TSJ/EMD/C-38/016/25 30 May 2025

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 (October'2024 to March'2025) 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 **October'2024 to March'2025**. You are requested to kindly acknowledge the same and place in your records.

Thanking you

Yours faithfully,
For Tata Steel Limited

Utsav Kashyap

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

Your (Half Yearly Compliance Report) has been Submitted with following details	
Proposal No	IA/JH/IND/3455/2012
Compliance ID	128515950
Compliance Number(For Tracking)	EC/M/COMPLIANCE/128515950/2025
Reporting Year	2025
Reporting Period	01 Jun(01 Oct - 31 Mar)
Submission Date	30-05-2025
RO/SRO Name	Shri Senthil Kumar Sampath
RO/SRO Email	agmu156@ifs.nic.in
State	JHARKHAND
RO/SRO Office Address	Integrated Regional Offices, Ranchi

Note:- SMS and E-Mail has been sent to Shri Senthil Kumar Sampath, 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	112813503
Compliance Number(For Tracking)	EC/M/COMPLIANCE/112813503/2025
Reporting Year	2025
Reporting Period	01 Jun(01 Oct - 31 Mar)
Submission Date	30-05-2025
RO/SRO Name	Shri Senthil Kumar Sampath
RO/SRO Email	agmu156@ifs.nic.in
State	JHARKHAND
RO/SRO Office Address	Integrated Regional Offices, Ranchi

Note:- SMS and E-Mail has been sent to Shri Senthil Kumar Sampath, JHARKHAND with Notification to Project Proponent.

ENVIRONMENTAL CLEARANCE COMPLIANCE STATUS REPORT

April 2024 to March 2025

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: 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. 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.
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 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.**

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 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. Reports attached in **Annexure-3.** CRM Bara is ZED unit and not discharging any effluent outside premises. Moreover, there is no leachate generation at the site.
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. Waste analysis report is attached as **Annexure-4.**
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-5.**
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 in and around plant , which is more than 33% of the plant area.

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 The company is committed to enhancing the well-being of nearby villages through a range of socio-economic development activities with initiatives such as community development programs, educational programs, drinking water supply, Livelihood- Skill Development, sports, Rural Infrastructure and health care etc.
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-6**.
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 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 NOx are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Ranchi and the SPCB/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 Mar'25 is attached in **Annexure-3**.
iv	Industrial Wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E)	CRM Bara is not discharging effluent outside premises. Effluent treatment plant is installed for the treatment of wastewater. The treated water is

II. General Conditions:		
S.No.	**Compliance Conditions**	**Compliance Status**
	dated 19th May, 1993 and 31st December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose.	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 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.	Capital cost and recurring is being utilized judicially for Environmental & Pollution Control Measures and to implement the conditions stipulated by MoEF&CC as well as the State Government. Capital and recurring costs are spent on Environment Management measures such as WWTP, online emission monitoring, pollution control equipment, waste disposal, horticulture etc.
x	A copy of clearance letter shall be sent by the proponent to concerned Panchnyat, 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-7.** 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

II. General Conditions:		
S.No.	**Compliance Conditions**	**Compliance Status**
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, NOx (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 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-8.**
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 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. FY25 compliance report submitted via TSJ/EMD/C-38/216 /24 dated 27 Nov 2024**.**
xiii	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional office of the MoEFCC 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 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.	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-9.** 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	Financial closure and final approval of the project by Board of Tata Steel was done in April 2013.

II. General Conditions:		
S.No.	**Compliance Conditions**	**Compliance Status**
	date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	
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 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 March 2025

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

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. 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-10)**.
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.	Capital cost and recurring is being utilized judicially for Environmental & Pollution Control Measures and to implement the conditions stipulated by MoEF&CC as well as the State Government. Capital and recurring costs are spent on Environment Management measures such as WWTP, online emission monitoring, pollution control equipment, waste disposal, horticulture etc.

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.	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. 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. At any time, the emission level will not go beyond the prescribed standards.
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 Mar'25 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.	The following equipment are provided to control Air Pollution: 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. 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.
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 MoEFCC.

General Conditions:		
S.No	**Compliance Conditions**	**Compliance Status**
vii.	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. 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 The company is committed to enhancing the well-being of nearby villages through a range of socio-economic development activities with initiatives such as community development programs, educational programs, drinking water supply, Livelihood- Skill Development, sports, Rural Infrastructure and health care etc.
xiv.	The Regional Office at Bhubaneswar / CPCB / SPCB will monitor the stipulated conditions. A six-monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	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.

General Conditions:		
S.No	**Compliance Conditions**	**Compliance Status**
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-9.**
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.

Annexure-1

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

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

पत्रांक..... दिनांक.....

सेवा में,

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

विषयः— **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.**

प्रसंगः— 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 बन्य प्राणी प्रबंधन योजना को स्वीकृति प्रदान की गयी।

सूचनार्थ प्रेषित।

अनुलग्नकः—यथोक्त।
वन्यप्राणी प्रबंधन योजना
की एक प्रति संलग्न।

आपका विश्वासी
ह0/—
प्रधान मुख्य वन संरक्षक,
वन्य प्राणी एवं मुख्य वन्यप्राणी प्रतिपालक,
झारखण्ड, रांची।

ज्ञापांक.....दिनांक.....

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

ह0/—
प्रधान मुख्य वन संरक्षक,
वन्य प्राणी एवं मुख्य वन्यप्राणी प्रतिपालक,
झारखण्ड, रांची।

D:/mantu/letters

ज्ञापांक 1945 दिनांक 13.11.2017

प्रतिलिपिः— 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,
13/11/17 झारखण्ड, रांची।

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

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

24/2/23

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-GRAS

e-Challan

Finance Department, Goverment 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

J - 2042 92497

Net Payable Amount:- ₹ **20000000.00**

Two Crore Rupees And Zero Paisa 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

2498

Treasury Officer Signature is not reuqired.

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

ANNEXURE-I

Tata Steel Limited
Environmental Monitoring Report of CRM Bara
CRM BARA EFFLUENT QUALITY REPORT FROM APR 2024 to MAR 2025

	Parameter	Unit	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
ETP Treated	pH	-	7.17	7.42	7.98	7.88	7.8	7.96	7.7	7.8	7.2	7.5	7.6	7.0
	Total Suspended solids	mg/L	< 10	6	10	< 10	18	< 10	20.0	48.0	<10	18	13	28
	Oil & Grease	mg/L	0.8	1	1.2	1.2	1.4	1.2	3.20	0.60	1.00	1.4	1.2	1.6
	Hexavalent Chromium, Cr+6	mg/L	< 0.05	< 0.05	<0.05	< 0.05	< 0.05	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Biological Oxygen Demand, BOD	mg/L	7.0	6.0	6.0	6.0	5.0	9.0	4.0	5.0	3.0	5.0	10	6
	Chemical Oxygen Demand, COD	mg/L	39.0	30.0	18.0	46.0	21.0	40.0	15.0	17	13	13	33	20

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.

J. Nagarjuna Reddy

Sr. Manager
Monitoring and Analysis

Head
Environment Monitoring, Testing & Analysis (TSJ)

ANNEXURE-I

Tata Steel Limited

Environmental Monitoring Report of CRM Bara

CONTINOUS AMBIENT AIR QUALITY REPORT FOR CRM BARA FROM APR 2024 to MAR 2025

Sl. No.	Parameter	UoM	Standard	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
1	Particulate Matter (PM10)	$\mu g/m^3$	100	180.9	95.5	93.4	50.1	47.5	49.4	98.3	199.4	225.1	258.4	217.2	196.6
2	Particulate Matter (PM2.5)	$\mu g/m^3$	60	67.5	38.2	36.7	20.1	19.9	20.6	52.0	102.5	125.5	136.0	87.3	74.4
3	Sulphur Dioxide (SO2)	$\mu g/m^3$	80	33.4	24.7	25.4	29.3	26.2	24.6	24.6	25.5	24.1	44.1	59.2	61.8
4	Nitrogen Dioxide (NOx)	$\mu g/m^3$	80	38.7	17.9	18.8	14.2	11.6	9.3	11.6	17.1	53.4	61.3	55.6	54.4

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)

ANNEXURE-I

Tata Steel Limited
Environmental Monitoring Report of CRM Bara
AMBIENT AIR QUALITY REPORT FOR CRM BARA FROM APR 2024 to MAR 2025

Location	Parameter	UoM	Standard	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
NEAR DISPATCH SHUTTER	Particulate Matter, PM_{10}[$]	µg/m^3	100	116.60	58.55	93.76	45.78	61.72	57.79	69.53	62.53	201.06	232.18	164.78	132.57
	Particulate Matter, $PM_{2.5}$[$]	µg/m^3	60	45.83	22.40	37.62	15.65	24.39	28.06	27.71	24.71	70.51	84.54	62.54	54.85
	Sulphur Dioxide (SO_2)[$]	µg/m^3	80	12.69	15.93	23.90	20.89	24.75	22.43	24.29	21.25	24.67	29.42	24.83	26.01
	Nitrogen Dioxide (NO_2)[$]	µg/m^3	80	25.66	30.56	34.40	32.90	38.75	34.64	40.8	36.57	33.65	41.39	44.61	39.24
	Carbon Monoxide (CO)	mg/m^3	2	0.25	0.26	0.22	0.21	0.24	0.23	0.26	0.23	0.27	0.25	0.27	0.29
	Ammonia (NH_3)[$]	µg/m^3	400	30.68	48.36	67.85	55.35	61.53	55.99	65.49	60.23	57.69	49.55	64.81	67.53
	Ozone (O_3)[$]	µg/m^3	180	11.97	12.94	9.35	9.35	14.72	13.32	7.81	5.61	11.91	11.78	12.04	9.86
	Nickel (Ni)[$]	ng/m^3	20	0.04	0.01	0.03	0.02	0.01	0.01	0.04	0.03	0.02	0.01	0.02	0.03
	Arsenic (As)	ng/m^3	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	Lead (Pb)[$]	µg/m^3	1	< 0.01	0.10	< 0.01	< 0.01	0.09	0.01	< 0.01	<0.01	<0.01	0.06	0.08	0.06
	Benzene (C_6H_6)	µg/m^3	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Benzo alpha Pyrene (BaP)	ng/m^3	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NEAR FIRE FIGHTING STATION	**Parameter**	**UoM**	**Standard**	**Apr-24**	**May-24**	**Jun-24**	**Jul-24**	**Aug-24**	**Sep-24**	**Oct-24**	**Nov-24**	**Dec-24**	**Jan-25**	**Feb-25**	**Mar-25**
	Particulate Matter, PM_{10}[$]	µg/m^3	100	92.58	82.00	91.90	34.55	43.39	66.24	60.21	56.51	181.37	223.44	149.61	120.69
	Particulate Matter, $PM_{2.5}$[$]	µg/m^3	60	33.67	37.32	36.97	13.43	18.45	25.91	23.77	21.84	68.55	81.24	57.1	47.17
	Sulphur Dioxide (SO_2)[$]	µg/m^3	80	13.44	21.95	15.32	25.53	24.97	28.71	22.335	18.71	33.63	25.25	23.92	23.3
	Nitrogen Dioxide (NO_2)[$]	µg/m^3	80	22.37	30.28	26.87	36.80	32.89	39.87	34.26	31.76	48.35	37.81	45.15	38.61
	Carbon Monoxide (CO)	mg/m^3	2	0.27	0.29	0.25	0.23	0.25	0.27	0.25	0.22	0.28	0.3	0.28	0.26
	Ammonia (NH_3)[$]	µg/m^3	400	44.36	51.69	51.88	62.53	47.90	49.55	42.42	38.82	60.4	57.01	53.96	58.03
	Ozone (O_3)[$]	µg/m^3	180	17.09	10.98	11.91	11.65	9.35	12.80	8.065	6.77	11.52	16.13	10.5	11.91
	Nickel (Ni)[$]	ng/m^3	20	0.03	0.02	0.02	0.09	0.03	0.02	0.02	0.03	0.02	0.01	< 0.01	0.02
	Arsenic (As)	ng/m^3	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	Lead (Pb)[$]	µg/m^3	1	0.07	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	<0.01	< 0.01	0.11	0.07	0.06
	Benzene (C_6H_6)	µg/m^3	5	<0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Benzo alpha Pyrene (BaP)	ng/m^3	1	<0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NEAR ROLL SHUTTER	**Parameter**	**UoM**	**Standard**	**Apr-24**	**May-24**	**Jun-24**	**Jul-24**	**Aug-24**	**Sep-24**	**Oct-24**	**Nov-24**	**Dec-24**	**Jan-25**	**Feb-25**	**Mar-25**
	Particulate Matter, PM_{10}[$]	µg/m^3	100	167.39	88.22	145.33	53.13	58.04	31.48	60.025	57.12	180.28	265.32	127	156.02
	Particulate Matter, $PM_{2.5}$[$]	µg/m^3	60	59.67	34.66	57.39	22.37	23.92	12.53	23.02	24.21	63.91	95.97	47.91	58.14
	Sulphur Dioxide (SO_2)[$]	µg/m^3	80	24.54	11.72	14.38	14.88	22.60	28.06	20.635	17.75	27.4	13.71	27.08	25.73
	Nitrogen Dioxide (NO_2)[$]	µg/m^3	80	38.20	27.98	38.62	33.66	37.86	36.22	42.635	39.24	41.41	37.95	61.96	45.75
	Carbon Monoxide (CO)	mg/m^3	2	0.28	0.27	0.24	0.20	0.22	0.25	0.28	0.24	0.29	0.28	0.3	0.28
	Ammonia (NH_3)[$]	µg/m^3	400	37.36	47.36	62.86	61.86	59.20	60.74	54.63	51.89	58.03	55.66	54.31	45.75
	Ozone (O_3)[$]	µg/m^3	180	11.48	12.21	10.89	10.33	11.78	14.60	11.39	9.83	13.96	11.39	10.89	11.65
	Nickel (Ni)[$]	ng/m^3	20	0.10	0.01	0.03	0.03	0.03	0.01	0.04	0.02	0.03	0.01	0.02	0.03
	Arsenic (As)	ng/m^3	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	Lead (Pb)[$]	µg/m^3	1	1.43	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.07	0.1	0.02
	Benzene (C_6H_6)	µg/m^3	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 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	< 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)

