TSL/MoEF&CC/BS-01/2022-21/266
November 30, 2022

The Deputy Director General of Forests (C)
Ministry of Environment, Forest and Climate Change,
Integrated Regional Office,
A/3, Chandersekharpur,
Bhubaneswar-751023

Subject: Submission of six-monthly EC compliance reports for expansion of existing 155 MW CPP by installation of 256 MW thermal power plant at Tata Steel Limited, Meramandali for the period April 2022 to September 2022.

Reference: EC vide file no. J-13012/77/2011-I.A.II (T), dated 12.02.2015 and its amendment dated 10.02.2020 & 13.08.2021.

Dear Sir,

This has reference to the captioned subject and cited references. It is to inform that we are herewith submitting six monthly compliance reports for the conditions stipulated in the Environment Clearance for expansion of existing 155 MW CPP by installation of 256 MW thermal power plant at Tata Steel Limited, Meramandali for the period from April 2022 to September 2022 along with monitoring reports for your kind consideration.

The copy of above compliance report is also being sent in soft format through email (roez.bsr-mef@nic.in) for your kind perusal. Also copy of EC compliance is being uploaded in MoEF&CC portal http://environmentalclearence.nic.in.

Hope the above are in line with the statutory requirements.

Thanking you,

Yours faithfully,
For Tata Steel Limited

Anoop Srivastava

Anoop Srivastava
Chief Environment -TSM

Encl: As above

Copy to:

1. The Zonal Officer, Central Pollution Control Board, Southern Conclave Block 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700107.
2. The Member Secretary, SPCB, Parivesh Bhawan, A/118, Nilakahanta Nagar, Unit- VIII, Odisha, Bhubaneswar-751012.
3. The Regional Officer, State Pollution Control Board, Odisha, Angul.

SL.	STIPULATED CONDITIONS	COMPLIANCE STATUS
i	Vision document specifying prospective plan for the site shall be formulated and submitted to the RO of the Ministry within six months.	• Vision, Mission and Environment Policy statements have been submitted to the Regional Office, MoEF&CC, BBSR along with the compliance report.
ii	Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.	• Power is co-generated utilizing waste heat from DRI units through WHRBs. • Additionally, coke oven and blast furnace gases are also used for generating green power through gas fired boilers utilizing renewal energy source. • TERI has been engaged to carryout feasibility study for installation of solar power.
iii	Sulphur and ash contents in the imported coal to be used in the project shall not exceed 0.3% and 6% respectively at any given time. In case of variation of coal quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments to environment clearance condition wherever necessary.	• Not applicable as presently gas-based power plant of capacity 165 MW has been commissioned. This plant does not consume coal hence, no ash is being generated. • Amendments in environment clearance has been made on 13th Aug'21 for switching of fuel from dual firing (Coal + Mixed gas) to 100 % mixed gas firing.
iv	A long term study of radioactivity and heavy metals contents in coal to be used shall be carried out through a reputed institute and results thereof analyzed every two years and reported along with monitoring reports. Thereafter mechanism for an in-built continuous monitoring for radioactivity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.	• Not applicable as presently gas-based power plant of capacity 165 MW has been commissioned. This plant does not consume coal hence, no ash is being generated. • Hence, no need no monitor Radioactivity and heavy metals contents in coal and ash.
v	A stack of 220 meter height shall be provided with continuous online monitoring equipments for SO_x, NO_x, PM_{10} and $PM_{2.5.}$ Exit velocity of flue gases shall not be less than 22 m / sec. Mercury emissions from stack shall also be monitored on periodic basis.	• Not applicable as gas fired boiler has been commissioned instead of CFBC coal boiler. Chimney height 70 m and 40 m is attached to 60 TPH & 125 TPH and 250 TPH respectively. Online monitoring system has been installed for SOx and NOx in the stacks. Online data is

