

TSJ/EMD/C-38/213/23

28 November 2023

Deputy Director General of Forests (C)

Ministry of Environment, Forest and Climate Change Integrated Regional Office, 2nd Floor, Headquarter- Jharkhand State Housing Board Harmu Chowk, Ranchi, Jharkhand – 834002, Ranchi

Sub.: Submission of Half Yearly (April'2023 to September'2023) 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 0.3 MTPA vide MoEF&CC letter no. F.No. J-11011/199/2007-IA II (I) dated: 07.08.2007
- 2. 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

Dear Sir,

This has reference to the captioned subject and cited references. We wish to inform you that we have uploaded the Half Yearly ECCR for the period from April'2023 to September'2023 on MoEF&CC portal <u>http://environmentclearance.nic.in/</u>. Confirmation of the same is attached.

We are herewith submitting the softcopy of the same for your ready reference. You are requested to kindly acknowledgement the same and place in your records. Thanking you

Yours faithfully, For Tata Steel Limited

utlay Kashyop

Utsav Kashyap Head Environment Clearance & Compliance (TSL)

Enclosures as above

Copy to:

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

TATA STEEL LIMITED

Environment Management Jamshedpur 831 001 India Ph: 8092087043 (M) e-mail: utsav.kashyap@tatasteel.com Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400001 Tel 91 22 66658282 Fax 91 22 66657724 Corporate Identity Number L27100MH 1907PLC000260 Website www.tatasteel.com

Confirmation of Online Compliance submission at Parivesh

2023, 17:41	Home Page
Your applica	ation has been Submitted with following details
Proposal No	IA/JH/IND/21196/2007
Compliance ID	27607011
Compliance Number(For Tracking)	EC/M/COMPLIANCE/27607011/2023
Reporting Year	2023
Reporting Period	01 Dec(01 Apr - 30 Sep)
Submission Date	28-11-2023
IRO Name	
IRO Email	
State	
IRO Office Address	
Note:- SMS and E-Mail has been sent to , with Notification to Project	ct Proponent.

1/2023, 16:35 Home Page				
Your app	plication has been Submitted with following details			
Proposal No	IA/JH/IND/3455/2012			
Compliance ID	27324057			
Compliance Number(For Tracking)	EC/M/COMPLIANCE/27324057/2023			
Reporting Year	2023			
Reporting Period	01 Dec(01 Apr - 30 Sep)			
Submission Date	28-11-2023			
IRO Name				
IRO Email				
State				
IRO Office Address				
Note:- SMS and E-Mail has been sent to , with Notification to F	Project Proponent.			

ENVIRONMENTAL CLEARANCE COMPLIANCE STATUS REPORT

April 2023 to September 2023

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

SN	Compliance Conditions	Compliance Status
	Specific Conditions:	
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.	 The following equipment are provided to control Air Pollution: Fume extraction system including scrubber in pickling line. Bag filter in shot blasting machine. Roof-top ventilation system. This system is used to collect, scrub, clean and vent fumes and vapors from the wash tank, pickling tanks, rinse tank, storage, and re- circulating tanks. Pickling baths are covered with tight granite covers. There is no LPG emission inside plant premises.
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.	Water consumption is metered and recorded regularly & the same is within prescribed limit for Steel Plants and as mentioned in EC.RequirementUoMStandardFY'22FY'23FY24H1Steel PlantM³/T50.780.770.45Wastewater treatment plant for the treatment of oily and acidic waste have been installed and are in operation. The excess treated effluent is being stored at the pond inside Bara Complex. The treated water is being used for plantation/dust suppression and other low end uses. No groundwater is used. Domestic wastewater generated inside plant is being treated in STP having capacity of 25 m3/day.
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 all the solid waste generated are being ensured. Iron oxide is recycled by paint industry. Oily scum and sludge are disposed by authorized agency (Adityapur waste management private limited). Solid waste generated at CRM Bara is being 100% 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.	 Green belt at CRM Bara complex has been developed as per CPCB guidelines. Approx. 3.5 Ha area in and around plant is under plantation which is more than 33% of the plant area. We have planted 13235 no. of samplings in the above area till date. We have developed approx. 5m wide area of plantation around the plant as per CPCB guidelines. Density of plantation > 3000 plants/Ha which is more than CPCB guidelines.
v	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 and approval received vide letter no. 1204 dated 17-04-2008 & letter no 2614 dated 02-09-2014.

SN	Compliance Conditions	Compliance Status					
	Specific Conditions:	_					
vi	As mentioned in EIA / EMP, 10.20 Crores and 0.21 Crores earmarked towards the	For environment protection, 29.2 Cr capital cost. Details are as below:	rupees spent as				
	capital cost and recurring cost per annum	Details	Capital Cost				
	respectively for Environmental & Pollution Control Measures shall be judicially utilized to implement the conditions	Pollution control measures (WWTP, ARP, fume extraction systems, etc.	12				
	stipulated by MoEF as well as the State Government. The funds shall not be diverted for any other purpose.	Provision of online environment monitoring equipment and display	2.26				
		Rejuvenation of water bodies	6.94				
		ARP environmental upgradation	7.49				
		PL rinse scrubber	0.510				
		Total capital cost(Cr.)	29.20				
		Recurring cost for upkeep the facilities till FY24 H1 is 68.42 crores					
Gene	eral Conditions:						
i.	The project authorities shall strictly adhere to the stipulations made by Jharkhand State Pollution Control Board (Jharkhand SPCB) and the State Government.	y 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.						
iii.	The gaseous emissions from various process units shall conform to the load / mass based standards notified by this Ministry on 10th May 1002 and	dated 30 th May, 2008 is not applicable for CRM complex, Bara.					
	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.	 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. t g s e 					
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	 four locations in the plant premises. f Near Mill dispatch shutter Near Pickling dispatch shutter Near Roll Shop shutter Near HR Receiving Shutter 					

SN	Compliance Conditions	Compliance Status
	Specific Conditions:	
	Bhubaneswar, SPCB and CPCB once in six months.	being monitored and monitoring reports are being submitted to JSPCB on monthly basis and CPCB and MoEF&CC on six monthly basis.
		Monitoring reports for all relevant parameters from Apr 2023 to Sep 2023 are attached in Annexure-1 .
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. 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. However, fugitive dust emission monitoring is being carried out on regular basis, records are maintained and submitted to JSPCB and MoEF&CC.
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. Therefore, Standards issued by the Ministry vide G.S.R. 414(E) dated 30 th May 2008 are not applicable for CRM Complex, Bara.
vii.	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	Effluent treatment plant for the treatment of oily and acidic waste have been installed and this is in operation. The excess treated effluent is being stored at the pond inside Bara Complex. The treated water is being used for plantation/dust suppression and other low end uses.
		All applicable effluent parameters are being monitored and found within prescribed standards. Monitoring reports are being submitted to JSPCB on monthly basis and CPCB and MoEF&CC on six monthly basis.
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.	We have rejuvenated an abandoned ash pond inside CRM Bara Complex. The area comprises of two large and three small ponds and serves the purpose of rainwater harvesting. The pond capacity is 11,500 m3 in an area of 1.6 Acres. Green Belt has been developed around the pond in an area of 0.4 acres with native species in the surrounding. Photograph attached Annexure-2 .

SN	Compliance Conditions		Co	omplia	ance S	Status	;		
	Specific Conditions:								
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 (night time).	High noise generating equipment has been provided with acoustic enclosures and silencer. However, closed cabins are provided for workers wherever required and people are encouraged to use ear plugs or ear muffs. Monitoring reports for noise from Apr 2023 to Sep 2023 are attached in Annexure-1 .						closed d and ffs.	
x	Recommendations made in the Corporate Responsibility for Environment Conservation (CREP) issued for the steel plant shall be implemented.	No specific rec Cold rolling mi		endati	ons ai	re the	re und	er CR	EP for
xi.	Occupational Health Surveillance of the workers shall be done on the regular basis and records maintained as per the Factories Act.	Regular health conducted half					e work	ers is	being
xii.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report.	Environment implemented recommended	accor		to me		s and	are 1 safe	being guard
xiii.	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.	areas are being implemented.Year wise expenditure for implementation of enterprise					erprise		
		Interventions	FY18	FY19	FY20	FY21	FY22	FY23	FY24
		Health	2.3	66.8	1.5	0.5	0.6	2.2	0.34
		Drinking Water	0.0	0.1	0.1	0.0	0.0	0.1	0.0
		Education Livelihood- Skill Development	0.9 1.6	1.5 1.6	1.8 1.6	1.3 1.5	3.0 1.2	5.0 3.9	1.77 1.14
		Sports	4.4	6.7	4.7	13.3	12.3	13.2	9.16
		Rural Infrastructure	2.1	-	0.0	1.4	3.1	5.3	0.02
		Environment	2.1	2.0	2.7	2.8	4.0	4.3	4.00
		Ethnicity	2.7	4.5	5.3	1.7	4.8	13.3	2.23
		Total	16.1	83.1	17.7	22.4	29.02	47.2	18.7
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.	environment clearances granted by Ministry are being submitted to JSPCB's regional office, Ministry's Regional office, Zonal office CPCB Kolkata and JSPCB							

SN	Compliance Conditions	Compliance Status
	Specific Conditions:	
		https://www.tatasteel.com/corporate/our- organisation/environment/environment-compliance- reports/
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 <i>viz.</i> Chamakta Aina (Hindi) and Avenue Mail (English) on August 11, 2007 and communication to this effect was also sent to MoEF&CC vide our letter no. EMD/C38/2119/07 dated August 18, 2007
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.

