



TSJ/EMD/C-38/216 /24

27 Nov 2024

Deputy Director General of Forests (C)

Ministry of Environment, Forest, and Climate Change

Integrated Regional Office, 2nd Floor, Headquarter- Jharkhand State Housing Board

Harmu Chowk, Ranchi, Jharkhand – 834002, Ranchi

Sub.: Submission of Half Yearly (April'2024 to September'2024) Environment Clearances Compliance Reports (ECCR) for Cold Rolling Mill Complex (CRMC) of Tata Steel Limited at Bara, Golmuri-cum-Jugsalai, Jamshedpur, District- East Singhbhum, Jharkhand

Reference:

1. EC of CRMC for 0.8 MTPA vide MoEF&CC letter no. F.No. J-11011/22/2013-IA II (I) dated: 15.09.2015
2. EC of CRMC for 0.3 MTPA vide MoEF&CC letter no. F.No. J-11011/199/2007-IA II (I) dated: 07.08.2007

Dear Sir/ Ma'am,

With reference to the captioned subject and cited references, we are submitting Half Yearly EC Compliance Report for the period from **April'2024 to September'2024**. You are requested to kindly acknowledge the same and place in your records.

Thanking you

Yours faithfully,

For Tata Steel Limited

Utsav Kashyap

Head Environment Clearance & Compliance (TSL)

Enclosures as above

Copy to:

1. Zonal Officer, Central Pollution Control Board, Southern Conclave, Block 502, 5th and 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700 107
2. Member Secretary, Jharkhand State Pollution Control Board, T.A. Division Building, HEC Campus, Dhurwa, Ranchi – 834004
3. Regional Officer, Jharkhand State Pollution Control Board, Jamshedpur

TATA STEEL LIMITED

Environment Management Jamshedpur 831 001 India

Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400001

Tel 91 22 66658282 Fax 91 22 66657724

Corporate Identity Number L27100MH 1907PLC000260 Website www.tatasteel.com

Your (Half Yearly Compliance Report) has been Submitted with following details

| | |
|---------------------------------|-------------------------------------|
| Proposal No | IA/JH/IND/3455/2012 |
| Compliance ID | 112814021 |
| Compliance Number(For Tracking) | EC/M/COMPLIANCE/112814021/2024 |
| Reporting Year | 2024 |
| Reporting Period | 01 Dec(01 Apr - 30 Sep) |
| Submission Date | 28-11-2024 |
| RO/SRO Name | ARTATRANA MISHRA |
| RO/SRO Email | jhk109@ifs.nic.in |
| State | JHARKHAND |
| RO/SRO Office Address | Integrated Regional Offices, Ranchi |

Note:- SMS and E-Mail has been sent to ARTATRANA MISHRA, JHARKHAND with Notification to Project Proponent.

Your (Half Yearly Compliance Report) has been Submitted with following details

| | |
|---------------------------------|-------------------------------------|
| Proposal No | IA/JH/IND/21196/2007 |
| Compliance ID | 79474610 |
| Compliance Number(For Tracking) | EC/M/COMPLIANCE/79474610/2024 |
| Reporting Year | 2024 |
| Reporting Period | 01 Dec(01 Apr - 30 Sep) |
| Submission Date | 28-11-2024 |
| RO/SRO Name | ARTATRANA MISHRA |
| RO/SRO Email | jhk109@ifs.nic.in |
| State | JHARKHAND |
| RO/SRO Office Address | Integrated Regional Offices, Ranchi |

Note:- SMS and E-Mail has been sent to ARTATRANA MISHRA, JHARKHAND with Notification to Project Proponent.

ENVIRONMENTAL CLEARANCE COMPLIANCE STATUS REPORT

April 2024 to September 2024

**Cold Rolling Mill Complex (CRMC),
Jamshedpur**

**Six Monthly Compliance Status report of Environmental
Clearance of Cold Rolling Mill Complex (CRMC) Capacity
Expansion (0.3 MTPA to 0.8 MTPA) (Ph-II)**

**ENVIRONMENTAL MANAGEMENT DEPARTMENT
TATA STEEL LIMITED
JAMSHEDPUR**

Compliance Report of Environmental Clearance of Cold Rolling Mill Complex (CRMC) Capacity Expansion (0.3 MTPA to 0.8 MTPA) (Ph-II) Jamshedpur, District East Singhbhum, Jharkhand vide MoEF&CC Letter no F.NO J-11011/22/2013-IA (II) I, dated on 15 Sept 2015

| I. Specific Conditions: | | |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S.No. | Compliance Conditions | Compliance Status |
| i | The PP shall prepare a WL Conservation Plan in and around the project site drawn up in consultation with the PCCF (WL), Government of Jharkhand. Separate Funds shall be earmarked for the various activities identified and details of the expenditure made thereon shall be submitted as part of the Compliance Report to RO, Ranchi. | Wildlife Conservation Plan (WLCP) for Tata Steel Jamshedpur works and CRM Complex Bara has been prepared combinedly and approved by Principal Chief Conservator of Forests – Wildlife (PCCF-WL) GoJ on 13 November 2017 (Annexure-1). Funds are earmarked for the various activities identified in WLCP and payment of levies as per approved Site Specific WLCP has been deposited into DFO Jamshedpur account vide challan no. 108 dated: 20.02.2023 (Annexure-1). |
| ii | On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), and bag filters etc., shall be provided to keep the emission levels below 50 mg/Nm ³ by installing energy efficient technology. | Continuous Ambient Air Quality Monitoring Systems (CAAQMS) and Online Continuous Emission Monitoring System (OCEMS) have been installed to monitor air emissions. Fume extraction system including scrubber and bag filters have been installed. |
| iii | In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc. | The following equipment are provided to control Air Pollution: <ol style="list-style-type: none"> 1. Fume extraction system including scrubber in pickling line. 2. Bag filter in shot blasting machine and Acid recovery plant. 3. Roof-top ventilation system. 4. Water sprinkling and mechanized sweeping machine. <p>Hot Rolled Coils from Main Steel Works are used as raw material in the manufacturing process. As Ore and Minerals are not being handled inside plant premises, there is no generation of secondary fugitive dust emission.</p> |
| iv | Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines/Code of Practice issued by the CPCB shall be followed. | Mentioned notification is for Sponge iron industry. However, applicable points of the standards, issued by the Ministry vide G.S.R. 414(E) dated 30 May 2008 are being complied. |
| v | The water consumption shall not exceed as per the standard prescribed for the sponge iron plants and steel plants. | Water consumption is recorded regularly & the same is within prescribed limit for as mentioned in EC. |
| vi | Efforts shall further be made to use maximum water from the rainwater harvesting sources. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources. Use of air-cooled condensers shall be explored and closed-circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. | Rainwater harvesting capacity enhanced to 11,500 m ³ by rejuvenating abandoned sites of inside CRM Bara Complex, which comprises of two large and three small ponds. Further, service water and drinking water lines had been overgrounded to reduce losses. Closed circuit cooling system is deployed to reduce water consumption. Attached as Annexure-2 . |

Compliance Report of Environmental Clearance of Cold Rolling Mill Complex (CRMC) Capacity Expansion (0.3 MTPA to 0.8 MTPA) (Ph-II) Jamshedpur, District East Singhbhum, Jharkhand vide MoEF&CC Letter no F.NO J-11011/22/2013-IA (II) I, dated on 15 Sept 2015

| I. Specific Conditions: | | |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S.No. | Compliance Conditions | Compliance Status |
| vii | All the effluents shall be treated and used for dust suppression and green belt development. No effluent shall be discharged, and 'zero' discharge shall be adopted. Domestic wastewater will be treated in the Sewage Treatment Plant. | CRM Bara is Zero Effluent Discharge unit and not discharging any effluent outside premises. Effluent treatment plant is installed and in operation for the treatment of wastewater. The treated water is being recycled in operation, plantation, dust suppression and other low end uses. Domestic wastewater generated inside plant is being treated in STP. |
| viii | Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured, and treated wastewater shall be meet the norms prescribed by the State Pollution Control Board or described under the E (P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Ranchi, SPCB and CPCB. | Regular monitoring of water and wastewater is being done regularly. Reports attached in Annexure-3 . CRM Bara is ZED unit and not discharging any effluent outside premises. |
| ix | Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Ranchi, SPCB and CPCB. | Proper handling, storage, utilization, and disposal of solid waste generated is being ensured. Iron oxide is sold to paint industry and other recyclers; Disposable hazardous waste is sent to authorized TSDF. Metallic scraps generated at CRM Bara is being utilized through internal and external applications. |
| x | A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal. | Proper handling, storage, utilization, and disposal of solid waste generated is being ensured. Iron oxide is sold to paint industry and other recyclers; Disposable hazardous waste is sent to authorized TSDF. Metallic scraps generated at CRM Bara is being utilized through internal and external applications. |
| xi | Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash shall be provided to cement, and brick manufactures for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Ranchi. | No fly ash is being generated in cold rolling mill process. |
| xii | Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Ranchi, SPCB and CPCB within 3 months of issue of environment clearance letter. | Onsite emergency plan & Disaster Management Plan has been prepared and approved by Chief Inspector of Factories; Jharkhand vide letter no. 7/Plan 10215/2016-467 dated 14 March 2018 attached as Annexure-4 . |
| xiii | A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal. | Proper handling, storage, utilization, and disposal of solid waste generated is being ensured. |
| xiv | As proposed, green belt shall be developed in 33% of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO. | Green belt at CRM Bara complex has been developed. <ul style="list-style-type: none"> • Approx. 3.5 Ha area in and around plant is under plantation/ greenbelt/greenery which is more than 33% of the plant area. • We have developed approx. 5m wide area of plantation around the plant. |

Compliance Report of Environmental Clearance of Cold Rolling Mill Complex (CRMC) Capacity Expansion (0.3 MTPA to 0.8 MTPA) (Ph-II) Jamshedpur, District East Singhbhum, Jharkhand vide MoEF&CC Letter no F.NO J-11011/22/2013-IA (II) I, dated on 15 Sept 2015

| I. Specific Conditions: | | | | | | | | | | | |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|----------|------------|
| S.No. | Compliance Conditions | Compliance Status | | | | | | | | | |
| xv | All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented. | No specific recommendations are there under CREP for Cold rolling mills. | | | | | | | | | |
| xvi | At least 5% of the total cost of the expansion project shall be earmarked towards the Enterprise Social Commitment (ESC) based on locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Ranchi. | Enterprise Social Commitment (ESC) activities are being done in Jamshedpur and Immediate Periphery. Year wise expenditure of the same given below (in Rs crores): | | | | | | | | | |
| | | Interventions | FY 18 | FY 19 | FY 20 | FY 21 | FY 22 | FY 23 | FY 24 | FY 25 H1 | Cumulative |
| | | Health | 2.3 | 66.8 | 1.5 | 0.5 | 0.6 | 2.2 | 4.1 | 1.5 | 79.6 |
| | | Drinking Water | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.3 |
| | | Education | 0.9 | 1.5 | 1.8 | 1.3 | 3.0 | 5.0 | 10.6 | 4.9 | 29.0 |
| | | Livelihood-Skill Development | 1.6 | 1.6 | 1.6 | 1.4 | 1.2 | 3.9 | 4.9 | 2.3 | 18.4 |
| | | Sports | 4.4 | 6.7 | 4.7 | 13.3 | 12.3 | 13.2 | 20.7 | 4.2 | 79.4 |
| | | Rural Infrastructure | 2.1 | 0.0 | 0.0 | 1.4 | 3.1 | 5.3 | 2.0 | 0.2 | 14.0 |
| | | Environment | 2.1 | 2.0 | 2.7 | 2.8 | 4.0 | 4.3 | 14.3 | 2.0 | 34.2 |
| | | Ethnicity | 2.7 | 4.5 | 5.3 | 1.7 | 4.8 | 13.3 | 14.6 | 2.7 | 49.6 |
| | | Misc | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.0 | 2.8 | 0.3 | 3.6 |
| | | Total | 16.1 | 83.1 | 17.7 | 22.4 | 29.4 | 47.2 | 74.0 | 18.2 | 308.1 |
| xvii | All the commitments made to the public during the public Hearing / Public Consultation meeting shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Ranchi. | Public hearing commitment compliance implementation status is attached as Annexure-5 . | | | | | | | | | |
| xviii | 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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project. | The construction work has been completed for 0.8 MTPA. All the necessary infrastructure and facilities such as food, medical health care, toilets, safe drinking water, etc. had been provided to construction labour during the project work. | | | | | | | | | |

| II. General Conditions: | | | | | | | | | |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|
| S.No. | Compliance Conditions | Compliance Status | | | | | | | |
| i | The project authorities must strictly adhere to the stipulations made by the Jharkhand Pollution Control Board and the State Government. | We are abiding by all the compliance conditions made by JSPCB and State Government of Jharkhand. | | | | | | | |
| ii | No further expansion or modifications in the plant shall be carried out without prior approval of the MoEF&CC. | No further expansion or modifications beyond the existing capacity of 0.8 MTPA in the plant will be carried out without prior approval from MoEF&CC. | | | | | | | |
| iii | At least four ambient air quality monitoring stations should be established in the downward directions well as where maximum ground level concentration of PM ₁₀ , PM _{2.5} , SO ₂ and NO _x are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this | Ambient air quality monitoring is being done at 4 locations. Monitoring reports are being submitted to JSPCB, CPCB and MoEF&CC regularly. Monitoring reports for all relevant parameters from Apr'24 to Sep'24 is attached in Annexure-3 . | | | | | | | |

Compliance Report of Environmental Clearance of Cold Rolling Mill Complex (CRMC) Capacity Expansion (0.3 MTPA to 0.8 MTPA) (Ph-II) Jamshedpur, District East Singhbhum, Jharkhand vide MoEF&CC Letter no F.NO J-11011/22/2013-IA (II) I, dated on 15 Sept 2015

| II. General Conditions: | | | | | | | | | | | | | | | | |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------|----------------------------------------------------------------------|----|------------------------------------------------------------------|------|------------------------------|------|-------------------------------|------|-------------------|-------|---------------------------------|--------------|
| S.No. | Compliance Conditions | Compliance Status | | | | | | | | | | | | | | |
| | Ministry including its Regional Office at Ranchi and the SPCB/CPCB once in six months. | | | | | | | | | | | | | | | |
| iv | Industrial Wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose. | CRM Bara is Zero Effluent Discharge unit and not discharging any effluent outside premises. Effluent treatment plant is installed for the treatment of wastewater. The treated water is being recycled in operation, plantation, dust suppression and other low end uses. | | | | | | | | | | | | | | |
| v | The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night-time). | High noise generating equipment has been provided with acoustic enclosures and silencer to reduce noise at source. Moreover, closed cabins are provided for workers wherever required and people are encouraged to use ear plugs or earmuffs to avoid any accompanied noise hazards. | | | | | | | | | | | | | | |
| vi | Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. | Regular health surveillance of the workers is being conducted on half yearly basis. | | | | | | | | | | | | | | |
| vii | The company shall develop rainwater harvesting structures to harvest the rain-water for utilization in the lean season besides recharging the ground water table. | Rainwater harvesting capacity enhanced to 11,500 m ³ by rejuvenating abandoned sites of inside CRM Bara Complex, which comprises of two large and three small ponds. Photograph attached as Annexure-2 . | | | | | | | | | | | | | | |
| viii | The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc. | Environment protection measures are being implemented according to measures and safeguard recommended in the EIA/ EMP report. Community development programs in surrounding areas are being implemented. Enterprise Social Commitment (ESC) activities details is provided in specific condition no xvi. | | | | | | | | | | | | | | |
| ix | Requisite funds shall be earmarked towards capital cost and recurring cost/ annum for environment pollution control measures to implement the conditions stipulated by the MoEF&CC as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Ranchi. The funds so provided shall not be diverted for any other purpose. | <div>For environment protection, 29.2 Cr rupees spent as capital cost in FY24. Details are as below:<table><tr><th>Details</th><th>Capital Cost</th></tr><tr><td>Pollution control measures (WWTP, ARP, fume extraction systems, etc.</td><td>12</td></tr><tr><td>Provision of online environment monitoring equipment and display</td><td>2.26</td></tr><tr><td>Rejuvenation of water bodies</td><td>6.94</td></tr><tr><td>ARP environmental upgradation</td><td>7.49</td></tr><tr><td>PL rinse scrubber</td><td>0.510</td></tr><tr><td>Total capital cost (Cr.)</td><td>29.20</td></tr></table></div> <div>Recurring cost for upkeep the pollution control facilities till FY25H1 is 84 crores.</div> | Details | Capital Cost | Pollution control measures (WWTP, ARP, fume extraction systems, etc. | 12 | Provision of online environment monitoring equipment and display | 2.26 | Rejuvenation of water bodies | 6.94 | ARP environmental upgradation | 7.49 | PL rinse scrubber | 0.510 | Total capital cost (Cr.) | 29.20 |
| Details | Capital Cost | | | | | | | | | | | | | | | |
| Pollution control measures (WWTP, ARP, fume extraction systems, etc. | 12 | | | | | | | | | | | | | | | |
| Provision of online environment monitoring equipment and display | 2.26 | | | | | | | | | | | | | | | |
| Rejuvenation of water bodies | 6.94 | | | | | | | | | | | | | | | |
| ARP environmental upgradation | 7.49 | | | | | | | | | | | | | | | |
| PL rinse scrubber | 0.510 | | | | | | | | | | | | | | | |
| Total capital cost (Cr.) | 29.20 | | | | | | | | | | | | | | | |