		transmitted to SPCB and CPCB servers through RT-DAS.
vi	High efficiency ESPs shall be installed to ensure that particulate emission does not exceed 50 mg / Nm^3. Adequate dust extraction system such as cyclones/bag filters and water spraying system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	• Not applicable as presently gas-based power plant of capacity 165 MW has been commissioned. This plant does not consume coal and particulate matter emission is very less. Hence, no requirement of ESPs.
vii	Adequate dust extraction system such as cyclones / bag filters and water spraying system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	• Not applicable as presently gas-based power plant of capacity 165 MW has been commissioned. Hence, no coal and ash handling and dust extraction system such as cyclones / bag filters and water spraying system not required.
viii	COC of at least 5.0 shall be adopted	• COC in the range of 7 -8 is maintained.
ix	Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitoring data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of the flow of ground water and records maintained. Monitoring for heavy metals in ground water shall also be undertaken and results/findings submitted along with half yearly monitoring report.	• Monitoring of surface water and ground water is being carried out regularly. Monthly monitoring reports are being submitted to the SPCB, Odisha. Last monitoring report was submitted on October 10th, 2022. • The summarized data is enclosed as **Annexure - I.**
x	A welldesigned rainwater harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed records kept of the quantity of water harvested every year and its use.	• Lagoons and HDPE pond have been constructed to harvest rainwater. This water is reused in the operation process when required. During the period April'22 to September'22, 49520 m3 of rainwater has been utilized in process. • RWH potential has been studied by engaging an expert agency & the suggested projects are being implemented in phases. In the first phase 50000 Cum capacity storage pond has been constructed in the year 2021.

		Also, rainwater collected from DRI & RMHS area are channelized through drains into a series of storage pond (3nos lagoons are in operation).
xi	No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.	• No water body or natural drainage system is disturbed. Water body is kept as it is.
xii	Hydrogeology of the area shall be reviewed annually from an institute / organization of repute to assess impact of surface water and ground regime (especially around ash dyke). In case any deterioration is observed, specific mitigation measures shall be undertaken and report / data of water quality monitored regularly and maintained shall be submitted to the Regional Office of the Ministry.	• Annually hydrogeology study is being carried out by engagement of National Institute of Technology Rourkela. No deterioration of ground water level and quality have been observed from the last hydrogeology study.
xiii	Wastewater generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB / CPCB.	• Wastewater generated from the plant is being treated in Effluent Treatment Plant • Treated effluent is being reused in slag granulation, greenery development and low end application in Blast Furnace & Sinter Plant etc. • The water quality parameters are well within the limit as per the prescribed standard.
xiv	Additional soil for leveling of the proposed site shall be generated within the site (to the extent possible) so that natural drainage system of the area is protected and improved.	• No additional soil is required for leveling the site.
xv	Prior approval of the Ministry shall be obtained for Mine Void and abandoned stone quarry filling of fly ash based on the outcome of the pilot study for which permission was accorded to the existing units by the Ministry on 05.09.2013 subject to Hon'ble NGT's Order.	• We request to withdraw this condition as this is not applicable. We have communicated vide letter No. TSBSL/MoEF&CC/BS-01/2020-01/57 dtd.27.08.20. Copy of the letter is attached for kind reference.

xvi	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry. Mercury and other heavy metals (As, Cr, Pb etc) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying areas.	• Not applicable as presently gas-based power plant of capacity 165 MW has been commissioned. This plant does not consume coal hence, no ash is being generated.
xvii	Fugitive emission of fly ash (dry or wet) shall be controlled such that no agricultural or non-agricultural land is affected. Damage to any land shall be mitigated and suitable compensation provided in consultation with the local panchayat.	
xviii	Ash pond shall be lined up with HDPE/LDPE lining or any other suitable material impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	
xix	Green belt consisting of three tire of plantation of native species around plant and at least 50 m width shall be raised. Wherever 50 m width is not feasible a 20 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 trees per ha with survival rate not less than 80%. Only native species shall be planted and the green belt development shall be expedited.	• Green belt development is under progress in and around the plant complex by planting indigenous species as per CPCB guidelines. till Mar'22, 33.66% area (this includes Plant, R&R and CSR plantation) has been covered under green belt. Rapid afforestation using MiyaWaki method in consultation with IIT, Kharagpur has been initiated. • Wherever feasible, green areas are being developed in and around the plant premises using mainly native plant species to ensure survival rate is more than 80%. • Plantation of saplings are done regularly based on the availability of vacant area.
xx	CSR schemes identified based on Public Hearing issues and need based assessment shall be implemented in consultation with the village panchayat	• The peripheral development is being carried out based on socio economic survey and need based assessment. Based on this, company has provided the facilities of