ANNEXURE-I

Tata Steel Limited

Environmental Monitoring Report of CRM Bara

AMBIENT NOISE LEVEL MONITORING REPORT FOR CRM BARA FROM APR 2024 to MAR 2025

			Apr-24		May-24		Jun-24		Jul-24		Aug-24		Sep-24		Oct-24		Nov-24		Dec-24		Jan-25		Feb-25		Mar-25	
Sl.No.	**Sampling Location**		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	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		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	68.9	55.6	68.9	60.0	68.8	57.2	72.6	57	68.1	52.1	65.4	52
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	67.3	54.5	65.4	58.5	69.3	50.0	71	55.5	60.2	54.3	61.8	55.2
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	66.4	56.2	60.2	66.0	58.1	56.2	66.1	57.1	61.8	55.1	69.3	56.1
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	70.1	57.5	67.3	61.3	60.3	55.2	70.6	56.4	65.4	56.8	66.4	56.4
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	66.4	53.7	65.9	59.6	66.4	60.2	69.7	57.7	66.7	50	69.8	51.2

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

Manager
Monitoring and Analysis

Head
Environment Monitoring, Testing & Analysis (TSJ)

ANNEXURE-I

Tata Steel Limited

Environmental Monitoring Report of CRM Bara

Online Stack Emission Monitoring Report from APR 2024 to MAR 2025

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	-	-
	Shot Blasting	1.1	-	-
	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	-	-

Month	Location	PM (mg/Nm3)	SO2 (mg/Nm3)	NOx (mg/Nm3)
Oct-24	Mill Demister	20.9	-	-
	Boiler stack	2.2	21.7	48.9
	ARP stack	5.9	-	-
	Shot Blasting	22.7	-	-
	Pickling scrubber stack	6.4	-	-
Nov-24	Mill Demister	19.6	-	-
	Boiler stack	2.5	-	55.0
	ARP stack	2.7	-	-
	Shot Blasting	14.3	-	-
	Pickling scrubber stack	6.0	-	-
Dec-24	Mill Demister	22.5	-	-
	Boiler stack	2.4	23.2	60.7
	ARP stack	3.7	-	-
	Shot Blasting	3.8	-	-
	Pickling scrubber stack	6.0	-	-
Jan-25	Mill Demister	18.1	-	-
	Boiler stack	1.9	17.9	54.8
	ARP stack	3.5	-	-
	Shot Blasting	2.5	-	-
	Pickling scrubber stack	6.6	-	-
Feb-25	Mill Demister	18.8	-	-
	Boiler stack	2.3	18.0	53.8
	ARP stack	3.8	-	-
	Shot Blasting	3.6	-	-
	Pickling scrubber stack	7.1	-	-
Mar-25	Mill Demister	18.1	-	-
	Boiler stack	1.8	17.0	54.8
	ARP stack	3.8	-	-
	Shot Blasting	3.2	-	-
	Pickling scrubber stack	5.5	-	-

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)

ANNEXURE-I

TATA STEEL

Tata Steel Limited
Environmental Monitoring Report of CRM Bara
Fugitive Emission Monitoring Report from Apr 2024 to Mar 2025

S.No.	Location	UoM	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
1	Near RCPH Pump House	mg/m3	0.4	0.4	0.43	0.64	0.61	0.29	0.49	0.43	0.36	0.22	0.28	0.49
2	Near Pickling Line Exit		0.4	0.6	0.38	0.75	0.43	0.31	0.67	0.38	0.19	0.3	0.36	0.61
3	Near Mills Stand		0.7	0.5	0.48	0.68	0.56	0.58	0.31	0.31	0.45	0.28	0.31	0.63
4	Near Mill Stand outside		0.7	0.4	0.51	0.69	0.50	0.63	0.73	0.36	0.36	0.36	0.33	0.53
5	1 Mtr. Away From Compressor # 1		0.5	0.6	0.39	0.62	0.48	0.33	N/O	0.53	0.19	0.41	0.42	0.48
6	1 Mtr. Away From Compressor # 2		0.5	0.6	0.28	0.63	0.63	0.44	N/O	0.59	0.32	0.53	0.36	0.46
7	1 Mtr. Away From Compressor # 3		0.5	0.6	0.41	0.62	0.52	0.36	0.36	0.34	0.44	0.29	0.31	0.41
8	1 Mtr. Away From Compressor # 4		0.4	0.6	0.33	0.61	0.60	0.22	0.38	0.52	0.48	0.38	0.29	0.33
9	Inside Room Compressor		0.5	0.5	0.40	0.63	0.38	0.29	0.37	0.61	0.36	0.44	0.28	0.29
10	Inside Boiler House		0.5	0.4	0.36	0.57	0.44	0.42	0.43	0.4	0.19	0.22	0.43	0.57
11	ARP Pump Room		0.4	0.6	0.61	0.72	0.53	N/O	0.69	0.36	0.34	0.36	0.32	0.63
12	Sticher Area		0.5	0.6	0.55	0.78	0.60	0.66	0.29	0.38	0.59	0.29	0.44	0.54
13	Rince Tank Area		0.4	0.5	0.48	0.74	0.41	0.53	0.33	0.29	0.67	0.5	0.25	0.73
14	Main Office		0.4	0.7	0.71	0.54	0.52	0.66	0.39	0.3	0.4	0.27	0.28	0.81
15	Near Gate # 1		0.7	0.6	0.63	0.56	0.61	0.83	0.63	0.68	0.89	0.53	0.66	0.39
16	Near Gate # 2		0.5	0.5	0.57	0.59	0.58	0.49	0.59	0.54	0.67	0.44	0.51	0.53
17	Coil Receiving Area		0.5	0.4	0.60	0.61	0.54	0.38	0.72	0.35	0.43	0.36	0.4	0.41

Note:
As per CTO, Ref No. JSPCB/HO/RNC/CTO-10350692/2022/109 Dated on 28-01-2022.
N/0- NOT IN OPERATION

Parmi Thapa

Manager
Steel Making,CRM Bara & Tubes
Division

Head
Environment Monitoring, Testing &
Analysis (TSJ)

ANNEXURE-I

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)

ANNEXURE-I

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)

ANNEXURE-I

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)

ANNEXURE-I

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)

ANNEXURE-I

TATA STEEL LIMITED
ENVIRONMENT MANAGEMENT DEPARTMENT – LABORATORY
GROUNDWATER MONITORING REPORT- OCT 2024 TO MAR 2025

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
Oct-23	Sonari Ground Water	7.08	26.40	924.00	452.76	<10	254.00	428.76	102.74
	Baganhattu Ground Water	6.49	27.10	987.00	484.00	<10	98.00	405.10	80.81
	Parvati Ghat Ground Water	7.18	25.70	1371.00	671.79	<10	400.00	614.04	219.00
	Jugsalai Ground Water	7.14	25.70	1118.00	547.82	<10	420.00	456.96	122.00
	Jemco Ground Water	6.87	25.40	735.40	360.35	58.00	128.00	250.92	164.00
Nov-23	Sonari Ground Water	7.02	25.80	985.00	482.65	<10	250.00	431.72	106.88
	Baganhattu Ground Water	6.56	25.80	969.00	474.81	<10	96.00	413.28	83.53
	Parvati Ghat Ground Water	6.89	25.00	2862.00	1402.38	<10	590.00	1570.00	210.10
	Jugsalai Ground Water	7.01	24.90	1540.00	754.60	<10	402.00	556.00	119.00
	Jemco Ground Water	7.73	24.60	1482.00	726.18	<10	500.00	322.00	142.32
Dec-23	Sonari Ground Water	6.96	23.20	937.00	459.13	<10	264.00	403.61	103.37
	Baganhattu Ground Water	6.69	23.80	928.30	454.87	<10	132.60	181.32	78.95
	Parvati Ghat Ground Water	6.98	22.00	2730.00	1337.70	<10	565.60	12.94	263.11
	Jugsalai Ground Water	6.63	21.80	961.40	471.09	<10	168.80	296.78	87.61
	Jemco Ground Water	7.53	22.30	1573.00	770.77	<10	55.20	507.82	163.54
Jan-24	Sonari Ground Water	7.05	24.90	2625.00	1286.25	<10	570.00	1233.04	250.32
	Baganhattu Ground Water	7.10	24.70	1175.00	575.75	<10	396.00	442.22	130.25
	Parvati Ghat Ground Water	7.33	25.40	1588.00	778.12	<10	26.00	486.04	162.82
	Jugsalai Ground Water	6.89	24.70	953.00	466.97	<10	243.40	344.21	101.67
	Jemco Ground Water	6.58	24.60	934.00	457.66	<10	96.60	317.74	79.22
Feb-24	Sonari Ground Water	7.70	26.80	1564.00	766.36	<10	23.52	474.08	158.62
	Baganhattu Ground Water	6.93	26.70	2529.00	1239.21	<10	577.50	1134.72	231.33
	Parvati Ghat Ground Water	6.97	26.30	1228.00	601.72	<10	433.65	480.31	137.65
	Jugsalai Ground Water	7.03	26.10	994.00	487.06	<10	250.95	364.65	98.44
	Jemco Ground Water	6.60	26.50	943.00	462.07	<10	98.70	332.12	83.77
Mar-24	Sonari Ground Water	7.06	24.50	2440.00	1195.60	<10	571.20	944.56	220.32
	Baganhattu Ground Water	7.13	24.90	1213.00	594.37	<10	415.20	438.15	130.20
	Parvati Ghat Ground Water	7.31	24.50	1646.00	806.54	<10	49.20	611.23	136.58
	Jugsalai Ground Water	6.54	25.80	952.00	466.48	<10	94.80	330.52	89.02
	Jemco Ground Water	7.37	25.70	543.00	266.00	<10	124.20	121.33	81.33

Sr. Manager
Monitoring and Analysis

Head
Environment Monitoring, Testing & Analysis
(TSJ)