Compliance Report of Environmental Clearance of Cold Rolling Mill Complex (CRMC) Capacity Expansion (0.3 MTPA to 0.8 MTPA) (Ph-II) Jamshedpur, District East Singhbhum, Jharkhand vide MoEF&CC Letter no F.NO J-11011/22/2013-IA (II) I, dated on 15 Sept 2015

| II. General Conditions: | | |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S.No. | Compliance Conditions | Compliance Status |
| x | A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad /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 web site of the company the proponent. | The copy of Clearance letter has been sent to District Commissioner, Block Development Officer and Jamshedpur Notified Area Committee vide our letter no. EMD/C-38/135,137,138/15 dated 16 September 2015, attached as Annexure-6 . The clearance letter shall is also uploaded on the website of company. https://www.tatasteel.com/media/12708/ec-letter-for-08-mtpa-crm-complex-bara-of-tata-steel-issued-by-ministry-of-environment-forest-climate-change-govt-of-india.pdf |
| xi | The project proponent shall upload the status of compliance of the stipulated environment 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 MoEF&CC at Ranchi. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emission) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain. | The six-monthly compliance reports of all existing environment clearances granted by Ministry are being submitted to JSPCB's regional office, Ministry's Regional office, Zonal office CPCB Kolkata and JSPCB Ranchi regularly and being submitted online through the respective website. The six-monthly compliance reports along the monitored data is also uploaded in the website https://www.tatasteel.com/corporate/our-organisation/environment/environment-compliance-reports/ Monitoring data is being displayed near the main gate of the company in the public domain. Photograph attached as Annexure-7 . |
| xii | The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of the Ministry at Ranchi / CPCB shall monitor the stipulated conditions. | Six-monthly compliance reports of all existing environment clearances granted by Ministry along with environment monitoring reports are being submitted to JSPCB's regional office, Ministry's Regional office, Zonal office CPCB Kolkata and JSPCB Ranchi through email also the same is being uploaded on MoEF&CC website. FY24 compliance report submitted via TSJ/EMD/C-38/018/24 dated 29 May 2024. |
| xiii | The environmental statement for each financial year ending 31 st 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 conditions and shall also be sent to the respective Regional office of the MoEF&CC at Ranchi by e-mail. | The environmental statement for each financial year in Form-V is regularly being submitted to the Jharkhand State Pollution Control Board. Environment Statement for FY'24 has been submitted to JSPCB through hard and soft copies vide letter no. TSJ/EMD/C-23/196/24 dated 27 September 2024. The environmental statement has also been uploaded on the company's website: https://www.tatasteel.com/corporate/our-organisation/environment/environment-compliance-reports/ |
| xiv | The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the MoEF&CC at | Environment clearance information/notice had been advertised in two local newspaper dated September 20, 2015, in English Paper and Hindi Paper viz The Telegraph and Prabhat Khabar attached as Annexure-8 . |

Compliance Report of Environmental Clearance of Cold Rolling Mill Complex (CRMC) Capacity Expansion (0.3 MTPA to 0.8 MTPA) (Ph-II) Jamshedpur, District East Singhbhum, Jharkhand vide MoEF&CC Letter no F.NO J-11011/22/2013-IA (II) I, dated on 15 Sept 2015

| II. General Conditions: | | |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| S.No. | Compliance Conditions | Compliance Status |
| | http://envor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional Office at Ranchi. | Copy of these have been sent to the Regional Office, MoEF&CC at Ranchi vide letter no. EMD/C38/136/15 dated 16 September 2015. |
| xv | Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work. | Financial closure and final approval of the project by Board of Tata Steel was done in April 2013. |
| xvi | The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory. | We are abiding for implementation of all the above compliance conditions. The progress report of above conditions will be submitted on regular basis. |
| xvii | The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions. | We will be in accordance with implementation of necessary additional conditions stipulated by the Ministry for compliance (if any). |
| xviii | The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules. | We are abiding by all the applicable legal requirements and Statutory clearances. |

ENVIRONMENTAL CLEARANCE COMPLIANCE STATUS REPORT

April 2024 to September 2024

**Cold Rolling Mill Complex (CRMC),
Jamshedpur**

**Six Monthly Compliance Status report of Environmental
Clearance of Cold Rolling Mill Complex (CRMC) to produce
Cold Rolled Coils (2,50,000 TPA) and Hot Rolled Pickled Coils
(50,000 TPA)**

**ENVIRONMENTAL MANAGEMENT DEPARTMENT
TATA STEEL LIMITED
JAMSHEDPUR**

Compliance Report of Environmental Clearance of Cold Rolling Mill Complex (CRMC) to produce Cold Rolled Coils (2,50,000 TPA) and Hot Rolled Pickled Coils (50,000 TPA) at Bara, Jamshedpur, District East Singhbhum, Jharkhand, vide MoEF&CC Letter no.-J-11011/199/2007-IA.II (I) dated 7 Aug 2007

Specific Conditions:

| S.No. | Compliance Conditions | Compliance Status | | | | | | | | | | | | | | |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------|----------------------------------------------------------------------|-------|-----------------------------------------------------|------|------------------------------|------|-------------------------------|------|-------------------|-------|---------------------------------|--------------|
| i | Fume extraction system shall be provided to extract acid vapors or fumes from pickling line. Pickling bath shall be covered with tight granite covers. Ventilation chamber shall be provided in Cold Rolling Mill (CRM) plant to control LPG emissions. | Fume extraction system is provided to extract acid vapors or fumes from pickling line. Pickling baths are covered with tight granite covers. There is no LPG emission inside plant premises. Ventilation has been provided within the plant to control LPG emission. | | | | | | | | | | | | | | |
| ii | Total water requirement from M/s JUSCO is about 1712 m ³ /day as per the present available data. No ground water shall be used. Wastewater treatment plant for treatment of wastewater shall be provided using oil separation, acid neutralization and clarification. The treated effluent shall be used for green belt development. The plant as indicated shall adopt zero discharge concepts in disposing the wastewater. Domestic effluent shall be treated in Sewage Treatment Plant. | No ground water is being used. CRM Bara is Zero Effluent Discharge (ZED) unit and not discharging any effluent outside premises. Effluent treatment plant is installed for the treatment of wastewater. The treated water is being recycled in operation, plantation, dust suppression and other low end uses. Domestic wastewater generated inside plant is being treated in STP. | | | | | | | | | | | | | | |
| iii | Iron oxide from Acid Regeneration Plant (ARP) shall be sold to authorized vendors for further use. Non-hazardous solid waste from neutralization process in CRM shall also be properly disposed of. Oily sludge shall be sold to authorized re-cyclers / re-processors for proper disposal through incineration. | Proper handling, storage, utilization, and disposal of solid waste generated is being ensured. Iron oxide is sold to paint industry and other recyclers. Disposable hazardous waste is sent to authorized TSDF. Metallic scraps generated at CRM Bara is being utilized through internal and external applications. | | | | | | | | | | | | | | |
| iv | Green belt shall be developed in 2.5 ha (33%) out of the total of 7.4 ha within and around the plant premises as per the CPCB guidelines in consultation with DFO. | Approx. 3.5 Ha area in and around plant is under plantation/ greenbelt/greenery which is more than 33% of the plant area. We have developed approx. 5m wide area of plantation around the plant. | | | | | | | | | | | | | | |
| v | Prior approval from the state/Central Govt shall be obtained for the use of forest land, if any | No forest land is involved. | | | | | | | | | | | | | | |
| vi | Permission from the State Government shall be obtained regarding impact of the proposed project on the Dalma Reserve Forest. | It has been stated that the project has obtained necessary permission from the State Forest Department vide letter no. 1204 dated 17.04.2008 & letter no 2614 dated 02.09.2014 (Annexure-9) . | | | | | | | | | | | | | | |
| vii | As mentioned in EIA / EMP, 10.20 Crores and 0.21 Crores earmarked towards the capital cost and recurring cost per annum respectively for Environmental & Pollution Control Measures shall be judicially utilized to implement the conditions stipulated by MoEF as well as the State Government. The funds shall not be diverted for any other purpose. | <div>For environment protection, 29.2 Cr rupees spent as capital cost. Details are as below:</div> <table><tr><th>Details</th><th>Capital Cost</th></tr><tr><td>Pollution control measures (WWTP, ARP, fume extraction systems) etc.</td><td>12.00</td></tr><tr><td>Online environment monitoring equipment and display</td><td>2.26</td></tr><tr><td>Rejuvenation of water bodies</td><td>6.94</td></tr><tr><td>ARP environmental upgradation</td><td>7.49</td></tr><tr><td>PL rinse scrubber</td><td>0.510</td></tr><tr><td>Total capital cost (Cr.)</td><td>29.20</td></tr></table> <div>Recurring cost for upkeep the pollution control facilities till FY25H1 is 84 crores.</div> | Details | Capital Cost | Pollution control measures (WWTP, ARP, fume extraction systems) etc. | 12.00 | Online environment monitoring equipment and display | 2.26 | Rejuvenation of water bodies | 6.94 | ARP environmental upgradation | 7.49 | PL rinse scrubber | 0.510 | Total capital cost (Cr.) | 29.20 |
| Details | Capital Cost | | | | | | | | | | | | | | | |
| Pollution control measures (WWTP, ARP, fume extraction systems) etc. | 12.00 | | | | | | | | | | | | | | | |
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| Rejuvenation of water bodies | 6.94 | | | | | | | | | | | | | | | |
| ARP environmental upgradation | 7.49 | | | | | | | | | | | | | | | |
| PL rinse scrubber | 0.510 | | | | | | | | | | | | | | | |
| Total capital cost (Cr.) | 29.20 | | | | | | | | | | | | | | | |

Compliance Report of Environmental Clearance of Cold Rolling Mill Complex (CRMC) to produce Cold Rolled Coils (2,50,000 TPA) and Hot Rolled Pickled Coils (50,000 TPA) at Bara, Jamshedpur, District East Singhbhum, Jharkhand, vide MoEF&CC Letter no.-J-11011/199/2007-IA.II (I) dated 7 Aug 2007

General Conditions:

| S.No | Compliance Conditions | Compliance Status |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| i. | The project authorities shall strictly adhere to the stipulations made by Jharkhand State Pollution Control Board (Jharkhand SPCB) and the State Government. | We are abiding by all the compliance conditions made by JSPCB and State Government of Jharkhand. |
| ii. | No further expansion or modifications in the plant shall be carried out without prior approval of MoEF. | Further expansion of the plant was carried out with prior approval from MoEF&CC. |
| iii. | The gaseous emissions from various process units shall conform to the load / mass-based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The state board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit. | <p>Mentioned notification is for Sponge iron industry. However, applicable points of the standards, issued by the Ministry vide G.S.R. 414(E) dated 30 May 2008 are being complied.</p> <p>Interlocking facilities has been provided with pollution control equipment at acid regeneration plant, pickling line, reversing mill and Shot Blasting machine to stop the process.</p> <p>At any time, the emission level will not go beyond the prescribed standards.</p> |
| iv. | At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO ₂ and NO _x are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission should be regularly submitted to this ministry including its Regional Office at Bhubaneswar, SPCB and CPCB once in six months. | Ambient air quality monitoring is being done at 4 locations. Monitoring reports are being submitted to JSPCB, CPCB and MoEF&CC regularly. Monitoring reports for all relevant parameters from Apr'24 to Sep'24 is attached in Annexure-3 . |
| V | In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Further, specific measures like water sprinkling shall be carried out and fugitive emissions shall be controlled, regularly monitored and records maintained. | <p>The following equipment are provided to control Air Pollution:</p> <ol style="list-style-type: none"> 1. Fume extraction system including scrubber in pickling line. 2. Bag filter in shot blasting machine and Acid recovery plant. 3. Roof-top ventilation system. 4. Water sprinkling and mechanized sweeping machine. <p>Hot Rolled Coils from Main Steel Works are used as raw material in the manufacturing process. As Ore and Minerals are not being handled inside plant premises, there is no generation of secondary fugitive dust emission.</p> |
| vi. | Secondary fugitive emissions shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed. | Hot Rolled Coils from Tata Steel Jamshedpur and Kalinganagar are used as raw material in the manufacturing process. As Ore and Minerals are not being handled inside plant premises, there is no generation of secondary fugitive dust emission. However, fugitive dust emission monitoring is being carried out on regular basis, records are maintained and submitted to JSPCB and MoEF&CC. |

Compliance Report of Environmental Clearance of Cold Rolling Mill Complex (CRMC) to produce Cold Rolled Coils (2,50,000 TPA) and Hot Rolled Pickled Coils (50,000 TPA) at Bara, Jamshedpur, District East Singhbhum, Jharkhand, vide MoEF&CC Letter no.-J-11011/199/2007-IA.II (I) dated 7 Aug 2007

General Conditions:

| S.No | Compliance Conditions | Compliance Status | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| vii. | Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose. | CRM Bara is Zero Effluent Discharge unit and not discharging any effluent outside premises. Effluent treatment plant is installed for the treatment of wastewater. The treated water is being recycled in operation, plantation, dust suppression and other low end uses. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| viii. | The Company shall develop surface as well as ground water harvesting structures to harvest the rainwater for utilization in the lean season besides recharging the ground water table. | Rainwater harvesting capacity enhanced to 11,500 m ³ by rejuvenating abandoned sites of inside CRM Bara Complex, which comprises of two large and three small ponds. Photograph attached as Annexure-2 . | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ix. | The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime). | High noise generating equipment has been provided with acoustic enclosures and silencer to reduce noise at source. Moreover, closed cabins are provided for workers wherever required and people are encouraged to use ear plugs or earmuffs to avoid any accompanied noise hazards. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| x | Recommendations made in the Corporate Responsibility for Environment Conservation (CREP) issued for the steel plant shall be implemented. | No specific recommendations are there under CREP for Cold rolling mills. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| xi. | Occupational Health Surveillance of the workers shall be done on the regular basis and records maintained as per the Factories Act. | Regular health surveillance of all the workers is being conducted half yearly. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| xii. | The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report. | Environment protection measures are being implemented according to measures and safeguard recommended in the EIA/ EMP report. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| xiii. | The Company must undertake socio-economic development activities in the surrounding villages like community development programs, educational programs, drinking water supply and health care etc. | Enterprise Social Commitment (ESC) activities are being done in Jamshedpur and Immediate Periphery. Year wise expenditure of the same given below (in Rs crores): <table><tr><th>Interventions</th><th>FY 18</th><th>FY 19</th><th>FY 20</th><th>FY 21</th><th>FY 22</th><th>FY 23</th><th>FY 24</th><th>FY 25 H1</th><th>Cumulative</th></tr><tr><td>Health</td><td>2.3</td><td>66.8</td><td>1.5</td><td>0.5</td><td>0.6</td><td>2.2</td><td>4.1</td><td>1.5</td><td>79.6</td></tr><tr><td>Drinking Water</td><td>0.0</td><td>0.1</td><td>0.1</td><td>0.0</td><td>0.0</td><td>0.1</td><td>0.1</td><td>0.0</td><td>0.3</td></tr><tr><td>Education</td><td>0.9</td><td>1.5</td><td>1.8</td><td>1.3</td><td>3.0</td><td>5.0</td><td>10.6</td><td>4.9</td><td>29.0</td></tr><tr><td>Livelihood-Skill Development</td><td>1.6</td><td>1.6</td><td>1.6</td><td>1.4</td><td>1.2</td><td>3.9</td><td>4.9</td><td>2.3</td><td>18.4</td></tr><tr><td>Sports</td><td>4.4</td><td>6.7</td><td>4.7</td><td>13.3</td><td>12.3</td><td>13.2</td><td>20.7</td><td>4.2</td><td>79.4</td></tr><tr><td>Rural Infrastructure</td><td>2.1</td><td>0.0</td><td>0.0</td><td>1.4</td><td>3.1</td><td>5.3</td><td>2.0</td><td>0.2</td><td>14.0</td></tr><tr><td>Environment</td><td>2.1</td><td>2.0</td><td>2.7</td><td>2.8</td><td>4.0</td><td>4.3</td><td>14.3</td><td>2.0</td><td>34.2</td></tr><tr><td>Ethnicity</td><td>2.7</td><td>4.5</td><td>5.3</td><td>1.7</td><td>4.8</td><td>13.3</td><td>14.6</td><td>2.7</td><td>49.6</td></tr><tr><td>Misc</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.1</td><td>0.4</td><td>0.0</td><td>2.8</td><td>0.3</td><td>3.6</td></tr><tr><td>Total</td><td>16.1</td><td>83.1</td><td>17.7</td><td>22.4</td><td>29.4</td><td>47.2</td><td>74.0</td><td>18.2</td><td>308.1</td></tr></table> | Interventions | FY 18 | FY 19 | FY 20 | FY 21 | FY 22 | FY 23 | FY 24 | FY 25 H1 | Cumulative | Health | 2.3 | 66.8 | 1.5 | 0.5 | 0.6 | 2.2 | 4.1 | 1.5 | 79.6 | Drinking Water | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.3 | Education | 0.9 | 1.5 | 1.8 | 1.3 | 3.0 | 5.0 | 10.6 | 4.9 | 29.0 | Livelihood-Skill Development | 1.6 | 1.6 | 1.6 | 1.4 | 1.2 | 3.9 | 4.9 | 2.3 | 18.4 | Sports | 4.4 | 6.7 | 4.7 | 13.3 | 12.3 | 13.2 | 20.7 | 4.2 | 79.4 | Rural Infrastructure | 2.1 | 0.0 | 0.0 | 1.4 | 3.1 | 5.3 | 2.0 | 0.2 | 14.0 | Environment | 2.1 | 2.0 | 2.7 | 2.8 | 4.0 | 4.3 | 14.3 | 2.0 | 34.2 | Ethnicity | 2.7 | 4.5 | 5.3 | 1.7 | 4.8 | 13.3 | 14.6 | 2.7 | 49.6 | Misc | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.0 | 2.8 | 0.3 | 3.6 | Total | 16.1 | 83.1 | 17.7 | 22.4 | 29.4 | 47.2 | 74.0 | 18.2 | 308.1 |
| Interventions | FY 18 | FY 19 | FY 20 | FY 21 | FY 22 | FY 23 | FY 24 | FY 25 H1 | Cumulative | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Health | 2.3 | 66.8 | 1.5 | 0.5 | 0.6 | 2.2 | 4.1 | 1.5 | 79.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drinking Water | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Education | 0.9 | 1.5 | 1.8 | 1.3 | 3.0 | 5.0 | 10.6 | 4.9 | 29.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Livelihood-Skill Development | 1.6 | 1.6 | 1.6 | 1.4 | 1.2 | 3.9 | 4.9 | 2.3 | 18.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sports | 4.4 | 6.7 | 4.7 | 13.3 | 12.3 | 13.2 | 20.7 | 4.2 | 79.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rural Infrastructure | 2.1 | 0.0 | 0.0 | 1.4 | 3.1 | 5.3 | 2.0 | 0.2 | 14.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Environment | 2.1 | 2.0 | 2.7 | 2.8 | 4.0 | 4.3 | 14.3 | 2.0 | 34.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ethnicity | 2.7 | 4.5 | 5.3 | 1.7 | 4.8 | 13.3 | 14.6 | 2.7 | 49.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Misc | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.0 | 2.8 | 0.3 | 3.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 16.1 | 83.1 | 17.7 | 22.4 | 29.4 | 47.2 | 74.0 | 18.2 | 308.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| xiv. | The Regional Office at Bhubaneswar / CPCB / SPCB will monitor the stipulated conditions. A six-monthly compliance report and the monitored data along with | The six-monthly compliance reports of all existing environment clearances granted by Ministry are being submitted to JSPCB's regional office, Ministry's Regional office, Zonal office CPCB Kolkata and JSPCB Ranchi regularly and being submitted. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Compliance Report of Environmental Clearance of Cold Rolling Mill Complex (CRMC) to produce Cold Rolled Coils (2,50,000 TPA) and Hot Rolled Pickled Coils (50,000 TPA) at Bara, Jamshedpur, District East Singhbhum, Jharkhand, vide MoEF&CC Letter no.-J-11011/199/2007-IA.II (I) dated 7 Aug 2007