ENVIRONMENTAL CLEARANCE COMPLIANCE STATUS REPORT

April 2023 to September 2023

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

S.No	Compliance Conditions	Compliance Status
	Specific Conditions:	
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 for Tata Steel works and CRM Complex Bara has been prepared with the help of approved external agency recommended by State Forest Department and the same has been approved by Principal Chief Conservator of Forests – Wildlife (PCCF-WL) GoJ on Nov 13, 2017. Further, Payment of levies as per w.r.t. approved SSWLCP of Tata Steel Limited has been deposited into DFO Jamshedpur account vide challan no. 108 dated: 20.02.2023 attached as Annexure-3 .
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.	 Online ambient air quality monitoring station has been provided inside CRM Complex Bara and Continuous stack monitoring facility has been provided in Boiler stack. The following equipment are provided to to keep the emission levels below 50 mg/Nm³: 1. Fume extraction system including scrubber in pickling line. 2. Bag filter in shot blasting machine. 3. Roof-top ventilation system. 4. Water sprinkling and mechanized sweeping machine.
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: Fume extraction system including scrubber in pickling line. Bag filter in shot blasting machine. Roof-top ventilation system. 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 30 th May, 2008 and regularly monitored. Guidelines/Code of Practice issued by the CPCB shall be followed.	Standards issued by the Ministry vide G.S.R. 414(E) dated 30 th May, 2008 are not applicable for CRM Complex, Bara.

S.No	Compliance Conditions	Compliance Status				
1	Specific Conditions:					
v	The water consumption shall not exceed as per the standard prescribed for the sponge iron plants and steel plants.	Water consumption is metered and recorded regularly & the same is within prescribed limit for Steel Plants and as mentioned in EC.				
		RequirementUoMStandardFY'22FY'23FY24H1Steel PlantM³/T50.780.770.45				
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.	 capture rainwater from rooftop and surface catchment area. The harvested rainwater is being used for low end applications. Closed circuit cooling system is deployed to reduce water consumption. We have rejuvenated an abandoned ash pond inside CRM Bara Complex. The area comprises of two large and three small ponds and serves the 				
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.	Effluent treatment plant for the treatment of oily and acidic waste have been installed and are in operation. The excess treated effluent is being stored at the pond inside Bara Complex. The treated water is being used for plantation/dust suppression and other low end uses. Domestic wastewater generated inside plant is being				
		treated in STP having capacity of 25 m ³ /day.				
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.	 acidic waste have been installed and are in operation. The excess treated effluent is being stored at the pond inside Bara Complex. The treated water is being used for plantation/dust suppression and other low end uses. No groundwater is used. Ground water monitoring is conducted monthly and monitoring reports are being submitted regularly. 				
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.	2023 to Sep 2023 are attached in Annexure-1 . Proper handling, storage, utilization, and disposal o all the solid waste generated is being ensured. Iror oxide is sold to paint industry and other recyclers Oily scum and sludge is sold to authorized recyclers Details of solid waste and manifest of hazardous waste is being regularly submitted to statutory authorities. Annual Return of Hazardous waste submitted for FY23 via TSJ/EMD/C-26/117/2023 dated 28 June 2023.				

S.No	Compliance Conditions	Compliance Status						
	Specific Conditions:							
х	A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.	• Solid waste generated at CRM Bara is being 100% utilized and sustained 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.	This condition is not applicable as per our manufacturing process does not involve Coal burning and Ash generation.						
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 March 14, 2018 attached as Annexure-4. The report has been submitted to JSPCB and						
xiii	A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.	MoEF&CC.Solid waste generated at CRM Bara is being 100%						
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 as per CPCB guidelines.						
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	Year wise expenditure for implementation of enterprise social commitment for in and around Jamshedpur are given below (in Rs crores):						
	details along with time bound action plan	Interventions FY18 FY19 FY20 FY21 FY22 FY23 FY24						
	shall be prepared and submitted to the Ministry's Regional Office at Ranchi.	Health 2.3 66.8 1.5 0.5 0.6 2.2 0.34 Dripking Water 0.0 0.1 0.1 0.0 0.0 0.1 0.0						
		Drinking Water 0.0 0.1 0.1 0.0 0.1 0.0 Education 0.9 1.5 1.8 1.3 3.0 5.0 1.77						

S.No	Compliance Conditions	Compliance Status							
	Specific Conditions:								
		Livelihood- Skill Development	1.6	1.6	1.6	1.5	1.2	3.9	1.14
		Sports	4.4	6.7	4.7	13.3	12.3	13.2	9.16
		Rural Infrastructure	2.1	-	0.0	1.4	3.1	5.3	0.02
		Environment	2.1	2.0	2.7	2.8	4.0	4.3	4.00
		Ethnicity	2.7	4.5	5.3	1.7	4.8	13.3	2.23
		Total	16.1	83.1	17.7	22.4	29.02	47.2	18.7
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 h implementat	earing ion st		comm s atta				liance e-5 .
xviii	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the	The construct All the necess food, medica etc. had been the project w	sary i 1 heal n prov	nfrast th car	ructu: e, toile	re and ets, sa	l facili fe drir	ties su iking [,]	water,

S.No	Compliance Conditions	Compliance Status
Gener	ral Conditions:	
i	The project authorities must strictly adhere to the stipulations made by the Jharkhand Pollution Control Board and the State Government.	We are abiding by all the compliance conditions made by JSPCB and State Government of Jharkhand.
ii	No further expansion or modifications in the plant shall be carried out without prior approval of the MoEF&CC.	No further expansion or modifications beyond the existing capacity of 0.8 MTPA in the plant will be carried out without prior approval from MoEF&CC.
iii	At least four ambient air quality monitoring stations should be established in the downward directions well as where maximum ground level concentration of PM_{10} , $PM_{2.5}$, SO_2 and 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 is being monitored for the following four locations in the plant premises. 1. Near Mill dispatch shutter 2. Near Pickling dispatch shutter 3. Near Roll Shop shutter 4. Near HR Receiving Shutter All parameters as per NAAQS, 2009 standards are being monitored and monitoring reports are being

S.No	Compliance Conditions	Compliance Status
Gener	al Conditions:	
		submitted to JSPCB on monthly basis and CPCB and MoEF&CC on six-monthly basis. Monitoring reports for all relevant parameters from Apr 2023 to Sep 2023 are attached in Annexure-1 .
iv	Industrial Wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose.	Effluent treatment plants for the treatment of oily and acidic waste have been installed and are in operation. The excess treated effluent is being stored at the pond inside Bara Complex. The treated water is being used for dust suppression and other low end uses. All applicable effluent parameters are being monitored and found within prescribed standards. Monitoring reports are being submitted to JSPCB on monthly basis and CPCB and MoEF&CC on six - monthly basis.
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. However, closed cabins are provided for workers wherever required and people are encouraged to use ear plugs or earmuffs. Monitoring reports for noise from Apr 2023 to Sep 2023 are attached in Annexure-1.
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 all the workers is being conducted half yearly and annually. Occupational health surveillance has been conducted for permanent workers.
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.	We have rejuvenated an abandoned ash pond inside CRM Bara Complex. The area comprises of two large and three small ponds and serves the purpose of rainwater harvesting. The pond capacity is 11,500 m ³ in an area of 1.6 Acres. Green Belt has been developed around the pond in an area of 0.4 acres with native species in the surrounding. 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. Year wise expenditure for implementation of enterprise social commitment for in and around Jamshedpur are given below (in Rs crores):
		Interventions FY18 FY19 FY20 FY21 FY22 FY23 FY24
		Health 2.3 66.8 1.5 0.5 0.6 2.2 0.34

S.No	Compliance Conditions		C	ompli	ance	Statu	s		
Gener	al Conditions:								
		Drinking Water	0.0	0.1	0.1	0.0	0.0	0.1	0.0
		Education	0.9	1.5	1.8	1.3	3.0	5.0	1.77
		Livelihood- Skill Development	1.6	1.6	1.6	1.5	1.2	3.9	1.14
		Sports	4.4	6.7	4.7	13.3	12.3	13.2	9.16
		Rural Infrastructure	2.1	-	0.0	1.4	3.1	5.3	0.02
		Environment	2.1	2.0	2.7	2.8	4.0	4.3	4.00
		Ethnicity	2.7	4.5	5.3	1.7	4.8	13.3	2.23
		Total	16.1	83.1	17.7	22.4	29.02	47.2	18.7
ix	Requisite funds shall be earmarked towards capital cost and recurring cost/	For environn capital cost.					r rupe	es spo	ent as
	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.	Details Pollution co (WWTP, AR) systems, etc Provision of monitoring display Rejuvenation ARP environ PL rinse scr Total capit Recurring c facilities till I	P, fun c. f onlin equip on of v ament rubbe: cal cos ost fo FY24	ne extr ment vater l cal upg r st(Cr. pr up H1 is	raction ironm and podies gradat) keep 68.42	ent tion the crore	pollut:))) ontrol
х	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 C Commission Jamshedpur no. EMD/C 16, 2015 atta	er, E Notif -38/1	Block ied Ar 35,13	Deve ea Co 7,138	lopme mmitt /15 d	ent C tee vid	Officer le our	and letter

S.No	Compliance Conditions	Compliance Status
Gener	al Conditions:	
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 all existing environment clearances granted by Ministry are being submitted to JSPCB's regional office, Ministry's Regional office, Zonal office CPCB Kolkata and JSPCB Ranchi regularly and being submitted online through the respective website. The six-monthly compliance reports along the monitored data is also uploaded in the website <u>https://www.tatasteel.com/corporate/our- organisation/environment/environment- compliance-reports/</u> Monitoring data is being displayed near the main gate of the company in the public domain. Photograph attached as Annexure-7 .
xii	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e- mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of the Ministry at Ranchi / CPCB shall monitor the stipulated conditions.	Six-monthly compliance reports of all existing environment clearances granted by Ministry along with environment monitoring reports are being submitted to JSPCB's regional office, Ministry's Regional office, Zonal office CPCB Kolkata and JSPCB Ranchi through email also the same is being uploaded on MoEF&CC website. FY23 H2 compliance report submitted via TSJ/EMD/C-38/092/23 dated 31 May 2023.
xiii	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional office of the 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'23 has been submitted to JSPCB through hard and soft copies vide letter no. TSJ/EMD/C-23/176/23 dated September 26, 2023. 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	Environment clearance information/notice had been advertised in two local newspaper dated September 20, 2015 in English Paper and Hindi Paper <i>viz</i> The Telegraph and Prabhat Khabar attached as Annexure-8 . Copy of these have been sent to the Regional Office, MoEF&CC at Ranchi vide letter no. EMD/C38/136/15 dated September 16th, 2015.

