



To,
Shri. A. N. Sharan. IFS
Addl. PCCF. MoEFCC,
Regional Office (ECZ),
Bungalow No. A-2, Shyamali Colony,
Ranchi – 834002.

RefNo. - JMB/115/ 001626 /2016

May 20, 2016


SUB: Half Yearly Compliance Report of the conditions of EC issued by MoEFCC, New Delhi, to Mahal Saharjuri Bagula Sand Lease, Tata Steel Limited, Dhanbad for the period October'15 to March'16.

Dear Sir,

We are enclosing herewith compliance report for the period October'15 to March'16 for the EC granted vide letter no.- J-11015/162/2008-IA.II (M), Dated-19th January 2012 issued by Ministry of Environment, Forest and Climate Change. This is for your kind perusal.

Thanking you,

Yours faithfully,


General Manager (Jharia)
Email I.D.- skumar.singh@tatasteel.com

Encl: As above.

Copy to: Member Secretary, CPCB Zonal Office, Southend Conclave, 502, 5th Floor 1582, Rajdanga Main Road, Kolkata-700107.

Copy to: Member Secretary, JSPCB, T.A. Division Building (Ground Floor), H.E.C, Dhurwa, Ranchi -834004.

TATA STEEL LIMITED

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**HALF YEARLY COMPLIANCE REPORT
(PERIOD: OCTOBER'15 – MARCH'16)**

**MAHAL SAHARJURI BAGULA SAND
LEASE**

**(CAPACITY: 0.1 MTPA RIVER BED SAND)
VILLAGE: MAHAL, SAHARJURI & BAGULA, DIST: BOKARO,
JHARKHAND**



**TATA STEEL LIMITED, JHARIA DIVISION
P.O.- JAMADOBA, DIST. - DHANBAD,
STATE- JHARKHAND, PIN CODE – 828112**

**ENVIRONMENTAL CLEARANCE GRANTED VIDE LETTER NO. - J-11015/162/2008-
IA.II(M) DATED- 19.01.2012 ISSUED BY GOVT. OF INDIA, MINISTRY OF
ENVIRONMENT, FOREST AND CLIMATE CHANGE, NEW DELHI.**

A. SPECIFIC CONDITIONS:

- (i) The project proponent shall obtain Consent to Establish and Consent to Operate from the Jharkhand State Pollution Control Board, and effectively implement all the conditions stipulated therein.
- **The Consent to Establish has been granted by JSPCB vide letter no. PC/NOC/DHN/155/2010-D-498(N) dated 31.03.2015 and the Consent to Operate (CTO) vide letter no. 1375 dated 07.04.2015 valid till 31.03.2016. The CTO has further been renewed on 23.02.2016 for a period of 5 years. All the conditions as stipulated in the consent are being complied with.**
- (ii) The project proponent shall comply with section 3 of the Mines Act.
- **It is being complied.**
- (iii) The Company shall submit within 3 months their policy towards Corporate Environment Responsibility which should inter-alia provide for (i) Standard operating process / process to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions, (ii) Hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions and (iii) System of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders.
- **We have a Corporate Environment Policy and the implementation of the policy is being reviewed through Integrated Management System at regular intervals. There is a proper system in place to submit legal compliances and violations, if any, to top management for their information and review.**
- (iv) Sand collection shall be done at the middle/ main stream and not at the bank of the river to avoid any change of the river course due to the project.
- **Sand excavation is done by leaving 1/5th of the width of the river intact for maintaining the embankment. It will be ensured that no change in the river course takes place.**
- (v) Particulate level (PM_{2.5}) shall be monitored regularly and the result placed in the public domain.
- **Monitoring of PM_{2.5} has been carried out in this period. The report is given as annexure-I.**
- (vi) The project proponent shall identify the degraded area within the mine lease and undertake plantation/afforestation in the area identified by planting the native species.
- **The mine lease area is a riverbed. Hence we approach the villagers and assist them in planting the native species as well as fruit plants in the villages.**