	and the District administration starting from the development of the project itself. As part of CSR, prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating program.	sanitation, drinking water, education, health care, road and communication facilities etc. in surrounding villages. • Various socio-economic development programs covering education, safe drinking water, sports and health care etc. are undertaken in nearby villages. • Details breakup of CSR initiatives are enclosed as **Annexure-II**
xxi	As committed, a minimum amount of Rs. 40.00 crore shall be earmarked for CSR activities for next five years. For proper and periodic monitoring of CSR activities, a CSR committee or a social audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final	• CSR department has been established to monitor the CSR activities. The CSR activities are based on need based assessment.
xxii	For proper and periodic monitoring of CSR activities, a CSR committee or a social audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final.	• As per the revised companies Act, 2013 and its amendment, CSR committee has been formed. Evaluation of each specific CSR intervention/activities is monitored & evaluated by the CSR Committee. • Evaluation of the Impact of Corporate Social Responsibility Projects has been carried out by XIMB, Bhubaneswar.
xxiii	An Environmental Cell comprising of at least one expert in environment science/engineering, ecology, occupational health and social science, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social	• Environment Management Department has been established for implementation of stipulated environmental safeguards and control of pollution. • The head of the Environment department and other officers are having Environmental Science/Engineering qualification and adequate experience.

	impact improvement / mitigation measures.	
A	**General Conditions:**	
i	Space for FGD shall be provided for future installation as may be required.	• Not applicable as presently gas-based power plant of capacity 165 MW has been commissioned. This plant does not consume coal hence, generation SO2 is minimum. Hence, FGD is not required.
ii	The treated effluents conforming to the prescribed standards only shall be re-circulated and re-used within the plant. Arrangements shall be made that effluents and storm water do not get mixed	• Wastewater is treated in ETP • The treated effluent, conforming to the prescribed standards, are recycled and reused for slag granulation, dust suppression and green area development.
iii	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt / plantation.	• STP of 100 m3 per day has been installed near Blast Furnace-I.
iv	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fire in coal yard especially during summer season. Copy of these measures with full details along with location on plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	• Not applicable as presently gas-based power plant of capacity 165 MW has been commissioned. This plant does not consume coal.
v	Storage facility for auxiliary liquid fuel such as LDO/HFO/LSHS shall be made in the plant area in consultation with the Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	• Not applicable. LDO/HFO/LSHS is not using for startup activities. Startup activities are being carried out by LPG or COG.
vi	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	• Adequate First aid and sanitation arrangements were made during construction phase of the plant and similar facilities are being maintained during operational phase also for the workers and employees.

vii	Noise level emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) from the source. For people working in the high noised areas, requisite PPEs like ear plugs/ear muffs etc shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric records and for treatment for any hearing loss including shifting to non-noisy/less noisy areas.	• Silencers have been provided at boilers to control noise during steam venting. • Necessary PPEs are being provided to all the workers working in noisy areas and periodic examination is being conducted for the workers engaged in noisy areas. • Noise monitoring is carried out regularly in the work zone areas and reports are enclosed as **Annexure-III.**
viii	Regular monitoring of ambient air ground level concentration of SO_2, NO_x, $PM_{2.5}$, PM_{10} and Hg shall be carried out in the impact zone and records maintained. If at any stage levels are found to exceed the prescribe limits, necessary control measures shall be provided immediately. The locations of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the regional office of the Ministry. The data shall also be put on the website of the Company.	• Five manual ambient air quality monitoring stations have been set up in nearby villages for measuring ground level concentrations of PM_{10}, SO_2 and NOx in consultation with SPCB. Odisha. EC compliance along with all report is being uploaded on the Company's website at http://www.tatasteel.com.
ix	Utilization of 100 % fly ash generated shall be made from 4^{th} year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	• Not applicable as presently gas-based power plant of capacity 165 MW has been commissioned. This plant does not consume coal hence, no ash is being generated.
x	Provision shall be made for the housing of contractor workers (as applicable) within the site with all necessary infrastructure facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc.	• Adequate arrangements of housing for construction workers were made during construction phase of the plant.
xi	The project proponent shall advertise in at least two local news papers widely	• Advertisements were circulated in The Telegraph (English daily) dated 15.02.2015

	circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environment clearance and copies of the clearance letters 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	and the Samaya (Oriya daily) dated 15.02.2015. • A copy of the same was submitted to MoEF&CC vide our letter no. BSL/MoEF/BS-02/2015-09 dated 21.02.2015.
xii	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the Company by the Proponent.	• Copy of the environment clearance was submitted to the concerned panchayat, Zila Parishad, District Industry Centre etc.
xiii	The proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of measured data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF, the respective zonal office of CPCB and the SPCB. The criteria pollutant levels namely SPM, RSPM (PM_{10} and $PM_{2.5}$) SO_2, NO_x (ambient as well as stack emission) shall be displayed at a convenient location near the main gate of the Company in the public domain.	• Status of compliance of the stipulated environment clearance conditions are being uploaded on website and are being sent to the Ministry, CPCB and SPCB. Results of online air quality monitoring are displayed electronically near the main gate. The last half yearly compliance report was submitted vide letter no. TSL/MoEF&CC/BS-29/2022-02/211 dated 31.05.2022.
xiv	The environment statement for each financial year ending 31st March in Firm-V as is mandated to be submitted by the project proponent to the concerned SPCB as prescribed under the	• The environment statement in Form-V for each financial year ending 31st March is submitted to the Regional Office of the Ministry, CPCB and SPCB.