S.No	Compliance Conditions	Compliance Status
Gener	al Conditions:	
	should be forwarded to the Regional Office at Ranchi.	
xv	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Financial closure and final approval of the project by Board of Tata Steel was done in April 2013.
xvi	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	We are abiding for implementation of all the above compliance conditions. The progress report of above conditions will be submitted on regular basis.
xvii	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	We will be in accordance with implementation of necessary additional conditions stipulated by the Ministry for compliance (if any).
xviii	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.	We are abiding by all the applicable legal requirements and Statutory clearances.

MONITORING & ANALYSIS REPORT

April 2023 to September 2023

Cold Rolling Mill Complex (CRMC), Jamshedpur

ENVIRONMENTAL MANAGEMENT DEPARTMENT TATA STEEL LIMITED JAMSHEDPUR



Tata Steel Limited Environmental Monitoring Report of CRM Bara CRM BARA Effluent Quality Report from Apr 2023 To Sep 2023

	Parameter	Unit	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23
	pН	-	7.78	6.86	8.07	7.89	8.1	7.79
0-2	Total Suspended solids	mg/L	34	40	40	<10	38	<10
te N	Oil & Grease	mg/L	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
at Gate No-2	Hexavalent Chromium, Cr+6	mg/L	1.6	1.6	2	1.8	0.8	1.6
Drain	Biological Oxygen Demand, BOD	mg/L	8.5	6.5	22	13	7	5
	Chemical Oxygen Demand, COD	mg/L	24	17	57	44	40	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 21.02.2022 having validity till 20.02.2024.

J. Nagarjuma oleddy

Sr. Manager Monitoring and Analysis

Head Environment Monitoring, Testing & Analysis (TSJ)



Tata Steel Limited

Environmental Monitoring Report of CRM Bara Continuous Ambient Air Quality Report for CRM BARA from Apr 2023 to Sep 2023

SI No	Donomotor	UoM	Standard	CAAQMS#1	CAAQMS#1	CAAQMS#1	CAAQMS#1	CAAQMS#1	CAAQMS#1
Sl. No.	Parameter	UOM	Stanuaru	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23
1	Particulate Matter (PM10)	$\mu g/m^3$	100	170.0	115.2	101.0	43.9	96.6	60.5
2	Particulate Matter (PM2.5)	$\mu g/m^3$	60	58.5	41.0	36.2	17.8	32.9	24.6
3	Sulphur Dioxide (SO2)	$\mu g/m^3$	80	8.2	4.2	5.2	8.0	9.2	11.2
4	Nitrogen Dioxide (NOx)	$\mu g/m^3$	80	40.4	23.3	19.0	11.5	17.8	9.8
Notor	1	1		1	1	1	1	Į.	1

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

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Manager Monitoring and Analysis

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Head Environment Monitoring, Testing & Analysis (TSJ)



Tata Steel Limited Environmental Monitoring Report of CRM Bara Ambient Air Quality Report for CRM BARA from Apr 2023 to Sep 2023

Location	Parameter	UoM	Standard	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23
	Particulate Matter, PM10 ^{\$}	$\mu g/m^3$	100	190.09	202.27	108.35	64.17	59.51	38.15
	Particulate Matter, PM2.5	μg/m ³	60	56.49	72.2	39.21	27.64	24.62	14.67
	Sulphur Dioxide (SO ₂) ⁸	μg/m ³	80	21.96	17.53	14.32	13.28	13.7	11.66
	Nitrogen Dioxide (NO2) ⁸	$\mu g/m^3$	80	39.15	36.05	32.58	41.77	35.6	26.75
	Carbon Monoxide (CO)	mg/m ³	2	0.21	0.19	0.18	0.22	0.2	0.23
NEAR	Ammonia (NH ₃) ^{\$}	μg/m ³	400	57.81	46.88	58.34	51.05	28.65	32.3
DISPATCH SHUTTER	Ozone (O ₃) ^{\$}	$\mu g/m^3$	180	10.01	7.57	8.54	15.14	10.99	11.72
Sheribit	Nickel (Ni) ^{\$}	ng/m ³	20	0.04	0.01	0.02	< 5.0	0.02	0.12
	Arsenic (As)	ng/m ³	6	NT	NT	NT	NT	NT	NT
	Lead (Pb) ^{\$}	µg/m ³	1	0.15	0.09	0.05	< 0.1	< 0.1	0.05
	Benzene (C ₆ H ₆)	µg/m ³	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Benzo alpha Pyrene (BaP)	ng/m ³	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Parameter	UoM	Standard	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23
	Particulate Matter, PM10 ^S	µg/m ³	100	167.56	126.12	120.35	76.77	79.75	38.41
	Particulate Matter, PM2.5	μg/m ³	60	52.41	45.79	49.53	29.19	31.07	14.62
	Sulphur Dioxide (SO ₂) ^{\$}	μg/m ³	80	15.81	15.1	13.68	17.23	14.75	11.26
	Nitrogen Dioxide (NO2) ⁸	µg/m ³	80	32.08	33.33	34.55	29.05	33.29	37.14
NEAR FIRE	Carbon Monoxide (CO)	mg/m ³	2	0.24	0.2	0.23	0.21	0.19	0.22
FIGHTING	Ammonia (NH ₃) ^{\$}	$\mu g/m^3$	400	40.11	45.84	41.67	47.92	53.13	33.86
STATION	Ozone (O ₃) [§]	μg/m ³	180	17.82	10.25	11.72	16.36	12.94	13.67
	Nickel (Ni) ^{\$}	ng/m ³	20	0.05	0.01	0.06	< 5.0	0.02	0.17
	Arsenic (As)	ng/m ³	6	NT	NT	NT	NT	NT	NT
	Lead (Pb) ^{\$}	$\mu g/m^3$	1	0.19	0.04	0.06	0.11	0.01	0.1
	Benzene (C ₆ H ₆)	$\mu g/m^3$	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Benzo alpha Pyrene (BaP)	ng/m ³	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Parameter	UoM	Standard	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23
	Particulate Matter, PM ₁₀ ^{\$}	μg/m ³	100	242.32	156.46	103.08	85.04	55.26	30.93
	Particulate Matter, PM2.5	µg/m ³	60	62.54	58.65	37.24	32.05	22.43	13.96
	Sulphur Dioxide (SO2) ^{\$}	µg/m ³	80	18.9	19.17	18	11.36	13.29	10.18
	Nitrogen Dioxide (NO2) ⁸	µg/m ³	80	39.32	32.12	34.25	35.78	33.11	34.25
	Carbon Monoxide (CO)	mg/m ³	2	0.25	0.22	0.24	0.2	0.23	0.26
NEAR ROLL SHUTTER	Ammonia (NH ₃) ^{\$}	µg/m ³	400	52.09	46.88	41.67	43.75	43.75	31.77
SHUTTER	Ozone (O ₃) [§]	μg/m ³	180	14.65	10.25	12.94	22.46	14.41	9.77
	Nickel (Ni) ⁸	ng/m ³	20	0.01	0.01	0.03	< 0.1	< 0.1	0.13
	Arsenic (As)	ng/m ³	6	NT	NT	NT	NT	NT	NT
	Lead (Pb) ^{\$}	µg/m ³	1	0.16	0.03	0.07	0.02	0.02	0.04
	Benzene (C ₆ H ₆)	μg/m ³	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Benzo alpha Pyrene (BaP)	ng/m ³	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Note

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

NT - Not Traced

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

J. Nyurjuma bleddy

Sr. Manager Monitoring and Analysis

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Head Environment Monitoring, Testing & Analysis (TSJ)



Tata Steel Limited Environmental Monitoring Report of CRM Bara Ambient Noise Level Monitoring Report for CRM BARA from Apr 2023 to Sep 2023

			Ap	r-23	May-23		Jun-23		Jul-23		Aug-23		Sep-23	
Sl.No.	Sampling Location		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
			dB(A	dB(A) Leq		A) Leq	dB(A	dB(A) Leq		dB(A) Leq) Leq	dB(A) Leq	
1	Entrance Main Gate		61.3	57.3	64.2	46.4	63.4	52	63.1	59.5	68.2	53.9	67.4	52.8
2	Circle Near Main Gate	lt	62.8	56.7	63.7	51	64.6	52.8	62.9	58.3	64.3	53.1	63.9	52.9
3	Circle Near Gate No-1	esult	60.3	57.1	60.1	49.9	65	54.8	66.3	55.6	59.4	58	65.8	51.4
4	Gate No-1	R	59.4	58.6	59.3	59.2	63.2	52.8	67.1	58.5	62.1	60.8	68.1	51.8
5	Gate No-2		58.1	59.4	58.6	48.3	61.7	65.3	64.2	54.7	60.3	56.1	62.7	52

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.

