



To,  
Addl. PCCF,  
MoEF, Eastern Regional Office,  
Government of India,  
A/3 Chandrasekharpur,  
Bhubaneswar-751023.

Ref No. - JMB/115/ **002689** /2015

November 26, 2015


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 April'15 to September'15.

Dear Sir,

We are enclosing herewith compliance report for the period April'15 to September'15 for the EC granted vide letter no.- J-11015/162/2008-IA.II (M), Dated-19<sup>th</sup> January 2012 issued by Ministry of Environment & Forest, New Delhi. 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: Mr.A.N.Sharan, Addl. PCCF, MoEF, Regional Office, Forest Colony, Van Bhawan,  
Doranda, Ranchi.

**TATA STEEL LIMITED**

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**HALF YEARLY COMPLIANCE REPORT  
(PERIOD: APRIL'15 – SEPTEMBER'15)**

**MAHAL SAHARJURI BAGULA SAND  
LEASE**



**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<sup>TH</sup> JANUARY 2012 ISSUED BY GOVT. OF INDIA, MINISTRY OF  
ENVIRONMENT & FOREST, 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. The mining activity has started and 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.
  - **It will be followed strictly.**
- (v) Particulate level (PM<sub>2.5</sub>) shall be monitored regularly and the result placed in the public domain.
  - **Monitoring of PM<sub>2.5</sub> 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.
  - **Plantation on the land all along the riverside will be taken up by mutual understanding with the owner of the land, since the location of mine lease is a riverbed.**

- (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 will be complied. Water spraying will be 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 will be ensured to avoid any oil & grease leakage. Higher capacity trucks will be 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 pollution-control 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 will be 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., PM<sub>10</sub>) and NO<sub>x</sub> 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](http://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., PM<sub>10</sub>) and NO<sub>x</sub> 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., PM<sub>10</sub>) and NO<sub>x</sub>] 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 will be 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 19<sup>th</sup> May 1993 and 31<sup>st</sup> 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 31<sup>st</sup> 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 from next year onwards 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 Bhubaneshwar.**

  
General Manager (Jharia)



## Annexure- I

## Ambient Air &amp; Groundwater Analysis Report

TATA STEEL LIMITED, Jamadoba Group							
Ambient Air Analysis Report For The Month Of April'15							
Sampling Station	Latitude/ Longitude	Date of Sampling	Weather Condition	PM <sub>10</sub> (µg/M <sup>3</sup> )	PM <sub>2.5</sub> (µg/M <sup>3</sup> )	SO <sub>2</sub> (µg/M <sup>3</sup> )	NO <sub>x</sub> (µg/M <sup>3</sup> )
Mahal School Near Izri River	23°38'06.1" N/ 86°23'41.2" E	21.04.15	Clear	60.2	32.5	16.2	32.5
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	21.04.15	Clear	59.2	30.2	14.8	33.2
Bagula School	23°36'27.3" N/ 86°21'59.7" E	22.04.15	Clear	55.6	25.5	12.5	36.5
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	22.04.15	Clear	54.5	25.2	13.2	35.5

Ambient Air Analysis Report For The Month Of May'15							
Sampling Station	Latitude/ Longitude	Date of Sampling	Weather Condition	PM <sub>10</sub> (µg/M <sup>3</sup> )	PM <sub>2.5</sub> (µg/M <sup>3</sup> )	SO <sub>2</sub> (µg/M <sup>3</sup> )	NO <sub>x</sub> (µg/M <sup>3</sup> )
Mahal School Near Izri River	23°38'06.1" N/ 86°23'41.2" E	26.05.15	Cloudy	58.2	30.2	15.8	34.8
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	26.05.15	Cloudy	57.5	29.5	15.4	34.5
Bagula School	23°36'27.3" N/ 86°21'59.7" E	27.05.15	Clear	52.5	24.2	11.5	37.5
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	27.05.15	Clear	52.0	23.8	11.2	36.5

Ambient Air Analysis Report For The Month Of June'15							
Sampling Station	Latitude/ Longitude	Date of Sampling	Weather Condition	PM <sub>10</sub> (µg/M <sup>3</sup> )	PM <sub>2.5</sub> (µg/M <sup>3</sup> )	SO <sub>2</sub> (µg/M <sup>3</sup> )	NO <sub>x</sub> (µg/M <sup>3</sup> )
Mahal School Near Izri River	23°38'06.1" N/ 86°23'41.2" E	29.06.15	Rainy	56.5	28.5	14.2	35.2
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	29.06.15	Rainy	55.5	27.5	14.5	35.5
Bagula School	23°36'27.3" N/ 86°21'59.7" E	30.06.15	Rainy	51.5	23.6	11.2	38.2
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	30.06.15	Rainy	52.2	23.5	11.0	36.2