	Environment (Protection) Rules 1986, as amended subsequently, shall also be put on the website of the Company along with the status of compliance of environment clearance conditions and shall also be sent to the respective Regional Office of the Ministry by e-mail.	• Last environment statement was submitted vide letter no. TSL/SPCB/BS-03/2022-14/249, dated. 29.09.2022.
xv	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of environment and Forests, its Regional Office, CPCB and SPCB. The project proponent shall upload the status of compliance of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional office of MoEF.	• Six monthly reports on status of the implementation of the stipulated environmental safeguards are being submitted. • Status of compliance with the environmental clearance conditions is being uploaded on the Company's website at http://www.tatasteel.com.
xvi	Regional office of the MoEF will monitor the implementation of the stipulated conditions. A complete set of documents including Environment Impact Assessment report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will upload the compliance status in their website and update the same from time to time at least six monthly basis. Criteria pollutants levels including NOx (from stack and ambient air) shall be displayed at the main gate of the power plant.	• All the required documents have been already submitted to the Regional Office and will be made available during inspection. • Compliance status is uploaded on the website and updated in every six months.
xvii	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These shall be included	• Adequate funds are being provided by the management for pollution control and to meet recurring costs. Environmental requirements

	as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	are given top priority for fund allocation and approval of capital projects. • The funds earmarked for environment pollution control measures are not diverted for any other purpose. • The company has invested adequate capital expenditure to improve mix of clean power & also reduction of carbon emissions
xviii	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the project authorities and the dates of land development work and commissioning of plant.	• Financial closure and financial approval will be communicated to the regional office and the Ministry of MoEF&CC.
xix	Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office / CPCB / SPCB who would be monitoring the compliance on environmental status.	• Full cooperation is extended to the Scientists/Officers from the Ministry / Regional Office / CPCB / SPCB who would be monitoring the compliance on environmental status.

EC transfer from M/s Bhushan Steel Limited to Tata Steel BSL Limited		
SL	**ADDITIONAL CONDITION**	**COMPLIANCE STATUS**
i.	M/s Tata Steel BSL Ltd. (new incumbent) shall submit an application for amendment in EC for switching from 50% coal & 50% mix gases from Steel plant to 100% mix gases from steel plant for stipulation of adequate conditions on pollution control measures by the Ministry.	• Amendment EC has been obtained for switching from 50% coal & 50% mixed gases from Steel plant to 100% mixed gases.
ii	The revised emission standards and specific water consumption as per the Ministry's Notification vide S.O.33.5 dated 17.12.2015 and subsequent amendments shall be complied with. The progress of implementation of new emission standards as per the extended timelines given by CPCB vide Order dated 16.04.2018 shall be submitted as part of compliance report.	• The revised emission standards and specific water consumption as per the Ministry's Notification vide S.O.33.5 dated 17.12.2015 and subsequent amendments is being complied with.
iii	Details of quantity of water consumption, power generation and Specific water consumption shall be submitted as part of compliance report.	• Water consumption, power generation and specific water consumption for the period April'22 to Sept'22 are given below. Water consumption: 274 m^3/hr Power Generation: 461141 MWh Specific water consumption: 2.57 m3/MWh
iv	The status of case (CC case No.16/2014) filed before Hon'ble Sub Divisional Judicial Magistrate, Dhenkanal against Shri Neeraj Singhal, M/s Bhushan Steel Ltd. shall also be communicated to the Ministry.	• Case is sub-judice at Hon'ble Sub Divisional Judicial Magistrate, Dhenkanal and pending for Supply of Prosecution Report.

Amendment Environment clearance of 256 MW power plant Letter no.: J-13012/77/2011-I-A. II (T) dated 13.08.2021		
SL	**ADDITIONAL CONDITION**	**COMPLIANCE STATUS**
1	Project Proponent shall submit Compliance report of Ministry Regional office within 6 months.	• Certificate of compliance of Regional Office of MoEF&CC has already been communicated vide letter No. TSL/MoEF&CC/BS-26/2022-02/202 dtd. 13.05.22.