J. Negarjumarkeddy

Sr. Manager Monitoring and Analysis

Head Environment Monitoring, Testing & Analysis (TSJ)



Tata Steel Limited Environmental Monitoring Report of CRM Bara Manual Stack Emission Monitoring Report from Apr 2023 to Sep 2023

Month	Location	UoM	Standard	Parameter	Result
	ARP				18.0
Apr 22	Pickling				8.2
Apr-23	Boiler				2.8
	Shot Blasting				2.3
	ARP				14.9
May-23	Pickling				8.2
Iviay-23	Boiler				1.2
	Shot Blasting				2.6
	ARP				14.9
Jun-23	Pickling				8.2
Jun-23	Boiler				1.2
	Shot Blasting	$m\alpha/Nm^3$	100	PM	2.6
	ARP	mg/Nm ³	100	1 111	12.8
Jul-23	Pickling				8.8
Jui-23	Boiler				1.0
	Shot Blasting				3.0
	ARP				13.7
Aug-23	Pickling				8.8
Aug-25	Boiler				1.5
	Shot Blasting				2.2
	ARP				16.6
Sep-23	Pickling				7.3
Sep-25	Boiler				2.0
	Shot Blasting				2.1

Note:

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

Parmi Thapa

Manager Steel Making,CRM Bara & Tubes Division

Head Environment Monitoring, Testing & Analysis (TSJ)

ANNEXURE-I



Tata Steel Limited Environmental Monitoring Report of CRM Bara Fugitive Emission Monitoring Report from Apr 2023 to Sep 2023

S.No.	Location	UoM	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23
1	Near RCPH Pump House		0.3	0.7	0.5	0.7	0.4	0.8
2	Near Pickling Line Exit		0.5	0.8	0.5	0.7	0.4	0.8
3	Near Mills Stand		0.4	0.5	0.6	0.7	0.3	0.3
4	Near Mill Stand outside		0.5	0.6	0.4	0.7	0.4	0.2
5	1 Mtr. Away From Compressor # 1		0.4	0.6	0.6	0.6	N/O	N/O
6	1 Mtr. Away From Compressor # 2		0.4	0.6	0.6	0.6	0.9	0.4
7	1 Mtr. Away From Compressor # 3		0.4	0.6	0.6	0.6	0.9	0.4
8	1 Mtr. Away From Compressor # 4		0.4	0.6	0.6	0.6	0.9	0.4
9	Inside Room Compressor	mg/m3	0.3	0.6	0.5	0.6	0.8	0.4
10	Inside Boiler House		0.5	0.6	0.4	0.5	0.4	0.4
11	ARP Pump Room		0.5	0.8	0.5	0.7	0.3	0.3
12	Sticher Area		0.5	0.8	0.5	0.9	0.4	0.2
13	Rince Tank Area		0.6	0.8	0.4	0.8	0.4	0.3
14	Main Office		0.4	0.5	0.4	0.5	0.3	0.2
15	Near Gate # 1		0.6	0.6	0.7	0.5	0.3	0.4
16	Near Gate # 2		0.6	0.6	0.6	0.6	0.4	0.4
17	Coil Receiving Area		0.6	0.7	0.5	0.6	0.3	0.2

Note:

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

Parmi Thopa

Manager Steel Making,CRM Bara & Tubes Division

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Head Environment Monitoring, Testing & Analysis (TSJ)

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Tata Steel Limited

Environment Management Department – Laboratory

Groundwater Monitoring Report- Apr 2023 To Sept 2023

Month	Sampling Locations	рН	Temperature	Conductivity	Total Dissolved Solids	Total Suspended Solids	Alkalinity as CaCO ₃	Total Hardness as CaCO ₃	Calcium as Ca	Chlorides as Cl ⁻	Sulphates as SO_4^{-2}
			oC	µMho/Cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	Parvati GhatBore water	7.1	26.8	1554	761	22	122	544	163	95	607
	Jugsalai Bore Water	6.9	26.5	1798	881	16	114	518	155	89	673
Apr-23	Jemco Bore Water	7.0	25.8	2679	1313	< 10	122	54	16	55	450
	SonariBore water	7.0	26.6	950	466	< 10	242	371	58	77	118
	Baganhattu Bore water	6.7	25.9	711	348	< 10	152	221	62	66	22
	SonariBore water	7.1	28.9	955	468	< 10	240	323	63	83	119
	Baganhattu Bore water	6.7	28.1	1080	529	< 10	130	444	57	218	63
May-23	Jemco Bore Water	6.6	28.1	899	441	22	408	257	49	57	93
	Jugsalai Bore Water	7.8	28.3	1072	525	< 10	380	552	66	83	82
	Parvati GhatBore water	7.4	28.9	2454	1202	< 10	140	1285	157	93	450
	Jugsalai Bore Water	7.0	26.1	1037	508	< 10	388	418	126	59	163
	Parvati GhatBore water	6.6	25.7	891	437	< 10	156	283	27	104	127
Jun-23	Baganhattu Bore water	6.8	27.0	983	482	< 10	104	382	88	226	55
	Jemco Bore Water	7.2	26.3	1093	536	< 10	412	361	134	88	132
	SonariBore water	7.0	25.6	899	441	< 10	132	386	62	76	55
	Jugsalai Bore Water	7.2	27.0	1188	582	< 10	460	518	109	110	106
	Parvati GhatBore water	7.1	26.9	2587	1268	< 10	590	1074	192	180	32
Jul-23	SonariBore water	6.9	28.0	940	461	< 10	268	380	94	75	19
	Baganhattu Bore water	6.8	28.4	1013	496	< 10	88	365	78	245	57
	Jemco Bore Water	7.1	27.7	1570	769	12	56	502	121	181	127
	SonariBore water	6.6	25.6	1034	507	< 10	98	271	201	232	57
	Baganhattu Bore water	6.8	24.9	818	401	< 10	238	265	197	65	98
Aug-23	Jemco Bore Water	6.9	25.6	562	275	< 10	136	141	102	47	55
	Jugsalai Bore Water	7.1	28.6	1186	581	< 10	420	512	361	110	306
	Parvati GhatBore water	7.0	27.3	2781	1363	< 10	632	1315	964	215	38
	Parvati GhatBore water	7.1	26.4	3177	1557	< 10	684	1486	347	260	468
	Jugsalai Bore Water	7.2	26.7	899	441	< 10	226	319	100	76	167
Sep-23	Jemco Bore Water	7.1	26.4	886	434	12	146	303	94	95	179
	SonariBore water	6.9	28.3	787	386	< 10	224	271	78	63	99
	Baganhattu Bore water	6.7	27.4	1043	511	< 10	92	384	117	228	55

Naaganzuma

Sr. Manager Monitoring and Analysis

Head Environment Monitoring, Testing & Analysis (TSJ)

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TATA STEEL

Tata Steel Limited Environment Management Department – Laboratory Groundwater Monitoring Report- Apr 2023 To Sept 2023

Month	Sampling Locations	Nitrate Nitrogen as N	Nitrite Nitrogen as N	Fluorides as F [.]	Silica as SiO2	Iron as Fe	Manganese as Mn	Hexavalent Chromium as Cr+6	Copper as Cu	Total Chromium as Cr	Cadmium Cd	Nickel as Ni
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	Jugsalai Bore Water	< 0.05	0.1	1	34	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Parvati GhatBore water	0.1	0.0	0	45	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
Apr-23	SonariBore water	5.0	0.2	1	59	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Baganhattu Bore water	4.9	0.0	0	47	0	1	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Jemco Bore Water	4.0	0.1	0	66	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	SonariBore water	8.3	0.1	0	31	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Baganhattu Bore water	0.4	0.0	1	48	0	1	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
May-23	Jemco Bore Water	7.9	< 0.02	0	30	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Jugsalai Bore Water	1.8	0.0	1	28	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Parvati GhatBore water	4.0	0.0	1	53	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Jugsalai Bore Water	1.5	0.0	1	27	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Parvati GhatBore water	1.7	< 0.02	1	18	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
Jun-23	Baganhattu Bore water	0.1	< 0.02	0	43	0	1	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Jemco Bore Water	8.2	0.0	1	34	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	SonariBore water	0.1	0.0	0	36	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Jugsalai Bore Water	3.7	0.1	1	25	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Parvati GhatBore water	3.3	0.2	1	27	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
Jul-23	Jemco Bore Water	0.1	0.0	0	27	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	SonariBore water	2.7	0.0	0	25	0	1	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Baganhattu Bore water	6.4	0.0	2	28	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	SonariBore water	0.7	0.0	0	17	0	1	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Baganhattu Bore water	1.4	< 0.02	0	16	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
Aug-23	Jemco Bore Water	6.1	0.1	0	12	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Jugsalai Bore Water	5.0	0.0	1	25	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Parvati GhatBore water	6.7	0.2	0	11	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Parvati GhatBore water	4.1	0.2	1	14	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Jugsalai Bore Water	1.3	0.0	1	12	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
Sep-23	Jemco Bore Water	5.2	0.3	0	15	1	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	SonariBore water	4.8	< 0.02	0	8	0	0	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02
	Baganhattu Bore water	4.0	< 0.02	0	12	0	1	< 0.05	< 0.01	< 0.05	< 0.003	< 0.02

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Sr. Manager Monitoring and Analysis

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Head Environment Monitoring, Testing & Analysis (TSJ)

TATA TATA STEEL

Tata Steel Limited Environment Management Department – Laboratory Groundwater Monitoring Report- Apr 2023 To Sept 2023

Month	Sampling Locations	Zinc as Zn	Lead as Pb	Nitrogen (Ammonia) as N	Residual Chlorine as Cl	Sulphide as S ²	Phenolic Compound as Phenols	Free Cyanide	Arsenic as As	Mercury	Aluminum	Vanadium
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	Jugsalai Bore Water	0.24	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Parvati Ghat Bore water	0.53	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
Apr-23	Sonari Bore water	0.09	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Baganhattu Bore water	0.09	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Jemco Bore Water	0.15	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	SonariBore water	0.08	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Baganhattu Bore water	0.08	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
May-23	Jemco Bore Water	2.15	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Jugsalai Bore Water	0.07	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Parvati GhatBore water	0.05	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Jugsalai Bore Water	0.07	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Parvati GhatBore water	0.11	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
Jun-23	Baganhattu Bore water	0.04	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Jemco Bore Water	0.07	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	SonariBore water	0.10	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Jugsalai Bore Water	0.11	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Parvati GhatBore water	0.14	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
Jul-23	Jemco Bore Water	0.09	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	SonariBore water	0.05	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Baganhattu Bore water	0.09	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	SonariBore water	0.08	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Baganhattu Bore water	0.06	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
Aug-23	Jemco Bore Water	0.08	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Jugsalai Bore Water	0.17	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Parvati GhatBore water	0.11	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Parvati GhatBore water	0.11	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Jugsalai Bore Water	0.10	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
Sep-23	Jemco Bore Water	0.11	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	SonariBore water	0.06	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01
	Baganhattu Bore water	0.13	< 0.01	< 1.0	< 0.05	< 0.10	< 0.10	< 0.1	< 0.01	< 0.01	< 0.03	< 0.01