General Conditions:

| S.No | Compliance Conditions | Compliance Status |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | statistical interpretation shall be submitted to them regularly. | |
| xv. | The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB / Committee and may also be seen at website of the Ministry of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional Office. | Environment clearance notice had been advertised in two local newspapers viz. Chamakta Aina (Hindi) and Avenue Mail (English) on 11 August 2007 and communication to this effect was also sent to MoEF&CC vide our letter no. EMD/C38/2119/07 dated 18 August 2007. Attached as Annexure-8 . |
| xvi. | Project authorities should inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work. | Financial closure and final approval of the project by Board of Tata Steel was done in March 2006. |

**कार्यालय : प्रधान मुख्य वन संरक्षक, वन्य प्राणी एवं
मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, रांची।**

Email : pccfwljharkhand@gmail.com Phone No. 0651-2481744

सेवा में,

पत्रांक.....

दिनांक.....

अपर मुख्य सचिव,
वन, पर्यावरण एवं जलवायु परिवर्तन विभाग,
झारखण्ड सरकार, राँची।

विषय:— Submission of the revised Site Specific Wildlife conservation Plan of M/s Tata Steel Limited (Steel Plant & Cold Rolling Mills Complex), Jamshedpur East Singhbhum for approval.

प्रसंग:— अपर प्रधान मुख्य वन संरक्षक, सिंहभूम रीजन, जमशेदपुर का पत्रांक 84 दिनांक 09.01.2017

महाशय,

उपर्युक्त विषयक प्रासंगिक पत्र द्वारा M/s Tata Steel Limited द्वारा समर्पित स्थल विशिष्ट वन्यप्राणी (संरक्षण) प्रबंधन योजना (Site Specific Wildlife Conservation Plan) प्राप्त हुआ था। उक्त योजना का Power Point Presentation वन्यप्राणी (संरक्षण) प्रबंधन योजना की स्वीकृति हेतु गठित समिति के समक्ष दिनांक 29.03.2017 को किया गया। बैठक की कार्यवाही की छायाप्रति संलग्न है। बैठक में लिये गये निर्णय के आलोक में प्रयोक्ता अभिकरण द्वारा अनुपालन प्रतिवेदन समर्पित किया गया। प्रयोक्ता अभिकरण द्वारा संतोषजनक अनुपालन के पश्चात् उक्त वन्य प्राणी प्रबंधन योजना को स्वीकृति प्रदान की गयी।

सूचनार्थ प्रेषित।

अनुलग्नक:—यथोक्त।
वन्यप्राणी प्रबंधन योजना
की एक प्रति संलग्न।

आपका विश्वासी

ह0 / -

प्रधान मुख्य वन संरक्षक,
वन्य प्राणी एवं मुख्य वन्यप्राणी प्रतिपालक,
झारखण्ड, राँची।

ज्ञापांक.....दिनांक.....

प्रतिलिपि:— वन्यप्राणी (संरक्षण) प्रबंधन योजना की प्रति के साथ प्रधान मुख्य वन संरक्षक—सह कार्यकारी निदेशक, बंजर भूमि विकास बोर्ड, झारखण्ड, राँची को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

ह0 / -

प्रधान मुख्य वन संरक्षक,
वन्य प्राणी एवं मुख्य वन्यप्राणी प्रतिपालक,
झारखण्ड, राँची।

ज्ञापांक 1945 दिनांक 13.11.2017

प्रतिलिपि:— Shubhanand Mukesh, Head-Environment Management M/s
Tata Steel Limited को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

प्रधान मुख्य वन संरक्षक,
वन्य प्राणी एवं मुख्य वन्यप्राणी प्रतिपालक,
झारखण्ड, रांची।
13/11/17



Utsav Kashyap
Head Environment Clearance & Compliance TSL

TSJ/EMD/C-41/044/23

Date: 24.02.2023

To,
Divisional Forest Officer,
Jamshedpur Forest Division,
Jamshedpur - 831001
East Singhbhum, Jharkhand

Sub: Payment of levies w.r.t. approved Site-Specific Wildlife Conservation Plan (SSWLCP) of Tata Steel Limited (Main Steel Plant Jamshedpur & CRM Bara Rolling Mills Complex)

Ref: Approval of SSWLCP by Principle Chief Conservator of Forest - Wildlife & Chief Wildlife Warden (PCCF-WL & CWW), Jharkhand vide letter no. 1945 dated: 13.12.2017.
Demand note raised of your good office vide letter no. 3182 dated: 23.12.2023

Dear Ma'am,

This has reference to the captioned subject and cited references. We would like to inform you that we have made the payment of Rs.2,00,00,000/- (Rupees Two Crores only) with respect to the approved SSWLCP of Tata Steel Limited (Main Steel Plant Jamshedpur & CRM Bara Rolling Mills Complex) and submitting the e-challan copy of the payment as per the demand note received from your good office.

You are requested to kindly acknowledge the same and place in your records.

Thanking you
Yours Faithfully




For Tata Steel Limited

Utsav Kashyap
Head Environment Clearance & Compliance (TSL)
Encl: As above

TATA STEEL LIMITED

Environment Management Jamshedpur 831 001 India
Tel +91 657 6640363 P&T 8092087043 M e-mail utsav.kashyap@tatasteel.com
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001
Tel 91 22 66658282 Fax 91 22 66657724
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

Mob no → 6207901848
→ 8092087043

| | | | | | |
|-----------------------------------------------------------------------------------|--|---------------------------------------------------|----------------------------|-----------------------------------------------------------------------------------|---|
|  | | e-Challan | |  | |
| Finance Department, Government of Jharkhand | | | | | |
| Receiving Dept: | | Forest, Environment and Climate Change Department | | | |
| Valid UpTo :-01/03/2023 | | | Remitter's Copy | | |
| GRN:-2315871703 | | | Date:- 20/02/2023 17:17:34 | | |
|  | | | | | |
| Receiving Office :- JSRFOR051-D.F.O.JAMSHEDPUR PRM.JSR.-FOREST | | | | | |
| District :- Purbi Singhbhum | | | Treasury:- Jamshedpur | | |
| Year:-20/02/2023 | | | to:- 28/02/2023 | | |
| Head(8782) | | | Amount | | ₹ |
| Head Details | | 878200103010101 | | | |
| FOREST REMITTANCES | | 20000000.00 | | | |
| Net Payable Amount:- | | | | ₹ 20000000.00 | |
| Two Crore Rupees And Zero Paise Only | | | | | |
| For Treasury Use Only(Jamshedpur) | | | | | |
| Challan No and Date: 108 (20/02/2023) | | | | | |
| Identity Proof(Registration No) - 000260 | | | | | |
| PAN No:- | | | | | |
| Remitter Name:- | | TATA STEEL LIMITED | | | |
| Address :- | | BISTUPUR,JAMSHEDPUR,831001 | | | |
| Remarks :- | | Deposit Work | | | |
| Treasury Officer Signature is not required. | | | | | |
| FOR USE IN TREASURY LINK BANK | | | | | |
| CHEQUE/DD No :- | | 650925 DT. 16/02/2023 | | | |
| Scroll No and (Date) :- | | () | | | |
| Bank Name :-SBI,JAMSEDPUR,DISTRICT TREASURY OFFICE | | | | | |
| Note:- Bank Official are requested to update the receipt Online before Stamping. | | | | | |
| Signature & Seal of Bank | | | | | |

Annexure-2

CRM Bara Water reservoirs





Tata Steel Limited
Environmental Monitoring Report of CRM Bara
CRM BARA EFFLUENT QUALITY REPORT FROM APR 2024 to SEP 2024

| | Parameter | Unit | Apr-24 | May-24 | Jun-24 | Jul-24 | Aug-24 | Sep-24 |
|--------------------|-------------------------------|------|--------|--------|--------|--------|--------|--------|
| Drain at Gate No-2 | pH | - | 7.17 | 7.42 | NA | | | |
| | Total Suspended solids | mg/L | < 10 | 6 | | | | |
| | Oil & Grease | mg/L | 0.8 | 1 | | | | |
| | Hexavalent Chromium, Cr+6 | mg/L | < 0.05 | < 0.05 | | | | |
| | Biological Oxygen Demand, BOD | mg/L | 7.0 | 6.0 | | | | |
| | Chemical Oxygen Demand, COD | mg/L | 39.0 | 30.0 | | | | |

NOTE

Standards applicable as per Environment (Protection) (Third Amendment) Rules, 2012 issued in Gazette of India Notification vide No.: G. S. R. 277 (E) dated March 31, 2012.

This test report is generated by NABL Accredited TATA STEEL LIMITED JSR EMD LAB having accreditation No.TC-8363 dated 21.02.2024 having validity till 20.02.2026.

*CRM Bara is Zero effluent discharge since Jun'24 and not discharging any effluent outside premises.

Sr. Manager
Monitoring and Analysis

Head
Environment Monitoring, Testing &
Analysis (TSJ)



Tata Steel Limited
Environmental Monitoring Report of CRM Bara
CONTINUOUS AMBIENT AIR QUALITY REPORT FOR CRM BARA FROM APR 2024 to SEPT 2024

| Sl. No. | Parameter | UoM | Standard | CAAQMS#1 | CAAQMS#1 | CAAQMS#1 | CAAQMS#1 | CAAQMS#1 | CAAQMS#1 |
|---------|----------------------------|-------------------|----------|----------|----------|----------|----------|----------|----------|
| | | | | Apr-24 | May-24 | Jun-24 | Jul-24 | Aug-24 | Sep-24 |
| 1 | Particulate Matter (PM10) | µg/m ³ | 100 | 180.9 | 95.5 | 93.4 | 50.1 | 47.5 | 49.4 |
| 2 | Particulate Matter (PM2.5) | µg/m ³ | 60 | 67.5 | 38.2 | 36.7 | 20.1 | 19.9 | 20.6 |
| 3 | Sulphur Dioxide (SO2) | µg/m ³ | 80 | 33.4 | 24.7 | 25.4 | 29.3 | 26.2 | 24.6 |
| 4 | Nitrogen Dioxide (NOx) | µg/m ³ | 80 | 38.7 | 17.9 | 18.8 | 14.2 | 11.6 | 9.3 |
| | | | | | | | | | |

Note:

Standards applicable as per National Ambient Air Quality Standards vide Notification No.: B-29016/20/90/PCI-L dated 18th November 2009.

UoM - Unit of Measurement

Manager
Monitoring and Analysis

Head
Environment Monitoring, Testing & Analysis (TSJ)

Tata Steel Limited
Environmental Monitoring Report of CRM Bara
AMBIENT AIR QUALITY REPORT FOR CRM BARA FROM APR 2024 to SEP 2024

| Location | Parameter | UoM | Standard | Apr-24 | May-24 | Jun-24 | Jul-24 | Aug-24 | Sep-24 |
|----------------------------|-----------------------------------------------------|-------------------|----------|--------|--------|--------|--------|--------|--------|
| NEAR DISPATCH SHUTTER | Particulate Matter, PM ₁₀ ^{\$} | µg/m ³ | 100 | 116.60 | 58.55 | 93.76 | 45.78 | 61.72 | 57.79 |
| | Particulate Matter, PM _{2.5} ^{\$} | µg/m ³ | 60 | 45.83 | 22.40 | 37.62 | 15.65 | 24.39 | 28.06 |
| | Sulphur Dioxide (SO ₂) ^{\$} | µg/m ³ | 80 | 12.69 | 15.93 | 23.90 | 20.89 | 24.75 | 22.43 |
| | Nitrogen Dioxide (NO ₂) ^{\$} | µg/m ³ | 80 | 25.66 | 30.56 | 34.40 | 32.90 | 38.75 | 34.64 |
| | Carbon Monoxide (CO) | mg/m ³ | 2 | 0.25 | 0.26 | 0.22 | 0.21 | 0.24 | 0.23 |
| | Ammonia (NH ₃) ^{\$} | µg/m ³ | 400 | 30.68 | 48.36 | 67.85 | 55.35 | 61.53 | 55.99 |
| | Ozone (O ₃) ^{\$} | µg/m ³ | 180 | 11.97 | 12.94 | 9.35 | 9.35 | 14.72 | 13.32 |
| | Nickel (Ni) ^{\$} | ng/m ³ | 20 | 0.04 | 0.01 | 0.03 | 0.02 | 0.01 | 0.01 |
| | Arsenic (As) | ng/m ³ | 6 | NT | NT | NT | NT | NT | NT |
| | Lead (Pb) ^{\$} | µg/m ³ | 1 | < 0.01 | 0.10 | < 0.01 | < 0.01 | 0.09 | 0.01 |
| | Benzene (C ₆ H ₆) | µg/m ³ | 5 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| | Benzo alpha Pyrene (BaP) | ng/m ³ | 1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| NEAR FIRE FIGHTING STATION | Parameter | UoM | Standard | Apr-24 | May-24 | Jun-24 | Jul-24 | Aug-24 | Sep-24 |
| | Particulate Matter, PM ₁₀ ^{\$} | µg/m ³ | 100 | 92.58 | 82.00 | 91.90 | 34.55 | 43.39 | 66.24 |
| | Particulate Matter, PM _{2.5} ^{\$} | µg/m ³ | 60 | 33.67 | 37.32 | 36.97 | 13.43 | 18.45 | 25.91 |
| | Sulphur Dioxide (SO ₂) ^{\$} | µg/m ³ | 80 | 13.44 | 21.95 | 15.32 | 25.53 | 24.97 | 28.71 |
| | Nitrogen Dioxide (NO ₂) ^{\$} | µg/m ³ | 80 | 22.37 | 30.28 | 26.87 | 36.80 | 32.89 | 39.87 |
| | Carbon Monoxide (CO) | mg/m ³ | 2 | 0.27 | 0.29 | 0.25 | 0.23 | 0.25 | 0.27 |
| | Ammonia (NH ₃) ^{\$} | µg/m ³ | 400 | 44.36 | 51.69 | 51.88 | 62.53 | 47.90 | 49.55 |
| | Ozone (O ₃) ^{\$} | µg/m ³ | 180 | 17.09 | 10.98 | 11.91 | 11.65 | 9.35 | 12.80 |
| | Nickel (Ni) ^{\$} | ng/m ³ | 20 | 0.03 | 0.02 | 0.02 | 0.09 | 0.03 | 0.02 |
| | Arsenic (As) | ng/m ³ | 6 | NT | NT | NT | NT | NT | NT |
| | Lead (Pb) ^{\$} | µg/m ³ | 1 | 0.07 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| | Benzene (C ₆ H ₆) | µg/m ³ | 5 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| | Benzo alpha Pyrene (BaP) | ng/m ³ | 1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| NEAR ROLL SHUTTER | Parameter | UoM | Standard | Apr-24 | May-24 | Jun-24 | Jul-24 | Aug-24 | Sep-24 |
| | Particulate Matter, PM ₁₀ ^{\$} | µg/m ³ | 100 | 167.39 | 88.22 | 145.33 | 53.13 | 58.04 | 31.48 |
| | Particulate Matter, PM _{2.5} ^{\$} | µg/m ³ | 60 | 59.67 | 34.66 | 57.39 | 22.37 | 23.92 | 12.53 |
| | Sulphur Dioxide (SO ₂) ^{\$} | µg/m ³ | 80 | 24.54 | 11.72 | 14.38 | 14.88 | 22.60 | 28.06 |
| | Nitrogen Dioxide (NO ₂) ^{\$} | µg/m ³ | 80 | 38.20 | 27.98 | 38.62 | 33.66 | 37.86 | 36.22 |
| | Carbon Monoxide (CO) | mg/m ³ | 2 | 0.28 | 0.27 | 0.24 | 0.20 | 0.22 | 0.25 |
| | Ammonia (NH ₃) ^{\$} | µg/m ³ | 400 | 37.36 | 47.36 | 62.86 | 61.86 | 59.20 | 60.74 |
| | Ozone (O ₃) ^{\$} | µg/m ³ | 180 | 11.48 | 12.21 | 10.89 | 10.33 | 11.78 | 14.60 |
| | Nickel (Ni) ^{\$} | ng/m ³ | 20 | 0.10 | 0.01 | 0.03 | 0.03 | 0.03 | 0.01 |
| | Arsenic (As) | ng/m ³ | 6 | NT | NT | NT | NT | NT | NT |
| | Lead (Pb) ^{\$} | µg/m ³ | 1 | 1.43 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| | Benzene (C ₆ H ₆) | µg/m ³ | 5 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| | Benzo alpha Pyrene (BaP) | ng/m ³ | 1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |

Note

Standards applicable as per National Ambient Air Quality Standards vide Notification No.: B-29016/20/90/PCI-L dated 18th November 2009.