ANNEXURE-I

TATA STEEL LIMITED
ENVIRONMENT MANAGEMENT DEPARTMENT – LABORATORY
GROUNDWATER MONITORING REPORT- OCT 2024 TO MAR 2025

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
Oct-23	Sonari Ground Water	77.00	152.00	13.10	0.06	0.37	35.10	0.02	0.40
	Baganhattu Ground Water	191.44	16.10	1.10	<0.02	0.56	27.50	0.05	0.73
	Parvati Ghat Ground Water	117.41	52.02	23.00	0.02	0.48	28.90	0.04	0.18
	Jugsalai Ground Water	83.16	25.91	11.70	0.06	0.47	33.40	0.02	0.01
	Jemco Ground Water	53.81	44.48	3.10	0.12	0.48	17.10	0.05	0.01
Nov-23	Sonari Ground Water	73.97	70.10	19.10	0.01	0.24	33.50	0.02	0.56
	Baganhattu Ground Water	188.26	66.34	4.30	0.05	0.13	23.90	0.32	0.80
	Parvati Ghat Ground Water	194.93	322.40	6.80	0.10	0.83	27.00	0.06	0.14
	Jugsalai Ground Water	142.95	190.00	8.70	0.04	0.64	23.30	0.03	0.11
	Jemco Ground Water	19.99	363.15	0.30	0.03	0.30	10.20	0.05	0.01
Dec-23	Sonari Ground Water	40.78	40.12	5.30	0.01	0.52	22.60	< 0.01	0.52
	Baganhattu Ground Water	39.28	41.56	4.50	0.01	0.25	31.20	0.04	0.61
	Parvati Ghat Ground Water	218.91	358.95	17.00	0.12	0.79	26.30	0.04	0.30
	Jugsalai Ground Water	94.06	70.08	15.00	0.04	0.30	25.42	0.03	0.03
	Jemco Ground Water	163.03	510.00	0.70	0.01	0.72	9.46	0.02	<0.01
Jan-24	Sonari Ground Water	157.68	382.43	14.00	0.11	0.11	12.94	0.05	0.30
	Baganhattu Ground Water	81.79	133.75	11.00	0.02	0.20	11.40	0.00	0.01
	Parvati Ghat Ground Water	158.66	205.24	13.00	0.16	0.29	9.62	0.00	0.01
	Jugsalai Ground Water	76.72	87.09	7.70	0.09	0.56	11.83	0.10	0.49
	Jemco Ground Water	181.34	21.95	5.50	0.77	0.12	14.20	0.30	0.65
Feb-24	Sonari Ground Water	162.51	101.85	11.80	0.11	3.37	10.90	0.02	0.01
	Baganhattu Ground Water	146.93	86.03	12.30	0.14	0.70	49.60	0.04	0.27
	Parvati Ghat Ground Water	88.99	127.99	10.10	0.03	0.62	43.20	0.04	0.17
	Jugsalai Ground Water	72.82	78.40	7.10	0.07	0.56	31.90	0.04	0.56
	Jemco Ground Water	178.37	21.10	5.20	0.14	0.20	30.50	0.16	0.73
Mar-24	Sonari Ground Water	168.93	77.59	30.20	0.17	1.08	16.20	0.05	0.21
	Baganhattu Ground Water	94.76	61.73	2.20	0.01	0.67	41.20	0.03	0.15
	Parvati Ghat Ground Water	170.73	108.19	1.60	0.13	8.53	11.10	0.03	0.02
	Jugsalai Ground Water	175.15	75.12	6.20	0.04	0.10	26.40	0.02	0.49
	Jemco Ground Water	69.87	32.00	1.20	0.02	0.77	13.60	0.12	0.66

Sr. Manager
Monitoring and Analysis

Head
Environment Monitoring, Testing & Analysis (TSJ)

ANNEXURE-I

TATA STEEL LIMITED
ENVIRONMENT MANAGEMENT DEPARTMENT – LABORATORY
GROUNDWATER MONITORING REPORT- OCT 2024 TO MAR 2025

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
Oct-23	Sonari Ground Water	<0.05	0.01	< 0.01	< 0.01	0.02	0.02	0.03
	Baganhattu Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.03	0.03
	Parvati Ghat Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.01	0.01
	Jugsalai Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.02	0.02
	Jemco Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.01	0.05
Nov-23	Sonari Ground Water	<0.05	<0.01	< 0.01	< 0.01	0.03	0.03	< 0.01
	Baganhattu Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.02	0.01
	Parvati Ghat Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.01	0.01
	Jugsalai Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.02	<0.01
	Jemco Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.01	<0.01
Dec-23	Sonari Ground Water	<0.05	0.01	< 0.01	< 0.01	0.02	0.02	0.24
	Baganhattu Ground Water	<0.05	<0.01	< 0.01	< 0.01	0.01	0.06	0.02
	Parvati Ghat Ground Water	<0.05	<0.01	0.04	< 0.01	< 0.01	0.01	< 0.01
	Jugsalai Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
	Jemco Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01
Jan-24	Sonari Ground Water	<0.05	<0.01	0.03	< 0.01	< 0.01	0.23	0.02
	Baganhattu Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.02	0.02
	Parvati Ghat Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.04	0.01
	Jugsalai Ground Water	<0.05	<0.01	< 0.01	< 0.01	0.02	0.02	0.01
	Jemco Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.04	0.01
Feb-24	Sonari Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.02	0.02
	Baganhattu Ground Water	0.05	<0.01	0.05	< 0.01	< 0.01	0.07	0.05
	Parvati Ghat Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.07	0.01
	Jugsalai Ground Water	<0.05	0.01	< 0.01	< 0.01	0.02	0.03	0.02
	Jemco Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.04	0.02
Mar-24	Sonari Ground Water	<0.05	<0.01	0.05	< 0.01	< 0.01	0.05	0.04
	Baganhattu Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.06	0.02
	Parvati Ghat Ground Water	<0.05	<0.01	< 0.01	< 0.01	< 0.01	0.03	0.01
	Jugsalai Ground Water	<0.05	0.01	< 0.01	< 0.01	0.02	0.02	0.01
	Jemco Ground Water	<0.05	<0.01	< 0.01	< 0.01	0.01	0.03	0.02

Sr. Manager
Monitoring and Analysis

Head
Environment Monitoring, Testing & Analysis
(TSJ)

ANNEXURE-I

TATA STEEL LIMITED
ENVIRONMENT MANAGEMENT DEPARTMENT – LABORATORY
GROUNDWATER MONITORING REPORT- OCT 2024 TO MAR 2025

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
Oct-23	Sonari Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	0.01
	Baganhattu Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	<0.01
	Parvati Ghat Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	< 0.01
	Jugsalai Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	< 0.01
	Jemco Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	< 0.01
Nov-23	Sonari Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	< 0.01
	Baganhattu Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	< 0.01
	Parvati Ghat Ground Water	<1.0	0.20	<0.10	<0.10	<0.1	< 0.01
	Jugsalai Ground Water	<1.0	0.26	<0.10	<0.10	<0.1	< 0.01
	Jemco Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	< 0.01
Dec-23	Sonari Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	< 0.01
	Baganhattu Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	0.01
	Parvati Ghat Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	< 0.01
	Jugsalai Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	< 0.01
	Jemco Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	0.05
Jan-24	Sonari Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	0.02
	Baganhattu Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	< 0.01
	Parvati Ghat Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	0.02
	Jugsalai Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	< 0.01
	Jemco Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	< 0.01
Feb-24	Sonari Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	0.05
	Baganhattu Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	0.00
	Parvati Ghat Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	0.01
	Jugsalai Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	0.01
	Jemco Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	< 0.01
Mar-24	Sonari Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	0.01
	Baganhattu Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	0.02
	Parvati Ghat Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	0.04
	Jugsalai Ground Water	<1.0	< 0.1	<0.10	<0.10	<0.1	0.01
	Jemco Ground Water	1.50	< 0.1	<0.10	<0.10	<0.1	0.01

Sr. Manager
Monitoring and Analysis

Head
Environment Monitoring, Testing & Analysis (TSJ)

ANNEXURE-4

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re Sustainability

Date: 28.11.2024

To
M/s. Tata Steel Ltd-CRM Bara complex
Tata Steel Ltd, CRM complex Bara, Jamshedpur, Jharkhand-831009

We are here with enclosing the Comprehensive analysis report of Solid Waste Sample –: **Oily Sludge** received on Date: **19.11.2024**. The disposal method for the above sample is **Direct Incineration due to High Calorific value (3894 cal/gm).** We are also enclosing the invoice for analysis.

The disposal method is purely based on the characteristics of the sample sent to us. When the waste will be sent to us it will be analyzed and if the characteristics change the disposal method may change.

Please send us your suggestions for improving laboratory services by filling customer Feedback form attached herewith.

Thanking you for your business. Please Contact us again if we can be of any service in the future. Our fullest Co-Operation and best service assured always.

Yours faithfully
For Adityapur Waste Management Project
(A Subsidiary of Re Sustainability Ltd)

Authorized Signatory
(Shambhu Kumar Yadav)

Adityapur Waste Management Pvt. Ltd.
(A Division of Re Sustainability Limited)
Site Address :
Ukri Road, Plot No.-43, Khata No.- 529,
Sini More, Dist.-Seraikella - Kharswan,
Jharkhand - 833220
ISO 9000 : 2015, 14001 : 2015, 45001 : 2018
CIN : U37200AP2013PTC088316

Re Sustainability Limited
(formerly known as Ramky Enviro Engineers Limited)
Registered Office :
Level 11, Aurobindo Galaxy,
Hyderabad Knowledge City,
Hitech City Road, Hyderabad
Telangana - 500081, India.
CIN No. U74140TG1994PLC018833

T: +91 9065525725
E: hr.awmpl@resustainability.com
resustainability.com

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Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/742/24-25		Report Date	28.11.2024

Name of Client :	M/s. Tata Steel Ltd-CRM Bara complex
Contact Details :	
	Tata Steel Ltd, CRM complex Bara, Jamshedpur, Jharkhand-831009
Telephone No. : -	Fax No. : -
Email ID : -	
Membership No. :	

Name of Sample / Hazardous Waste	: Oily Sludge		
Description of Sample When Received	: Solid		
Sample Reference Number	: 742/24-25	Sample Received Date	19.11.2024
Sample Drawn By	: AWMPL Representative		
Waste Category: **Schedule-I, Cat.**			
RAW Material List / Process Details Enclosed	☐Yes	☑ NO	
MSDS Provided by Client	☐Yes	☑ NO	
Sample Registration No: AWMPL/Lab/CA/742/24-25			
Confirmation Date	19.11.2024	Confirmation by: MBD Dept., AWMPL	

Analysis start date	19.11.2024

Authorized Signatory
(Shambhu kumar Yadav)

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COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/742/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

Sr. No.	Particulars	Observation		Remarks (If any)
1	Does the waste have strong Odor?	□Y	☑N	
2	Does the waste give fumes exposed to the atmosphere?	□Y	☑N	
3	Does the waste react with water?	□Y	☑N	
4	Is the waste incompatible with any material? If so specify	□Y	☑N	

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	-	-	Semi wet	Not Specified
8	PFLT(Paint Filter Liquid Test)	-	USEPA 1998, SW-846; 9095A	Pass	Pass
9	Bulk Density	g/cc	APHA 23rd Edition; 2710 F	1.27	Not Specified
10	Calorific Value	cal/g	IS:1350 Part II – 1970	3894	<2500
11	Flash Point	°C	USEPA 1998, SW 846; 1020 A	>60	>60
12	pH (At Room Temperature)	-	USEPA 1998, SW-846; 9045 C	5.614	4 -12
13	LOD @ 105°C	%	APHA 23rd Edition, 2017; 2540	27.74	Not Specified
14	LOI @ 550°C	%	APHA 23rd Edition, 2017; 2540	67.53	<20
15	Ash Content @ 900°C	%	APHA 23rd Edition, 2017; 2540	NA	Not Specified

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(Shambhu kumar Yadav)

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COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/742/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

Sr. No.	Parameter	Unit	Method	Result	CPCB limit for direct landfill disposal
16	Water soluble organics	%	APHA 23rd Edition; 2540 - E	0.14	<10.0
17	Oil & Grease (n-Hexane Extractable)	%	SW-846: 3540	3.24	<4.0
19	Fluorides as F^-	mg/kg	APHA 23rd Edition; 4500 F^- - D	NA	Not Specified
20	Specific Gravity	g/cc	APHA 23rd Edition; 2710 F	NA	Not Specified
21	Reactive Cyanide as HCN	mg/kg	USEPA 1998, SW-846; 9014	<1.0	<250
22	Reactive Sulphide as H_2S	mg/kg	USEPA 1998, SW-846; 9034	<10.0	<500
23	Zinc as Zn- Total	mg/kg	USEPA 1998, SW-846; 7950	7.59	Not Specified
24	Cobalt as Co- Total	mg/kg	USEPA 1998, SW-846; 7200	NA	Not Specified
25	Cadmium as Cd- Total	mg/kg	USEPA 1998, SW-846; 7130	<1.0	Not Specified
26	Copper as Cu- Total	mg/kg	USEPA 1998, SW-846; 7210	22.85	Not Specified
27	Total Chromium as Cr- Total	mg/kg	USEPA 1998, SW-846; 7190	26.00	Not Specified
28	Iron as Fe- Total	mg/kg	USEPA 1998, SW-846; 7380	NA	Not Specified
29	Lead as Pb- Total	mg/kg	USEPA 1998, SW-846; 7420	45.96	Not Specified
30	Manganese as Mn – Total	mg/kg	USEPA 1998, SW-846; 7460	NA	Not Specified
31	Nickel as Ni- Total	mg/kg	USEPA 1998, SW-846; 7520	25.75	Not Specified

Authorized Signatory
(Shambhu kumar Yadav)

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/742/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