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Sr. Manager Monitoring and Analysis

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Head Environment Monitoring, Testing & Analysis (TSJ)





Ramky Enviro Engineers Limited Unit :- Rajasthan Waste Management Project, TSDF-Udaipur ISO 9001:2008 C No F5S70997 LO 14001:2004 OHSAS 18001:2007 IMS PAS 99:2066 C No FMS 570797 C No FMS 570500 C No IM 570907 COMPREHENSIVE ANALYSIS REPORT

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Name of Client :	M/	s. T	ATA	STE	EL	LTD														a
Contact Details :	17 0						×.		-,										5	
4	CR	м сс	OMP	_EX E	BARA	А, P(D:AG	RICO	D,JAI	MSHEDPUR	-831(009		-						owards
Telephone No. :						F	ax N	o.		:										Town
Email ID :																			2	1
Membership : No.	342																			
Name of Sample /	Haza	irdou	ıs W	aste			: E1	PS	ludg	e										
Description of Sa	mple	e Wh	ien F	Recei	ved		: So	olid										-		1 1
Sample Reference Number			•	102/	20-2	21	Sar	nple	Rec	eived Date		0	8	3	•	0	9	. 2	0	2
Sample Drawn By			1														10-	_		
Waste Category: S	che	dule	-I, (Cat.	-35.	.3													2	
RAW Material List Process Details En		d				es				13	NO									-
MSDS Provided by Client					ΠY	es				M	NO				1.					
Sample Registratio	on No	: RV	VMP	/LAB	/CA/	/102	/20-	21												5
Confirmation 1 Date	5		0	9	•	2	0	2	0	Confirmat	ion t	oy: M	BD D	ept.	, R1	мм	Р			
Analysis start date	1	5		0	9		2	0	2	0	+									
Testing Period	09	Days	s								-65									
Authorized (Rajkumar Par					ATORI AT	0. * Pcon		Pa	age 1	of 6			R	ev. I	No. (01/	04.08	3.2018	3	

(Raj.) Tel. : +91-294-280203 Email : rwmp@ramky.com



E-mail : info@ramky.com Website : www.ramky.com REEL CIN:U74140AP1994PLC018833





COMPREHENSIVE ANALYSIS REPORT

<u>of</u>o Report No. 0 2 RWMP/Lab/CA/102/20-21 Report Date 2 3 0 9 2 s sustainable Observation Remarks (If any) Sr. No. Particulars Does the waste have strong YN 1* DY Odor? QŃ Does the waste give fumes 2* ΠY exposed to the atmosphere? Toward VN 3* Does the waste react with water? DY 4* Is the waste incompatible with $\Box Y$ DN any material? If so specify

TEST REPORT

Sr. No.	Parameter	Unit	Method	Result	CPCB limit for direct landfill disposal
5*	Physical State	-	*	Solid	Not Specified
6*	Color	-	2 (<u>1</u> 1)	Black	Not Specified
7*	Texture	-	-	Wet	Not Specified
8	PFLT (Paint Filter Liquid Test)	-	USEPA 1998, SW-846; 9095A	Pass	Pass
9	Bulk Density	g/cc	APHA 23 rd Edition; 2710 F	1.22	Not Specified
10	Calorific Value	cal/g	IS:1350 Part II - 1970	385.40	<2500
11*	Flash Point	°C	USEPA 1998, SW 846; 1020 A	>60	>60
12	Moisture Content	%	IS 326 (Part 21): 2001	NA	Not Specified
13	LOD @ 105°C	%	APHA 23 rd Edition, 2017; 2540	66.59	Not Specified
14	LOI @ 550°C	%	APHA 23 rd Edition, 2017; 2540	7.32	<20
15*	Ash Content @ 900°C	%	APHA 23 rd Edition, 2017; 2540	91.48	Not Specified

Q-Daune DABORATO Authorized Signatory (Rajkumar Parmar - Dy. Manager)

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Rev. No. 01/ 04.08.2018

MANAGING HAZARDOUS WASTE



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

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





Ramky Enviro Engineers Limited Unit :- Rajasthan Waste Management Project, TSDF-Udaipur

Repor	t No.	RWMP/Lab/0	CA/102/20	-21	Report Date	2	3	. 0	9	. 2	0	2	
Sr. No.	Pa	arameter	Unit		Method			Re	esult		PCB I irect disp		for fill
16	pH (At I Tempera		-	USEP	PA 1998, SW-846;	904	5 C	8	8.46			-12	
17	Chlorid	e as Cl-	mg/kg	APHA	23 rd Edition; 4500	SO4	E	36	10.67	ſ	Not S	pecifi	
18*	Nitrate	as NO3 ⁻	mg/kg	APHA	23 rd Edition,4500	NO ₃	- B	5	5.04			30	
19	Sulphat	te as SO4	mg/kg	USE	PA 1998, SW-846	; 92	53	21	.7.47		Not S	pecifi	ed
20*	Fluoride	es as F-	mg/kg	APHA	A 23 rd Edition; 450)0 F-	- D		ND	1	Not S	pecifi	ed
21*	Phosph	ate as PO4	mg/kg	APHA	23 rd Edition; 4500) PO4	E	1	5.12	1	Not S	pecifi	ed
22*	Specific	c Gravity	g/cc	AP	HA 23 rd Edition; 2	710	F		NA	1	Not S	pecifi	ed
23*	Organio	c Halogens	mg/kg	S	SW-846; 5050 & 9	253			ND	1	Not S	pecifi	ed
24*	Reactiv HCN	ve Cyanide as	mg/kg	USE	EPA 1998, SW-846	5; 90	14	<	<1.0		<	250	
25*	Reactiv H ₂ S	ve Sulphide as	mg/kg	USE	EPA 1998, SW-846	5; 90	34	<	10.0		<	500	
26*	Carbon	l.	%		CHNS Analyze	r			NA	1	Not S	pecifi	ed
27*	Hydrog	jen	%		CHNS Analyze	r			NA		Not S	pecifi	ed
28*	Nitroge	en	%		CHNS Analyze	r			NA		Not S	pecifi	ed
29*	Sulphu	r	%		CHNS Analyze	r			NA		Not S	pecifi	ed
30	Copper	as Cu- Total	mg/kg	USE	EPA 1998, SW-840	5; 72	10	12	22.10		Not S	pecifi	ed
31	Total C Cr- Tot	Chromium as cal	mg/kg	USE	EPA 1998, SW-840	5; 71	90		08.57		Not S	pecifi	ed
32	Iron as	Fe- Total	mg/kg	USE	EPA 1998, SW-840	5; 73	80	217	944.90		Not S	pecifi	ed
33	Lead a	s Pb- Total	mg/kg	USE	EPA 1998, SW-840	5; 74	20	9	3.47	1 e 8	Not S	pecifi	ed
34	Manga Total	nese as Mn –	mg/kg	USE	EPA 1998, SW-84	5; 74	60	14	95.41		Not S	pecifi	ed



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



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



Ramky Enviro Engineers Limited Unit :- Rajasthan Waste Management Project, TSDF-Udaipur

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ISO 9001:2008 ISO 14001:2004 OHSAS 18001:2007 IMS PAS 99:2066 C No F8570987 C No F8570797 C No OHS 570500 C No IM 570907 COMPREHENSIVE ANALYSIS REPORT

Repor	t No.	RWMP/Lab/C	A/102/20	-21	Report Date	2	3		0	9	. 2	0	2	e dPow
Sr. No.	Pai	rameter	Unit		Method				Res	ult		CPCB direc dis		fore
35	Nickel as	s Ni- Total	mg/kg	USE	PA 1998, SW-846	; 75	20		440.	62 ,		Not S	Specif	icd tr
36	Zinc as Z	Zn- Total	mg/kg	USE	PA 1998, SW-846	5; 79	50		2053	.10		Not S	Specif	ied <mark>%</mark>
37*	Cobalt a	s Co- Total	mg/kg	USE	PA 1998, SW-846	5; 72	00		13.5	52		Not S	Specif	ied 2
38	Cadmiur	n as Cd- Total	mg/kg	USE	EPA 1998, SW-846	5; 71	30		12.4	43		Not S	Specif	ied 8
		(TCLP)	Toxicity	/ Chara	acteristics Lea	chin	g Pi	oce	dur	e				-
39*	Arsenic	as As	mg/L	USI	EPA 1998, SW-84	6; 70	61 A		NA	Ą			<1	
40	Cadmiur	m as Cd	mg/L	USI	EPA 1998, SW-84	6; 71	.30		BD	L		•	<0.2	nel l'est series
41	Total Ch	romium as Cr	mg/L	USE	EPA 1998, SW-840	5; 71	90		BD)L		Not s	Specif	ied
42*	Hexaval as Cr ⁶⁺	ent Chromium	mg/L	APHA	23 rd Edi., 2017: 3	3500	Cr B		<0	.1			<0.5	
43*	Cobalt a	is Co	mg/L	USE	EPA 1998, SW-84	5; 72	00		BD	۶L		Not :	Specif	ïed
44	Copper	as Cu	mg/L	USE	EPA 1998, SW-84	5; 72	10		BC	DL			<10	
45	Iron as	Fe	mg/L	USI	EPA 1998, SW-84	6; 73	80		1.9	40			<3	
46	Lead as	Pb	mg/L	USI	EPA 1998, SW-84	6; 74	20		0.0	74			<2	
. 47	Mangan	ese as Mn	mg/L	USI	EPA 1998, SW-84	6; 74	60		0.0	66		Not	Specif	fied
48	Nickel a	s Ni	mg/L	USI	EPA 1998, SW-84	6; 75	20		0.0	49			<3	
49	Zinc as	Zn	mg/L	USI	EPA 1998, SW-84	6; 79	50		0.0	52		-	<10	
		(WL	T) Water	Leach	ing Testing							Proto	TSDF	
50*	Arsenic	as As	mg/L	US	EPA 1998, SW-84	6; 7	061 A	1	N	A			<1.0	
51*	Cadmiu	m as Cd	mg/L	A	PHA 23 rd Edition,3	3111	В		0.0	69			<0.2	
52*	Total Cl	hromium as Cr	mg/L	A	PHA 23 rd Edition,3	3111	В		BI	DL		Not	Speci	fied