NT - Not Traced

\$This test report was generated by TATA STEEL LIMITED JSR EMD LAB having NABL Accreditation No.TC-8363.



Sr. Manager
Monitoring and Analysis



Head
Environment Monitoring, Testing & Analysis
(TSJ)



Tata Steel Limited
Environmental Monitoring Report of CRM Bara
AMBIENT NOISE LEVEL MONITORING REPORT FOR CRM BARA FROM APR 2024 to SEP 2024

| | | | Apr-24 | | May-24 | | Jun-24 | | Jul-24 | | Aug-24 | | Sep-24 | |
|--------|-----------------------|--------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|
| Sl.No. | Sampling Location | | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night |
| | | | dB(A) Leq | | dB(A) Leq | | dB(A) Leq | | dB(A) Leq | | dB(A) Leq | | dB(A) Leq | |
| 1 | Entrance Main Gate | Result | 69.4 | 61.5 | 68.2 | 60.5 | 71.2 | 58.4 | 69.8 | 58.2 | 68.1 | 62.4 | 67.0 | 61.2 |
| 2 | Circle Near Main Gate | | 68.3 | 59.8 | 67.4 | 58.1 | 66.4 | 64.3 | 70.3 | 56.5 | 63.5 | 55.1 | 62.4 | 56.3 |
| 3 | Circle Near Gate No-1 | | 70.7 | 59.4 | 71.0 | 59.2 | 68.3 | 57.2 | 71.2 | 55.7 | 60.2 | 54.4 | 61.3 | 55.1 |
| 4 | Gate No-1 | | 71.3 | 63.2 | 69.8 | 62.4 | 64.1 | 56.9 | 69.8 | 54.6 | 64.3 | 59.2 | 65.5 | 58.7 |
| 5 | Gate No-2 | | 67.9 | 59.5 | 68.2 | 58.3 | 63.2 | 58.0 | 72.2 | 58.1 | 60.9 | 56.9 | 61.9 | 55.6 |

NOTE

Standards applicable as per Noise Pollution (Regulation and Control) (Amendment) Rules, 2000 notified vide S. O. 1046 (E), dated 22-11-2000

This test report is generated by NABL Accredited TATA STEEL LIMITED JSR EMD LAB having accreditation No.TC-8363 dated 21.02.2022 having validity till 20.02.2024.

Sr. Manager
Monitoring and Analysis

Head
Environment Monitoring, Testing & Analysis (TSJ)



Tata Steel Limited
Environmental Monitoring Report of CRM Bara
Online Stack Emission Monitoring Report from Apr 2024 to Sep 2024

| Month | Stack | PM (mg/Nm3) | SO2 (mg/Nm3) | NOx (mg/Nm3) |
|--------|-------------------------|----------------|-----------------|-----------------|
| Apr-24 | Mill Demister | 3.0 | | |
| | Boiler stack | 1.6 | 23.4 | 66.9 |
| | ARP stack | 40.3 | | |
| | Shot Blasting | 3.0 | | |
| | Pickling scrubber stack | 7.1 | | |
| May-24 | Mill Demister | 16.5 | | |
| | Boiler stack | 1.5 | 19.0 | 67.0 |
| | ARP stack | 17.2 | | |
| | Pickling scrubber stack | 8.0 | | |
| Jun-24 | Mill Demister | 18.7 | | |
| | Boiler stack | 3.5 | 25.0 | 66.5 |
| | ARP stack | 4.7 | | |
| | Shot Blasting | 2.1 | | |
| | Pickling scrubber stack | 6.4 | | |
| Jul-24 | Mill Demister | 15.3 | | |
| | Boiler stack | 1.6 | 18.9 | 48.5 |
| | ARP stack | 5.4 | | |
| | Shot Blasting | 6.6 | | |
| | Pickling scrubber stack | 6.1 | | |
| Aug-24 | Mill Demister | 11.7 | | |
| | Boiler stack | 1.6 | 13.8 | 42.7 |
| | ARP stack | 6.0 | | |
| | Shot Blasting | 2.2 | | |
| | Pickling scrubber stack | 5.8 | | |
| Sep-24 | Mill Demister | 7.7 | | |
| | Boiler stack | 3.5 | 12.6 | 33.2 |
| | ARP stack | 2.6 | | |
| | Shot Blasting | 14.0 | | |
| | Pickling scrubber stack | 7.0 | | |

Note:

Standards applicable as per CTO, Ref No. JSPCB/HO/RNC/CTO-10350692/2022/109 Dated on 28-01-2022.

Manager
Steel Making, CRM Bara & Tubes Division

Head
Environment Monitoring, Testing
& Analysis (TSJ)



Tata Steel Limited
Environmental Monitoring Report of CRM Bara
Manual Stack Emission Monitoring Report from Apr 2024 to Sep 2024

| Month | Location | UoM | Standard | Parameter | Result |
|--------|---------------|--------------------|----------|-----------|--------|
| Apr-24 | ARP-2 | mg/Nm ³ | 100 | PM | 6.1 |
| | ARP-1 | | | | 15.4 |
| | Pickling | | | | 6.1 |
| | Mill | | | | 5.0 |
| | Boiler | | | | 5.0 |
| | Shot Blasting | | | | 10.6 |
| May-24 | ARP-2 | | | | 14.4 |
| | ARP-1 | | | | 18.2 |
| | Pickling | | | | 5.0 |
| | Boiler | | | | 5.0 |
| | Shot Blasting | | | | 9.8 |
| Jun-24 | ARP-2 | | | | 2.1 |
| | ARP-1 | | | | 9.3 |
| | Pickling | | | | 1.7 |
| | Mill | | | | 3.6 |
| | Boiler | | | | 4.8 |
| | Shot Blasting | | | | 7.5 |
| Jul-24 | ARP-2 | | | | 1.9 |
| | ARP-1 | | | | NA |
| | Pickling | | | | 3.2 |
| | Mill | | | | 3.1 |
| | Boiler | | | | 3.1 |
| | Shot Blasting | | | | 5.3 |
| Aug-24 | ARP-2 | | | | 2.4 |
| | ARP-1 | | | | 2.7 |
| | Pickling | | | | 2.5 |
| | Mill | | | | 2.3 |
| | Boiler | | | | 2.6 |
| | Shot Blasting | | | | 14.5 |
| Sep-24 | ARP-2 | | | | 2.8 |
| | ARP-1 | | | | NA |
| | Pickling | | | | 2.5 |
| | Mill | | | | 2.5 |
| | Boiler | | | | 2.7 |
| | Shot Blasting | | | | 8.0 |

Note:

Standards applicable as per CTO, Ref No. JSPCB/HO/RNC/CTO-10350692/2022/109 Dated on 28-01-2022.

Manager
Steel Making, CRM Bara & Tubes
Division

Head
Environment Monitoring, Testing &
Analysis (TSJ)



Tata Steel Limited
Environmental Monitoring Report of CRM Bara
Fugitive Emission Monitoring Report from Apr 2024 to Sep 2024

| S.No. | Location | UoM | Apr-24 | May-24 | Jun-24 | Jul-24 | Aug-24 | Sep-24 |
|-------|---------------------------------|-------|--------|--------|--------|--------|--------|--------|
| 1 | Near RCPH Pump House | mg/m3 | 0.4 | 0.4 | 0.43 | 0.64 | 0.61 | 0.29 |
| 2 | Near Pickling Line Exit | | 0.4 | 0.6 | 0.38 | 0.75 | 0.43 | 0.31 |
| 3 | Near Mills Stand | | 0.7 | 0.5 | 0.48 | 0.68 | 0.56 | 0.58 |
| 4 | Near Mill Stand outside | | 0.7 | 0.4 | 0.51 | 0.69 | 0.50 | 0.63 |
| 5 | 1 Mtr. Away From Compressor # 1 | | 0.5 | 0.6 | 0.39 | 0.62 | 0.48 | 0.33 |
| 6 | 1 Mtr. Away From Compressor # 2 | | 0.5 | 0.6 | 0.28 | 0.63 | 0.63 | 0.44 |
| 7 | 1 Mtr. Away From Compressor # 3 | | 0.5 | 0.6 | 0.41 | 0.62 | 0.52 | 0.36 |
| 8 | 1 Mtr. Away From Compressor # 4 | | 0.4 | 0.6 | 0.33 | 0.61 | 0.60 | 0.22 |
| 9 | Inside Room Compressor | | 0.5 | 0.5 | 0.40 | 0.63 | 0.38 | 0.29 |
| 10 | Inside Boiler House | | 0.5 | 0.4 | 0.36 | 0.57 | 0.44 | 0.42 |
| 11 | ARP Pump Room | | 0.4 | 0.6 | 0.61 | 0.72 | 0.53 | N/O |
| 12 | Sticher Area | | 0.5 | 0.6 | 0.55 | 0.78 | 0.60 | 0.66 |
| 13 | Rince Tank Area | | 0.4 | 0.5 | 0.48 | 0.74 | 0.41 | 0.53 |
| 14 | Main Office | | 0.4 | 0.7 | 0.71 | 0.54 | 0.52 | 0.66 |
| 15 | Near Gate # 1 | | 0.7 | 0.6 | 0.63 | 0.56 | 0.61 | 0.83 |
| 16 | Near Gate # 2 | | 0.5 | 0.5 | 0.57 | 0.59 | 0.58 | 0.49 |
| 17 | Coil Receiving Area | | 0.5 | 0.4 | 0.60 | 0.61 | 0.54 | 0.38 |

Note:

As per CTO, Ref No. JSPCB/HO/RNC/CTO-10350692/2022/109 Dated on 28-01-2022.

N/O- NOT IN OPERATION

Manager
Steel Making, CRM Bara & Tubes Division

Head
Environment Monitoring, Testing &
Analysis (TSJ)



TATA STEEL LIMITED
ENVIRONMENT MANAGEMENT DEPARTMENT – LABORATORY
GROUNDWATER MONITORING REPORT- APR 2024 TO SEPT 2024

| Month | Sampling Locations | pH | Temperature | Conductivity | Total Dissolved Solids | Total Suspended Solids | Alkalinity as CaCO ₃ | Total Hardness as CaCO ₃ | Calcium as Ca |
|--------|------------------------|-----|-------------|--------------|------------------------|------------------------|---------------------------------|-------------------------------------|---------------|
| | | -- | oC | μMho/Cm | mg/L | mg/L | mg/L | mg/L | mg/L |
| Apr-24 | Parvati GhatBore water | 7.0 | 29.4 | 2269 | 1112 | <10 | 560 | 1104 | 262 |
| | Jugsalai Bore Water | 7.1 | 27.4 | 1090 | 534 | <10 | 386 | 335 | 152 |
| | Jemco Bore Water | 7.5 | 27.2 | 1634 | 801 | <10 | 28 | 524 | 186 |
| | SonariBore water | 7.0 | 27.0 | 1054 | 516 | <10 | 384 | 237 | 99 |
| | Baganhattu Bore water | 6.9 | 25.1 | 922 | 452 | <10 | 88 | 355 | 87 |
| May-24 | Jugsalai Bore Water | 7.1 | 27.5 | 1044 | 512 | <10 | 380 | 355 | 127 |
| | Parvati GhatBore water | 7.1 | 26.2 | 2409 | 1180 | <10 | 550 | 1151 | 234 |
| | Jemco Bore Water | 7.3 | 27.2 | 1654 | 810 | <10 | 52 | 528 | 172 |
| | SonariBore water | 7.1 | 28.0 | 1008 | 494 | 16 | 380 | 220 | 92 |
| | Baganhattu Bore water | 7.0 | 27.9 | 716 | 351 | <10 | 66 | 314 | 78 |
| Jun-24 | Parvati GhatBore water | 7.1 | 28.3 | 2459 | 1205 | <10 | 567 | 213 | 257 |
| | Jugsalai Bore Water | 7.2 | 28.7 | 1028 | 504 | <10 | 413 | 289 | 101 |
| | Jemco Bore Water | 7.0 | 28.6 | 1005 | 492 | <10 | 374 | 346 | 117 |
| | SonariBore water | 7.1 | 26.4 | 895 | 439 | <10 | 257 | 203 | 76 |
| | Baganhattu Bore water | 6.7 | 25.9 | 901 | 441 | <10 | 90 | 352 | 69 |
| Jul-24 | Parvati GhatBore water | 7.1 | 26.1 | 2464 | 1207 | <10 | 556 | 1018 | 235 |
| | Jugsalai Bore Water | 7.0 | 25.6 | 1077 | 528 | <10 | 376 | 480 | 130 |
| | Jemco Bore Water | 7.2 | 25.8 | 1684 | 825 | <10 | 34 | 524 | 168 |
| | SonariBore water | 7.1 | 24.3 | 906 | 444 | <10 | 250 | 402 | 101 |
| | Baganhattu Bore water | 6.6 | 24.9 | 923 | 452 | <10 | 92 | 341 | 84 |
| Aug-24 | Parvati GhatBore water | 7.2 | 24.7 | 1280 | 627 | <10 | 336 | 514 | 221 |
| | Jugsalai Bore Water | 7.2 | 25.1 | 1262 | 618 | <10 | 414 | 521 | 125 |
| | Jemco Bore Water | 6.8 | 25.2 | 225 | 110 | <10 | 16 | 65 | 161 |
| | SonariBore water | 7.0 | 26.3 | 950 | 466 | <10 | 248 | 400 | 101 |
| | Baganhattu Bore water | 6.6 | 25.5 | 990 | 485 | <10 | 92 | 352 | 84 |
| Sep-24 | Parvati GhatBore water | 7.0 | 27.4 | 2086 | 1022 | 16 | 394 | 1052 | 222 |
| | Jugsalai Bore Water | 7.2 | 26.8 | 1504 | 737 | <10 | 406 | 618 | 121 |
| | Jemco Bore Water | 7.6 | 27.9 | 1551 | 760 | <10 | 40 | 466 | 168 |
| | SonariBore water | 7.0 | 27.7 | 977 | 479 | <10 | 263 | 399 | 87 |
| | Baganhattu Bore water | 6.6 | 27.8 | 1027 | 503 | <10 | 99 | 357 | 79 |

Sr. Manager
Monitoring and Analysis

Head
Environment Monitoring, Testing & Analysis
(TSJ)