Sr. No.	Parameter	Unit	Method	Result	CPCB limit for direct landfill disposal
	(TCLP) Toxicity Characteristics Leaching Procedure				
32	Arsenic as As	mg/L	USEPA 1998, SW-846; 7061 A	<0.05	<5.0
33	Cadmium as Cd	mg/L	USEPA 1998, SW-846; 7130	<0.05	<1.0
34	Total Chromium as Cr	mg/L	USEPA 1998, SW-846; 7190	<0.05	<5.0
35	Hexavalent Chromium as Cr^{6+}	mg/L	APHA 23rd Edi., 2017: 3500 Cr B	<0.05	<5.0
36	Cobalt as Co	mg/L	USEPA 1998, SW-846; 7200	NA	<80.0
37	Copper as Cu	mg/L	USEPA 1998, SW-846; 7210	<0.05	<25.0
38	Iron as Fe	mg/L	USEPA 1998, SW-846; 7380	NA	<3.0
39	Lead as Pb	mg/L	USEPA 1998, SW-846; 7420	<0.05	<5.0
40	Manganese as Mn	mg/L	USEPA 1998, SW-846; 7460	NA	<10.0
41	Nickel as Ni	mg/L	USEPA 1998, SW-846; 7520	<0.05	<20.0
42	Zinc as Zn	mg/L	USEPA 1998, SW-846; 7950	0.42	<250.0
	(WLT) Water Leaching Testing				**CPCB/HAZWAMS /TSDF Protocol/2010-2011**
43	Cyanide	mg/L	APHA 23rd Edition,4500 CN-E	<0.1	<2.0
44	Fluoride	mg/L	APHA 23rd Edition,4500 F-D	<1.0	<50.0
45	Nitrate	mg/L	APHA 23rd Edition,4500 NO_3^- - E	<5.0	<30.0
46	Phenols	mg/L	APHA 23rd Edition,5530 B & D	<1.0	<100.0
47	Ammonia as N	mg/L	APHA 23rd Edition,4500NH3 B,C	<10.0	<1000.0

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COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/742/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

48	Arsenic as As	mg/L	USEPA 1998, SW-846; 7061 A	NA	<1.0
49	Cadmium as Cd	mg/L	APHA 23rd Edition,3111 B	<0.01	<0.2
50	Total Chromium as Cr	mg/L	APHA 23rd Edition,3111 B	<0.05	Not Specified
51	Hexavalent Chromium as Cr^{6+}	mg/L	APHA 23rd Edi., 2017: 3500 Cr B	<0.05	<0.5
52	Cobalt as Co	mg/L	APHA 23rd Edition,3111 B	NA	Not Specified
53	Copper as Cu	mg/L	APHA 23rd Edition,3111 B	<0.05	<10.0
54	Iron as Fe	mg/L	APHA 23rd Edition,3111 B	NA	<3.0
55	Lead as Pb	mg/L	APHA 23rd Edition,3111 B	<0.05	<2.0
56	Manganese as Mn	mg/L	APHA 23rd Edition,3111 B	<0.05	Not Specified
57	Nickel as Ni	mg/L	APHA 23rd Edition,3111 B	<0.05	<3.0
58	Zinc as Zn	mg/L	APHA 23rd Edition,3111 B	<0.05	<10.0

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

Use PPE's during handling of Oily 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 23rd 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

Authorized Signatory
(Shambhu Kumar Yadav)

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Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/742/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

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 Adityapur Waste Management Private Limited
3. In the absence of specific request from the customer, AWMPL follows National/International standards specifications for conducting the tests. Alternatively, in the absence of these methods, AWMPL shall follow the operating procedures developed by AWMPL.
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 AWMPL 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. AWMPL 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 Incineration.

END OF REPORT

Authorized Signatory
(Shambhu kumar Yadav)

ISO 9001, 45001, 14001

Sustainability

Date: 28.11.2024

To
M/s. Tata Steel Ltd-CRM Bara complex
Tata Steel Ltd, CRM complex Bara, Jamshedpur, Jharkhand-831009

We are here with enclosing the Comprehensive analysis report of Solid Waste Sample –: **Oily Scum** received on Date: **18.11.2024**. The disposal method for the above sample is **Direct Incineration due to High Calorific value (3389 cal/gm).** We are also enclosing the invoice for analysis.

The disposal method is purely based on the characteristics of the sample sent to us. When the waste will be sent to us it will be analyzed and if the characteristics change the disposal method may change.

Please send us your suggestions for improving laboratory services by filling customer Feedback form attached herewith.

Thanking you for your business. Please Contact us again if we can be of any service in the future. Our fullest Co-Operation and best service assured always.

Yours faithfully
For Adityapur Waste Management Project
(A Subsidiary of Re Sustainability Ltd)

Authorized Signatory
(Shambhu Kumar Yadav)

Adityapur Waste Management Pvt. Ltd.
(A Division of Re Sustainability Limited)
Site Address :
Ukri Road, Plot No.-43, Khata No.- 529,
Sini More, Dist -Seraikella - Kharswan,
Jharkhand - 833220
ISO 9000 : 2015, 14001 : 2015, 45001 : 2018
CIN : U37200AP2013PTC088316

Re Sustainability Limited
(Formerly known as Ramky Enviro Engineers Limited)
Registered Office :
Level 11, Aurobindo Galaxy,
Hyderabad Knowledge City,
Hitech City Road, Hyderabad
Telangana - 500081, India.
CIN No. U74140TG1994PLC018833

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resustainability.com

ISO 9001, 45001, 14001

Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/741/24-25	Report Date	28.11.2024

Name of Client :	M/s. Tata Steel Ltd-CRM Bara complex
Contact Details :	
	Tata Steel Ltd, CRM complex Bara, Jamshedpur, Jharkhand-831009
Telephone No. : -	Fax No. : -
Email ID : -	
Membership No. :	

Name of Sample / Hazardous Waste :	Oily Scum		
Description of Sample When Received :	Solid		
Sample Reference Number :	741/24-25	Sample Received Date	18.11.2024
Sample Drawn By :	AWMPL Representative		
Waste Category: **Schedule-I, Cat.**			
RAW Material List / Process Details Enclosed	☐Yes	☑ NO	
MSDS Provided by Client	☐Yes	☑ NO	
Sample Registration No: AWMPL/Lab/CA/741/24-25			
Confirmation Date	18.11.2024	Confirmation by: MBD Dept., AWMPL	

Analysis start date	18.11.2024

Authorized Signatory
(Shambhu kumar Yadav)

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COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/741/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

Sr. No.	Particulars	Observation		Remarks (If any)
1	Does the waste have strong Odor?	□Y	☑N	
2	Does the waste give fumes exposed to the atmosphere?	□Y	☑N	
3	Does the waste react with water?	□Y	☑N	
4	Is the waste incompatible with any material? If so specify	□Y	☑N	

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	-	-	Slurry	Not Specified
8	PFLT(Paint Filter Liquid Test)	-	USEPA 1998, SW-846; 9095A	Pass	Pass
9	Bulk Density	g/cc	APHA 23rd Edition; 2710 F	1.12	Not Specified
10	Calorific Value	cal/g	IS:1350 Part II – 1970	3389	<2500
11	Flash Point	°C	USEPA 1998, SW 846; 1020 A	>60	>60
12	pH (At Room Temperature)	-	USEPA 1998, SW-846; 9045 C	5.589	4 -12
13	LOD @ 105°C	%	APHA 23rd Edition, 2017; 2540	44.69	Not Specified
14	LOI @ 550°C	%	APHA 23rd Edition, 2017; 2540	66.41	<20
15	Ash Content @ 900°C	%	APHA 23rd Edition, 2017; 2540	NA	Not Specified

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(Shambhu kumar Yadav)

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COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/741/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

Sr. No.	Parameter	Unit	Method	Result	CPCB limit for direct landfill disposal
16	Water soluble organics	%	APHA 23rd Edition; 2540 - E	0.14	<10.0
17	Oil & Grease (n-Hexane Extractable)	%	SW-846: 3540	6.41	<4.0
19	Fluorides as F	mg/kg	APHA 23rd Edition; 4500 F- - D	NA	Not Specified
20	Specific Gravity	g/cc	APHA 23rd Edition; 2710 F	NA	Not Specified
21	Reactive Cyanide as HCN	mg/kg	USEPA 1998, SW-846; 9014	<1.0	<250
22	Reactive Sulphide as H_2S	mg/kg	USEPA 1998, SW-846; 9034	<10.0	<500
23	Zinc as Zn- Total	mg/kg	USEPA 1998, SW-846; 7950	14.58	Not Specified
24	Cobalt as Co- Total	mg/kg	USEPA 1998, SW-846; 7200	NA	Not Specified
25	Cadmium as Cd- Total	mg/kg	USEPA 1998, SW-846; 7130	3.5	Not Specified
26	Copper as Cu- Total	mg/kg	USEPA 1998, SW-846; 7210	<1.0	Not Specified
27	Total Chromium as Cr- Total	mg/kg	USEPA 1998, SW-846; 7190	<1.0	Not Specified
28	Iron as Fe- Total	mg/kg	USEPA 1998, SW-846; 7380	NA	Not Specified
29	Lead as Pb- Total	mg/kg	USEPA 1998, SW-846; 7420	<1.0	Not Specified
30	Manganese as Mn – Total	mg/kg	USEPA 1998, SW-846; 7460	NA	Not Specified
31	Nickel as Ni- Total	mg/kg	USEPA 1998, SW-846; 7520	<1.0	Not Specified

Authorized Signatory
(Shambhu kumar Yadav)

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/741/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

Sr. No.	Parameter	Unit	Method	Result	CPCB limit for direct landfill disposal
	(TCLP) Toxicity Characteristics Leaching Procedure				
32	Arsenic as As	mg/L	USEPA 1998, SW-846; 7061 A	<0.05	<5.0
33	Cadmium as Cd	mg/L	USEPA 1998, SW-846; 7130	<0.05	<1.0
34	Total Chromium as Cr	mg/L	USEPA 1998, SW-846; 7190	<0.05	<5.0
35	Hexavalent Chromium as Cr^{6+}	mg/L	APHA 23rd Edi., 2017: 3500 Cr B	<0.05	<5.0
36	Cobalt as Co	mg/L	USEPA 1998, SW-846; 7200	NA	<80.0
37	Copper as Cu	mg/L	USEPA 1998, SW-846; 7210	<0.05	<25.0
38	Iron as Fe	mg/L	USEPA 1998, SW-846; 7380	NA	<3.0
39	Lead as Pb	mg/L	USEPA 1998, SW-846; 7420	<0.05	<5.0
40	Manganese as Mn	mg/L	USEPA 1998, SW-846; 7460	NA	<10.0
41	Nickel as Ni	mg/L	USEPA 1998, SW-846; 7520	<0.05	<20.0
42	Zinc as Zn	mg/L	USEPA 1998, SW-846; 7950	1.25	<250.0
	(WLT) Water Leaching Testing				**CPCB/HAZWAMS /TSDF Protocol/2010-2011**
43	Cyanide	mg/L	APHA 23rd Edition,4500 CN-E	<0.1	<2.0
44	Fluoride	mg/L	APHA 23rd Edition,4500 F-D	<1.0	<50.0
45	Nitrate	mg/L	APHA 23rd Edition,4500 NO_3^- - E	<5.0	<30.0
46	Phenols	mg/L	APHA 23rd Edition,5530 B & D	<1.0	<100.0
47	Ammonia as N	mg/L	APHA 23rd Edition,4500NH3 B,C	<10.0	<1000.0

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COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/741/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

48	Arsenic as As	mg/L	USEPA 1998, SW-846; 7061 A	NA	<1.0
49	Cadmium as Cd	mg/L	APHA 23rd Edition,3111 B	<0.01	<0.2
50	Total Chromium as Cr	mg/L	APHA 23rd Edition,3111 B	<0.05	Not Specified
51	Hexavalent Chromium as Cr^{6+}	mg/L	APHA 23rd Edi., 2017: 3500 Cr B	<0.05	<0.5
52	Cobalt as Co	mg/L	APHA 23rd Edition,3111 B	NA	Not Specified
53	Copper as Cu	mg/L	APHA 23rd Edition,3111 B	<0.05	<10.0
54	Iron as Fe	mg/L	APHA 23rd Edition,3111 B	NA	<3.0
55	Lead as Pb	mg/L	APHA 23rd Edition,3111 B	<0.05	<2.0
56	Manganese as Mn	mg/L	APHA 23rd Edition,3111 B	<0.05	Not Specified
57	Nickel as Ni	mg/L	APHA 23rd Edition,3111 B	<0.05	<3.0
58	Zinc as Zn	mg/L	APHA 23rd Edition,3111 B	<0.05	<10.0

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

Use PPE's during handling of Oily Scum.

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 23rd 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

Authorized Signatory
(Shambhu kumar Yadav)

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Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/741/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

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 Adityapur Waste Management Private Limited
3. In the absence of specific request from the customer, AWMPL follows National/International standards specifications for conducting the tests. Alternatively, in the absence of these methods, AWMPL shall follow the operating procedures developed by AWMPL.
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 AWMPL 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. AWMPL 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 Incineration.