Annexure-I

Summary of Surface Water Quality Analysis

Period: From April to September 2022

S.N	Parameter	Unit	Lingra Nala		Kisinda Nala	
			U/S	D/S	U/S	D/S
1	pH Value	-	7.66-8.21	7.35-7.97	6.95-8.11	7.41-8.17
2	Colour	Hazen	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
3	Temperature	Deg C	25	25	25	25
4	Total Suspended Solids	mg/l	2.8-4.8	4.2-26	3.2-10.6	2.8-21
5	Ammoniacal Nitrogen	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
6	Arsenic as As	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
8	BOD, 3days at 27°C	mg/l	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)
9	Boron as B	mg/l	BDL(DL:0.25)	BDL(DL:0.3)	BDL(DL:0.3)	BDL(DL:0.3)
10	Cadmium as Cd	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
11	Calcium as Ca	mg/l	31.68-39.6	32.64-102.96	40-110.88	19.8-48.96
12	Chlorides as Cl	mg/l	20.19-48.98	14.11-107.77	24.74-88.17	29.39-146.4
13	COD	mg/l	6.85-11.52	7.2-11.52	7.2-11.52	6.98-14.72
14	Copper (as Cu)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
15	Cyanide as CN	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
16	Fluoride as F-	mg/l	0.26-0.61	0.33-0.58	2.18-4.7	1.73-2.9
17	Free Ammonia	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
18	Hexa Chromium as Cr +6	mg/l	0.032	BDL(DL:0.01)	0.052	0.088
19	Iron as Fe	mg/l	0.12-0.38	0.25-0.38	0.28-0.89	0.26-0.93
20	Lead (as Pb)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
21	Manganese (as Mn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
22	Mercury (as Hg)	mg/l	BDL(DL:0.0002)	BDL(DL:0.0002)	BDL(DL:0.0002)	BDL(DL:0.0002)
23	Nickel (as Ni)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
24	Nitrate as N	mg/l	0.5-0.92	0.62-1.45	0.52-1.02	0.61-1.01
25	O&G	mg/l	BDL(DL:1.4)	BDL(DL:1.4)	BDL(DL:1.4)	BDL(DL:1.4)
27	Phenolic Comp	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
28	Phosphate as P	mg/l	0.18-0.26	0.38-0.4	0.18-0.32	0.18-0.38
29	RFC	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)

30	Selenium (as Se)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
31	Sulphate mg/l	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
32	TKN	mg/l	BDL(DL:0.3)	BDL(DL:0.3)	BDL(DL:0.3)	BDL(DL:0.3)
33	Total Chromium,(as Cr)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
34	Total Nitrogen Content	mg/l	BDL(DL:0.01)	1.02-5.1	0.86-42	0.9-3.9
35	Vanadium (as V)	mg/l	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)
36	Zinc (as Zn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)

Note: $ - No specific standards, ND - Not detected, U/S: Upstream D/S: Downstream

Source: Monitoring/ Analysis report of S.K. Mitra Private Limited

Summary of Treated Domestic Effluent Analysis

Period: From April to September 2022

S.N.	Location	Parameters in Range		
		pH	**Suspended Solid in mg/l**	**BOD (3 days at 27°C) in mg/l**
1.	Colony STP	7.03-7.8	35-74	14.3-22
2.	AEL STP	7.22-7.99	36-58	15-24
3.	SMS-1 STP	7.55-8.26	27-68	12.2-21
4.	BF-1 STP	7.15-8.19	31-67	12.2-23
Standard		**5.5-9.0**	**100**	**30**

Summary of Effluent Treatment Plant Analysis

Period: From April to September 2022

S.N	Location	Parameters in Range					
		pH	Suspended Solid in mg/l	Chemical Oxygen Demand in mg/l	BOD (3days at 27°C) in mg/l	Oil & Grease	Iron as Fe
1.	ETP-1 (Outlet)	7.29-8.25	33-65	40-80	6.2-8.8	ND	0.15-0.47
2.	ETP-2 (Outlet)	6.64-8.08	30-72	42-68	6.3-7.9	ND	0.15-0.47
3.	ETP-3 (Outlet)	6.52-7.75	32-64	43-76	6.6-106.9	ND	0.1-0.22
4.	CRM (ETP Outlet)	6.76-7.72	32-60	144-188	16.7-25.5	ND	0.15-0.21
5.	BF-1 (Thickener Outlet)	6.35-7.1	44-76	32-64	6-9	ND	-
6.	BF-2 (Thickener Outlet)	6.97-8.05	60-74	36-64	4.8-7.54	ND	-
7.	SMS-3 (Thickener Outlet)	9.72-12.41	60-76	48-68	6-8.8	ND	-
Standard		**5.5-9.0**	**100**	**250**	**30**	**10**	**1.0**