TATA STEEL LIMITED
ENVIRONMENT MANAGEMENT DEPARTMENT – LABORATORY
GROUNDWATER MONITORING REPORT- APR 2024 TO SEPT 2024

| Month | Sampling Locations | Chlorides as Cl ⁻ | Sulphates as SO ₄ ⁻² | Nitrate Nitrogen as N | Nitrite Nitrogen as N | Fluorides as F ⁻ | Silica as SiO ₂ | Iron as Fe | Manganese as Mn |
|--------|------------------------|---------------------------------|-----------------------------------------------|-----------------------------|--------------------------|--------------------------------|-------------------------------|---------------|--------------------|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Apr-24 | Parvati GhatBore water | 215 | 414 | 34.70 | 0.11 | 1.50 | 44.00 | 0.09 | 0.27 |
| | Jugsalai Bore Water | 82 | 128 | 3.10 | < 0.01 | 0.70 | 34.00 | 0.53 | 0.30 |
| | Jemco Bore Water | 186 | 71 | 3.40 | 0.01 | 1.10 | 9.00 | 0.25 | 0.01 |
| | SonariBore water | 89 | 56 | <0.2 | 0.26 | 1.10 | 26.00 | 0.05 | 0.12 |
| | Baganhattu Bore water | 199 | 55 | 6.30 | < 0.01 | 0.40 | - | 0.06 | 0.52 |
| May-24 | Jugsalai Bore Water | 71 | 106 | 6.90 | 0.02 | 0.70 | 38.00 | 0.04 | 0.04 |
| | Parvati GhatBore water | 150 | 327 | 31.00 | 0.08 | 0.70 | 41.00 | 0.04 | 0.30 |
| | Jemco Bore Water | 177 | 82 | 4.50 | 0.03 | 0.70 | 9.00 | 0.00 | 0.01 |
| | SonariBore water | 91 | 12 | 4.30 | 0.04 | 0.80 | 25.00 | 0.41 | 0.50 |
| | Baganhattu Bore water | 66 | 13 | 5.10 | 0.05 | 0.60 | 53.00 | 0.10 | 0.55 |
| Jun-24 | Parvati GhatBore water | 172 | 99 | 34.40 | 0.11 | 0.60 | 27.00 | 0.05 | 0.30 |
| | Jugsalai Bore Water | 100 | 37 | 3.50 | 0.03 | 0.50 | 25.00 | 0.60 | 0.41 |
| | Jemco Bore Water | 65 | 98 | 5.90 | <0.02 | 0.40 | 25.00 | 0.08 | 0.01 |
| | SonariBore water | 80 | 60 | 9.10 | 0.02 | 0.70 | 28.00 | 0.01 | 0.21 |
| | Baganhattu Bore water | 186 | 46 | 6.30 | 0.09 | 0.60 | 21.00 | 0.38 | 0.75 |
| Jul-24 | Parvati GhatBore water | 143 | 61 | 28.60 | <0.02 | 0.90 | 108.00 | 0.07 | 0.19 |
| | Jugsalai Bore Water | 66 | 131 | 2.40 | <0.02 | 0.80 | 55.00 | 0.04 | 0.01 |
| | Jemco Bore Water | 168 | 142 | 3.40 | <0.02 | 1.10 | 29.00 | 0.04 | 0.02 |
| | SonariBore water | 73 | 92 | 6.00 | 0.04 | 1.20 | 39.00 | 0.07 | 0.57 |
| | Baganhattu Bore water | 191 | - | 1.70 | 0.05 | 0.40 | 82.00 | 0.39 | 0.77 |
| Aug-24 | Parvati GhatBore water | 100 | 115 | 0.60 | 0.01 | 0.50 | 22.00 | 0.05 | 0.16 |
| | Jugsalai Bore Water | 93 | 113 | 0.90 | 0.02 | 0.40 | 49.00 | 0.02 | 0.01 |
| | Jemco Bore Water | 28 | 50 | 0.50 | 0.01 | 0.40 | 3.00 | 0.04 | 0.02 |
| | SonariBore water | 70 | 38 | 3.20 | 0.01 | 0.60 | 34.00 | 0.07 | 0.57 |
| | Baganhattu Bore water | 187 | 45 | 1.00 | 0.02 | 0.40 | 7.00 | 0.39 | 0.77 |
| Sep-24 | Parvati GhatBore water | 100 | 307 | 19.00 | 0.06 | 1.00 | 26.00 | 0.05 | 0.14 |
| | Jugsalai Bore Water | 134 | 153 | 8.30 | <0.02 | 0.80 | 25.00 | 0.02 | 0.01 |
| | Jemco Bore Water | 158 | 9 | 2.70 | 0.02 | 1.10 | 13.00 | 0.04 | 0.02 |
| | SonariBore water | 75 | 19 | 11.70 | <1.0 | 0.40 | 41.00 | 0.07 | 0.57 |
| | Baganhattu Bore water | 189 | 9 | 0.50 | 0.12 | 0.40 | 43.00 | 0.39 | 0.77 |

Sr. Manager
Monitoring and Analysis

Head
Environment Monitoring, Testing & Analysis
(TSJ)



TATA STEEL LIMITED
ENVIRONMENT MANAGEMENT DEPARTMENT – LABORATORY
GROUNDWATER MONITORING REPORT- APR 2024 TO SEPT 2024

| Month | Sampling Locations | Hexavalent Chromium as Cr+6 | Copper as Cu | Total Chromium as Cr | Cadmium Cd | Nickel as Ni | Zinc as Zn | Lead as Pb |
|--------|------------------------|-----------------------------|--------------|----------------------|------------|--------------|------------|------------|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Apr-24 | Parvati GhatBore water | <0.05 | < 0.01 | 0.06 | < 0.01 | < 0.01 | 0.04 | 0.03 |
| | Jugsalai Bore Water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.05 | 0.08 |
| | Jemco Bore Water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.10 | 0.03 |
| | SonariBore water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.07 | 0.03 |
| | Baganhattu Bore water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.07 | 0.08 |
| May-24 | Jugsalai Bore Water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.02 | 0.02 |
| | Parvati GhatBore water | <0.05 | < 0.01 | 0.08 | < 0.01 | < 0.01 | 0.04 | 0.01 |
| | Jemco Bore Water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.02 | < 0.01 |
| | SonariBore water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.08 | 0.03 |
| | Baganhattu Bore water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.04 | 0.02 |
| Jun-24 | Parvati GhatBore water | <0.05 | < 0.01 | 0.07 | < 0.01 | < 0.01 | 0.02 | 0.02 |
| | Jugsalai Bore Water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.02 | 0.01 |
| | Jemco Bore Water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.01 | 0.01 |
| | SonariBore water | <0.05 | < 0.01 | 0.01 | < 0.01 | 0.02 | 0.00 | 0.01 |
| | Baganhattu Bore water | <0.05 | < 0.01 | 0.01 | < 0.01 | 0.01 | 0.06 | < 0.01 |
| Jul-24 | Parvati GhatBore water | <0.05 | < 0.01 | 0.04 | < 0.01 | < 0.01 | 0.01 | 0.03 |
| | Jugsalai Bore Water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.03 | 0.03 |
| | Jemco Bore Water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.02 | 0.01 |
| | SonariBore water | <0.05 | 0.01 | < 0.01 | < 0.01 | 0.03 | 0.02 | 0.02 |
| | Baganhattu Bore water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.03 | 0.05 |
| Aug-24 | Parvati GhatBore water | <0.05 | < 0.01 | 0.03 | < 0.01 | < 0.01 | 0.01 | 0.02 |
| | Jugsalai Bore Water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.02 | 0.02 |
| | Jemco Bore Water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.01 | 0.01 |
| | SonariBore water | <0.05 | 0.01 | < 0.01 | < 0.01 | 0.03 | 0.02 | 0.02 |
| | Baganhattu Bore water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.03 | 0.05 |
| Sep-24 | Parvati GhatBore water | <0.05 | < 0.01 | 0.02 | < 0.01 | < 0.01 | 0.01 | 0.02 |
| | Jugsalai Bore Water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.01 | 0.03 |
| | Jemco Bore Water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.02 | 0.01 |
| | SonariBore water | <0.05 | 0.01 | < 0.01 | < 0.01 | 0.03 | 0.02 | 0.02 |
| | Baganhattu Bore water | <0.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.03 | 0.05 |

Sr. Manager
Monitoring and Analysis

Head
Environment Monitoring, Testing & Analysis
(TSJ)



TATA STEEL LIMITED
ENVIRONMENT MANAGEMENT DEPARTMENT – LABORATORY
GROUNDWATER MONITORING REPORT- APR 2024 TO SEPT 2024

| Month | Sampling Locations | Nitrogen (Ammonia) as N | FREE CHLORINE | Sulphide as S- 2 | Phenolic Compounds as Phenols | Free Cyanide | Aluminum |
|--------|------------------------|-------------------------------|------------------|---------------------|-------------------------------------|--------------|----------|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Apr-24 | Parvati GhatBore water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | 0.06 |
| | Jugsalai Bore Water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Jemco Bore Water | <1.0 | 0.03 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | SonariBore water | <1.0 | 0.33 | <0.10 | <0.10 | <0.1 | 0.25 |
| | Baganhattu Bore water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | 0.06 |
| May-24 | Jugsalai Bore Water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Parvati GhatBore water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Jemco Bore Water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | 0.06 |
| | SonariBore water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Baganhattu Bore water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | 0.02 |
| Jun-24 | Parvati GhatBore water | <1.0 | 0.57 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Jugsalai Bore Water | <1.0 | 0.35 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Jemco Bore Water | <1.0 | 0.35 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | SonariBore water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Baganhattu Bore water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |
| Jul-24 | Parvati GhatBore water | <0.02 | 0.24 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Jugsalai Bore Water | <0.02 | 0.29 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Jemco Bore Water | <0.02 | 0.23 | <0.10 | <0.10 | <0.1 | 0.02 |
| | SonariBore water | 0.04 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Baganhattu Bore water | 0.05 | 0.07 | <0.10 | <0.10 | <0.1 | < 0.01 |
| Aug-24 | Parvati GhatBore water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Jugsalai Bore Water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Jemco Bore Water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | 0.01 |
| | SonariBore water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Baganhattu Bore water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |
| Sep-24 | Parvati GhatBore water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Jugsalai Bore Water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Jemco Bore Water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | 0.02 |
| | SonariBore water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |
| | Baganhattu Bore water | <1.0 | <0.1 | <0.10 | <0.10 | <0.1 | < 0.01 |

Sr. Manager
Monitoring and Analysis

Head
Environment Monitoring, Testing & Analysis (TSJ)



Accredited Laboratory
Certificate No.TC-5729



Ramky Enviro Engineers Limited

Unit :- Rajasthan Waste Management Project, TSDF-Udaipur

ISO 9001:2008 C No FSS70987 ISO 14001:2004 C No EMS 570797 OHSAS 18001:2007 C No OHS 570500 IMS PAS 99:2006 C No IM 570907

COMPREHENSIVE ANALYSIS REPORT

Towards sustainable growth

| | | | | | | | | | | | |
|------------|-----------------------|-------------|---|---|---|---|---|---|---|---|---|
| Report No. | RWMP/Lab/CA/102/20-21 | Report Date | 2 | 3 | . | 0 | 9 | . | 2 | 0 | 2 |
|------------|-----------------------|-------------|---|---|---|---|---|---|---|---|---|

| | |
|-------------------------------------------------|-----------|
| Name of Client : M/s. TATA STEEL LTD. | |
| Contact Details : - | |
| CRM COMPLEX BARA, PO: AGRICO, JAMSHEDPUR-831009 | |
| Telephone No. : | Fax No. : |
| Email ID : | |
| Membership No. : | |

| | |
|---------------------------------------------------------------------------|--------------------------------------------|
| Name of Sample / Hazardous Waste : ETP Sludge | |
| Description of Sample When Received : Solid | |
| Sample Reference Number : 102/20-21 | Sample Received Date : 0 8 . 0 9 . 2 0 2 0 |
| Sample Drawn By : | |
| Waste Category: Schedule-I, Cat. -35.3 | |
| RAW Material List / Process Details Enclosed <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> NO |
| MSDS Provided by Client <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> NO |
| Sample Registration No: RWMP/LAB/CA/102/20-21 | |
| Confirmation Date : 1 5 . 0 9 . 2 0 2 0 | Confirmation by: MBD Dept., RWMP |

| | |
|-------------------------------------------|--|
| Analysis start date : 1 5 . 0 9 . 2 0 2 0 | |
| Testing Period : 09 Days | |

Authorized Signatory
(Rajkumar Parmar - Dy. Manager)

Page 1 of 6

Rev. No. 01/ 04.08.2018

Site Address :

Ramky Enviro Engineers Limited

Unit : Rajasthan Waste Management Project, TSDF-Udaipur

Survey No- 1018/13, Village-Gudli,

Zinc Smelter Chauraha, Debari Railway Station Road,

Udaipur - 313024 (Raj.) Tel. : +91-294-2802032, 2658253-54

Email : rwmpr@ramky.com

MANAGING HAZARDOUS WASTE



Corporate Office :

Ramky Enviro Engineers Ltd.

Ramky Grandiose - Floors - 12,13, Ramky Towers Complex

Gachibowli, Hyderabad - 500032

Ph. No.: 040-23015000, Fax No:040-23015100

E-mail : info@ramky.com Website : www.ramky.com

REEL CIN:U74140AP1994PLC018833



Accredited Laboratory
Certificate No.TC-5729



Ramky Enviro Engineers Limited

Unit :- Rajasthan Waste Management Project, TSDF-Udaipur

ISO 9001:2008 | ISO 14001:2004 | OHSAS 18001:2007 | IMS PAS 99:2066
C No ES570987 | C No EMS 570797 | C No OHS 570500 | C No IM 570907

COMPREHENSIVE ANALYSIS REPORT

| | | | | | | | | | | | |
|------------|-----------------------|-------------|---|---|---|---|---|---|---|---|---|
| Report No. | RWMP/Lab/CA/102/20-21 | Report Date | 2 | 3 | . | 0 | 9 | . | 2 | 0 | 2 |
|------------|-----------------------|-------------|---|---|---|---|---|---|---|---|---|

| Sr. No. | Particulars | Observation | Remarks (If any) |
|---------|------------------------------------------------------------|------------------------------------------------------------------|------------------|
| 1* | Does the waste have strong Odor? | <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | |
| 2* | Does the waste give fumes exposed to the atmosphere? | <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | |
| 3* | Does the waste react with water? | <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | |
| 4* | Is the waste incompatible with any material? If so specify | <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | |

Towards sustainable growth

TEST REPORT

| Sr. No. | Parameter | Unit | Method | Result | CPCB limit for direct landfill disposal |
|---------|---------------------------------|-------|-------------------------------------------|--------|-----------------------------------------|
| 5* | Physical State | - | - | Solid | Not Specified |
| 6* | Color | - | - | Black | Not Specified |
| 7* | Texture | - | - | Wet | Not Specified |
| 8 | PFLT (Paint Filter Liquid Test) | - | USEPA 1998, SW-846; 9095A | Pass | Pass |
| 9 | Bulk Density | g/cc | APHA 23 rd Edition; 2710 F | 1.22 | Not Specified |
| 10 | Calorific Value | cal/g | IS:1350 Part II - 1970 | 385.40 | <2500 |
| 11* | Flash Point | °C | USEPA 1998, SW 846; 1020 A | >60 | >60 |
| 12 | Moisture Content | % | IS 326 (Part 21): 2001 | NA | Not Specified |
| 13 | LOD @ 105°C | % | APHA 23 rd Edition, 2017; 2540 | 66.59 | Not Specified |
| 14 | LOI @ 550°C | % | APHA 23 rd Edition, 2017; 2540 | 7.32 | <20 |
| 15* | Ash Content @ 900°C | % | APHA 23 rd Edition, 2017; 2540 | 91.48 | Not Specified |

Authorized Signatory
(Rajkumar Parmar - Dy. Manager)

Page 2 of 6

Rev. No. 01/ 04.08.2018

Site Address :

Ramky Enviro Engineers Limited
Unit : Rajasthan Waste Management Project, TSDF-Udaipur
Survey No- 1018/13, Village-Gudli,
Zinc Smelter Chauraha, Debari Railway Station Road,
Udaipur - 313024 (Raj.) Tel. : +91-294-2802032, 2658253-54
Email : rwmp@ramky.com

MANAGING HAZARDOUS WASTE



Corporate Office :

Ramky Enviro Engineers Ltd.
Ramky Grandiose - Floors - 12,13, Ramky Towers Complex
Gachibowli, Hyderabad - 500032
Ph. No.: 040-23015000, Fax No:040-23015100
E-mail : info@ramky.com Website : www.ramky.com
REEL CIN:U74140AP1994PLC018833



Accredited Laboratory
Certificate No. TC-5729



Ramky Enviro Engineers Limited

Unit :- Rajasthan Waste Management Project, TSDF-Udaipur

COMPREHENSIVE ANALYSIS REPORT

IS 9001:2015 | ISO 14001:2015 | ISO 45001:2018 | IMS PAS 99:2066
C No FSC/1997 | C No EMS 370757 | C No OHS 370500 | C No IM 570907

| | | | | | | | | | | | |
|------------|-----------------------|-------------|---|---|---|---|---|---|---|---|---|
| Report No. | RWMP/Lab/CA/102/20-21 | Report Date | 2 | 3 | . | 0 | 9 | . | 2 | 0 | 2 |
|------------|-----------------------|-------------|---|---|---|---|---|---|---|---|---|

| Sr. No. | Parameter | Unit | Method | Result | CPCB limit for direct landfill disposal |
|---------|--------------------------------------------|-------|-----------------------------------------------------------------------|-----------|-----------------------------------------|
| 16 | pH (At Room Temperature) | - | USEPA 1998, SW-846; 9045 C | 8.46 | 4 -12 |
| 17 | Chloride as Cl ⁻ | mg/kg | APHA 23 rd Edition; 4500 SO ₄ ²⁻ - E | 3610.67 | Not Specified |
| 18* | Nitrate as NO ₃ ⁻ | mg/kg | APHA 23 rd Edition; 4500 NO ₃ ⁻ - B | 5.04 | <30 |
| 19 | Sulphate as SO ₄ ²⁻ | mg/kg | USEPA 1998, SW-846; 9253 | 217.47 | Not Specified |
| 20* | Fluorides as F ⁻ | mg/kg | APHA 23 rd Edition; 4500 F ⁻ - D | ND | Not Specified |
| 21* | Phosphate as PO ₄ ³⁻ | mg/kg | APHA 23 rd Edition; 4500 PO ₄ ³⁻ - E | 15.12 | Not Specified |
| 22* | Specific Gravity | g/cc | APHA 23 rd Edition; 2710 F | NA | Not Specified |
| 23* | Organic Halogens | mg/kg | SW-846; 5050 & 9253 | ND | Not Specified |
| 24* | Reactive Cyanide as HCN | mg/kg | USEPA 1998, SW-846; 9014 | <1.0 | <250 |
| 25* | Reactive Sulphide as H ₂ S | mg/kg | USEPA 1998, SW-846; 9034 | <10.0 | <500 |
| 26* | Carbon | % | CHNS Analyzer | NA | Not Specified |
| 27* | Hydrogen | % | CHNS Analyzer | NA | Not Specified |
| 28* | Nitrogen | % | CHNS Analyzer | NA | Not Specified |
| 29* | Sulphur | % | CHNS Analyzer | NA | Not Specified |
| 30 | Copper as Cu- Total | mg/kg | USEPA 1998, SW-846; 7210 | 122.10 | Not Specified |
| 31 | Total Chromium as Cr- Total | mg/kg | USEPA 1998, SW-846; 7190 | 108.57 | Not Specified |
| 32 | Iron as Fe- Total | mg/kg | USEPA 1998, SW-846; 7380 | 217944.90 | Not Specified |
| 33 | Lead as Pb- Total | mg/kg | USEPA 1998, SW-846; 7420 | 93.47 | Not Specified |
| 34 | Manganese as Mn - Total | mg/kg | USEPA 1998, SW-846; 7460 | 1495.41 | Not Specified |

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Page 3 of 6

Rev. No. 01/ 04.08.2018

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Email : nwmp@ramky.com

MANAGING HAZARDOUS WASTE



Corporate Office :

Ramky Enviro Engineers Ltd.

