantation etc.

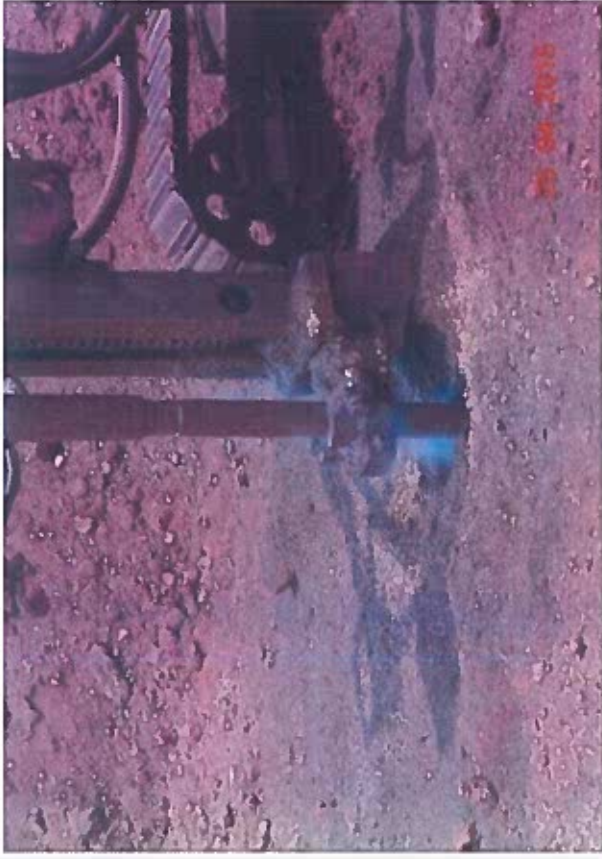
### PART-I

Any other particulars for improving the quality of the environment

- Step towards Environmental Awareness Program, project has observed the "World Environment Day, 5th June 2015" with the plantation campaign in the area.
- We have observed the Van Mahotsav Celebration to educate & aware the surrounding village community as well as students of educational institutions during July 01-07, 2015 through saplings distribution, plantation campaign & various awareness competitions among them.
- We have conducted the Wild life awareness programme to aware the village people during the Wild Life Week Celebration during October 01-07, 2015 through publicity propaganda and plantation drive.
- Project has observed International Day of Forest, 21<sup>st</sup> March 2016 with saplings distribution & plantation campaign in the area.