- (vii) Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out of haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- **It is being complied. Water spraying is done on the transportation roads.**
- (viii) The project proponent shall undertake adequate safeguard measures during extraction of river bed material and ensure that due to this activity the hydrogeological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area by establishing a network of existing well and installing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office Bhubaneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.
- **The extraction of sand is done with utmost care of the environment. There is no extraction of water as well as no change in river course involved hence there will be no impact on the hydrogeological regime. The monitoring report of the ground water level and quality is given as annexure-I.**
- (ix) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite of water (surface water and groundwater), if any, required for the project.
- **No water is required for the operation of project. Drinking water required by the workers is arranged by the company.**
- (x) Appropriate mitigative measures shall be taken to prevent pollution of the river in consultation with the State Pollution Control Board. It shall be ensured that there is no leakage of oil and grease in the river from the vehicles used for transportation.
- **Adequate monitoring of the health of the vehicles used for transportation of sand is ensured to avoid any oil & grease leakage. Higher capacity trucks have been deployed.**
- (xi) Vehicular emissions shall be kept under control and regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.
- **The vehicles used are regularly checked and maintained. Only vehicles having PUC certificates are allowed to ply. Transportation of sand is always done via tarpaulin-covered trucks which are optimally loaded.**

- (xii) No drilling and blasting operation shall be carried out.
- **Not applicable as it is a sand mining project.**
- (xiii) Mineral handling area shall be provided with the adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- **Sand being coarse in nature and having high moisture content during gathering & transportation does not get air borne. Sand stored in the sand yards is transferred to underground voids through surface bunkers in a slurry form. However, dust control measures while transporting of sand is in place through water tanker, coverage of trucks and optimal loading.**
- (xiv) Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.
- **As per our policy, PME's are conducted at regular intervals.**
- (xv) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- **The workers are from the neighbouring villages and hence new housing facilities are not required.**
- (xvi) The critical parameters such as RSPM (Particulate matter with size less than 10 micron i.e., PM₁₀) and NO_x in the ambient air within the impact zone shall be monitored periodically. Further, quality of discharge water shall also be monitored [(TDS, DO, PH, Fecal Coliform and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the company in public domain. The Circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.
- **The monitoring of the air parameters has been done in this period. There is no use of water for mining operation hence there is no discharge. Details of air analysis are given later.**

B. GENERAL CONDITIONS:

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and forests.
 - **It will be complied with.**

- (ii) No change in the calendar plan including excavation, quantum of sand from river bed and waste should be made.
 - **It will be complied with.**

- (iii) Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest and wildlife department and effectively implemented.
 - **No rare species are found in the area.**

- (iv) Atleast four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10micron i.e., PM₁₀) and NO_x monitoring. Location of stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.
 - **The monitoring stations have been established and monitoring job has been started.**

- (v) Data on ambient air quality [(RSPM(Particulate matter with size less than 10micron i.e., PM₁₀) and NO_x] should be regularly submitted to the Ministry including its regional office at Bhubaneswar and to the State Pollution Control Board/ Central Pollution Control Board once in six months.
 - **It is being submitted as annexure-I in this compliance report.**

- (vi) Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
 - **Sand, being coarse in nature and having high moisture content, does not get air borne during gathering & transportation. However, dust control measures while transporting of sand is in place through water tanker, coverage of trucks and optimal loading.**

- (vii) Measure should be taken for control of noise levels below 85 dBA in work Environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.
- **Proper PPE's are provided to all the workers.**
- (viii) Industrial waste water (Workshop and Waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and Grease trap should be installed before discharge of Workshop effluents.
- **No waste water generation will take place.**
- (ix) Personnel working in dusty area should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspect. Occupational Health Surveillance programme of the worker should be undertaken periodically to observe any contraction due to exposure to dust and take corrective measures, if needed
- **It will be complied with.**
- (x) A separate Environmental Management cell with suitable qualified personnel should be set-up under the control of a senior executive, who will report directly to the Head of the Organization.
- **We have an established Environmental Management Cell, with qualified personnel who report directly to the General Manager of the Division.**
- (xi) The funds earmarked for environmental protection measures should be kept in separate A/C and should not be diverted for other purposes. Year wise expenditure should be reported to this ministry and its regional office located at Bhubaneswar.
- **Expenditure on Environmental Protection measures is monitored separately. It will be provided in the next compliance report.**
- (xii) The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- **The CTE and CTO of the project have been granted by JSPCB. The permission for lifting of sand from the river bed has also been granted by District Mining Officer, Bokaro.**
- (xiii) The regional office of this ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full co-operation to the officer (s) of the regional office by furnishing the requisite Data/ information/ Monitoring reports.
- **It will be complied with.**