S.N.	Location	Parameters in Range						
		pH	Suspended Solid in mg/l	Chemical Oxygen Demand in mg/l	BOD (3days at 27°C) in mg/l	Oil & Grease	TCN	Phenol
8.	Coke Oven-1(ETP Outlet)	7.44-8.25	41-68	172-220	19.5-26.8	4-7	0.11-0.15	0.55-0.81
9.	Coke Oven-2 (ETP Outlet)	6.63-7.28	32-67	148-240	18.3-27.8	5-6	0.1-0.18	0.65-0.88
Standard		**5.5-9.0**	**100**	**250**	**30**	**10**	**0.2**	**1.0**

Summary of ground water level monitoring report inside plant premises

Period: From April to September 2022

S.N.	Location with description	Depth of Monitoring Bore Well	Longitude	Latitude	Monitoring Point in m AGL	Water level in m BGL
						June-22
1	Near CRM	163ft	20°47.956'	85°15.076'	1.58	2.42
2	Colony near STP	165ft	20°49.045'	85°15.734'	1.19	1.15
3	RMHS Near Wagon Tippler	300ft	20°47.752'	85°15.993'	1.2	3.68
4	Near Blast Furnace-2	162ft	20°47.25'	85°15.613'	1.0	2.13
5	Near Gate no-10	166ft	20°48.653'	85°15.754'	0.9	3.05
6	Near Railway bridge	156ft	20°48.920'	85°15.858'	1.46	3.55

Ground Water Quality Analysis

S.N.	Parameter	Unit	GW-1	GW-2	GW-3	GW-4	GW-5	GW-6	Standard as per IS-10500-2012
1	p H	-	7.11	7.45	7.23	7.55	7.59	7.42	6.5-8.5
2	Odour	-	Unobje ctionable	Unobje ctionable	Unobje ctionable	Unobje ctionable	Unobje ctionable	Unobje ctionable	-
3	T. Hardness (as CaCO3)	mg/l	244	356	410	276	412	310	300
4	Calcium as Ca	mg/l	58.5	85.8	98.6	66.5	98.6	75.5	75
5	Magnesium as Mg	mg/l	23.91	34.65	40	26.8	40.5	30.3	30
6	Iron as Fe	mg/l	0.16	0.18	0.22	0.11	0.15	0.08	0.3
7	Chlorides as Cl	mg/l	64.6	159	207.7	188.9	228.6	159	250
8	Fluoride as F-	mg/l	0.77	0.85	0.66	0.48	0.88	0.52	1.0
9	Dissolved solids	mg/l	342	416	492	336	502	389	500
10	Nitrate as NO3-	mg/l	2.8	3.5	3	2.7	4.4	1.5	45
11	Chromium as Cr+6	mg/l	0.016	0.018	0.018	0.008	0.02	0.011	0.05
12	Alkalinity as CaCO3	mg/l	52	66	58	52	78	36	200
13	Phosphate as PO4	mg/l	0.36	0.58	0.72	0.48	0.56	0.42	$

N.B-GW-1-Near colony STP, GW-2-Near CRM, GW-3-Near Wagon Tippler area, GW-4- Near BF-2, GW-5-Near Gate Number-10,GW-6- Near Railway Bridge at material road

Ground Water Level

Period: June 2022

S.N	Location	Sample Code	Monitoring Point in m AGL	Longitude	Latitude	Water Level in m BGL
						June-22
1	Kharagprasad	GW-01	0.5	20^0 49.299’	85^0 18.923’	3.52
2	Charadagadia	GW-02	1	20^0 47.768’	85^0 17.083’	5.26
3	Sibpur	GW-03	0	20^0 46.941’	85^0 14.394’	5.68
4	Kochilamara	GW-04	0.21	20^0 47.541’	85^0 16.802’	5.92
5	Galpada	GW-05	0.39	20^0 48.142’	85^0 18.600’	6.12
6	Motonga	GW-06	0.64	20^0 48.143’	85^0 18.599’	4.36
7	Asanabania	GW-07	0.7	20^0 47.534’	85^0 16.802’	5.88
8	Narendrapur	GW-08	0.25	20^0 49.483’	85^0 15.530’	5.06
9	Khaliberena	GW-09	0.18	20^0 46.946’	85^0 14.396’	5.58
10	Ganthigadia	GW-10	0.52	20^0 48.501’	85^0 15.118’	4.10