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

Accredited Laboratory

Certificate No.TC-5729

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





Ramky Enviro Engineers Limited Unit :- Rajasthan Waste Management Project, TSDF-Udaipur

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COMPREHENSIVE ANALYSIS REPORT

Repor	rt No.	RWMP/Lab/C	A/102/20	-21	Report Date	2	3	0	9		2	0	2	
53*	Hexavale as Cr ⁶⁺	ent Chromium	mg/L	APHA 2	23 rd Edi., 2017: 3	500	Cr B	<(0.1			<(0.5	
54*	Cobalt a	s Co	mg/L	AP	HA 23 rd Edition,33	L11 E	3	B	DL		N	ot Sp	pecifie	ed
55*	Copper a	as Cu	mg/L	AP	HA 23 rd Edition,33	L11 E	3	0.0	800	2		<	10	
56*	Iron as F	Fe	mg/L	AP	HA 23 rd Edition,33	L11 E	3	1.9	920			<	:3	
57*	Lead as	Pb	mg/L	AP	HA 23 rd Edition, 3	L11 E	3	0.0)72			<	:2	
58*	Mangan	ese as Mn	mg/L	API	HA 23 rd Edition,3	L11 E	3	0.0	063		Ν	lot Sp	pecifi	ed,
59*	Nickel as	s Ni	mg/L	API	HA 23 rd Edition, 3	L11 E	3	0.0)48			<	<3	
60*	Zinc as 2	Zn	mg/L	API	HA 23 rd Edition,3	111 E	3	0.0)49			<	10	

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

Use PPE's during handling of ETP Sludge.

ABBREVIATIONS

CPCB	 Central Pollution Control Board
SW 846	 Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA, 1998
Std. Methods	- Standard Methods for the Examination of Water & Wastewater, APHA 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

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

Authorized Signatory (Rajkumar Parmar - Dy. Manager)

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Rev. No. 01/ 04.08.2018

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



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COMPREHENSIVE ANALYSIS REPORT

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Report No.	RWMP/Lab/CA/102/20-21	Report Date	2	3	0	9		2	0	2	JOB D
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 Inland Surfa 	ce discharge water standard Applica	able.									sustainabl
											tail
											sus
											S
ERMS AND CO	ONDITIONS										vard
											NO
1. The analysis	report refers only to the 'as received' s	ample of waste									-

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

Disposal Pathway/Opinions/Interpretations

Direct Landfill

END OF REPORT

2-000/mg Authorized Signatory (Rajkumar Parmar - Dy. Manager)

Page 6 of 6

Rev. No. 01/ 04.08.2018

Site Address : Ramky Enviro Engineers Limited Unit : Rajasthan Waste Management Project, TSDF-Udaipur Sulvey 100-101-013, Vinage Guun,

MANAGING HAZARDOUS WASTE

E Corporate Office : Ramky Enviro Engineers Ltd. Cregdinge Doors 40.13 Doorly Touron Considerations.





Accredited Laboratory Certificate No.TC-5729

 Solution
 Solution

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Report No.		RWI	MP/L	ab/C	A/99	9/20)-21		R	eport Date	2	3	.	0	9		. 2	2	0	2	
Name - College								-									-				
Name of Client	: M	I/S.	TAT	A ST	EEL	LTI	D.				- 2-										-
Contact Details	: -																_				
	С	RM (COMI	PLEX	BAR	RA, F	PO:AC	GRIC	:0,JA	MSHEDPUR-	8310	09					_	ůï.			-
		-																			
Telephone No.	:						Fax N	lo.		:											F
Email ID	:																				
Membership No.	: -									5. 15-11											
Nome of Comple	(11															-	-			-	-
Name of Sample ,							: W	ast	es/I	Residues Co	ntai	ning	Oil		_	-	-	_	_		
Description of S		le W	hen	Rece	ivec	1	: So	bilc								ŝ					
Sample Reference Number	2		3	99/2	20-2	1	Sar	mple	Rec	eived Date		0	8	8	. 1	0	9		2	0	2
Sample Drawn By			2																		-
Waste Category:	Scho	dul	-T	Cat						-						-			-		-
RAW Material List		uun	c 1,	cat.			-			/	<i>1</i>						2.11				
Process Details Er	iclos	ed	227			res				<u> </u>	NO							_			
MSDS Provided by Client	/					ſes				Ø	NO										
Sample Registrati	on N	o: R	WMF	/LAB	/CA	/99/	/20-2	1				14									
Confirmation	5		0	9		2	0	2	0	Confirmati	on hi	. MD	0.0	ant	DW	/6.41		e d			
Date			U	9	•	2		2	0	Confirmatio	эп ву	: MB		ept.	, RV	VIMI					
Analysis start	1	5	Τ.	0	9	Ι.	2	0	2	0				-							
date .															_			_			
Testing Period	09	Day	'S																		
Authorizo) au		NN.	TORY	*		0-													
Authorized (Rajkumar Par				ager)	319	122		Pa	iye I	of 6			Re	ev. N	0. 0	1/ (14.08	8.20	018		
Ramky Enviro		eers				AN/	AGIN	GH	AZA	RDOUS WA	STE	20	Dam	Cor ky Er	porat				tel		
Unit : Rajasthan Waste Mar	nageme	nt Proje	ct, TSD	F-Udaip	ur		-			A DEL M	Denelo						50			ro Cor	mnle
Survey No- 10'	8/13.	Villag	e-Guo	ili,				-		DSI	Ramky	Grand		- FIOC						5 001	inpic





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 Ramky Enviro Engineers Limited

 Unit :- Rajasthan Waste Management Project, TSDF-Udalpur

 ISO 9001:2008
 ISO 14001:2004

 OHSAS 18001:2007
 IMS PAS 99:2066

 C No F85570987
 C No EMS 570797

COMPREHENSIVE ANALYSIS REPORT

	Via State							1 1		1	T 1				-
Repor	t No.	RWMP/Lab/CA/99/20-2	1	Report I	Date	2	3	•	0	9	•	2	0	2	
					T				_				_		
Sr. No.		Particulars	Ob	servation	Ren	nark	s (If	any)						_
1*	Does the Odor?	e waste have strong	ΠY	N											
2*	Does the	e waste give fumes I to the atmosphere?	υY	N											
3*	Does the	e waste react with water?	ΠY	NZN											
4*	Is the w	vaste incompatible with terial? If so specify	ΠY												

TEST REPORT

Sr. No.	Parameter	Unit	Method	Result	CPCB limit for direct landfill disposal
5*	Physical State	-	-	Solid	Not Specified
6*	Color	-		Black	Not Specified
7*	Texture	-	-	Wet	Not Specified
8	PFLT (Paint Filter Liquid Test)	-	USEPA 1998, SW-846; 9095A	Pass	Pass
9	Bulk Density	g/cc	APHA 23 rd Edition; 2710 F	0.84	Not Specified
10	Calorific Value	cal/g	IS:1350 Part II - 1970	8237.32	<2500
11*	Flash Point	٥C	USEPA 1998, SW 846; 1020 A	>60	>60
12	Moisture Content	%	IS 326 (Part 21): 2001	NA	Not Specified
13	LOD @ 105ºC	%	APHA 23 rd Edition, 2017; 2540	13.55	Not Specified
14	LOI @ 550°C	%	APHA 23 rd Edition, 2017; 2540	83.51	<20
15*	Ash Content @ 900°C	%	APHA 23rd Edition, 2017; 2540	16.20	Not Specified

a our tog LARORA Authorized Signatory (Rajkumar Parmar - Dy. Manager)

Page 2 of 6

Rev. No. 01/ 04.08.2018

MANAGING HAZARDOUS WASTE



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

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



Accredited Laboratory

Certificate No.TC-5729



Ramky Enviro Engineers Limited Unit :- Rajasthan Waste Management Project, TSDF-Udaipur ISO 9001:2008 | ISO 14001:2004 | OHSAS 18001:2007 | IMS PAS 99:2066 CNo F\$570987 | C No EMS 570797 | C No OHS 570500 | C No IM 570907 COMPREHENSIVE ANALYSIS REPORT

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Repor	t No.	RWMP/Lab/	CA/99/20-	21	Report Date	2	3	. 0	ו	9	. 2	0	2	TO AN O
Sr. No.	Pa	rameter	Unit		Method			R	lesi	ult		irect	imit Iand oosal	fill
16	pH (At R Tempera			USEP	PA 1998, SW-846;	904	5 C		6.8	9 ·		4	-12	0.00
17	Chloride	e as Cl ⁻	mg/kg	APHA	23 rd Edition; 4500	SO4	E	3	807.	30	ſ	lot S	pecifi	ed
18*	Nitrate	as NO3 ⁻	mg/kg	APHA	23 rd Edition,4500	NO ₃	- B		6.3	7			30	
19	Sulphat	e as SO4	mg/kg	USE	EPA 1998, SW-846	; 92	53	2	224.	15	ſ	Not S	pecifi	ed
20*	Fluoride	s as F	mg/kg	APHA	A 23 rd Edition; 450)0 F-	- D		NC)	1		pecifi	
21*	Phospha	ate as PO ₄	mg/kg	APHA	23 rd Edition; 4500) PO4	E		3.1	8	1	Not S	pecifi	ed
22*	Specific	Gravity	g/cc	AP	PHA 23 rd Edition; 2	710	F		NA	N.	1	Not S	pecifi	ed
23*	Organic	Halogens	mg/kg		SW-846; 5050 & 9	253	0	1	232	.34		Not S	pecifi	ed
24*	Reactive	e Cyanide as	mg/kg	USE	EPA 1998, SW-846	5; 90	14		<1.	.0		<	250	
25*		e Sulphide as	mg/kg	USE	EPA 1998, SW-846	5; 90	34		<10	.0		<	500	
26*	Carbon		%		CHNS Analyze	r			NA	Υ.		Not S	pecifi	ed
27*	Hydrog	en	%		CHNS Analyze	r			NA	4		Not S	pecifi	ied
28*	Nitroge	n	%		CHNS Analyze	r			NA	4		Not S	pecifi	ied
29*	Sulphur	·	%		CHNS Analyze	-			NA	A		Not S	pecifi	ied
30	Copper	as Cu- Total	mg/kg	USE	EPA 1998, SW-840	5; 72	10		NA	ł		Not S	pecifi	ied
31	Total Cl Cr- Tota	hromium as al	mg/kg	USE	EPA 1998, SW-840	5; 71	90		NA	4		Not S	pecifi	ied
32	Charles and the	Fe- Total	mg/kg	US	EPA 1998, SW-84	5; 73	80		NA	4		Not S	pecifi	ied
33	Lead as	Pb- Total	mg/kg	USI	EPA 1998, SW-84	5; 74	20		N	4		Not S	pecif	ied
34	Mangar Total	nėse as Mn –	mg/kg	USI	EPA 1998, SW-84	5; 74	60		N	Ą		Not S	pecif	ied

aroung Authorized Signatory (Rajkumar Parmar - Dy. Manager) PORATOR

Site Address :