(xiv) The project proponent shall submit six monthly reports on the status of compliance of the stipulated environment clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Office Bhubaneswar , the respective zonal office of Central Pollution Control Board and the State Pollution Control Board. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment and Forests, Bhubaneswar, the respective Zonal Officer of Central Pollution Control Board and the State Pollution Control Board.

➤ **It will be complied with.**

(xv) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, Urban local Body and the Local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

➤ **It has been done.**

(xvi) The State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and the Collector's Office / Tehsildar's Office for 30 days.

➤ **To be done by SPCB.**

(xvii) The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and also be sent to the respective Regional Office of the Ministry on Environment and Forests, Bhubaneswar by e-mail.

➤ **It will be submitted this year for FY16.**

(xiii) The project authorities should advertise at least in two local newspapers of the District or State in which the project is located and widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at website of the Ministry of Environment and Forests at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneswar.

➤ **It has been done and copies sent to regional office at Bhubaneswar.**


General Manager (Jharia)

Annexure- I

Ambient Air & Groundwater Analysis Report

TATA STEEL LIMITED, Jamadoba Group							
Ambient Air Analysis Report For The Month Of October'15							
Sampling Station	Latitude/ Longitude	Date of Sampling	Weather Condition	PM ₁₀ (µg/M ³)	PM _{2.5} (µg/M ³)	SO ₂ (µg/M ³)	NO _x (µg/M ³)
Mahal School Near Izri River	23°38'06.1" N/ 86°23'41.2" E	23.10.15	Clear	66.2	35.5	12.2	15.9
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	23.10.15	Clear	58.9	25.4	14.1	13.2
Bagula School	23°36'27.3" N/ 86°21'59.7" E	24.10.15	Clear	68.8	36.6	17.8	14.8
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	24.10.15	Clear	78.9	36.6	12.2	14.8

Ambient Air Analysis Report For The Month Of November'15							
Sampling Station	Latitude/ Longitude	Date of Sampling	Weather Condition	PM ₁₀ (µg/M ³)	PM _{2.5} (µg/M ³)	SO ₂ (µg/M ³)	NO _x (µg/M ³)
Mahal School Near Izri River	23°38'06.1" N/ 86°23'41.2" E	06.11.15	Cloudy	74.2	37.7	15.8	18.9
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	06.11.15	Cloudy	68.9	32.4	16.9	17.7
Bagula School	23°36'27.3" N/ 86°21'59.7" E	07.11.15	Clear	63.4	31.1	21.1	19.5
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	07.11.15	Clear	86.8	48.8	26.6	18.3

Ambient Air Analysis Report For The Month Of December'15							
Sampling Station	Latitude/ Longitude	Date of Sampling	Weather Condition	PM ₁₀ (µg/M ³)	PM _{2.5} (µg/M ³)	SO ₂ (µg/M ³)	NO _x (µg/M ³)
Mahal School Near Izri River	23°38'06.1" N/ 86°23'41.2" E	09.12.15	Clear	62.3	34.8	16.8	23.3
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	09.12.15	Clear	78.9	37.5	18.9	19.5
Bagula School	23°36'27.3" N/ 86°21'59.7" E	10.12.15	Clear	75.8	35.5	18.2	17.7
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	10.12.15	Clear	85.6	41.1	23.8	19.9

Ambient Air Analysis Report For The Month Of January'16

Sampling Station	Latitude/ Longitude	Date of Sampling	Weather Condition	PM ₁₀ ($\mu\text{g}/\text{M}^3$)	PM _{2.5} ($\mu\text{g}/\text{M}^3$)	SO ₂ ($\mu\text{g}/\text{M}^3$)	NO _x ($\mu\text{g}/\text{M}^3$)
Mahal School Near Izri River	23°38'06.1" N/ 86°23'41.2" E	27.01.16	Clear	65.5	35.0	12.5	15.5
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	27.01.16	Clear	57.5	24.5	14.5	13.5
Bagula School	23°36'27.3" N/ 86°21'59.7" E	28.01.16	Clear	69.0	37.2	18.2	15.2
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	28.01.16	Clear	77.8	35.6	13.5	15.2