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Gachibowli, Hyderabad - 500032
Ph. No.: 040-23015000, Fax No: 040-23015100
E-mail : info@ramky.com Website : www.ramky.com
REEL CIN:U74140AP1994PLC018833



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Unit :- Rajasthan Waste Management Project, TSDF-Udaipur

ISO 9001:2008 | ISO 14001:2004 | OHSAS 18001:2007 | IMS PAS 99:2066
C No. FS570987 | C No. EMS-570787 | C No. OHS-570500 | C No. IM-570907

COMPREHENSIVE ANALYSIS REPORT

Towards sustainable growth

| | | | | | | | | | | | | |
|------------|-----------------------|-------------|---|---|---|---|---|---|---|---|---|---|
| Report No. | RWMP/Lab/CA/102/20-21 | Report Date | 2 | 3 | . | 0 | 9 | . | 2 | 0 | 2 | 0 |
|------------|-----------------------|-------------|---|---|---|---|---|---|---|---|---|---|

| Sr. No. | Parameter | Unit | Method | Result | CPCB limit for direct landfill disposal |
|-----------------------------------------------------------|-----------------------------------------|-------|---------------------------------------------|---------|----------------------------------------------|
| 35 | Nickel as Ni- Total | mg/kg | USEPA 1998, SW-846; 7520 | 440.62 | Not Specified |
| 36 | Zinc as Zn- Total | mg/kg | USEPA 1998, SW-846; 7950 | 2053.10 | Not Specified |
| 37* | Cobalt as Co- Total | mg/kg | USEPA 1998, SW-846; 7200 | 13.52 | Not Specified |
| 38 | Cadmium as Cd- Total | mg/kg | USEPA 1998, SW-846; 7130 | 12.43 | Not Specified |
| (TCLP) Toxicity Characteristics Leaching Procedure | | | | | |
| 39* | Arsenic as As | mg/L | USEPA 1998, SW-846; 7061 A | NA | <1 |
| 40 | Cadmium as Cd | mg/L | USEPA 1998, SW-846; 7130 | BDL | <0.2 |
| 41 | Total Chromium as Cr | mg/L | USEPA 1998, SW-846; 7190 | BDL | Not Specified |
| 42* | Hexavalent Chromium as Cr ⁶⁺ | mg/L | APHA 23 rd Edi., 2017: 3500 Cr B | <0.1 | <0.5 |
| 43* | Cobalt as Co | mg/L | USEPA 1998, SW-846; 7200 | BDL | Not Specified |
| 44 | Copper as Cu | mg/L | USEPA 1998, SW-846; 7210 | BDL | <10 |
| 45 | Iron as Fe | mg/L | USEPA 1998, SW-846; 7380 | 1.940 | <3 |
| 46 | Lead as Pb | mg/L | USEPA 1998, SW-846; 7420 | 0.074 | <2 |
| 47 | Manganese as Mn | mg/L | USEPA 1998, SW-846; 7460 | 0.066 | Not Specified |
| 48 | Nickel as Ni | mg/L | USEPA 1998, SW-846; 7520 | 0.049 | <3 |
| 49 | Zinc as Zn | mg/L | USEPA 1998, SW-846; 7950 | 0.052 | <10 |
| (WLT) Water Leaching Testing | | | | | CPCB/HAZWAMS /TSDF Protocol/2010-2011 |
| 50* | Arsenic as As | mg/L | USEPA 1998, SW-846; 7061 A | NA | <1.0 |
| 51* | Cadmium as Cd | mg/L | APHA 23 rd Edition, 3111 B | 0.069 | <0.2 |
| 52* | Total Chromium as Cr | mg/L | APHA 23 rd Edition, 3111 B | BDL | Not Specified |

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Page 4 of 6

Rev. No. 01/ 04.08.2018

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C No FS570987 | C No EMS 570797 | C No OHS 570500 | C No IM 570907

COMPREHENSIVE ANALYSIS REPORT

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|------------|-----------------------|-------------|---|---|---|---|---|---|---|---|---|
| Report No. | RWMP/Lab/CA/102/20-21 | Report Date | 2 | 3 | . | 0 | 9 | . | 2 | 0 | 2 |
|------------|-----------------------|-------------|---|---|---|---|---|---|---|---|---|

| | | | | | |
|-----|-----------------------------------------|------|---------------------------------------------|-------|---------------|
| 53* | Hexavalent Chromium as Cr ⁶⁺ | mg/L | APHA 23 rd Edi., 2017: 3500 Cr B | <0.1 | <0.5 |
| 54* | Cobalt as Co | mg/L | APHA 23 rd Edition, 3111 B | BDL | Not Specified |
| 55* | Copper as Cu | mg/L | APHA 23 rd Edition, 3111 B | 0.008 | <10 |
| 56* | Iron as Fe | mg/L | APHA 23 rd Edition, 3111 B | 1.920 | <3 |
| 57* | Lead as Pb | mg/L | APHA 23 rd Edition, 3111 B | 0.072 | <2 |
| 58* | Manganese as Mn | mg/L | APHA 23 rd Edition, 3111 B | 0.063 | Not Specified |
| 59* | Nickel as Ni | mg/L | APHA 23 rd Edition, 3111 B | 0.048 | <3 |
| 60* | Zinc as Zn | mg/L | APHA 23 rd Edition, 3111 B | 0.049 | <10 |

Towards sustainable growth

Safety Instructions for Handling of Hazardous Waste (if any) -

Use PPE's during handling of ETP Sludge.

ABBREVIATIONS

| | |
|---------------------|---------------------------------------------------------------------------------------------------|
| CPCB | - Central Pollution Control Board |
| SW 846 | - Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA, 1998 |
| Std. Methods | - Standard Methods for the Examination of Water & Wastewater, APHA 23 rd Edition, 2017 |
| TCLP | - Toxicity Characteristic Leaching Procedure |
| WLT | - Water Leaching Testing |
| LOD | - Loss on Drying |
| LOI | - Loss on Ignition |
| NA | - Not Applicable |
| ND | - Not Detected |
| BDL | - Below Detectable Limit |
| Y | - Yes |
| N | - No |

"The tests marked with an * are not accredited by NABL"

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Page 5 of 6

Rev. No. 01/ 04.08.2018

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C No FS570987 | C No EMS 570797 | C No OHS 570500 | C No IM 570907

COMPREHENSIVE ANALYSIS REPORT

Towards sustainable growth

| | | | | | | | | | | | |
|------------|-----------------------|-------------|---|---|---|---|---|---|---|---|---|
| Report No. | RWMP/Lab/CA/102/20-21 | Report Date | 2 | 3 | . | 0 | 9 | . | 2 | 0 | 2 |
|------------|-----------------------|-------------|---|---|---|---|---|---|---|---|---|

- Inland Surface discharge water standard Applicable.

TERMS AND CONDITIONS

1. The analysis report refers only to the 'as received' sample of waste
2. The report cannot be produced in part or in full without the permission of Rajasthan Waste Management Project
3. In the absence of specific request from the customer, RWMP follows National/International standards specifications for conducting the tests. Alternatively, in the absence of these methods, RWMP shall follow the operating procedures developed by RWMP.
4. The laboratory, normally, will not offer any opinion/advise or recommendation with respect to the suitability or otherwise of the sample for any application or use. Conformities to a specification or Act will be mentioned as per the Act/specification, if required.
5. Under no circumstances RWMP accepts any liability or loss or damage caused by use or misuse of the test report. Liability is limited to the testing fee charged, in case of proven negligence by the laboratory.
6. RWMP shall not assume any responsibility for variation in test results of samples kept on hold for want of clarification.
7. Client may visit (If desired) our laboratory to witness the related tests.
8. This Test report is valid for two years from the date of issue of report, if there is no change in processes, raw materials etc.

Disposal Pathway/Opinions/Interpretations

Direct Landfill

END OF REPORT

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Page 6 of 6

Rev. No. 01/ 04.08.2018

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Corporate Office :
Ramky Enviro Engineers Ltd.



Ramky Grandline, Floor-10/12, Dimple Tower, Connaught Place, New Delhi-110028
Rajkumbh, Hyderabad-500022



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COMPREHENSIVE ANALYSIS REPORT

Towards sustainable growth

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|------------|----------------------|-------------|---|---|---|---|---|---|---|---|---|
| Report No. | RWMP/Lab/CA/99/20-21 | Report Date | 2 | 3 | . | 0 | 9 | . | 2 | 0 | 2 |
|------------|----------------------|-------------|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | |
|-----------------|-------------------------------------------------|--|--|--|--|---------|--|--|--|--|--|
| Name of Client | M/s. TATA STEEL LTD. | | | | | | | | | | |
| Contact Details | - | | | | | | | | | | |
| | CRM COMPLEX BARA, PO: AGRICO, JAMSHEDPUR-831009 | | | | | | | | | | |
| Telephone No. | | | | | | Fax No. | | | | | |
| Email ID | | | | | | | | | | | |
| Membership No. | - | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|----------------------------------------------|--------------------------------|---|---|----------------------|---|----------------------------------------|---|---|---|---|----------------------------------|---|---|---|
| Name of Sample / Hazardous Waste | Wastes/Residues Containing Oil | | | | | | | | | | | | | |
| Description of Sample When Received | Solid | | | | | | | | | | | | | |
| Sample Reference Number | 99/20-21 | | | Sample Received Date | 0 | 8 | . | 0 | 9 | . | 2 | 0 | 2 | 0 |
| Sample Drawn By | | | | | | | | | | | | | | |
| Waste Category: | Schedule-I, Cat. - | | | | | | | | | | | | | |
| RAW Material List / Process Details Enclosed | <input type="checkbox"/> Yes | | | | | <input checked="" type="checkbox"/> NO | | | | | | | | |
| MSDS Provided by Client | <input type="checkbox"/> Yes | | | | | <input checked="" type="checkbox"/> NO | | | | | | | | |
| Sample Registration No: | RWMP/LAB/CA/99/20-21 | | | | | | | | | | | | | |
| Confirmation Date | 1 | 5 | . | 0 | 9 | . | 2 | 0 | 2 | 0 | Confirmation by: MBD Dept., RWMP | | | |

| | | | | | | | | | | | | | |
|---------------------|---------|---|---|---|---|---|---|---|---|---|--|--|--|
| Analysis start date | 1 | 5 | . | 0 | 9 | . | 2 | 0 | 2 | 0 | | | |
| Testing Period | 09 Days | | | | | | | | | | | | |

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Page 1 of 6

Rev. No. 01/ 04.08.2018

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| Report No. | RWMP/Lab/CA/99/20-21 | Report Date | 2 | 3 | . | 0 | 9 | . | 2 | 0 | 2 | 0 |
|------------|----------------------|-------------|---|---|---|---|---|---|---|---|---|---|

| Sr. No. | Particulars | Observation | Remarks (If any) |
|---------|------------------------------------------------------------|------------------------------------------------------------------|------------------|
| 1* | Does the waste have strong Odor? | <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | |
| 2* | Does the waste give fumes exposed to the atmosphere? | <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | |
| 3* | Does the waste react with water? | <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | |
| 4* | Is the waste incompatible with any material? If so specify | <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | |

Towards sustainable growth

TEST REPORT

| Sr. No. | Parameter | Unit | Method | Result | CPCB limit for direct landfill disposal |
|---------|---------------------------------|-------|-------------------------------------------|----------------|-----------------------------------------|
| 5* | Physical State | - | - | Solid | Not Specified |
| 6* | Color | - | - | Black | Not Specified |
| 7* | Texture | - | - | Wet | Not Specified |
| 8 | PFLT (Paint Filter Liquid Test) | - | USEPA 1998, SW-846; 9095A | Pass | Pass |
| 9 | Bulk Density | g/cc | APHA 23 rd Edition; 2710 F | 0.84 | Not Specified |
| 10 | Calorific Value | cal/g | IS:1350 Part II - 1970 | 8237.32 | <2500 |
| 11* | Flash Point | °C | USEPA 1998, SW 846; 1020 A | >60 | >60 |
| 12 | Moisture Content | % | IS 326 (Part 21): 2001 | NA | Not Specified |
| 13 | LOD @ 105°C | % | APHA 23 rd Edition, 2017; 2540 | 13.55 | Not Specified |
| 14 | LOI @ 550°C | % | APHA 23 rd Edition, 2017; 2540 | 83.51 | <20 |
| 15* | Ash Content @ 900°C | % | APHA 23 rd Edition, 2017; 2540 | 16.20 | Not Specified |

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Page 2 of 6

Rev. No. 01/ 04.08.2018

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COMPREHENSIVE ANALYSIS REPORT

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|------------|----------------------|-------------|---|---|---|---|---|---|---|---|---|
| Report No. | RWMP/Lab/CA/99/20-21 | Report Date | 2 | 3 | . | 0 | 9 | . | 2 | 0 | 2 |
|------------|----------------------|-------------|---|---|---|---|---|---|---|---|---|

| Sr. No. | Parameter | Unit | Method | Result | CPCB limit for direct landfill disposal |
|---------|--------------------------------------------|-------|-----------------------------------------------------------------------|---------|-----------------------------------------|
| 16 | pH (At Room Temperature) | - | USEPA 1998, SW-846; 9045 C | 6.89 | 4 -12 |
| 17 | Chloride as Cl ⁻ | mg/kg | APHA 23 rd Edition; 4500 SO ₄ ²⁻ - E | 307.30 | Not Specified |
| 18* | Nitrate as NO ₃ ⁻ | mg/kg | APHA 23 rd Edition, 4500 NO ₃ ⁻ - B | 6.37 | <30 |
| 19 | Sulphate as SO ₄ ²⁻ | mg/kg | USEPA 1998, SW-846; 9253 | 224.15 | Not Specified |
| 20* | Fluorides as F ⁻ | mg/kg | APHA 23 rd Edition; 4500 F ⁻ - D | ND | Not Specified |
| 21* | Phosphate as PO ₄ ³⁻ | mg/kg | APHA 23 rd Edition; 4500 PO ₄ ³⁻ - E | 3.18 | Not Specified |
| 22* | Specific Gravity | g/cc | APHA 23 rd Edition; 2710 F | NA | Not Specified |
| 23* | Organic Halogens | mg/kg | SW-846; 5050 & 9253 | 1232.34 | Not Specified |
| 24* | Reactive Cyanide as HCN | mg/kg | USEPA 1998, SW-846; 9014 | <1.0 | <250 |
| 25* | Reactive Sulphide as H ₂ S | mg/kg | USEPA 1998, SW-846; 9034 | <10.0 | <500 |
| 26* | Carbon | % | CHNS Analyzer | NA | Not Specified |
| 27* | Hydrogen | % | CHNS Analyzer | NA | Not Specified |
| 28* | Nitrogen | % | CHNS Analyzer | NA | Not Specified |
| 29* | Sulphur | % | CHNS Analyzer | NA | Not Specified |
| 30 | Copper as Cu- Total | mg/kg | USEPA 1998, SW-846; 7210 | NA | Not Specified |
| 31 | Total Chromium as Cr- Total | mg/kg | USEPA 1998, SW-846; 7190 | NA | Not Specified |
| 32 | Iron as Fe- Total | mg/kg | USEPA 1998, SW-846; 7380 | NA | Not Specified |
| 33 | Lead as Pb- Total | mg/kg | USEPA 1998, SW-846; 7420 | NA | Not Specified |
| 34 | Manganese as Mn - Total | mg/kg | USEPA 1998, SW-846; 7460 | NA | Not Specified |