END OF REPORT

Authorized Signatory
(Shambhu kumar Yadav)

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Date: 04.12.2024

To
M/s. Tata Steel Ltd-CRM Bara complex
Tata Steel Ltd, CRM complex Bara,
Jamshedpur, Jharkhand-831009

We are here with enclosing the Comprehensive analysis report of Solid Waste Sample –: Grinding **Sludge** received on Date: **28.11.2024**. The disposal method for the above sample is **Direct Incineration due to High Calorific value (2685.91 cal/gm).** We are also enclosing the invoice for analysis.

The disposal method is purely based on the characteristics of the sample sent to us. When the waste will be sent to us it will be analyzed and if the characteristics change the disposal method may change.

Please send us your suggestions for improving laboratory services by filling customer Feedback form attached herewith.

Thanking you for your business. Please Contact us again if we can be of any service in the future. Our fullest Co-Operation and best service assured always.

Yours faithfully
For Adityapur Waste Management Project
(A Subsidiary of Re Sustainability Ltd)

Authorized Signatory
(Shambhu Kumar Yadav)

Adityapur Waste Management Pvt. Ltd.
(A Division of Re Sustainability Limited)
Site Address :
Ukri Road, Plot No.-43, Khata No.- 529,
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Jharkhand - 833220
ISO 9000 : 2015, 14001 : 2015, 45001 : 2018
CIN : U37200AP2013PTC088316

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ISO 9001, 45001, 14001

Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/750/24-25	Report Date	04.12.2024

Name of Client	: M/s. Tata Steel Ltd-CRM Bara complex
Contact Details	: Tata Steel Ltd, CRM complex Bara, Jamshedpur, Jharkhand-831009
Telephone No.	: - Fax No. : -
Email ID	: -
Membership No.	:

Name of Sample / Hazardous Waste	: Grinding Sludge		
Description of Sample When Received	: Solid		
Sample Reference Number	: 750/24-25	Sample Received Date	28.11.2024
Sample Drawn By	: AWMPL Representative		
Waste Category: **Schedule-I, Cat.**			
RAW Material List / Process Details Enclosed	☐Yes	☑ NO	
MSDS Provided by Client	☐Yes	☑ NO	
Sample Registration No: AWMPL/Lab/CA/750/24-25			
Confirmation Date	28.11.2024	Confirmation by: MBD Dept., AWMPL	
Analysis start date	28.11.2024		

Authorized Signatory
(Shambhu kumar Yadav)

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COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/750/24-25		Report Date	0	4	.	1	2	.	2	0	2	4

Sr. No.	Particulars	Observation		Remarks (If any)
1	Does the waste have strong Odor?	□Y	☑N	
2	Does the waste give fumes exposed to the atmosphere?	□Y	☑N	
3	Does the waste react with water?	□Y	☑N	
4	Is the waste incompatible with any material? If so specify	□Y	☑N	

TEST REPORT

Sr. No.	Parameter	Unit	Method	Result	CPCB limit for direct landfill disposal
5	Physical State	-	-	Solid	Not Specified
6	Color	-	-	Grey	Not Specified
7	Texture	-	-	Semi wet	Not Specified
8	PFLT(Paint Filter Liquid Test)	-	USEPA 1998, SW-846; 9095A	Pass	Pass
9	Bulk Density	g/cc	APHA 23rd Edition; 2710 F	1.21	Not Specified
10	Calorific Value	cal/g	IS:1350 Part II – 1970	2685.91	<2500
11	Flash Point	°C	USEPA 1998, SW 846; 1020 A	>60	>60
12	pH (At Room Temperature)	-	USEPA 1998, SW-846; 9045 C	6.982	4 -12
13	LOD @ 105°C	%	APHA 23rd Edition, 2017; 2540	64.84	Not Specified
14	LOI @ 550°C	%	APHA 23rd Edition, 2017; 2540	40.48	<20
15	Ash Content @ 900°C	%	APHA 23rd Edition, 2017; 2540	NA	Not Specified

Authorized Signatory
(Shambhu kumar Yadav)

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Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/750/24-25		Report Date	0	4	.	1	2	.	2	0	2	4

Sr. No.	Parameter	Unit	Method	Result	CPCB limit for direct landfill disposal
16	Water soluble organics	%	APHA 23rd Edition; 2540 - E	0.13	<10.0
17	Oil & Grease (n-Hexane Extractable)	%	SW-846: 3540	<2.0	<4.0
19	Fluorides as F^-	mg/kg	APHA 23rd Edition; 4500 F^- - D	NA	Not Specified
20	Specific Gravity	g/cc	APHA 23rd Edition; 2710 F	NA	Not Specified
21	Reactive Cyanide as HCN	mg/kg	USEPA 1998, SW-846; 9014	<1.0	<250
22	Reactive Sulphide as H_2S	mg/kg	USEPA 1998, SW-846; 9034	<10.0	<500
23	Zinc as Zn- Total	mg/kg	USEPA 1998, SW-846; 7950	<10.0	Not Specified
24	Cobalt as Co- Total	mg/kg	USEPA 1998, SW-846; 7200	NA	Not Specified
25	Cadmium as Cd- Total	mg/kg	USEPA 1998, SW-846; 7130	<1.0	Not Specified
26	Copper as Cu- Total	mg/kg	USEPA 1998, SW-846; 7210	1.59	Not Specified
27	Total Chromium as Cr- Total	mg/kg	USEPA 1998, SW-846; 7190	15.89	Not Specified
28	Iron as Fe- Total	mg/kg	USEPA 1998, SW-846; 7380	NA	Not Specified
29	Lead as Pb- Total	mg/kg	USEPA 1998, SW-846; 7420	112.58	Not Specified
30	Manganese as Mn – Total	mg/kg	USEPA 1998, SW-846; 7460	NA	Not Specified
31	Nickel as Ni- Total	mg/kg	USEPA 1998, SW-846; 7520	15.80	Not Specified

Authorized Signatory
(Shambhu kumar Yadav)

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Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/750/24-25		Report Date	0	4	.	1	2	.	2	0	2	4

Sr. No.	Parameter	Unit	Method	Result	CPCB ... direct ... dis...	...or ...ill
	(TCLP) Toxicity Characteristics Leaching Procedure					
32	Arsenic as As	mg/L	USEPA 1998, SW-846; 7061 A	<0.05	<5.	
33	Cadmium as Cd	mg/L	USEPA 1998, SW-846; 7130	<0.05	<1	
34	Total Chromium as Cr	mg/L	USEPA 1998, SW-846; 7190	<0.05	<	
35	Hexavalent Chromium as Cr^{6+}	mg/L	APHA 23rd Edi., 2017: 3500 Cr B	<0.05	<5	
36	Cobalt as Co	mg/L	USEPA 1998, SW-846; 7200	NA	<5	
37	Copper as Cu	mg/L	USEPA 1998, SW-846; 7210	<0.05	<2	
38	Iron as Fe	mg/L	USEPA 1998, SW-846; 7380	NA	<	
39	Lead as Pb	mg/L	USEPA 1998, SW-846; 7420	<0.05	<	
40	Manganese as Mn	mg/L	USEPA 1998, SW-846; 7460	NA	<	
41	Nickel as Ni	mg/L	USEPA 1998, SW-846; 7520	<0.05	<	
42	Zinc as Zn	mg/L	USEPA 1998, SW-846; 7950	<0.05	<2	
	(WLT) Water Leaching Testing				CPCB/ / Proto...	...IS ...0-
43	Cyanide	mg/L	APHA 23rd Edition,4500 CN-E	<0.1		
44	Fluoride	mg/L	APHA 23rd Edition,4500 F-D	<1.0	<	
45	Nitrate	mg/L	APHA 23rd Edition,4500 NO_3^- - E	<5.0		
46	Phenols	mg/L	APHA 23rd Edition,5530 B & D	<1.0		
47	Ammonia as N	mg/L	APHA 23rd Edition,4500NH3 B,C	<10.0	<	

Authorized Signatory
(Shambhu kumar Yadav)

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Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/750/24-25		Report Date	0	4	.	1	2	.	2	0

48	Arsenic as As	mg/L	USEPA 1998, SW-846; 7061 A	NA	
49	Cadmium as Cd	mg/L	APHA 23rd Edition,3111 B	<0.01	
50	Total Chromium as Cr	mg/L	APHA 23rd Edition,3111 B	<0.05	Not
51	Hexavalent Chromium as Cr^{6+}	mg/L	APHA 23rd Edi., 2017: 3500 Cr B	<0.05	
52	Cobalt as Co	mg/L	APHA 23rd Edition,3111 B	NA	Not
53	Copper as Cu	mg/L	APHA 23rd Edition,3111 B	<0.05	
54	Iron as Fe	mg/L	APHA 23rd Edition,3111 B	NA	
55	Lead as Pb	mg/L	APHA 23rd Edition,3111 B	<0.05	
56	Manganese as Mn	mg/L	APHA 23rd Edition,3111 B	<0.05	Not
57	Nickel as Ni	mg/L	APHA 23rd Edition,3111 B	<0.05	
58	Zinc as Zn	mg/L	APHA 23rd Edition,3111 B	<0.05	

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

Use PPE's during handling of Grinding Sludge.

ABBREVIATIONS

CPCB	–	Central Pollution Control Board
SW 846	–	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA,1996
Std. Methods	–	Standard Methods for the Examination of Water & Wastewater, APHA 23rd 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

Authorized Signatory
(Shambhu kumar Yadav)

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Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/750/24-25		Report Date	0	4	.	1	2	.	2	

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 Adityapur Waste Management Privat
3. In the absence of specific request from the customer, AWMPL follows National/International standards s conducting the tests. Alternatively, in the absence of these methods, AWMPL shall follow the operating proce by AWMPL.
4. The laboratory, normally, will not offer any opinion/advise or recommendation with respect to the suitability or sample for any application or use. Conformities to a specification or Act will be mentioned as per the Act required.
5. Under no circumstances AWMPL accepts any liability or loss or damage caused by use or misuse of the tes is limited to the testing fee charged, in case of proven negligence by the laboratory.
6. AWMPL shall not assume any responsibility for variation in test results of samples kept on hold for want of cla
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 p materials etc.**

Disposal Pathway/Opinions/Interpretations

Direct Incineration.

END OF REPORT

Authorized Signatory
(Shambhu kumar Yadav)

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Date: 28.11.2024

To
M/s. Tata Steel Ltd-CRM Bara complex
Tata Steel Ltd, CRM complex Bara, Jamshedpur, Jharkhand-831009

We are here with enclosing the Comprehensive analysis report of Solid Waste Sample –: Mill **Chimney Sludge** received on Date: **13.11.2024**. The disposal method for the above sample is Direct **Incineration due to High Calorific value (8823 cal/gm).** We are also enclosing the invoice for analysis.

The disposal method is purely based on the characteristics of the sample sent to us. When the waste will be sent to us it will be analyzed and if the characteristics change the disposal method may change.

Please send us your suggestions for improving laboratory services by filling customer Feedback form attached herewith.

Thanking you for your business. Please Contact us again if we can be of any service in the future. Our fullest Co-Operation and best service assured always.