Ambient Air Analysis Report For The Month Of February'16

Sampling Station	Latitude/ Longitude	Date of Sampling	Weather Condition	PM ₁₀ ($\mu\text{g}/\text{M}^3$)	PM _{2.5} ($\mu\text{g}/\text{M}^3$)	SO ₂ ($\mu\text{g}/\text{M}^3$)	NO _x ($\mu\text{g}/\text{M}^3$)
Mahal School Near Izri River	23°38'06.1" N/ 86°23'41.2" E	17.02.16	Clear	74.5	37.5	15.5	18.5
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	17.02.16	Clear	69.0	34.5	17.5	18.0
Bagula School	23°36'27.3" N/ 86°21'59.7" E	18.02.16	Clear	64.2	32.3	19.5	18.5
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	18.02.16	Clear	87.2	49.5	25.5	19.5

Ambient Air Analysis Report For The Month Of March'16

Sampling Station	Latitude/ Longitude	Date of Sampling	Weather Condition	PM ₁₀ ($\mu\text{g}/\text{M}^3$)	PM _{2.5} ($\mu\text{g}/\text{M}^3$)	SO ₂ ($\mu\text{g}/\text{M}^3$)	NO _x ($\mu\text{g}/\text{M}^3$)
Mahal School Near Izri River	23°38'06.1" N/ 86°23'41.2" E	21.03.16	Clear	63.5	35.5	15.8	22.5
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	21.03.16	Clear	77.5	36.5	18.5	18.5
Bagula School	23°36'27.3" N/ 86°21'59.7" E	22.03.16	Clear	70.5	32.5	18.5	18.0
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	22.03.16	Clear	85.0	40.5	24.2	20.0


Manager (Environment)

**Ground Water Quality Analysis (Hand Pump & Dugwell)
Post-Monsoon Season- October 2015**

S. No.	Location	Date of Sampling	Sample Parameter				
			pH	Temperature ^o C	TDS, mg/l	Total Hardness (as CaCO ₃), mg/l	Ground Water Table, mtrs.
1.	Mahal	23.10.15	7.0	25	718	605	2.6
2.	Bhandaribandh	23.10.15	7.2	27	626	501	3.6
3.	Saharjuri	23.10.15	7.1	26	502	402	4.8
4.	Sudamdih	23.10.15	7.0	25	450	520	1.9
5.	Joradih	23.10.15	7.0	25	410	495	2.9
6.	Chandankiyari	23.10.15	7.1	26	554	601	6.7
7.	Madhabpur	23.10.15	7.0	25	635	695	4.3
8.	Lagla	23.10.15	7.1	26	538	415	5.2
9.	Bagula	23.10.15	7.0	25	505	550	3.8
10.	Pathardih	23.10.15	7.1	26	550	450	2.6

**Ground Water Quality Analysis (Hand Pump & Dugwell)
Winter Season- January 2016**

S. No.	Location	Date of Sampling	Sample Parameter				
			pH	Temperature ^o C	TDS, mg/l	Total Hardness (as CaCO ₃), mg/l	Ground Water Table, mtrs.
1.	Mahal	28.01.16	7.2	26	528	550	3.1
2.	Bhandaribandh	28.01.16	7.0	25	616	430	4.2
3.	Saharjuri	28.01.16	7.1	27	456	350	5.4
4.	Sudamdih	28.01.16	7.0	27	468	502	3.2
5.	Joradih	28.01.16	7.1	26	432	450	4.2
6.	Chandankiyari	28.01.16	7.0	26	534	550	6.9
7.	Madhabpur	28.01.16	7.0	27	618	630	5.3
8.	Lagla	28.01.16	6.8	26	535	502	5.9
9.	Bagula	28.01.16	6.9	26	450	500	4.1
10.	Pathardih	28.01.16	7.2	27	558	450	3.4


Manager (Environment)