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Page 3 of 6

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COMPREHENSIVE ANALYSIS REPORT

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

| Sr. No. | Parameter | Unit | Method | Result | CPCB limit for direct landfill disposal |
|-----------------------------------------------------------|-----------------------------------------|-------|---------------------------------------------|---------------|-----------------------------------------------|
| 35 | Nickel as Ni- Total | mg/kg | USEPA 1998, SW-846; 7520 | NA | Not Specified |
| 36 | Zinc as Zn- Total | mg/kg | USEPA 1998, SW-846; 7950 | NA | Not Specified |
| 37* | Cobalt as Co- Total | mg/kg | USEPA 1998, SW-846; 7200 | NA | Not Specified |
| 38 | Cadmium as Cd- Total | mg/kg | USEPA 1998, SW-846; 7130 | NA | Not Specified |
| (TCLP) Toxicity Characteristics Leaching Procedure | | | | | |
| 39* | Arsenic as As | mg/L | USEPA 1998, SW-846; 7061 A | NA | <1 |
| 40 | Cadmium as Cd | mg/L | USEPA 1998, SW-846; 7130 | 0.089 | <0.2 |
| 41 | Total Chromium as Cr | mg/L | USEPA 1998, SW-846; 7190 | BDL | Not Specified |
| 42* | Hexavalent Chromium as Cr ⁶⁺ | mg/L | APHA 23 rd Edi., 2017: 3500 Cr B | <0.1 | <0.5 |
| 43* | Cobalt as Co | mg/L | USEPA 1998, SW-846; 7200 | 0.009 | Not Specified |
| 44 | Copper as Cu | mg/L | USEPA 1998, SW-846; 7210 | BDL | <10 |
| 45 | Iron as Fe | mg/L | USEPA 1998, SW-846; 7380 | 69.230 | <3 |
| 46 | Lead as Pb | mg/L | USEPA 1998, SW-846; 7420 | 0.132 | <2 |
| 47 | Manganese as Mn | mg/L | USEPA 1998, SW-846; 7460 | 1.112 | Not Specified |
| 48 | Nickel as Ni | mg/L | USEPA 1998, SW-846; 7520 | 2.578 | <3 |
| 49 | Zinc as Zn | mg/L | USEPA 1998, SW-846; 7950 | 0.821 | <10 |
| (WLT) Water Leaching Testing | | | | | CPCB/HAZWAMS /TSDF Protocol/ 2010-2011 |
| 50* | Arsenic as As | mg/L | USEPA 1998, SW-846; 7061 A | NA | <1.0 |
| 51* | Cadmium as Cd | mg/L | APHA 23 rd Edition, 3111 B | 0.068 | <0.2 |
| 52* | Total Chromium as Cr | mg/L | APHA 23 rd Edition, 3111 B | BDL | Not Specified |

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Page 4 of 6

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

| | | | | | |
|-----|-----------------------------------------|------|---------------------------------------------|---------------|---------------|
| 53* | Hexavalent Chromium as Cr ⁶⁺ | mg/L | APHA 23 rd Edi., 2017: 3500 Cr B | <0.1 | <0.5 |
| 54* | Cobalt as Co | mg/L | APHA 23 rd Edition, 3111 B | 0.006 | Not Specified |
| 55* | Copper as Cu | mg/L | APHA 23 rd Edition, 3111 B | BDL | <10 |
| 56* | Iron as Fe | mg/L | APHA 23 rd Edition, 3111 B | 59.850 | <3 |
| 57* | Lead as Pb | mg/L | APHA 23 rd Edition, 3111 B | 0.126 | <2 |
| 58* | Manganese as Mn | mg/L | APHA 23 rd Edition, 3111 B | 1.002 | Not Specified |
| 59* | Nickel as Ni | mg/L | APHA 23 rd Edition, 3111 B | 2.501 | <3 |
| 60* | Zinc as Zn | mg/L | APHA 23 rd Edition, 3111 B | 0.677 | <10 |

Safety Instructions for Handling of Hazardous Waste (if any) -

Use PPE's during handling of Wastes/Residues Containing Oil.

ABBREVIATIONS

| | |
|---------------------|---------------------------------------------------------------------------------------------------|
| CPCB | - Central Pollution Control Board |
| SW 846 | - Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA, 1998 |
| Std. Methods | - Standard Methods for the Examination of Water & Wastewater, APHA 23 rd Edition, 2017 |
| TCLP | - Toxicity Characteristic Leaching Procedure (Carried out in Ash Sample) |
| WLT | - Water Leaching Testing (Carried out in Ash Sample) |
| LOD | - Loss on Drying |
| LOI | - Loss on Ignition |
| NA | - Not Applicable |
| ND | - Not Detected |
| BDL | - Below Detectable Limit |
| Y | - Yes |
| N | - No |

"The tests marked with an * are not accredited by NABL"

Authorized Signatory
(Rajkumar Parmar - Dy. Manager)

Page 5 of 6

Rev. No. 01/ 04.08.2018

Site Address :
Ramky Enviro Engineers Limited
Unit : Rajasthan Waste Management Project, TSDF-Udaipur
Survey No- 1018/13, Village-Gudli,
Zinc Smelter Chauraha, Debari Railway Station Road,
Udaipur - 313024 (Raj.) Tel. : +91-294-2802032, 2658253-54
Email : rwmp@ramky.com

MANAGING HAZARDOUS WASTE



Corporate Office :
Ramky Enviro Engineers Ltd.
Ramky Grandiose - Floors - 12,13, Ramky Towers Complex
Gachibowli, Hyderabad - 500032
Ph. No.: 040-23015000, Fax No:040-23015100
E-mail : info@ramky.com Website : www.ramky.com
REEL CIN:U74140AP1994PLC018833



Accredited Laboratory
Certificate No.TC-5729



Ramky Enviro Engineers Limited

Unit :- Rajasthan Waste Management Project, TSDF-Udaipur

ISO 9001:2008 | ISO 14001:2004 | OHSAS 18001:2007 | IMS PAS 99:2006
C No FS570987 | C No EMS 570797 | C No OHS 570500 | C No IM 570907

COMPREHENSIVE ANALYSIS REPORT

| | | | | | | | | | | | |
|------------|----------------------|-------------|---|---|---|---|---|---|---|---|---|
| Report No. | RWMP/Lab/CA/99/20-21 | Report Date | 2 | 3 | . | 0 | 9 | . | 2 | 0 | 2 |
|------------|----------------------|-------------|---|---|---|---|---|---|---|---|---|

- Inland Surface discharge water standard Applicable.

TERMS AND CONDITIONS

1. The analysis report refers only to the 'as received' sample of waste
2. The report cannot be produced in part or in full without the permission of Rajasthan Waste Management Project
3. In the absence of specific request from the customer, RWMP follows National/International standards specifications for conducting the tests. Alternatively, in the absence of these methods, RWMP shall follow the operating procedures developed by RWMP.
4. The laboratory, normally, will not offer any opinion/advise or recommendation with respect to the suitability or otherwise of the sample for any application or use. Conformities to a specification or Act will be mentioned as per the Act/specification, if required.
5. Under no circumstances RWMP accepts any liability or loss or damage caused by use or misuse of the test report. Liability is limited to the testing fee charged, in case of proven negligence by the laboratory.
6. RWMP shall not assume any responsibility for variation in test results of samples kept on hold for want of clarification.
7. Client may visit (If desired) our laboratory to witness the related tests.
8. This Test report is valid for two years from the date of issue of report, if there is no change in processes, raw materials etc.

Disposal Pathway/Opinions/Interpretations

Incineration After Treatment

END OF REPORT

Authorized Signatory
(Rajkumar Parmar - Dy. Manager)

Page 6 of 6

Rev. No. 01/ 04.08.2018

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MANAGING HAZARDOUS WASTE



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REEL CIN:U74140AP1994PLC018833

Towards sustainable growth

LETTER NO.7/Plan 10 215/2016 अ०नि०(मु०का०नि०)-467
OFFICE OF THE CHIEF INSPECTOR OF FACTORIES, JHARKHAND, RANCHI.
LABOUR BUILDING, DORANDA, RANCHI-834002

From,
Chief Inspector of Factories, Jharkhand,
Ranchi.

To,
The occupier,
M/s Tata Steel Limited,
C.R.M. Complex, Bara
Jamshedpur.

Ranchi, Dated 14/03/18

Sub: Recommendation of On-site Emergency Plan of M/s Tata Steel Limited, C.R.M. Complex, Bara, Jamshedpur.

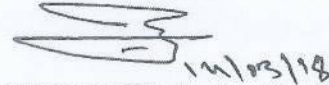
Sir,

The On-site Emergency plan Submitted by you through Inspector of Factories, Jamshedpur Circle no.-1, Jamshedpur have been examined and the same is recommended subject to the following conditions: -

1. Regular Mock-drill shall be carried out in the factory at least once in every year and a detailed report should be made available to the Chief Inspector of Factories, Jharkhand, Ranchi office
2. A detailed safety audit report conducted by an experienced outside agency shall be submitted along with details of health & safety policy of your factory.
3. The On- site Emergency plan will be up-dated and revised if there is any modification in the plant, process or industrial activity.
4. Adequate arrangement of medical/ relief facilities (first aid equipments etc.) should be provided and maintained in the emergency control room.
5. Telephone number of key persons to be noted and displayed in the central control room.

A copy of the recommended plan is enclosed herewith.

Yours Faithfully



Chief Inspector of Factories, Jharkhand,
Ranchi

Public hearing commitments and their compliance status for expansion of 0.3 MTPA to 0.8 MTPA EC
CRM Bara, Dated 08/05/2014

| SN | Name | Questions | Action Plan given in EIA | Present status of compliance | |
|--------------------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 01 | Shri Suresh Sonthalia President, Singhbhum Chamber of Commerce | <p>We welcome the expansion of the project. People will get employment. Region will be developed. Permission for expansion of plant should be granted. Company is doing good work in the region.</p> <p>No accident took place here for the last two to three years. It is also well appreciated that Tata Steel is spending a good amount on environment front. We welcome the decision of plant expansion.</p> | Focus will be made on environment compliance. | CRM Bara plant is running with a focus on environmental compliance. | |
| 02 | Shri Pavan Tiwari, Bhuiadih | We welcome the expansion of the project. It is a welcoming step that the company is expanding. But the management has to pay special attention for the development of surrounding region. Attention may be given on basic problems of local people. | CSR Committee has been formed and action plan is under preparation. ` | Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. | |
| 03. | Shri Bharat Vasani Vice-President, Singhbhum Chamber of Commerce | We welcome the expansion of the project. Whatever the plans are made by the company to ensure that there should not be any pollution effect on environment with expansion of plant. Company has to spend on environmental protection as per its plan so that the environment can be protected. | Action plan prepared and will be implemented accordingly. | For environment protection, 29.2 Cr spent as capital cost. Details are as below: | |
| | | | | Details | Capital Cost |
| | | | | Pollution control measures (WWTP, ARP, fume extraction systems, etc. | 12 |
| | | | | Provision of online environment monitoring equipment and display | 2.26 |
| | | | | Rejuvenation of water bodies | 6.94 |
| | | | | ARP environmental upgradation | 7.49 |
| | | | | PL rinse scrubber | 0.510 |
| Total capital cost(Cr.) | | 29.20 | | | |

Public hearing commitments and their compliance status for expansion of 0.3 MTPA to 0.8 MTPA EC
CRM Bara, Dated 08/05/2014

| | | | | |
|-----|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 04. | Shri Ramashray Prasad, INTUC | Company has to expand. Company should be developed. People should also get employment. Civic amenities should be developed in the surrounding area. Management should also focus and share information about how many permanent and temporary employees/ workers will be required. | Issues are being taken care under CSR activities. | Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. More than 50% employment has been given to local people. |
| 05. | Shri Dev Sharan Singh Govindpur | Employment opportunities will increase with the expansion of the plant. Employment should be provided to the citizens/ locals residing within 10 km radius. Infrastructural facilities like drinking water, medical facilities for good health and other basic amenities should be provided by the company. Special attention should be given on environment and pollution. | Various environment protection measures have been taken by the company in the plant as per environment norms. Other issues have been taken care by CSR activities. | <p>Various environment protection measures have been taken by the company such as:</p> <ul style="list-style-type: none"> • Fume extraction system including scrubber in pickling line. • Bag filter in shot blasting machine. • Roof-top ventilation system. • Water sprinkling and mechanized sweeping machine • Effluent treatment plants for the treatment of oily and acidic waste and • STP is installed and operational for treatment of domestic water. • Rejuvenation of water bodies • Green belt development in and around plant. <p>Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. More than 50% employment has been given to local people.</p> |

Public hearing commitments and their compliance status for expansion of 0.3 MTPA to 0.8 MTPA EC
CRM Bara, Dated 08/05/2014

| | | | | |
|-----|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 06. | Shri Sonaram Bothra | Employment should be provided to local unemployed people. Priority should also be given in employment for SC and ST people. Management should give attention on poor people. We are not provided any facility. | Local employment has been given on top priorities as per their skill during construction work. | More than 50% employment has been given to local people. |
| 07. | Shri Gunjan Yadav, Sitaramdera | Due to proposed expansion the traffic may increase. Cutting of trees may be involved. Development of green belt is recommended. Public pumps/ taps should be arranged in local areas by the company/ Unit. We will oppose the plant if water is not available. There is a tribal school in Babudih where 450 children study. Management should also pay attention on this. We are not against for the expansion of the plant. But at the same time company should also give attention on basic problems of local people. | Plantation has been done in & around premises (More than three thousand). Other issues have been considered in CSR activities. | <ul style="list-style-type: none"> Roads at the Bhuiyadih area are being widened. Other issues had been undertaken under CSR activities. Green belt at CRM Bara complex has been developed as per CPCB guidelines. Approx. 3.5 Ha area in and around plant is under plantation which is more than 33% of the plant area. We have planted 13235 no. of samplings in the above area till date. We have developed approx. 5m wide area of plantation around the plant as per CPCB guidelines. Density of plantation > 3000 plants/Ha which is more than CPCB guidelines. Public pumps/taps have been provided at Bhuiyadih and Babudih. |
| 08. | Shri Chandra Sekhar Mishra, President Housing Development Committee | We welcome the expansion of the project. The facilities which were provided by Tata Steel 20years back, are not made available today. The management should provide infrastructure facilities like electricity, water, medical, education etc. at least in 5 kms radius area instead of 10 kms radius. | Issues are taken care under CSR activities. | <ul style="list-style-type: none"> Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. |

Public hearing commitments and their compliance status for expansion of 0.3 MTPA to 0.8 MTPA EC
CRM Bara, Dated 08/05/2014

| | | | | |
|-----|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 09. | Shri Krishna Prasad Swarnakar, Babudih Basti | Babudih Basti is located in 1 km radius of the company. Waste is dumped by the plant in this area. Basic amenities should be provided to the citizens residing in 10 km radius. Pollution has increased a lot by which people are becoming sick. | Environment management plan under implementation will be strengthened for proposed expansion also. | Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. Various environment protection measures have been taken by the company such as: <ul style="list-style-type: none">• Fume extraction system including scrubber in pickling line.• Bag filter in shot blasting machine.• Roof-top ventilation system.• Water sprinkling and mechanized sweeping machine• Effluent treatment plants for the treatment of oily and acidic waste and• STP is installed and operational for treatment of domestic water.• Rejuvenation of water bodies• Green belt development in and around plant. |
|-----|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Public hearing commitments and their compliance status for expansion of 0.3 MTPA to 0.8 MTPA EC
CRM Bara, Dated 08/05/2014

| | | | | |
|-----|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10. | Shri Sudhir Singh, Secretary Singhbhum Chamber of Commerce | Expansion of plant is a good thing and we welcome the same. Sewage discharge is released without treatment into Kharkai and Swarnarekha rivers. This should be stopped immediately. Plant should be operated with pollution free environment. | Company will comply with CPCB norms | Various environment protection measures have been taken by the company such as: <ul style="list-style-type: none">• Effluent treatment plants for the treatment of oily and acidic waste and• STP is installed and operational for treatment of domestic water.• Rejuvenation of water bodies• Green belt development in and around plant.• Fume extraction system including scrubber in pickling line.• Bag filter in shot blasting machine.• Roof-top ventilation system.• Water sprinkling and mechanized sweeping machine are used for dust suppression. |
| 11. | Shri Kaushal Prasad | We welcome the expansion of the plant. Employment will be generated after the expansion. Our income will increase. Our living standards will also improve. Plant Management should also give attention on basic problems of local people. Drinking water, education, medical and training programmes for women for their self-development etc. should be provided. | Issues are taken care under CSR activities. Local employment has been given on top priorities as per their skill. | Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. More than 50% employment has been given to local people. |