Yours faithfully
For Adityapur Waste Management Project
(A Subsidiary of Re Sustainability Ltd)

Authorized Signatory
(Shambhu Kumar Yadav)

Adityapur Waste Management Pvt. Ltd.
(A Division of Re Sustainability Limited)
Site Address :
Ukri Road, Plot No.-43, Khata No.- 529,
Sini More, Dist -Seraikella - Kharswan,
Jharkhand - 833220
ISO 9000 : 2015, 14001 : 2015, 45001 : 2018
CIN : U37200AP2013PTC088316

Re Sustainability Limited
(formerly known as Ramky Enviro Engineers Limited)
Registered Office :
Level 11, Aurobindo Galaxy,
Hyderabad Knowledge City,
Hitech City Road, Hyderabad
Telangana - 500081, India
CIN No. U74140TG1994PLC018833

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ISO 9001, 45001, 14001

Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/740/24-25	Report Date	28.11.24

Name of Client :	M/s. Tata Steel Ltd-CRM Bara complex
Contact Details :	Tata Steel Ltd, CRM complex Bara, Jamshedpur, Jharkhand-831009
Telephone No. : -	Fax No. : -
Email ID : -	
Membership No. :	

Name of Sample / Hazardous Waste :	Mill Chimney Sludge		
Description of Sample When Received :	Solid		
Sample Reference Number :	740/24-25	Sample Received Date	13.11.2024
Sample Drawn By :	AWMPL Representative		
Waste Category: **Schedule-I, Cat.**			
RAW Material List / Process Details Enclosed	☐Yes	☑ NO	
MSDS Provided by Client	☐Yes	☑ NO	
Sample Registration No: AWMPL/Lab/CA/740/24-25			
Confirmation Date	13.11.2024	Confirmation by: MBD Dept., AWMPL	

Analysis start date	13.11.2024

Authorized Signatory
(Shambhu kumar Yadav)

ISO 9001, 45001, 14001

Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/740/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

Sr. No.	Particulars	Observation		Remarks (If any)
1	Does the waste have strong Odor?	□Y	☑N	
2	Does the waste give fumes exposed to the atmosphere?	□Y	☑N	
3	Does the waste react with water?	□Y	☑N	
4	Is the waste incompatible with any material? If so specify	□Y	☑N	

TEST REPORT

Sr. No.	Parameter	Unit	Method	Result	CPCB limit for direct landfill disposal
5	Physical State	-	-	Solid	Not Specified
6	Color	-	-	Dark Brown	Not Specified
7	Texture	-	-	Semi wet	Not Specified
8	PFLT(Paint Filter Liquid Test)	-	USEPA 1998, SW-846; 9095A	Pass	Pass
9	Bulk Density	g/cc	APHA 23rd Edition; 2710 F	0.97	Not Specified
10	Calorific Value	cal/g	IS:1350 Part II – 1970	8823	<2500
11	Flash Point	°C	USEPA 1998, SW 846; 1020 A	>60	>60
12	pH (At Room Temperature)	-	USEPA 1998, SW-846; 9045 C	7.024	4 - 12
13	LOD @ 105°C	%	APHA 23rd Edition, 2017; 2540	2.44	Not Specified
14	LOI @ 550°C	%	APHA 23rd Edition, 2017; 2540	97.48	<10
15	Ash Content @ 900°C	%	APHA 23rd Edition, 2017; 2540	NA	Not Specified

Authorized Signatory
(Shambhu kumar Yadav)

ISO 9001, 45001, 14001

Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/740/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

Sr. No.	Parameter	Unit	Method	Result	CPCB Limit for direct landfill disposal
16	Water soluble organics	%	APHA 23rd Edition; 2540 - E	0.14	<10.0
17	Oil & Grease (n-Hexane Extractable)	%	SW-846: 3540	<2.0	<10
19	Fluorides as F^-	mg/kg	APHA 23rd Edition; 4500 F^- - D	NA	Not Specified
20	Specific Gravity	g/cc	APHA 23rd Edition; 2710 F	NA	Not Specified
21	Reactive Cyanide as HCN	mg/kg	USEPA 1998, SW-846; 9014	<1.0	<250
22	Reactive Sulphide as H_2S	mg/kg	USEPA 1998, SW-846; 9034	<10.0	<500
23	Zinc as Zn- Total	mg/kg	USEPA 1998, SW-846; 7950	140.12	Not Specified
24	Cobalt as Co- Total	mg/kg	USEPA 1998, SW-846; 7200	NA	Not Specified
25	Cadmium as Cd- Total	mg/kg	USEPA 1998, SW-846; 7130	<1.0	Not Specified
26	Copper as Cu- Total	mg/kg	USEPA 1998, SW-846; 7210	22.85	Not Specified
27	Total Chromium as Cr- Total	mg/kg	USEPA 1998, SW-846; 7190	26.00	Not Specified
28	Iron as Fe- Total	mg/kg	USEPA 1998, SW-846; 7380	NA	Not Specified
29	Lead as Pb- Total	mg/kg	USEPA 1998, SW-846; 7420	45.96	Not Specified
30	Manganese as Mn – Total	mg/kg	USEPA 1998, SW-846; 7460	NA	Not Specified
31	Nickel as Ni- Total	mg/kg	USEPA 1998, SW-846; 7520	25.75	Not Specified

Authorized Signatory
(Shambhu kumar Yadav)

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/740/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

Sr. No.	Parameter	Unit	Method	Result	CPCB Limit for direct landfill disposal
	(TCLP) Toxicity Characteristics Leaching Procedure				
32	Arsenic as As	mg/L	USEPA 1998, SW-846; 7061 A	<0.05	<5.0
33	Cadmium as Cd	mg/L	USEPA 1998, SW-846; 7130	<0.05	<1.0
34	Total Chromium as Cr	mg/L	USEPA 1998, SW-846; 7190	<0.05	<5.0
35	Hexavalent Chromium as Cr^{6+}	mg/L	APHA 23rd Edi., 2017: 3500 Cr B	<0.05	<5.0
36	Cobalt as Co	mg/L	USEPA 1998, SW-846; 7200	NA	<80
37	Copper as Cu	mg/L	USEPA 1998, SW-846; 7210	<0.05	<250
38	Iron as Fe	mg/L	USEPA 1998, SW-846; 7380	NA	<1
39	Lead as Pb	mg/L	USEPA 1998, SW-846; 7420	<0.05	<1
40	Manganese as Mn	mg/L	USEPA 1998, SW-846; 7460	NA	<10
41	Nickel as Ni	mg/L	USEPA 1998, SW-846; 7520	<0.05	<20
42	Zinc as Zn	mg/L	USEPA 1998, SW-846; 7950	<0.05	<250
	(WLT) Water Leaching Testing				CPCB/H/T... Protoco... 20...
43	Cyanide	mg/L	APHA 23rd Edition,4500 CN-E	<0.1	<1
44	Fluoride	mg/L	APHA 23rd Edition,4500 F-D	<1.0	<50
45	Nitrate	mg/L	APHA 23rd Edition,4500 NO_3^- - E	<5.0	<20
46	Phenols	mg/L	APHA 23rd Edition,5530 B & D	<1.0	<10
47	Ammonia as N	mg/L	APHA 23rd Edition,4500NH3 B,C	<10.0	<10.0

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(Shambhu kumar Yadav)

ISO 9001, 45001, 14001

Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/740/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

48	Arsenic as As	mg/L	USEPA 1998, SW-846; 7061 A	NA	<1.0
49	Cadmium as Cd	mg/L	APHA 23rd Edition,3111 B	<0.01	<0.0
50	Total Chromium as Cr	mg/L	APHA 23rd Edition,3111 B	<0.05	Not Sp ifi
51	Hexavalent Chromium as Cr^{6+}	mg/L	APHA 23rd Edi., 2017: 3500 Cr B	<0.05	<0.
52	Cobalt as Co	mg/L	APHA 23rd Edition,3111 B	NA	Not Sp ifi
53	Copper as Cu	mg/L	APHA 23rd Edition,3111 B	<0.05	<1.
54	Iron as Fe	mg/L	APHA 23rd Edition,3111 B	NA	<0.
55	Lead as Pb	mg/L	APHA 23rd Edition,3111 B	<0.05	<0.
56	Manganese as Mn	mg/L	APHA 23rd Edition,3111 B	<0.05	Not Sp ifi
57	Nickel as Ni	mg/L	APHA 23rd Edition,3111 B	<0.05	<0.
58	Zinc as Zn	mg/L	APHA 23rd Edition,3111 B	<0.05	<1.

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

Use PPE's during handling of Mill Chimney 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 23rd 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

Authorized Signatory
(Shambhu Kumar Yadav)

ISO 9001, 45001, 14001

Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/740/24-25		Report Date	2	8	.	1	1	.	2	0	2	4

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 Adityapur Waste Management Private Limited.
3. In the absence of specific request from the customer, AWMPL follows National/International standards specifically conducting the tests. Alternatively, in the absence of these methods, AWMPL shall follow the operating procedures developed by AWMPL.
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 required.
5. Under no circumstances AWMPL 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. AWMPL 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 process, raw materials etc.**

Disposal Pathway/Opinions/Interpretations

Direct Incineration.

END OF REPORT

Authorized Signatory
(Shambhu kumar Yadav)

ISO 9001, 45001, 14001

Sustainability

Date: 04.12.2024

To
M/s. Tata Steel Ltd-CRM Bara complex
Tata Steel Ltd, CRM complex Bara,
Jamshedpur, Jharkhand-831009

We are here with enclosing the Comprehensive analysis report of Solid Waste Sample –: **WWTP Sludge** received on Date: **28.11.2024**. The disposal method for the above sample is **Direct Landfill.** We are also enclosing the invoice for analysis.

The disposal method is purely based on the characteristics of the sample sent to us. When the waste will be sent to us it will be analyzed and if the characteristics change the disposal method may change.

Please send us your suggestions for improving laboratory services by filling customer Feedback form attached herewith.

Thanking you for your business. Please Contact us again if we can be of any service in the future. Our fullest Co-Operation and best service assured always.

Yours faithfully
For Adityapur Waste Management Project
(A Subsidiary of Re Sustainability Ltd)

Authorized Signatory
(Shambhu Kumar Yadav)

Adityapur Waste Management Pvt. Ltd.
(A Division of Re Sustainability Limited)
Site Address :
Ukri Road, Plot No.-43, Khata No.- 529,
Sini More, Dist.-Seraikella - Kharswan,
Jharkhand - 833220
ISO 9000 : 2015, 14001 : 2015, 45001 : 2018
CIN : U37200AP2013PTC088316

Re Sustainability Limited
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ISO 9001, 45001, 14001

Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/749/24-25	Report Date	04.12.2024

Name of Client	: M/s. Tata Steel Ltd-CRM Bara complex
Contact Details	: Tata Steel Ltd, CRM complex Bara, Jamshedpur, Jharkhand-831009
Telephone No.	: -
Fax No.	: -
Email ID	: -
Membership No.	:

Name of Sample / Hazardous Waste	: WWTP Sludge		
Description of Sample When Received	: Solid		
Sample Reference Number	: 749/24-25	Sample Received Date	28.11.2024
Sample Drawn By	: AWMPL Representative		
Waste Category: **Schedule-I, Cat.**			
RAW Material List / Process Details Enclosed	☐Yes	☑ NO	
MSDS Provided by Client	☐Yes	☑ NO	
Sample Registration No: AWMPL/Lab/CA/749/24-25			
Confirmation Date	28.11.2024	Confirmation by: MBD Dept., AWMPL	
Analysis start date	28.11.2024		

Authorized Signatory
(Shambhu kumar Yadav)

ISO 9001, 45001, 14001

Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/749/24-25		Report Date	0	4	.	1	2	.	2	0	2

Sr. No.	Particulars	Observation		Remarks (If any)
1	Does the waste have strong Odor?	□Y	☑N	
2	Does the waste give fumes exposed to the atmosphere?	□Y	☑N	
3	Does the waste react with water?	□Y	☑N	
4	Is the waste incompatible with any material? If so specify	□Y	☑N	

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	-	-	Semi wet	Not Specified
8	PFLT(Paint Filter Liquid Test)	-	USEPA 1998, SW-846; 9095A	Pass	Pass
9	Bulk Density	g/cc	APHA 23rd Edition; 2710 F	1.47	Not Specified
10	Calorific Value	cal/g	IS:1350 Part II - 1970	353.54	<2500
11	Flash Point	°C	USEPA 1998, SW 846; 1020 A	>60	>60
12	pH (At Room Temperature)	-	USEPA 1998, SW-846; 9045 C	7.009	4 -12
13	LOD @ 105°C	%	APHA 23rd Edition, 2017; 2540	45.06	Not Specified
14	LOI @ 550°C	%	APHA 23rd Edition, 2017; 2540	2.08	<20
15	Ash Content @ 900°C	%	APHA 23rd Edition, 2017; 2540	NA	Not Specified

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Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/749/24-25		Report Date	0	4	.	1	2	.	2	0	2

Sr. No.	Parameter	Unit	Method	Result	CPCB limit for direct landfill disposal
16	Water soluble organics	%	APHA 23rd Edition; 2540 - E	0.11	<10.0
17	Oil & Grease (n-Hexane Extractable)	%	SW-846: 3540	<2.0	<4.0
19	Fluorides as F^-	mg/kg	APHA 23rd Edition; 4500 F^- - D	NA	Not Specified
20	Specific Gravity	g/cc	APHA 23rd Edition; 2710 F	NA	Not Specified
21	Reactive Cyanide as HCN	mg/kg	USEPA 1998, SW-846; 9014	<1.0	<250
22	Reactive Sulphide as H_2S	mg/kg	USEPA 1998, SW-846; 9034	<10.0	<500
23	Zinc as Zn- Total	mg/kg	USEPA 1998, SW-846; 7950	50.25	Not Specified
24	Cobalt as Co- Total	mg/kg	USEPA 1998, SW-846; 7200	NA	Not Specified
25	Cadmium as Cd- Total	mg/kg	USEPA 1998, SW-846; 7130	6.52	Not Specified
26	Copper as Cu- Total	mg/kg	USEPA 1998, SW-846; 7210	42.89	Not Specified
27	Total Chromium as Cr- Total	mg/kg	USEPA 1998, SW-846; 7190	261.02	Not Specified
28	Iron as Fe- Total	mg/kg	USEPA 1998, SW-846; 7380	NA	Not Specified
29	Lead as Pb- Total	mg/kg	USEPA 1998, SW-846; 7420	451.96	Not Specified
30	Manganese as Mn – Total	mg/kg	USEPA 1998, SW-846; 7460	NA	Not Specified
31	Nickel as Ni- Total	mg/kg	USEPA 1998, SW-846; 7520	95.75	Not Specified