Ground Water Quality Analysis Report of surrounding villages

May 2022

S.N.	Parameters	unit	GW-01	GW-02	GW-03	GW-04	GW-05	GW-06	GW-07	GW-08	GW-09	GW-10
1	pH	None	6.40	6.34	6.69	7.30	6.75	7.04	6.69	7.58	6.91	7.19
2	Zinc as Zn	mg/l	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)
3	Turbidity	N.T.U	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)
4	Total Hardness as CaCO3	mg/l	235	578	167	274	127	461	206	265	333	451
5	Total Dissolved Solids (as TDS)	mg/l	385	897	211	487	150	637	540	375	399	545
6	Sulphate as SO4	mg/l	2.22	5.16	1.54	3.85	1.31	3.10	3.06	2.06	2.09	3.20
7	Selenium as Se	mg/l	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)
8	Residual Free Chlorine	mg/l	BDL (DL:0.1)	BDL (DL:0.1)	BDL (DL:0.1)	BDL (DL:0.1)	BDL (DL:0.1)	BDL (DL:0.1)	BDL (DL:0.1)	BDL (DL:0.1)	BDL (DL:0.1)	BDL (DL:0.1)
9	Potassium as K	mg/l	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)
10	Phenolic Compounds as C6H5OH	mg/l	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)
11	Odour	None	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
12	Nitrate as NO3	mg/l	0.96	1.92	1.04	1.51	BDL (DL:0.4)	1.98	1.88	1.10	0.93	2.22
13	Nickel (as Ni)	mg/l	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)

14	Mineral Oil	mg/l	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)
15	Mercury as Hg	mg/l	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)
16	Manganese as Mn	mg/l	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)
17	Magnesium as Mg	mg/l	23.5	68.2	16.5	23.5	11.8	44.7	21.2	23.5	32.9	21.2
18	Lead as Pb	mg/l	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)
19	Iron as Fe	mg/l	0.08	0.14	0.18	0.10	BDL (DL:0.05)	0.09	0.20	0.11	0.08	0.11
20	Fluoride as F	mg/l	0.25	0.50	BDL (DL:0.2)	0.30	BDL (DL:0.2)	0.48	0.48	0.29	0.25	0.32
21	Cyanide as CN	mg/l	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)
22	Copper as Cu	mg/l	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)
23	Colour	mg/l	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)
24	Chloride as Cl	mg/l	83.3	196.0	29.4	53.9	19.6	107.8	49.0	48.9	44.1	58.8
25	Calcium as Ca	mg/l	54.8	117.6	39.2	70.6	31.4	109.8	47.0	66.6	78.4	47.0
26	Cadmium as Cd	mg/l	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)
27	Boron as B	mg/l	BDL (DL:0.3)	BDL (DL:0.3)	BDL (DL:0.3)	BDL (DL:0.3)	BDL (DL:0.3)	BDL (DL:0.3)	BDL (DL:0.3)	BDL (DL:0.3)	BDL (DL:0.3)	BDL (DL:0.3)
28	Anionic Surface Active Agents as (MBAS)	mg/l	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)
29	Aluminium as Al	mg/l	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)

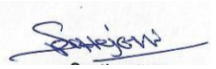
30	Alkalinity as CaCO3	mg/l	168	495	129	386	109	436	445	297	307	307
31	E. coli	/100 ml	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
32	Total coliform	/100 ml	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

September 2022

S.N.	Parameters	unit	GW-01	GW-02	GW-03	GW-04	GW-07	GW-08	GW-09	GW-10
1	pH	None	6.40	7.17	7.24	7.28	7.34	7.12	7.21	7.90
2	Zinc as Zn	mg/l	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)
3	Turbidity	N.T.U.	1.6	2.1	2.8	1.4	2.0	1.8	1.4	1.9
4	Total Hardness as CaCO3	mg/l	119	317	149	307	198	287	178	139
5	Total Dissolved Solids (as TDS)	mg/l	172	560	180	380	386	320	210	360
6	Sulphate as SO4	mg/l	4.62	7.64	3.68	5.92	4.80	5.40	4.20	5.68
7	Selenium as Se	mg/l	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)
8	Residual Free Chlorine	mg/l	BDL (DL:0.1)	BDL (DL:0.1)	BDL (DL:0.1)	BDL (DL:0.1)	BDL (DL:0.1)	BDL (DL:0.1)	BDL (DL:0.1)	BDL (DL:0.1)
9	Potassium as K	mg/l	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)
10	Phenolic Compounds as C6H5OH	mg/l	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)
11	Odour	None	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
12	Nitrate as NO3	mg/l	1.08	1.80	1.20	1.32	0.98	1.10	1.40	1.22