Public hearing commitments and their compliance status for expansion of 0.3 MTPA to 0.8 MTPA EC
CRM Bara, Dated 08/05/2014

| | | | | |
|-----|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12. | Shri Navin Kumar Bagunnagar | Since Tata steel prefers global tender, contractors from other states will get their work with outside workers. This policy should not work out. The presentation shown by the company is fully false one. We are not opposing expansion of the plant, but expect that the quality of life of contract workers should also be improved. | Local area will be developed under CSR. | Basic needs such as Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. More than 50% employment has been given to local people. |
| 13. | Shri Shankar Soren Baridih | The entire area where plant is established belongs to Tribal. Management should aware and concentrate on the welfare of tribals. Training should be imparted to local youth. Facilities like water education, and health should be provided. If management gives attention on these issues, I don't have any objection for expansion of the plant. We are in favour of this plant. | A committee involving company and knowledgeable / qualified persons will be constituted to solve problems | Basic needs such as Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. |
| 14. | Shri Jeevan Kumar Sahu | I am in favour of expansion of the plant. Company has done a wonderful thing by afforestation work. Water, Electricity, Education and other works which will be beneficial for the public should be done. | CSR committee has been formed and action plan is under preparation. | Basic needs such as Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. |
| 15. | Shri Ram Sahni Babudih | Fishes (aquatic) are getting killed due to the acid water discharged from Tata Steel Company. River water is also contaminated leading to skin irritation. Polluted water should be controlled. Facilities like drinking water, education, electricity and medical facilities for health should be provided. | No wastewater is being discharged into the rivers. Environmental control measure has been already in place. | No wastewater is being discharged into the rivers. All the effluents generated in plant are treated at Effluent treatment plant and domestic waste is treated in Sewage treatment plant. Environmental control measure has been already in place. Basic needs are undertaken under CSR activities. |

Public hearing commitments and their compliance status for expansion of 0.3 MTPA to 0.8 MTPA EC
CRM Bara, Dated 08/05/2014

| | | | | |
|-----|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16. | Shri Goutam Lohar Bagunhatu | Water from the company is discharged in the river. This should be stopped. Employment is given to the outside people. Local people should get employment. Water, electricity, education and better medical facilities for good health should be provided. Nobody knows where women are being trained. | Wastewater treatment plant is already in place. No water discharge from our premises. Experts team study is under progress. | All the effluents generated in plant are treated at Effluent treatment plant and domestic waste is treated in Sewage treatment plant. Basic needs such as Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. |
| 17. | Shri P.N.Dixit President, Builders Association | Expansion of the plant should invariably take place. I have been observing and experiencing for the last 52 years that whatever work done by Tata Steel was for the welfare of local people. Plant expansion should take place by paying special attention on environment. | Environment control measure has been already in place. | Environment pollution control measures are already in place. Various environment protection measures have been taken by the company such as: <ul style="list-style-type: none">• Fume extraction system including scrubber in pickling line.• Bag filter in shot blasting machine.• Roof-top ventilation system.• Water sprinkling and mechanized sweeping machine• Effluent treatment plants for the treatment of oily and acidic waste and• STP is installed and operational for treatment of domestic water.• Rejuvenation of water bodies• Green belt development in and around plant. |

Public hearing commitments and their compliance status for expansion of 0.3 MTPA to 0.8 MTPA EC

CRM Bara, Dated 08/05/2014

| | | | | |
|-----|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 18. | Shri Vijay Khan | Most of the people from the region are in favour of the expansion of plant. The expectations of people from the company management are not fulfilled by the unit. Contract labourers of Tata group of companies are not getting medical facility in MGM Hospital. One ITI should be opened for the local youth. Water, Electricity, Technical arrangements for higher education, and other basic facilities should be taken care. I am in favour of expansion of the plant. | CSR committee has been formed and action plan is under preparation. | Basic needs such as Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. |
| 19. | Shri Beli Bodhanwala Social worker Jamshedpur | Here everybody wish for the expansion of the plant. I too want the same. Proper planning should be done for controlling pollution effects on environment. Local problems should be resolved under CSR. Attention should be paid for improvement of standard of living. | CSR committee has been formed and action plan is under preparation. | Local problems are being resolved under CSR. Basic needs such as Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. Environment pollution control measures are already in place. |
| 20. | Shri Ranjit Bhattarcharya , Jamshedpur | Acid water released from the unit should be avoided. Traffic will also be a problem which should also be addressed. I am in favour of expansion of the plant. | Wastewater treatment plant is already in place. No water discharge from our premises. Experts team study is under progress. | No acid water is discharged from the unit/plant. All the effluents generated in plant are treated at Effluent treatment plant and domestic waste is treated in Sewage treatment plant. Roads at the Bhuiyadih and other area are being widened to cater increased traffic load. |
| 21. | Shri Mahesh Santhalia, Jamshedpur | I am in favour of expansion of the plant. There should be control/ stoppage of discharge of polluted water from the plant. Drinking water facility should be provided for the local/ Basti people. Proper arrangement should be done to ensure that there is no pollution from the unit/plant. | Environment control measure has been already inplace. | Environment control measures are already in place. All the effluents generated in plant are treated at Effluent treatment plant and domestic waste is treated in Sewage treatment plant. Drinking water facility has been provided to local people. |
| 22. | Smt. Santoshi Devi Babudih | Water facility should be provided in Babudih Basti. Even if a Tap is arranged for the public in the road side will also help to some extent. | CSR committee has been formed and action plan is under preparation. | Water facility has been provided in Babudih Basti under CSR activities. |
| 23. | Shri Anand Bihari Dubey Bagunnagar | Earlier also Public Hearing was conducted here in the same place. Assurance was also given for solving / avoiding problems of local | A committee will be constituted with the company representatives | <ul style="list-style-type: none"> Local problems are being resolved under CSR. Basic needs such as Health, Sanitation (Domestic Toilets), |

Public hearing commitments and their compliance status for expansion of 0.3 MTPA to 0.8 MTPA EC

CRM Bara, Dated 08/05/2014

| | | | | |
|-----|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <p>people. The presentation which was shown by the management is fully false. There were five-five ponds here where this public hearing is being conducted. Now the ponds have been filled with slag. Due to this, the water levels at Bagunnagar, Bagunhatu, Babudih and Baridih Basti have gone down. There were thousands of trees. Ponds (Talab) were filled and all big-big trees were cut. The water levels here have gone down to 600-700 feet.</p> <p>Company management should arrange public water taps in the region. The polluted water from the company is directly sent to rivers. Outsiders have been provided works in the name of global tenders. I am not against the expansion of the plant. But the problems of the region should be given more concentration. A good school for the children, employment for the youth, drinking water in the surrounding areas, electricity, medical facilities, training for women for their self-employment, etc. should be provided. It should be ensured that there will not be any pollution impact on environment. There will be acute opposition if the management neglects the local problems and expands the plant.</p> | <p>considering view of local people. Efforts will be made to solve the problems in the surrounding areas. Special attention will be given for the community development activities. Direct and indirect employment opportunities will be provided.</p> | <p>Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd.</p> <ul style="list-style-type: none"> • Work for rejuvenation of ponds completed which also cater rain-water harvesting. • Green belt in and around plant has been developed. 10850 no. of samplings have been planted till date. • No polluted water is discharged from the unit/plant. All the effluents generated in plant are treated at Effluent treatment plant and domestic waste is treated in Sewage treatment plant. • More than 50% employment has been given to local people. |
| 24. | Shri Feroz Ali Khan Dhatakidi | I am in favour of the expansion of the plant. | | |
| 25. | Shri A.K.Srivatsava | We all want that the plant should be expanded. Management also should concentrate on the local problems. Chances will increase for improving employment opportunities with the expansion of the company during this recession period. | Employment opportunities will be provided. | More than 50% employment has been given to local people. |



EMD/C-38/135/15
September 16, 2015

Shubhanand Mukesh
Head Environment Management

District Commissioner, East Singhbhum
Office of the District Commissioner
JAMSHEDPUR- 831 001

Subject: Information of grant of Environmental Clearance for expansion of Cold Rolling Mill from 0.3 MTPA to 0.8 MTPA capacity at CRM Complex of Tata Steel Limited, Bara, Jamshedpur

Reference: MoEFCC Environmental Clearance letter no. J-11011/22/2013-IS II (I) dated September 15, 2015

Dear Sir,

This has reference to the captioned subject and cited reference. It is to inform that the Ministry of Environment, Forests and Climate Change (MoEFCC), Govt. of India vide their letter no. J-11011/22/2013-IS II (I) dated September 15, 2015 has accorded Environment Clearance to M/s Tata Steel Limited for expansion of Cold Rolling Mill from 0.3 to 0.8 MTPA at CRM Complex at Bara, Jamshedpur in accordance with the EIA Notification, 2006 of the Environment (Protection) Act, 1986.

It is also to inform that copy of the said Environmental Clearance letter may also be seen at Company's Website at <http://www.tatasteelindia.com/corporate-citizen/environment-compliance-reports.asp>.

Thanking you,

Warm regards,

For Tata Steel Limited

Shubhanand Mukesh

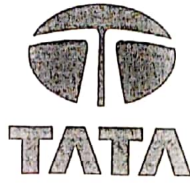
Head, Environment Management

Encl: Copy of Environmental Clearance letter

19/9/15

TATA STEEL LIMITED

Environment Management Jamshedpur 831 001 India
Tel 91 657 2424125 6644859 Fax 91 657 2427819 e-mail shubhanand.mukesh@tatasteel.com
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001
Tel 91 22 66658282 Fax 91 22 66657724
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com



Shubhanand Mukesh
Head Environment Management

EMD/C-38/137/15
September 16, 2015

Block Development Officer
East Singhbhum
JAMSHEDPUR- 831 001

Subject: Information of grant of Environmental Clearance for expansion of Cold Rolling Mill from 0.3 MTPA to 0.8 MTPA capacity at CRM Complex of Tata Steel Limited, Bara, Jamshedpur

Reference: MoEFCC Environmental Clearance letter no. J-11011/22/2013-IS II (I) dated September 15, 2015

Dear Sir,

19/9/15
This has reference to the captioned subject and cited reference. It is to inform that the Ministry of Environment, Forests and Climate Change (MoEFCC), Govt. of India vide their letter no. J-11011/22/2013-IS II (I) dated September 15, 2015 has accorded Environment Clearance to M/s Tata Steel Limited for expansion of Cold Rolling Mill from 0.3 to 0.8 MTPA at CRM Complex at Bara, Jamshedpur in accordance with the EIA Notification, 2006 of the Environment (Protection) Act, 1986.

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Thanking you,

Warm regards,
For Tata Steel Limited

Shubhanand Mukesh

Shubhanand Mukesh
Head, Environment Management

Encl: Copy of Environmental Clearance letter

TATA STEEL LIMITED

Environment Management Jamshedpur 831 001 India
Tel 91 657 2424125 6644859 Fax 91 657 2427819 e-mail shubhanand.mukesh@tatasteel.com
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001
Tel 91 22 66658282 Fax 91 22 66657724
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com



EMD/C-38/138/15
September 16, 2015

Shubhanand Mukesh
Head Environment Management

Special Officer

Jharkhand Notified Area Committee
East Singhbhum

JAMSHEDPUR- 831 001

Subject: Information of grant of Environmental Clearance for expansion of Cold Rolling Mill from 0.3 MTPA to 0.8 MTPA capacity at CRM Complex of Tata Steel Limited, Bara, Jamshedpur

Reference: MoEFCC Environmental Clearance letter no. J-11011/22/2013-IS II (I) dated September 15, 2015

Dear Sir,

This has reference to the captioned subject and cited reference. It is to inform that the Ministry of Environment, Forests and Climate Change (MoEFCC), Govt. of India vide their letter no. J-11011/22/2013-IS II (I) dated September 15, 2015 has accorded Environment Clearance to M/s Tata Steel Limited for expansion of Cold Rolling Mill from 0.3 to 0.8 MTPA at CRM Complex at Bara, Jamshedpur in accordance with the EIA Notification, 2006 of the Environment (Protection) Act, 1986.

It is also to inform that copy of the said Environmental Clearance letter may also be seen at Company's Website at <http://www.tatasteelindia.com/corporate-citizen/environment-compliance-reports.asp>.

Thanking you,

Warm regards,

For Tata Steel Limited

Shubhanand Mukesh

Head, Environment Management

Encl: Copy of Environmental Clearance letter

TATA STEEL LIMITED

Environment Management Jamshedpur 831 001 India
Tel 91 657 2424125 6644859 Fax 91 657 2427819 e-mail shubhanand.mukesh@tatasteel.com
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001
Tel 91 22 66658282 Fax 91 22 66657724
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

Online Display Board at CRM Bara



प्रभात खबर \ सिटी

TATA STEEL

सार्वजनिक सूचना

सर्वसाधारण को एतत् द्वारा यह सूचना दी जाती है कि भारत सरकार के पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय ने पर्यावरण (संरक्षण) अधिनियम, 1986 की पर्यावरण प्रभाव आकलन (ईआईए) अधिसूचना, 2006 के अनुरूप 15 सितंबर, 2015 के अपने पत्र संख्या J-11011/22/2013-II (I) के जरिए मेसर्स टाटा स्टील लिमिटेड को बारा, जमशेदपुर स्थित सीआरएम कॉम्प्लेक्स की कोल्ड रॉलिंग मिल के 0.3 मिलियन टन प्रतिवर्ष से 0.8 मिलियन टन प्रतिवर्ष तक के विस्तारीकरण के लिए पर्यावरण स्वीकृति (इन्वायर्नमेंट क्लियरेंस) प्रदान की है।

सर्वसाधारण को यह भी सूचित किया जाता है कि उपरोक्त पर्यावरण स्वीकृति पत्र की प्रति झारखंड राज्य प्रदूषण नियंत्रण बोर्ड, रौंघी के कार्यालय में उपलब्ध है और इसे पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय के वेबसाइट <http://moef.nic.in> पर जाकर देखा जा सकता है।

यह सार्वजनिक सूचना पर्यावरण स्वीकृति पत्र की सामान्य शर्त संख्या (xiv) के अनुपालन हेतु जारी की जा रही है।



Sun, 20 September 2015

epaper.prabhatkhabar.com/c/6607321

Annexure-9

OFFICE OF THE DIVISIONAL FOREST OFFICER, DHALBHUM FOREST DIVISION,
JAMSHEDPUR

Letter no. 1204

Dated : 17/4/08

To,
M/s Tata Steels Ltd.
Cold Rolling Mill Complex (CRMC)
Bara, East Singhbhum
Jamshedpur - 831001

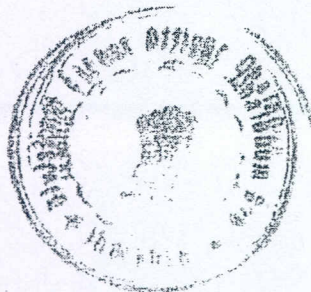
Sub: Impact of Cold Rolling Mill Complex, Bara on Dalma Reserve Forest

Ref: Your letter no. CPED/CRM-391/8231/2008 Dated 14-2-2008

Sir,

This is to inform that the site for proposed Cold Rolling Mill complex has been inspected by Shri. Anoop K.R., IFS, Attached Officer, Dhalbhum Forest Division. After studying the various environmental aspects of the establishment of the Cold Rolling Mill complex, he has opined that there is no direct apparent threat to Dalma Reserve Forest from the said complex.

Yours faithfully



Divisional Forest Officer
Dhalbhum Forest Division
Jamshedpur



कार्यालय : वन प्रमण्डल पदाधिकारी, जमशेदपुर वन प्रमण्डल, जमशेदपुर।

(सी० एच० एरिया, रोड नं० 1, जमशेदपुर - 831001)

दूरभाष संख्या- 0657-2231017, फ़ैक्स-0657-2231017, ई-मेल- dfo.jamshedpur@gmail.com

पत्रांक- 2614 / जमशेदपुर

दिनांक 02/9/2014

सेवा में,

श्री शुभानन्द मुकेश
हेड एनवाइरमेंट मैनेजमेंट
टाटा स्टील लिमिटेड
जमशेदपुर।

विषय :- Submission of application for clearance by the standing Committee of the National Board of Wild life under the Wild life (Protection) Act, 1972 for expansion of Cold Rolling Mill from 0.3 MTPA to 0.8 MTPA capacity of Tata Steel Limited at CRM Complex at Bara, Jamshedpur

प्रसंग:- आपका पत्रांक EMD/C-38/207/13 दिनांक 8.11.2013

महाशय,

उपर्युक्त विषयक प्रासंगिक पत्र के संदर्भ में सूचित करना है कि प्रस्तावित विस्तारीकरण स्थल का वन क्षेत्र पदाधिकारी, मानगो द्वारा स्थलीय निरीक्षण किया गया है जिसके अनुसार प्रस्तावित विस्तारीकरण स्थल से वन सीमा की दूरी निम्नवत है :-

| | |
|-----------|------------------|
| 1.84 K.M | North |
| 1.776 K.M | North North West |
| 4.0 K.M | East |
| 2.04 K.M | West |
| 8.00 K.M | South East |

यहाँ यह उल्लेखनीय है कि प्रस्तावित स्थल (बारा) वार्ड न011 जमशेदपुर अधिसूचित क्षेत्र समिति, खाता न0 52, नया प्लॉट न0 62(पी.), 63(पी.), 64(पी.) एवं 65(पी.) में अवस्थित है जो कि गैर वनभूमि है। कोल्ड मील के विस्तारीकरण से दलमा वन्य प्राणी आश्रयणी पर प्रभाव की संभावना नहीं है।

विश्वासभाजन
02/9/14

वन प्रमंडल पदाधिकारी
जमशेदपुर वन प्रमंडल,
जमशेदपुर