Ambient Air Analysis Report For The Month Of July'15							
Sampling Station	Latitude/ Longitude	Date of Sampling	Weather Condition	PM <sub>10</sub> (µg/M <sup>3</sup> )	PM <sub>2.5</sub> (µg/M <sup>3</sup> )	SO <sub>2</sub> (µg/M <sup>3</sup> )	NO <sub>x</sub> (µg/M <sup>3</sup> )
Mahal School Near Izri River	23°38'06.1" N/ 86°23'41.2" E	02.07.15	Rainy	61.5	33.5	17.5	33.5
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	02.07.15	Rainy	61.2	31.5	15.5	34.5
Bagula School	23°36'27.3" N/ 86°21'59.7" E	03.07.15	Clear	57.5	27.5	14.5	38.5
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	03.07.15	Clear	56.5	27.5	14.2	36.8

Ambient Air Analysis Report For The Month Of August'15							
Sampling Station	Latitude/ Longitude	Date of Sampling	Weather Condition	PM <sub>10</sub> (µg/M <sup>3</sup> )	PM <sub>2.5</sub> (µg/M <sup>3</sup> )	SO <sub>2</sub> (µg/M <sup>3</sup> )	NO <sub>x</sub> (µg/M <sup>3</sup> )
Mahal School Near Izri River	23°38'06.1" N/ 86°23'41.2" E	25.08.15	Rainy	59.5	31.5	17.0	36.0
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	25.08.15	Rainy	58.5	30.5	16.5	35.7
Bagula School	23°36'27.3" N/ 86°21'59.7" E	26.08.15	Rainy	53.7	25.6	12.4	38.6
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	26.08.15	Rainy	53.2	25.0	12.8	37.8

Ambient Air Analysis Report For The Month Of September'15							
Sampling Station	Latitude/ Longitude	Date of Sampling	Weather Condition	PM <sub>10</sub> (µg/M <sup>3</sup> )	PM <sub>2.5</sub> (µg/M <sup>3</sup> )	SO <sub>2</sub> (µg/M <sup>3</sup> )	NO <sub>x</sub> (µg/M <sup>3</sup> )
Mahal School Near Izri River	23°38'06.1" N/ 86°23'41.2" E	24.09.15	Clear	58.5	30.2	16.5	37.2
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	24.09.15	Clear	57.2	29.6	16.2	37.6
Bagula School	23°36'27.3" N/ 86°21'59.7" E	25.09.15	Clear	53.0	25.2	13.4	39.8
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	25.09.15	Clear	54.5	25.5	13.0	38.2

*Ankit*  
Manager (Environment)

**Ground Water Quality Analysis (Hand Pump & Dugwell)  
Summer Season-May'2015**

S. No.	Location	Date of Sampling	Sample Parameter				
			pH	Temperature °C	TDS, mg/l	Total Hardness (as CaCO <sub>3</sub> ), mg/l	Ground Water Table, mtrs.
1.	Mahal	28.05.15	7.2	29	726	615	5.7
2.	Bhandaribandh	28.05.15	7.1	29	658	515	6.8
3.	Saharjuri	28.05.15	6.8	30	515	412	7.8
4.	Sudamdih	28.05.15	7.0	29	495	550	5.5
5.	Joradih	28.05.15	7.2	30	450	515	4.6
6.	Chandankiyari	28.05.15	7.2	29	565	615	6.5
7.	Madhabpur	28.05.15	6.9	29.5	625	735	6.7
8.	Lagla	28.05.15	6.9	30	546	425	6.5
9.	Bagula	28.05.15	6.8	29	530	595	5.8
10.	Pathardih	28.05.15	7.0	30	615	495	6.9

**Ground Water Quality Analysis (Hand Pump & Dugwell)  
Rainy Season-August'2015**

S. No.	Location	Date of Sampling	Sample Parameter				
			pH	Temperature °C	TDS, mg/l	Total Hardness (as CaCO <sub>3</sub> ), mg/l	Ground Water Table, mtrs.
1.	Mahal	24.08.15	7.0	28	712	600	3.2
2.	Bhandaribandh	24.05.15	7.1	27	615	495	2.7
3.	Saharjuri	24.05.15	6.9	29	520	400	2.9
4.	Sudamdih	24.05.15	7.0	28	450	525	3.0
5.	Joradih	24.05.15	7.0	29	415	495	3.5
6.	Chandankiyari	24.05.15	7.1	28	475	598	3.8
7.	Madhabpur	24.05.15	7.0	28	612	685	3.2
8.	Lagla	24.05.15	7.0	27	555	512	3.5
9.	Bagula	24.05.15	7.1	29	495	530	3.2
10.	Pathardih	24.05.15	7.2	28	565	485	4.5

  
Manager (Environment)