Ramky Enviro Engineers Limited Unit : Rajasthan Waste Management Project, TSDF-Udaipur

Survey No- 1018/13, Village-Gudli,

Zinc Smelter Chauraha, Debari Railway Station Road, Udaipur - 313024 (Raj.) Tel. : +91-294-2802032, 2658253-54 Email : rwmp@ramky.com

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Rev. No. 01/ 04.08.2018

MANAGING HAZARDOUS WASTE



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





Accredited Laboratory Certificate No.TC-5729

Ramky Enviro Engineers Limited Unit :- Rajasthan Waste Management Project, TSDF-Udaipur COMPREHENSIVE ANALYSIS REPORT

Repor	t No. RWMP/Lab/	CA/99/20-	21	Report Date	2	3		0	9	. 2	0	2	geowth
Sr. No.	Parameter	Unit		Method				Re	sult		irect	imit f landf	ĩιĔ
35	Nickel as Ni- Total	mg/kg	USE	PA 1998, SW-846	; 75	20	+	N	A	Not Specified		Ista	
36	Zinc as Zn- Total	mg/kg	USE	PA 1998, SW-846	; 79	50		N	A		Not S	pecifie	dos
37*	37* Cobalt as Co- Total mg/kg USEPA 1998, SW-846; 7200		Ν	A			pecifie	O					
38	Cadmium as Cd- Total	mg/kg	USE	PA 1998, SW-846	; 71	30		N	A			pecifie	5
	(TCLP)) Toxicity	/ Chara	cteristics Lea	chin	g Pi	.00	edu	re				F
39*	39* Arsenic as As mg/L USEPA 1998, SW-846; 7061 A		NA		<1								
40	Cadmium as Cd	mg/L	USE	PA 1998, SW-846	5; 71	30		0.0)89		<	0.2	
41	Total Chromium as Cr	mg/L	USE	PA 1998, SW-846	; 71	90		B	DL		Not S	pecifie	d
42*	Hexavalent Chromium as Cr ⁶⁺	mg/L	APHA	23 rd Edi., 2017: 3	500	Cr B	1	<().1		<	0.5	
43*	Cobalt as Co	mg/L	USE	PA 1998, SW-846	; 72	00		0.0	009	1	Not S	pecifie	ed.
44	Copper as Cu	mg/L	USE	PA 1998, SW-846	; 72	10		В	DL		<	:10	
45	Iron as Fe	mg/L	USE	PA 1998, SW-846	; 73	80		69.	230			<3	
46	Lead as Pb	mg/L	USE	PA 1998, SW-846	; 74	20		0.3	132			<2	
47	Manganese as Mn	mg/L	USE	PA 1998, SW-846	; 74	60		1.	112		Not S	pecifie	d
48	Nickel as Ni	mg/L	USE	PA 1998, SW-846	5; 75	20		2.	578			<3	
49	Zinc as Zn	mg/L	USE	PA 1998, SW-846	; 79	50		0.8	321		<	:10	
	(WI	T) Water	Leachi	ng Testing							/T otoc	IAZW SDF ol/20 011	
50*	Arsenic as As	mg/L	USE	EPA 1998, SW-84	5; 70)61 A	1	P	IA		<	1.0	
51*	Cadmium as Cd	mg/L	AP	HA 23 rd Edition,3	111	В		0.0	068	-	<	0.2	
52*	Total Chromium as Cr	mg/L	AP	HA 23 rd Edition,3	111	В		В	DL		Not S	pecifie	ed



Page 4 of 6

Rev. No. 01/ 04.08.2018

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

MANAGING HAZARDOUS WASTE



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2

Ramky Enviro Engineers Limited Unit :- Rajasthan Waste Management Project, TSDF-Udaipur ISO 9001:2006 ISO 14001:2004 | OHSAS 18001:2007 IMS PAS 99:2066 C No F8570987 | C No FMS 570797 | C No OHS 570500 | C No IM 570907 COMPREHENSIVE ANALYSIS REPORT

Repoi	Report No. RWMP/Lab/		CA/99/20-	-21	Report Date	2	3	•	0	9	•	2	0	2	
53*	Hexaval as Cr ⁶⁺	ent Chromium	mg/L	APHA 2	23 rd Edi., 2017: 3	500	Cr B		<0).1			<	D.5	cidon.
54*	Cobalt a	as Co	mg/L	APHA 23 rd Edition,3111 B			0.006			Not Specified					
55*	Copper	as Cu	mg/L	APHA 23 rd Edition,3111 B			BDL			<10					
56*	Iron as	Fe	mg/L	APH	HA 23 rd Edition,3	111 E	3		59.	850			<	<3	-
57*	Lead as	Pb	mg/L	APH	HA 23 rd Edition,3	111 E	3		0.1	.26		-	<	<2	-
58*	Mangan	ese as Mn	mg/L	APH	HA 23 rd Edition,3	111 E	3		1.0	02		N	lot Sj	oecifie	d
59*	Nickel a	is Ni	mg/L	APHA 23 rd Edition,3111 B			2.5	501			<	<3			
60*	Zinc as	Zn	mg/L	AP	HA 23 rd Edition,3	111 8	в		0.6	577			<	10	

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

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

ABBREVIATIONS

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

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



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Rev. No. 01/ 04.08.2018

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



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5

Accredited Laboratory Certificate No.TC-5729 Ramky Enviro Engineers Limited Unit :- Rajasthan Waste Management Project, TSDF-Udaipur ISO 9001:2008 ISO 14001:2004 OHSAS 18001:2007 IMS PAS 99:2066 C No F5570987 C No EMS 570797 C No OHS 570500 C No IM 570907

COMPREHENSIVE ANALYSIS REPORT

Inland Surface discharge water standard Applicable. RMS AND CONDITIONS	Report No.	RWMP/Lab/CA/99/20-21	Report Date	2	3	0	9	•	2	0	2
RMS AND CONDITIONS	 Inland Surfa 	ce discharge water standard Applica	able.								
RMS AND CONDITIONS											
	RMS AND CO	ONDITIONS									

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

Disposal Pathway/Opinions/Interpretations

Incineration After Treatment

END OF REPORT

DUN Authorized Signatory (Rajkumar Parmar - Dy. Manager)

Page 6 of 6

Rev. No. 01/ 04.08.2018

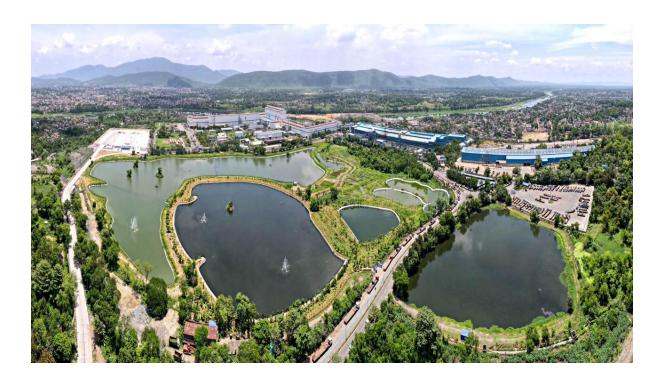
Site Address : MANAGING HAZARDOUS WASTE Ramky Enviro Engineers Limited Unit : Rajasthan Waste Management Project, TSDF-Udaipur Survey No- 1018/13, Village-Gudli, Zinc Smelter Chauraha, Debari Railway Station Road, Udaipur - 313024 (Raj.) Tel. : +91-294-2802032, 2658253-54 Email : rwmp@ramky.com



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Annexure-2

CRM Bara Water reservoirs





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

rall all

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

TATA STEEL LIMITED

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

Mobno→ 6207901848 → 8092087043

Finance	e-Challan Department, Goverment of Jharkhand						
Receiving Dept: Forest, Envir	onment and Climate Change Department						
Valid UpTo :-01/03/2023		Remitter's Copy					
GRN:-2315871703	Date	e:- 20/02/2023 17:17:34					
Receiving Office :- JSRFC	DR051-D.F.O.JAMSHEDPUR PRM.J	SRFOREST					
District :- Purbi Singhbhum		Treasury:- Jamshedpur					
Year:-20/02/2023		to:- 28/02/2023					
Head(8782)		Amount ₹					
Head Details	878200103010101						
FOREST REMITTANCES		2000000.00					
Net Payable Amount:- ₹ 2000000.00 Two Crore Rupees And Zero Paisa Only For Treasury Use Only(Jamshedpur)							
Challan No and Date							
Identity Proof(Registration No)							
PAN No:-	Trishadpura						
Remitter Name:-	TATA STEEL LIMITED						
Address :-	BISTUPUR, JAMSHEDPUR, 831001						
Remarks :-	Deposit Work						
1/	Treasury Office	er Signature is not reuqired.					
	FOR USE IN TREASURY LINK BAI	NK					
CHEQUE/DD No :-	650925 DT. 16/02/2023	3					
Scroll No and (Date) :-	()						
	R,DISTRICT TREASURY OFFICE	fore Stamping.					
		Signature & Seal of Bank					

LETTER NO.7/Plan 10 215/2016 अ0नि0(मु0का0नि0)-2467 OFFICE OF THE CHIEF INSPECTOR OF FACTORIES, JHARKHAND, RANCHI. LABOUR BUILDING, DORANDA, RANCHI-834002

From,

Chief Inspector of Factories, Jharkhand, Ranchi.