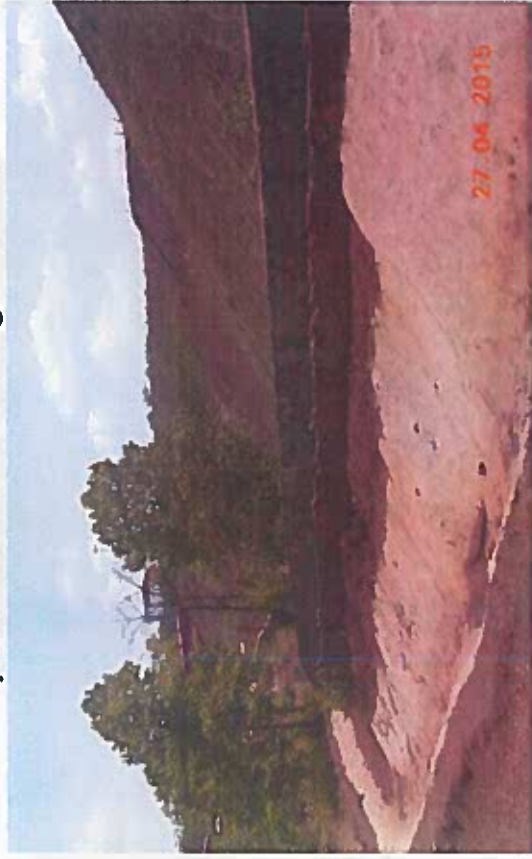




**Photo – 1 - Showing the inbuilt water injecting provision in the drilling machine**



**Photo – 2 - Showing the dump stabilization with coir mat application**



**Photo – 3— Showing dump provided with retaining wall followed by garland drain & settling pit**



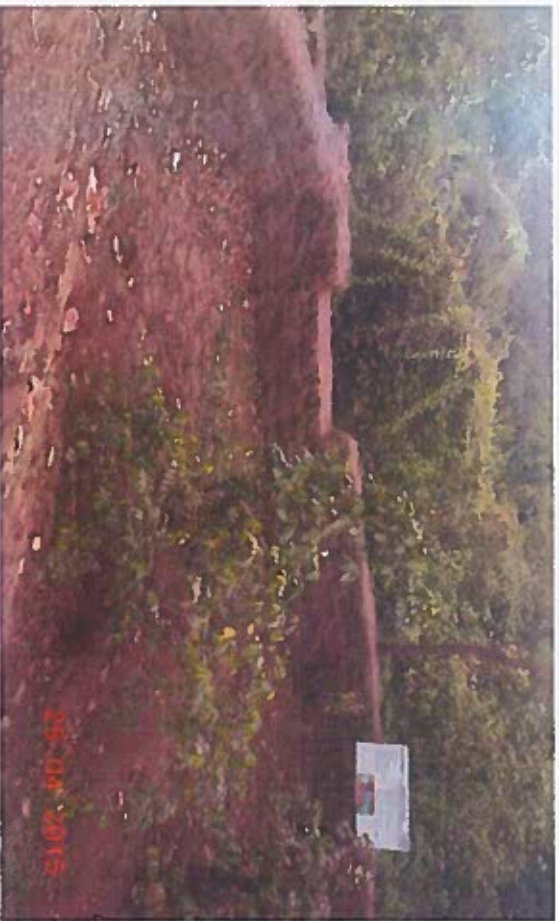
**Photo – 4 - Showing the nallah protection measures with gabion mesh wall along the nallah**



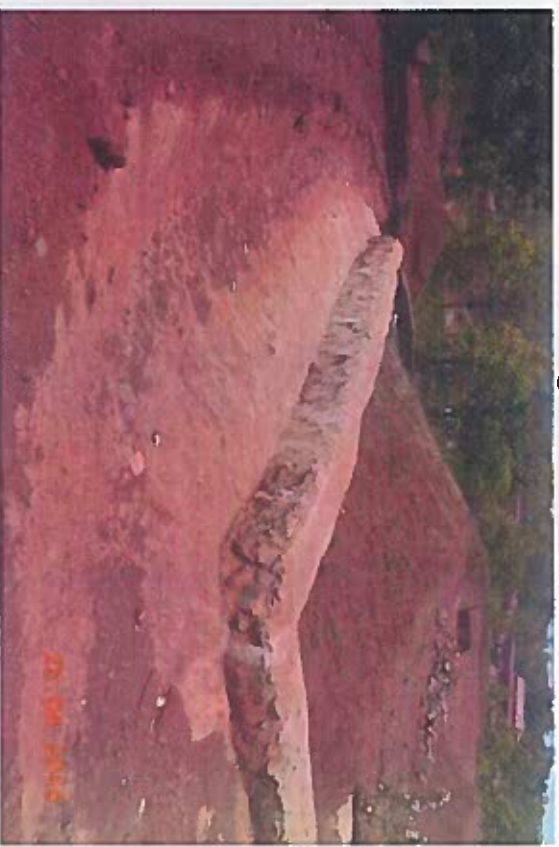
**Photo – 5– showing the provision of check weir & check dam on the nallah**



**Photo – 6– showing the settling pond at the strategic locations**



**Photo – 7 – Showing Check dam at the strategic location**



**Photo – 8 – Showing the retaining wall followed by garland drain provided at the bottom of the dumps**



**Photo – 10– showing watering of the plantations with the help of rain gun**



**Photo – 9– showing the water sprinkling through water tankers**



**Photo – 11 – Showing the auto fixed water sprinklers all along the mines haul roads**





**Photo – 12 – Showing the haul road maintenance with the help of grader**



**Photo – 13 – Showing the mineral transportation trucks covered with tarplins**



**Photo – 14 – Showing the crushing & screen plants equipped with dry fog system & hoods over the conveyor belts**





**Photo – 15 showing the Screening plant equipped with bag filter system & dry fog system**



**Photo – 16 showing the STP for treatment of domestic waste water**



**Photo – 17- showing the ETP for treatment of work shop effluents**



**Photo – 18- showing the free distribution of saplings to the local people**