Authorized Signatory
(Shambhu kumar Yadav)

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/749/24-25		Report Date	0	4	.	1	2	.	2	0	2

Sr. No.	Parameter	Unit	Method	Result	CPCB limit for direct landfill disposal
	(TCLP) Toxicity Characteristics Leaching Procedure				
32	Arsenic as As	mg/L	USEPA 1998, SW-846; 7061 A	<0.05	<5.0
33	Cadmium as Cd	mg/L	USEPA 1998, SW-846; 7130	<0.05	<1.0
34	Total Chromium as Cr	mg/L	USEPA 1998, SW-846; 7190	<0.05	<5.0
35	Hexavalent Chromium as Cr^{6+}	mg/L	APHA 23rd Edi., 2017: 3500 Cr B	<0.05	<5.0
36	Cobalt as Co	mg/L	USEPA 1998, SW-846; 7200	NA	<80.0
37	Copper as Cu	mg/L	USEPA 1998, SW-846; 7210	<0.05	<25.0
38	Iron as Fe	mg/L	USEPA 1998, SW-846; 7380	NA	<3.0
39	Lead as Pb	mg/L	USEPA 1998, SW-846; 7420	0.08	<5.0
40	Manganese as Mn	mg/L	USEPA 1998, SW-846; 7460	NA	<10.0
41	Nickel as Ni	mg/L	USEPA 1998, SW-846; 7520	0.85	<20.0
42	Zinc as Zn	mg/L	USEPA 1998, SW-846; 7950	<0.05	<250.0
	(WLT) Water Leaching Testing				**CPCB/HAZWMRS /TSDF Protocol/2011**
43	Cyanide	mg/L	APHA 23rd Edition,4500 CN-E	<0.1	<2.0
44	Fluoride	mg/L	APHA 23rd Edition,4500 F-D	<1.0	<50.0
45	Nitrate	mg/L	APHA 23rd Edition,4500 NO_3^- - E	<5.0	<30.0
46	Phenols	mg/L	APHA 23rd Edition,5530 B & D	<1.0	<100.0
47	Ammonia as N	mg/L	APHA 23rd Edition,4500NH3 B,C	<10.0	<1000.0

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(Shambhu kumar Yadav)

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Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/749/24-25		Report Date	0	4	.	1	2	.	2	0	2

48	Arsenic as As	mg/L	USEPA 1998, SW-846; 7061 A	NA	<1.0
49	Cadmium as Cd	mg/L	APHA 23rd Edition,3111 B	<0.01	<0.2
50	Total Chromium as Cr	mg/L	APHA 23rd Edition,3111 B	<0.05	Not Specifi
51	Hexavalent Chromium as Cr^{6+}	mg/L	APHA 23rd Edi., 2017: 3500 Cr B	<0.05	<0.5
52	Cobalt as Co	mg/L	APHA 23rd Edition,3111 B	NA	Not Specifi
53	Copper as Cu	mg/L	APHA 23rd Edition,3111 B	<0.05	< 0
54	Iron as Fe	mg/L	APHA 23rd Edition,3111 B	NA	< 0
55	Lead as Pb	mg/L	APHA 23rd Edition,3111 B	<0.05	< 0
56	Manganese as Mn	mg/L	APHA 23rd Edition,3111 B	<0.05	Not S ecifi
57	Nickel as Ni	mg/L	APHA 23rd Edition,3111 B	<0.05	< 0
58	Zinc as Zn	mg/L	APHA 23rd Edition,3111 B	<0.05	< 0

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

Use PPE's during handling of WWTP 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 23rd 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

Authorized Signatory
(Shambhu kumar Yadav)

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Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/749/24-25	Report Date	0	4	.	1	2	.	2	0	2	4

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 Adityapur Waste Management Private Limited
3. In the absence of specific request from the customer, AWMPL follows National/International standards specified in conducting the tests. Alternatively, in the absence of these methods, AWMPL shall follow the operating procedures developed by AWMPL.
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 AWMPL 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. AWMPL 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 process, raw materials etc.**

Disposal Pathway/Opinions/Interpretations

Direct Landfill.

END OF REPORT

Authorized Signatory
(Shambhu kumar Yadav)

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Sustainability

Date: 28.03.2024

To
M/s. Tata Steel Ltd (CRM BARA)
Agrico Jamshedpur

We are here with enclosing the Comprehensive analysis report of Solid Waste Sample –: **ZLD Salt** received on Date: 18.03.2024. The disposal method for the above sample is **Encapsulation** We are also enclosing the invoice for analysis.

The disposal method is purely based on the characteristics of the sample sent to us. When the waste will be sent to us it will be analyzed and if the characteristics change the disposal method may change.

Please send us your suggestions for improving laboratory services by filling customer Feedback form attached herewith.

Thanking you for your business. Please Contact us again if we can be of any service in the future. Our fullest Co-Operation and best service assured always.

Yours faithfully
For Adityapur Waste Management Project
(A Subsidiary of Re Sustainability Ltd)

Authorized Signatory
(Shambhu Kumar Yadav)

Adityapur Waste Management Pvt. Ltd.
(A Division of Re Sustainability Limited)
Site Address :
Ukri Road, Plot No.-43, Khata No.- 529,
Sini More, Dist.-Seraikella - Kharswan,
Jharkhand - 833220
ISO 9000 : 2015, 14001 : 2015, 45001 : 2018
CIN : U37200AP2013PTC088316

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Telangana - 500081, India.
CIN No. U74140TG1994PLC018833

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ISO 9001, 45001, 14001

Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/686/23-24		Report Date	28.03.2024

Name of Client	: M/s. Tata Steel Ltd (CRM BARA)
Contact Details	: -
	Agrico Jamshedpur
Telephone No.	: -
Fax No.	: -
Email ID	: -
Membership No.	:

Name of Sample / Hazardous Waste	: ZLD Salt		
Description of Sample When Received	: Solid		
Sample Reference Number	: 686/23-24	Sample Received Date	18.03.2024
Sample Drawn By	: AWMPL Representative		
Waste Category: **Schedule-I, Cat.**			
RAW Material List / Process Details Enclosed	☐Yes	☑ NO	
MSDS Provided by Client	☐Yes	☑ NO	
Sample Registration No: AWMPL/Lab/CA/686/23-24			
Confirmation Date	18.03.2024	Confirmation by: MBD Dept., AWMPL	

Analysis start date	18.03.2024

Authorized Signatory
(Shambhu kumar Yadav)

Adityapur Waste Management Pvt. Ltd.
(A Division of Re Sustainability Limited)
Site Address :
Ukri Road, Plot No.-43, Khata No.- 529,
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Jharkhand - 833220
ISO 9000 : 2015, 14001 : 2015, 45001 : 2018
CIN : U37200AP2013PTC088316

Re Sustainability Limited
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Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/686/23-24		Report Date	2	8	.	0	3	.	2	0	2	4

Sr. No.	Particulars	Observation		Remarks (If any)
1	Does the waste have strong Odor?	□Y	☑N	
2	Does the waste give fumes exposed to the atmosphere?	□Y	☑N	
3	Does the waste react with water?	□Y	☑N	
4	Is the waste incompatible with any material? If so specify	□Y	☑N	

TEST REPORT

Sr. No.	Parameter	Unit	Method	Result	CPCB limit for direct landfill disposal
5	Physical State	-	-	Solid	Not Specified
6	Color	-	-	Off White	Not Specified
7	Texture	-	-	Wet Dry	Not Specified
8	PFLT(Paint Filter Liquid Test)	-	USEPA 1998, SW-846; 9095A	Pass	Pass
9	Bulk Density	g/cc	APHA 23rd Edition; 2710 F	1.19	Not Specified
10	Calorific Value	cal/g	IS:1350 Part II – 1970	<200	<2500
11	Flash Point	^{0}C	USEPA 1998, SW 846; 1020 A	>60	>60
12	pH (At Room Temperature)	-	USEPA 1998, SW-846; 9045 C	12.265	4 -12
13	LOD @ 105^{0}C	%	APHA 23rd Edition, 2017; 2540	11.14	Not Specified
14	LOI @ 550^{0}C	%	APHA 23rd Edition, 2017; 2540	1.06	<20
15	Ash Content @ 900^{0}C	%	APHA 23rd Edition, 2017; 2540	NA	Not Specified

Authorized Signatory
(Shambhu kumar Yadav)

ISO 9001, 45001, 14001

Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/686/23-24		Report Date	2	8	.	0	3	.	2	0	2	4

Sr. No.	Parameter	Unit	Method	Result	CPCB limit for direct landfill disposal
16	Water soluble Inorganic	%	APHA 23rd Edition; 2540 - E	83.61	<10.0
17	Oil & Grease (n-Hexane Extractable)	%	SW-846: 3540	<2.0	<4.0
19	Fluorides as F^-	mg/kg	APHA 23rd Edition; 4500 F^- - D	NA	Not Specified
20	Specific Gravity	g/cc	APHA 23rd Edition; 2710 F	NA	Not Specified
21	Reactive Cyanide as HCN	mg/kg	USEPA 1998, SW-846; 9014	<1.0	<250
22	Reactive Sulphide as H_2S	mg/kg	USEPA 1998, SW-846; 9034	<10.0	<500
23	Zinc as Zn- Total	mg/kg	USEPA 1998, SW-846; 7950	<1.0	Not Specified
24	Cobalt as Co- Total	mg/kg	USEPA 1998, SW-846; 7200	NA	Not Specified
25	Cadmium as Cd- Total	mg/kg	USEPA 1998, SW-846; 7130	<1.0	Not Specified
26	Copper as Cu- Total	mg/kg	USEPA 1998, SW-846; 7210	<1.0	Not Specified
27	Total Chromium as Cr- Total	mg/kg	USEPA 1998, SW-846; 7190	25.91	Not Specified
28	Iron as Fe- Total	mg/kg	USEPA 1998, SW-846; 7380	NA	Not Specified
29	Lead as Pb- Total	mg/kg	USEPA 1998, SW-846; 7420	47.16	Not Specified
30	Manganese as Mn – Total	mg/kg	USEPA 1998, SW-846; 7460	NA	Not Specified
31	Nickel as Ni- Total	mg/kg	USEPA 1998, SW-846; 7520	49.03	Not Specified

Authorized Signatory
(Shambhu kumar Yadav)

ISO 9001, 45001, 14001

Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/686/23-24		Report Date	2	8	.	0	3	.	2	0	2	4

Sr. No.	Parameter	Unit	Method	Result	CPCB limit for direct landfill disposal
	(TCLP) Toxicity Characteristics Leaching Procedure				
32	Arsenic as As	mg/L	USEPA 1998, SW-846; 7061 A	<0.05	<5.0
33	Cadmium as Cd	mg/L	USEPA 1998, SW-846; 7130	0.15	<1.0
34	Total Chromium as Cr	mg/L	USEPA 1998, SW-846; 7190	0.43	<5.0
35	Hexavalent Chromium as Cr^{6+}	mg/L	APHA 23rd Edi., 2017: 3500 Cr B	<0.05	<5.0
36	Cobalt as Co	mg/L	USEPA 1998, SW-846; 7200	NA	<80.0
37	Copper as Cu	mg/L	USEPA 1998, SW-846; 7210	<0.05	<25.0
38	Iron as Fe	mg/L	USEPA 1998, SW-846; 7380	NA	<3.0
39	Lead as Pb	mg/L	USEPA 1998, SW-846; 7420	1.87	<2.0
40	Manganese as Mn	mg/L	USEPA 1998, SW-846; 7460	NA	<10.0
41	Nickel as Ni	mg/L	USEPA 1998, SW-846; 7520	2.03	<20.0
42	Zinc as Zn	mg/L	USEPA 1998, SW-846; 7950	<0.05	<250.0
	(WLT) Water Leaching Testing				**CPCB/HAZWAMS /TSDF Protocol/2010-2011**
43	Cyanide	mg/L	APHA 23rd Edition,4500 CN-E	<0.1	<2.0
44	Fluoride	mg/L	APHA 23rd Edition,4500 F-D	<1.0	<50.0
45	Nitrate	mg/L	APHA 23rd Edition,4500 NO_3^- - E	<5.0	<30.0
46	Phenols	mg/L	APHA 23rd Edition,5530 B & D	<1.0	<100.0
47	Ammonia as N	mg/L	APHA 23rd Edition,4500NH3 B,C	<10.0	<1000.0

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(Shambhu kumar Yadav)

ISO 9001, 45001, 14001

Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/686/23-24		Report Date	2	8	.	0	3	.	2	0	2	4

48	Arsenic as As	mg/L	USEPA 1998, SW-846; 7061 A	NA	<1.0
49	Cadmium as Cd	mg/L	APHA 23rd Edition,3111 B	0.11	<0.2
50	Total Chromium as Cr	mg/L	APHA 23rd Edition,3111 B	<0.05	Not Specified
51	Hexavalent Chromium as Cr^{6+}	mg/L	APHA 23rd Edi., 2017: 3500 Cr B	<0.05	<0.5
52	Cobalt as Co	mg/L	APHA 23rd Edition,3111 B	NA	Not Specified
53	Copper as Cu	mg/L	APHA 23rd Edition,3111 B	<0.05	<10.0
54	Iron as Fe	mg/L	APHA 23rd Edition,3111 B	NA	<3.0
55	Lead as Pb	mg/L	APHA 23rd Edition,3111 B	1.90	<2.0
56	Manganese as Mn	mg/L	APHA 23rd Edition,3111 B	<0.05	Not Specified
57	Nickel as Ni	mg/L	APHA 23rd Edition,3111 B	1.18	<3.0
58	Zinc as Zn	mg/L	APHA 23rd Edition,3111 B	<0.05	<10.0

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

Use PPE's during handling of ZLD Salt.