To,

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

Ranchi, Dated 14/03/18

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

Sir,

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

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

Yours Faithfully

Chief Inspector of Factories, Jharkhand, Ranchi

On-site plan

SN	Name	Questions	Action Plan given in EIA	Present status of complia	nce
01	Shri Suresh Sonthalia President, Singhbhum Chamber of Commerce	People will get employment. Region will be developed. Permission for expansion of plant should be granted. Company is doing good	Focus will be made on environment compliance.	CRM Bara plant is running on environmental complian	
02	Shri Pavan Tiwari, Bhuiadih	We welcome the expansion of the project. It is a welcoming step that the company is expanding. But the management has to pay special attention for the development of surrounding region. Attention may be given on basic problems of local people.	CSR Committee has been formed and action plan is under preparation.`	Health, Sanitation (Domest Drinking Water, Education, (Skill Development), Liveli (Agriculture), Sports, Infras Urban Services, Environme Ethnicity are undertaken u activities of Tata Steel Ltd.	, Livelihood lood structure & ent and
03.	Shri Bharat Vasani Vice-President, Singhbhum	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	Action plan prepared and will be implemented accordingly.	For environment protecti spent as capital cost. De below:	
	Chamber of Commerce	1		Details	Capital Cost
		that the environment can be protected.		Pollution control measures (WWTP, ARP, fume extraction systems, etc.	12
				Provision of online environment monitoring equipment and display	2.26
				Rejuvenation of water bodies	6.94
				ARP environmental upgradation	7.49
				PL rinse scrubber	0.510
				Total capital cost(Cr.)	29.20

04.	Shri Ramashray Prasad, INTUC	Company has to expand. Company should be developed. People should also get employment. Civic amenities should be developed in the surrounding area. Management should also focus and share information about how many permanent and temporary employees/ workers will be required.	Issues are being taken care under CSR activities.	Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. More than 50% employment has been given to local people.
05.	Shri Dev Sharan Singh Govindpur	Employment opportunities will increase with the expansion of the plant. Employment should be provided to the citizens/ locals residing within 10 km radius. Infrastructural facilities like drinking water, medical facilities for good health and other basic amenities should be provided by the company. Special attention should be given on environment 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 aroundplant. 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.

06.	Shri Sonaram Bothra	Employment should be provided to local unemployed people. Priority should also be given in employment for SC and ST people. Management should give attention on poor people. We are not provided any facility.	Local employment has been given on top priorities as per their skill during construction work.	More than 50% employment has been given to local people.
07.	Shri Gunjan Yadav, Sitaramdera	Due to proposed expansion the traffic may increase. Cutting of trees may be involved. Development of green belt is recommended. Public pumps/ taps should be arranged in local areas by the company/ Unit. We will oppose the plant if water is not available. There is a tribal school in Babudih where 450 children study. Management should also pay attention on this. We are not against for the expansion of the plant. But at the same time company should also give attention on basic problems of local people.	Plantation has been done in & around premises (More than three thousand). Other issues have been considered in CSR activities.	 Roads at the Bhuiyadih area are being widened. Other issues had been undertaken under CSR activities. Green belt at CRM Bara complex has been developed as per CPCB guidelines. Approx. 3.5 Ha area in and around plant is under plantation which is more than 33% of the plant area. We have planted 13235 no. of samplings in the above area till date. We have developed approx. 5m wide area of plantation around the plant as per CPCB guidelines. Density of plantation > 3000 plants/Ha which is more than CPCB guidelines. Public pumps/taps have been provided at Bhuiyadih and Babudih.
08.	Shri Chandra Sekhar Mishra, President Housing Development Committee	We welcome the expansion of the project. The facilities which were provided by Tata Steel 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.

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09.	Shri Krishna		Environment management	Health, Sanitation (Domestic Toilets),
	Prasad	company. Waste is dumped by the plant in	plan under implementation	Drinking Water, Education, Livelihood
	Swarnakar,	this area. Basic amenities should be provided	will be strengthened for	(Skill Development), Livelihood
	Babudih Basti	to the citizens residing in 10 km radius.	proposed expansion also.	(Agriculture), Sports, Infrastructure &
		Pollution has increased a lot by which people		Urban Services, Environment and
		are becoming sick.		Ethnicity are undertaken under CSR
				activities of Tata Steel Ltd.
				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.

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10.	Shri Sudhir Singh, Secretary Singhbhum Chamber of Commerce	Expansion of plant is a good thing and we welcome the same. Sewage discharge is released without treatment into Kharkai and Swarnarekha rivers. This should be stopped immediately. Plant should be operated with pollution free environment.	Company will comply with CPCB norms	 Various environment protection measures have been taken by the company such as: 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 theirskill.	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.

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

16.	Shri Goutam Lohar Bagunhatu	Water from the company is discharged in the river. This should be stopped. Employment is given to the outside people. Local people should get employment. Water, electricity, education and better medical facilities for good health should be provided. Nobody knows where women are being trained.	Wastewater treatment plant is already in place. No water discharge from our premises. Experts team study is under progress.	All the effluents generated in plant are treated at Effluent treatment plant and domestic waste is treated in Sewage treatment plant. Basic needs such as Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd.
17.	Shri P.N.Dixit President, Builders Association	Expansion of the plant should invariably take place. I have been observing and experiencing for the last 52 years that whatever work done by Tata Steel was for the welfare of local people. Plant expansion should take place by paying special attention on environment.	Environment control measure has been already in place.	 Environment pollution control measures are already in place. Various environment protection measures have been taken by the company such as: 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.

18.	Shri Vijay Khan	Most of the people from the region are in favour of the expansion of plant. The expectations of people from the company management are not fulfilled by the unit. Contract labourers of Tata group of companies are not getting medical facility in MGM Hospital. One ITI should be opened for the local youth. Water, Electricity, Technical arrangements for higher education, and other basic facilities should be taken care. I am in favour of expansion of the plant.	CSR committee has been formed and action plan is under preparation.	Basic needs such as Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd.
19.	Shri Beli Bodhanwala Social worker Jamshedpur	Here everybody wish for the expansion of the plant. I too want the same. Proper planning should be done for controlling pollution effects on environment. Local problems should be resolved under CSR. Attention should be paid for improvement of standard of living.	CSR committee has been formed and action plan is under preparation.	Local problems are being resolved under CSR. Basic needs such as Health, Sanitation (Domestic Toilets), Drinking Water, Education, Livelihood (Skill Development), Livelihood (Agriculture), Sports, Infrastructure & Urban Services, Environment and Ethnicity are undertaken under CSR activities of Tata Steel Ltd. Environment pollution control measures are already in place.
20.	Shri Ranjit Bhattarcharya , Jamshedpur	Acid water released from the unit should be avoided. Traffic will also be a problem which should also be addressed. I am in favour of expansion of the plant.	is already in place. No water	No acid water is discharged from the unit/plant. All the effluents generated in plant are treated at Effluent treatment plant and domestic waste is treated in Sewage treatment plant. Roads at the Bhuiyadih and other area are being widened to cater increased traffic load.
21.	Shri Mahesh Santhalia, Jamshedpur	I am in favour of expansion of the plant. There should be control/ stoppage of discharge of polluted water from the plant. Drinking water facility should be provided for the local/ Basti people. Proper arrangement should be done to ensure that there is no pollution from the unit/plant.	measure has been already inplace.	Environment control measures are already in place. All the effluents generated in plant are treated at Effluent treatment plant and domestic waste is treated in Sewage treatment plant. Drinking water facility has been provided to local people.
22.	Smt. Santoshi Devi Babudih	Basti. Even if a Tap is arranged for the publicin the road side will also help to some extent.	formed and action plan is under preparation.	Water facility has been provided in Babudih Basti under CSR activities.
23.	Shri Anand Bihari Dubey Bagunnagar	Earlier also Public Hearing was conducted here in the same place. Assurance was also given for solving / avoiding problems of local	A committee will be constituted with the company representatives	 Local problems are being resolved under CSR. Basic needs such as Health, Sanitation (Domestic Toilets),

24.	Shri Feroz Ali Khan Dhatakidih	 people. The presentation which was shown by the management is fully false. There were five-five ponds here where this public hearing is being conducted. Now the ponds have been filled with slag. Due to this, the water levels at Bagunnagar, Bagunhatu, Babudih and Baridih Basti have gone down. There were thousands of trees. Ponds (Talab) were filled and all bigbig 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 for the youth, drinking water in the surrounding areas, electricity, medical facilities, training for women for their self-employment, etc. should be provided. It should be ensured that there will not be any pollution impact on environment. There will be acute opposition if the management neglects the local problems and expands the plant. 		 Drinking Water, Education, Livelihood (Skill 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 beengiven to local people.
25.	Shri A.K.Srivatsava	We all want that the plant should be expanded. Management also should concentrate on the local problems. Chances will increase for improving employment opportunities with the expansion of the company during this recession period.	Employment opportunities will be provided.	More than 50% employment has been given to local people.



Shubhanand Mukesh Head Environment Management

EMD/C-38/**13**5715 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,

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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/corporatecitizen/environment-compliance-reports.asp.

Thanking you,

Warm regards, For Tata Steel Limited

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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/**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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Shubhanand Heeleth

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

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Shubhanand Mukesh Head Environment Management

EMD/C-38/**13**%/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

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Thanking you,

Warm regards, For Tata Steel Limited

Shubhanand Mukesh Head, Environment Management Encl: Copy of Environmental Clearance letter

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Annexure-7

Online Display Board at CRM Bara



Annexure-8

