

Ref No: BBIM-SC/SPCB/ES/2017-18/

Date: 22.09.2017

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

Sub: Environmental Statement of "Balda Block Iron 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, 2017.


Dear Sir,

With reference to above, we are herewith submitting the "Environmental Statement" for the financial year ending March, 2017 (April 2016- March 2017)" in Form-V as per rule-14 under Environment (Protection) Rules, 1986 in proper format of Balda Block Iron Mines.

This is for your kind information, please.

Thanking You,

Yours Sincerely,
For Balda Block Iron Mines,


Mines Manager
BALDA BLOCK IRON MINES
M/s. SERAJUDDIN & Co
26.9.2017

Encl



Copy to :1. THE DIRECTOR (S), Eastern Regional Office, Ministry of Environment, Forest & climate change, Govt. of India, A-3, Chandrasekharpur, Bhubaneswar- 751023 (Odisha)

2. The soft of the Annual Environment Statement is mailed to: mef.or@nic.in

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Guruda Block Manganese Mines :

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

[FORM-V]

(See Rule 14)

Environment Statement for the financial year ending the 31st March 2017

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 | - | 12.07.2016 |

PART-B

| | |
|---|---------------------------------|
| Water and Raw material Consumption: | |
| (1) Water Consumption m ³ /day | - 500 m³/ Day |
| Process | - NA |
| Cooling (Water sprinkling on Haul roads) | - 430 m³/ Day |
| Domestic (Drinking purpose) | - 70 m³/ Day |

| | | |
|-----------------------|--|----------------|
| Name of Product | Process water consumption per unit of output | |
| Sized Iron Ore | NA | |
| | During the previous | During the |
| current | Financial year | financial year |
| | (1) | (2) |
| (1) | | |
| (2) | | |

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**

| | | |
|----------------------|---------------------|--|
| 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 |

*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 |
|---|---|---|--|
| <u>Water (ETP Discharge) : 5 M³/Day</u> | | | |
| pH | NA | 6.59 | Within the Range |
| TSS | 0.125 kg /day | 25.11 mg/ lit | 74.89 % below the norm |
| Oil & Grease | 0.013 kg /day | 2.64 mg/ lit | 73.6 % below the norm |

Water (S.T.P Discharge) 80 M³ / D

| | | | |
|-------|----------------|---------------|------------------------|
| pH | NA | 6.35 | Within the Range |
| T.S.S | 1.752 kg /day | 21.91 mg/ lit | 89.04 % below the norm |
| B.O.D | 1.554 kg / day | 19.43 mg/ lit | 80.57 % below the norm |

Mines Surface runoff water Quality Report

| | | | |
|-------|---------------|---------------|------------------------|
| pH | NA | 6.86 | Within the Range |
| T.S.S | 88.04 kg /day | 12.07 mg/ lit | 87.93% below the norm |
| Iron | 4.52 kg / day | 0.62 mg/lit | 60.00 % 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, 2015-16 | During the Current financial year, 2016-17 |
| 1) From process | NA | NA |
| 2) From Pollution Control FACILITY | NA | NA |
| 3) Used Oil | 34.48 KL | 38.01 KL |
| 4) Oil contaminate waste | 2500 Kg | 500 KG (stored at earmarked HW yard) |

PART-E

Solid Waste

| Financial Year | Total Quantity | |
|--|---|---|
| | During the previous Financial year, 2015-16 | During the current Financial year, 2016-17 |
| (a) From process: (Overburden and Intercalated Waste) | : 1198996.00 MT | 1280678 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.
- 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, 2016-17 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.

- Oil contaminated empty barrel: All the contaminated barrels were being kept under well ventilated covered shed on concrete platform with spill containment arrangement.

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:

- 09 nos. of mobile water tankers (1 no. 06KL, 1 nos. 16KL, 3 no's 18KL, 3 nos. 12 KL) and One (01) 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 6900 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.
- The project has commissioned truck tyre washing system at the exit point of the mines, which removes the dust/mud carried by the transporting vehicles by water injecting systems for the vehicle wheels. It is having equipped with oil & grease trap pit for treatment of the treated water generated from the truck tyre washing units. It is an automated sensor based system, which saves the time, safety & environment.
- As per the regular practice the vehicles which are carrying the loaded materials are being fully covered with tarpaulins covers (both bottom & top) to curb & prevent the spillage of mineral on the transportation roads.
- The approach transportation roads and KIDCO road passing through the ML area is black topped and widened. The KIDCO road has been made of shoulder free without leaving any gap. Further, the project operation is regularly practicing the water sprinkling of the road through dedicated high pressurized water tankers round the clock as when required from B-plot to the toll gate area to maintain the wet condition forever.

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 (6011 M) have been constructed at the toe of OB& sub-grade dumps to protect the dumps from sliding and its also followed by garland drains (3642 M) to prevent entering of mine run-off directly into nearby water bodies.
- The project has planted 10,809 nos. of saplings during the reporting period 2016-17 within the ML Area (safety zone, dump slopes, nallah safety zones etc.) and distributed free saplings of 17000 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 5000 numbers of saplings has been completed all along the village Gumurahudi, Keonjhar under the guidelines of DFO, Keonjhar Division during the year 2016-17 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 office & 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.
- Monthly basis regular monitoring of water quality of different water bodies including upstream and downstream of water bodies like i.e. Baitarani River, Jalpa Nallah & Betjhari Nallah are carried out once in every month and record of monitoring data is maintained.

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".
- New 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 office & 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.
- Construction of Vermicompost pit for the canteen waste management & to support the greenbelt development.

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 2017" with the plantation campaign in the area.
- We have observed the Van Mahotsava Celebration to educate & aware the surrounding village community as well as students of educational institutions during July 01-07, 2017 through saplings distribution, plantation campaign & various awareness competitions among them.
- We have conducted the Wild life awareness program me to aware the village people during the Wild Life Week Celebration during October 01-07, 2016 through publicity propaganda and plantation drive.
- Project has observed International Day of Forest, 21st March & World water Day, 22nd March 2017 with awareness meets, saplings distribution & plantation campaign in the area.



DUMP STABILISATION WITH PLANTATION



DUMP WITH RETAINING WALL, GARLAND DRAIN



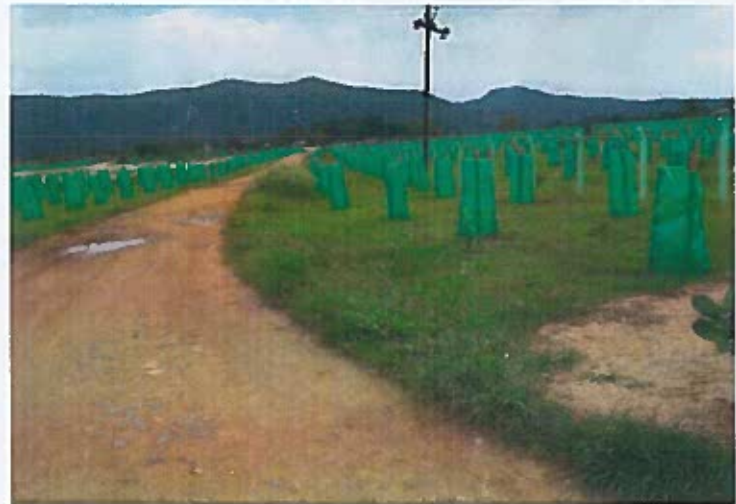
CHECK DAM FOR NALLAH PROTECTION



SETTLING POND FOR SURFACE RUN OFF



SPRINKLING THROUGH WATER TANKER



AVENUE PLANTATION