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 23rd 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

Authorized Signatory
(Shambhu kumar Yadav)

ISO 9001, 45001, 14001

Sustainability

COMPREHENSIVE ANALYSIS REPORT

Report No.	AWMPL/Lab/CA/686/23-24		Report Date	2	8	.	0	3	.	2	0	2	4

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 Adityapur Waste Management Private Limited
3. In the absence of specific request from the customer, AWMPL follows National/International standards specifications for conducting the tests. Alternatively, in the absence of these methods, AWMPL shall follow the operating procedures developed by AWMPL.
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 AWMPL 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. AWMPL 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

Encapsulation

END OF REPORT

Authorized Signatory
(Shambhu kumar Yadav)

Annexure-5

LETTER NO.7/Plan 10 215/2016 श्र0नि0(मु0का0नि0)–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

14/03/18

Chief Inspector of Factories, Jharkhand,
Ranchi

ANNEXURE-6

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	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. 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 ofplant expansion.	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 isunder 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 sothat the environment can be protected.	Action plan prepared and will be implemented accordingly.	Capital cost and recurring cost is being utilized judicially for Environmental & Pollution Control Measures and to implement the conditions stipulated by MoEF as well as the State Government. Capital and recurring costs are spent on measures such as Pollution control (WWTP, ARP, fume extraction systems) etc., Online environment monitoring equipment and display and so on.
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 beengiven to local people.

ANNEXURE-6

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
05.	Shri Dev Sharan SinghGovindpur	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 andpollution.	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.	Various environment protection measures have been taken by the company such as: • 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. 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.

ANNEXURE-6

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 inlocal 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.	• 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 developed approx. 5m wide area of plantation around the plant as per CPCB guidelines. • Density of plantation > 3000 plants/Ha which is more than CPCBguidelines. • 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 20 years 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.	• 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.

ANNEXURE-6

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 measureshave been taken by the company such as: • 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.

ANNEXURE-6

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 measureshave been taken by the company such as: • 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.

ANNEXURE-6

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 awareand 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 TataSteel 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 SahniBabudih	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 inplace.	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.

ANNEXURE-6

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 TataSteel 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 inplace.	Environment pollution control measures are already in place. Various environment protection measures have been taken by the company such as: • 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 aroundplant.

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 TataSteel 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 ofexpansion 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 inplant 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. Thereshould 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. SantoshiDevi 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 isunder preparation.	Water facility has been provided in Babudih Basti under CSR activities.
23.	Shri Anand Bihari DubeyBagunnagar	Earlier also Public Hearing was conducted here in the same place. Assurance was also given for solving / avoiding problems of local people. The presentation which was shown by the management is fully false. There were five-five ponds here where	A committee will be constituted with the company representatives considering view of local people.	• Local problems are being resolved under CSR. Basic needs such as Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill

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

		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. 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 forthe 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.	Efforts will be made to solvethe problems in the surrounding areas. Special attention will be given for the community development activities. Direct and indirect employment opportunitieswill be provided.	Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. • 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 Dhatakidih	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 beengiven to local people.

TATA

Shubhanand Mukesh
Head Environment Management

EMD/C-38/1357/15
September 16, 2015

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

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19/9/15

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

Shubhanand Mukesh
Head Environment Management

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

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

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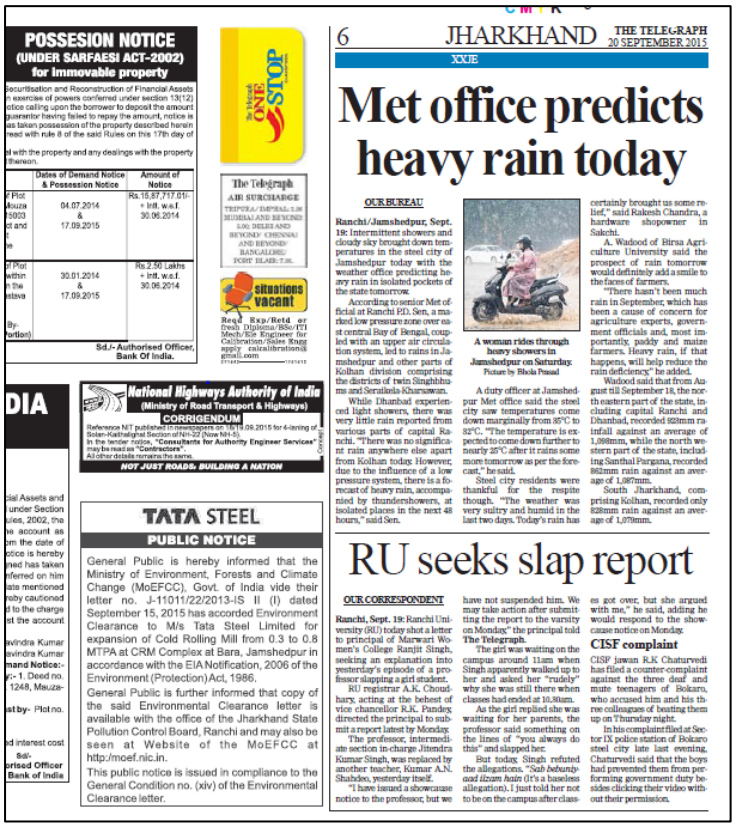
Online Display Board at CRM Bara

Annexure-9



POSSESION NOTICE
(UNDER SARFAESI ACT-2002)
for immovable property

ecuritisation and Reconstruction of Financial Assets
n exercise of powers conferred under section 13(12)
otice calling upon the borrower to deposit the amount
guarantor having failed to repay the amount, notice is
as taken possession of the property described herein
read with rule 8 of the said Rules on this 17th day of
el with the property and any dealings with the property
thereon.

	Dates of Demand Notice & Possession Notice	Amount of Notice
f Plot Mouza 15923 ct and t e	04.07.2014 & 17.09.2015	Rs.15,87,717.01/- + Intt. w.e.f. 30.06.2014
f Plot within n the estiva By- ortion)	30.01.2014 & 17.09.2015	Rs.2.50 Lakhs + Intt. w.e.f. 30.06.2014

Sd/- Authorised Officer,
Bank Of India.

DIA

cial Assets and
under Section
ules, 2002, the
e account as
om the date of
otice is hereby
owed has taken
nferred on him
date mentioned
reby cautioned
d to the charge
st the account

avindra Kumar
avindra Kumar
mand Notice:-
y:- 1. Deed no.
1248, Mauza-

st by- Plot no.

d interest cost
Sd/-
orised Officer
Bank of India

National Highways Authority of India
(Ministry of Road Transport & Highways)
CORRIGENDUM
Reference NIT published in newspapers on 18/19.09.2015 for 4-laning of Solan-Kaithalghat Section of NH-22 (Now NH-5).
In the tender notice, **"Consultants for Authority Engineer Services"** may be read as **"Contractors"**.
All other details remains the same.
NOT JUST ROADS, BUILDING A NATION

TATA STEEL
PUBLIC NOTICE

General Public is hereby informed 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.

General Public is further informed that copy of the said Environmental Clearance letter is available with the office of the Jharkhand State Pollution Control Board, Ranchi and may also be seen at Website of the MoEFCC at http:/moef.nic.in.

This public notice is issued in compliance to the General Condition no. (xiv) of the Environmental Clearance letter.

6 JHARKHAND THE TELEGRAPH 20 SEPTEMBER 2015

XXIE

Met office predicts heavy rain today

OUR BUREAU

Ranchi/Jamshedpur, Sept. 19: Intermittent showers and cloudy sky brought down temperatures in the steel city of Jamshedpur today with the weather office predicting heavy rain in isolated pockets of the state tomorrow.

According to senior Met official at Ranchi RD. Sen, a marked low pressure zone over east central Bay of Bengal, coupled with an upper air circulation system, led to rains in Jamshedpur and other parts of Kolhan division comprising the districts of twin Singhbhums and Seraikela-Kharsawan.

While Dhanbad experienced light showers, there was very little rain reported from various parts of capital Ranchi. "There was no significant rain anywhere else apart from Kolhan today. However, due to the influence of a low pressure system, there is a forecast of heavy rain, accompanied by thundershowers, at isolated places in the next 48 hours," said Sen.

A woman rides through heavy showers in Jamshedpur on Saturday. Picture by Bhola Prasad

A duty officer at Jamshedpur Met office said the steel city saw temperatures come down marginally from 35°C to 32°C. "The temperature is expected to come down further to nearly 25°C after it rains some more tomorrow as per the forecast," he said.

Steel city residents were thankful for the respite though. "The weather was very sultry and humid in the last two days. Today's rain has certainly brought us some relief," said Rakesh Chandra, a hardware shopowner in Sakchi.

A. Wadood of Birsa Agriculture University said the prospect of rain tomorrow would definitely add a smile to the faces of farmers.

"There hasn't been much rain in September, which has been a cause of concern for agriculture experts, government officials and, most importantly, paddy and maize farmers. Heavy rain, if that happens, will help reduce the rain deficiency," he added.

Wadood said that from August till September 18, the north eastern part of the state, including capital Ranchi and Dhanbad, recorded 928mm rainfall against an average of 1,098mm, while the north western part of the state, including Santhal Pargana, recorded 862mm rain against an average of 1,387mm.

South Jharkhand, comprising Kolhan, recorded only 828mm rain against an average of 1,079mm.

RU seeks slap report

OUR CORRESPONDENT

Ranchi, Sept. 19: Ranchi University (RU) today shot a letter to principal of Marwari Women's College Ranjit Singh, seeking an explanation into yesterday's episode of a professor slapping a girl student.

RU registrar A.K. Choudhary, acting at the behest of vice chancellor R.K. Pandey, directed the principal to submit a report latest by Monday.

The professor, intermediate section in-charge Jitendra Kumar Singh, was replaced by another teacher, Kumar A.N. Shahdeo, yesterday itself.

"I have issued a showcause notice to the professor, but we have not suspended him. We may take action after submitting the report to the varsity on Monday," the principal told **The Telegraph.**

The girl was waiting on the campus around 11am when Singh apparently walked up to her and asked her "rudely" why she was still there when classes had ended at 10.30am.

As the girl replied she was waiting for her parents, the professor said something on the lines of "you always do this" and slapped her.

But today Singh refuted the allegations. "*Sab bekunjaad ilzaam hain* (It's a baseless allegation). I just told her not to be on the campus after classes got over, but she argued with me," he said, adding he would respond to the showcause notice on Monday.

CISF complaint

CISF jawan R.K Chaturvedi has filed a counter-complaint against the three deaf and mute teenagers of Bokaro, who accused him and his three colleagues of beating them up on Thursday night.

In his complaint filed at Sector IX police station of Bokaro steel city late last evening, Chaturvedi said that the boys had prevented them from performing government duty besides clicking their video without their permission.

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-IS 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 क्लियरेन्स) प्रदान की है।

सर्वसाधारण को यह भी सूचित किया जाता है कि उपरोक्त पर्यावरण स्वीकृति पत्र की प्रति झारखंड राज्य प्रदूषण नियंत्रण बोर्ड, राँची के कार्यालय में उपलब्ध है और इसे पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय के वेबसाईट 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।

प्रभात खबर Sun, 20 September 2015
epaper.prabhatkhabar.com/c/6607321

ANNEXURE-10

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

Letter no. 124 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, फैक्स–0657–2231017, ई–मेल– **dfo.jamshedpur@gmail.com**

पत्रांक– 2614 /जमशेदपुर दिनांक 02/9/2014

सेवा में,

श्री शुभानन्द मुकेश
हेड ऐनवाइरमेंट 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

प्रसंगः– 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

यहॉ 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
वन प्रमंडल पदाधिकारी
जमशेदपुर वन प्रमंडल,
जमशेदपुर

C:\Users\hp\Desktop\Choudhary\tatasteel related.doc