13	Nickel (as Ni)	mg/l	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)
14	Mineral Oil	mg/l	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)	BDL (DL:0.5)
15	Mercury as Hg	mg/l	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)
16	Manganese as Mn	mg/l	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)
17	Magnesium as Mg	mg/l	9.50	23.76	11.88	23.76	19.01	23.76	19.01	9.5
18	Lead as Pb	mg/l	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)
19	Iron as Fe	mg/l	0.08	0.16	0.18	0.07	0.09	0.09	0.07	0.11
20	Fluoride as F	mg/l	0.26	0.34	BDL (DL:0.2)	0.30	BDL (DL:0.2)	BDL (DL:0.2)	BDL (DL:0.2)	BDL (DL:0.2)
21	Cyanide as CN	mg/l	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)
22	Copper as Cu	mg/l	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)	BDL (DL:0.02)
23	Colour	mg/l	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)
24	Chloride as Cl	mg/l	39.19	142.06	29.39	48.98	53.88	39.19	29.39	53.88
25	Calcium as Ca	mg/l	31.68	87.12	39.60	83.16	47.52	75.24	39.60	39.60
26	Cadmium as Cd	mg/l	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)
27	Boron as B	mg/l	BDL (DL:0.3)	BDL (DL:0.3)	BDL (DL:0.3)	BDL (DL:0.3)	BDL (DL:0.3)	BDL (DL:0.3)	BDL (DL:0.3)	BDL (DL:0.3)
28	Anionic Surface Active Agents as (MBAS)	mg/l	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)
29	Aluminium as Al	mg/l	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)	BDL (DL:0.01)
30	Alkalinity as	mg/l	98.0	313	68.6	274	186	235	98.0	284

	CaCO3									
31	E. coli	/100ml	Detected	Detected	Detected	Detected	Detected	Detected	Detected	Not Detected
32	Total coliform	/100ml	Detected	Detected	Detected	Detected	Detected	Detected	Detected	Detected



Authorized Signature

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Annexure-II

CSR EXPENDITURE AND ACTIVITY HIGHLIGHTS (Around Tata Steel Limited, Meramandali) For Period April 2022 to September 2022		
PROGRAM HEAD	**Expenditure in Lakhs**	**MAJOR INTERVENTIONS/REMARKS**
Health	4.98	Mobile Medical Unit; Adolescent empowerment; Dengue/Malaria control
Drinking Water	54.20	Installation of tubewells; deep bore wells with overhead tank and pipeline system
EDUCATION	157.79	School infrastructure; Education project: QUEST
LIVELIHOOD	45.68	WEE Project; Other livelihood activities
INFRASTRUCTURE & MISC.	20.52	Construction & repair of road; Installation of solar lights
SPORTS	0.90	Volleyball coaching; Sports tournaments
TOTAL	**284.07**	**Rs. 2.84 crores**

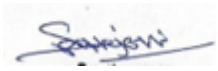
Annexure-III

SUMMARY OF WORK ZONE NOISE MONITERING

TATA STEEL LIMITED

PERIOD: From April to September,2022

SL	Name of the Unit	Location	Noise level in dB at 3 mt.	Standard as per Factory Rule Govt of Odisha 1950 (8 Hrs.)
			Range	
1.	Gas fired boiler 60 TPH Area	NearID fan -1	81.8-84.3	90
		NearID fan -2	83.6-84.8	
		NearFD fan -1	82.5-85	
		NearFD fan -2	81.4-85	
		Near Boiler area	74.9-84.1	
2.	Gas fired boiler 125 TPH Area	NearID fan -1	84.6-88.4	
		NearID fan -2	85.4-88.3	
		NearFD fan -1	85.1-88.2	
		NearFD fan -2	86.7-88.5	
		Near Boiler area	80.4-85.3	
3.	Gas fired boiler 250 TPH Area	NearID fan -1/2 area	83.4-85.4	
		NearFD fan -1/2 area	84.2-86.7	
		Near Boiler area	80.1-85.3	
		Near Fire water pump house area	82.7 - 86	
		Near ETP area	80.8-86.7	
		Near JP-1 Coil yard area	83.1- 86.3	
		Near JP-2 Coil yard area	83 -88	
		Near JP-3 Coil yard area	84.2 -90.3	
		Near Hot Generator Area	83.2 -85	



Authorized Signature

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