

MAHAGENCO
Maharashtra State Power Generation Company Limited
CIN: U40100MH2005SGC153648

(A GOVERNMENT OF MAHARASHTRA UNDERTAKING)

CHANDRAPUR SUPER THERMAL POWER STATION
MAHARASHTRA STATE POWER GENERATION COMPANY LIMITED
(ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 & ISO 50001:2018)
Office of: Chief Engineer, C.S.T.P.S. Urjanagar, Chandrapur – 442404
Phone: 07172 - 220155 to 220159 Fax: 07172 - 220203
Email: cegenchandrapur@mahagenco.in

No.CHN/Env & Coal/ENV/MoEF&CC/

0 0 2 6 8 6

Date:

31 JUL 2024

To,

The Additional Principal Chief Conservator of Forests,
Ministry of Environment, Forest & Climate Change (WCZ)
Ground floor, East Wing, "New Secretary building"
Civil line Nagpur-440001

Email: eccompliance-mh@gov.in

Sub: - Submission of Six Monthly Compliance Reports of Environmental Clearances (EC) of CSTPS, Chandrapur.

Ref: - 1) Format1.0/CAC/ UAN No. MPCB CONSENT- 0000163955/CR/2307001126 dated 18.07.2023.

- 2) TO letter CHN/Env/MoEF&CC/002362 dated 25.07.2022
- 3) EC letter No. J- 13011/ 53 / 2008- IA.II (T) dated 15.06.2018.
- 4) EC letter No. J- 13011/ 53 / 2008- IA.II (T) dated 31.03.2016.
- 5) EC letter No. J- 13011 / 53 /2008- IA.II (T) dated 30.01.2009.
- 6) CTE No. BO/RO (P&P)/CC-485 dated 30.12.2008
- 7) EC letter No. J- 13011 / 15 / 87- IA.II (T) dated 03.07.1990.

Dear Sir,

With reference to subject, please find enclosed herewith the Six Monthly Compliance Reports of Environmental Clearances for the period **January-2024 to June-2024** pertain to Chandrapur Super Thermal Power Station, Chandrapur. The report comprises-

1. Environment Clearance Conditions
2. Stack Emission Measurement for Jan-2024 to Jun-2024
3. Ambient Air Quality Monitoring for Jan-2024 to Jun-2024
4. Fugitive Dust Emission for Jan-2024 to Jun-2024
5. Effluent Quality for Jan-2024 to Jun-2024
6. Ash Generation & its Utilization for Jan-2024 to Jun-2024
7. Noise Monitoring for Jan-2024 to Jun-2024
8. Ground water and soil Quality Report for March-2024
9. Surface water analysis Report for Jan-2024 to Jun-2024
10. Study of radioactivity & heavy metals in coal and ash
11. Environment Statement 2022-23 and Plantation report 2023
12. Coal ash & sulphur analysis report Jan-2024 to Jun-2024

Thanking you,

Yours sincerely,

[Signature]
Chief Engineer
CSTPS, Chandrapur

Received
15/8/24
[Signature]
Maharashtra Pollution Control Board
Regional office
Udyog Bhavan, 1st Floor Station Road
Chandrapur-442401
Enclosed above
Copy sent to:

1. The Executive Director (O&M-II/E&S), MSPGCL, Mumbai.
2. The Divisional Head-IPC-II, CPCB, Delhi.
3. The Regional Officer MPCB, Chandrapur
4. The Sub-Regional Officer MPCB, Chandrapur

SIX MONTHLY COMPLIANCE REPORTS
OF
ENVIRONMENTAL CLEARANCES (EC)

2920(2X210+5X500) MW THERMAL POWER PLANT
AT
CHANDRAPUR, DISTRICT CHANDRAPUR
MAHARASHTRA

Submitted to:

Ministry of Environment, Forest & Climate Change
Central Pollution Control Board, New Delhi &
Maharashtra Pollution Control Board, Mumbai

Submitted By:

Chandrapur Super Thermal Power Station,
Chandrapur-442404, Maharashtra.
(January-2024 to June-2024)

CONTENT

Sr. No.	Title	Page No.
1	Introduction	3
2	Compliance status of Environmental Clearances (EC)	4-11
3	Six Monthly Environmental Monitoring Report	12
4	Stack Monitoring Report (Annexure-I)	13
5	Ambient Air Quality Monitoring Report(Annexure-I)	14-15
6	Fugitive Dust Emission Report(Annexure-I)	16-17
7	Effluent Analysis Report	18
8	Monthly Ash Generation & Utilization Report	19
9	Noise Analysis Report	20
10	Ground water and soil Quality Report (Annexure-II)	21-26
11	Surface Water Analysis Report (Annexure-III)	27-29
12	Health Camp (Annexure-IV)	30-31
13	Control measure to prevent fugitive dust emission (Annexure-V)	32-34
14	Display of Stack emission, AAQ at main gate (Annexure-VI)	35-39
15	Environment Statement 2022-23(Annexure-VII)	40-58
16	Plantation report (Annexure-VIII)	59
17	Coal Ash & Sulphur Analysis Report (Annexure-IX)	60-62
18	Study of radioactivity & heavy metals in coal (Annexure-XI)	63-64
19	Environmental policy (Annexure-XII)	65-72
20	Disaster Management Plan (Annexure-XIII)	73

1.0 [Introduction](#)

Chandrapur Super Thermal Power Station, Chandrapur is coal based Thermal Power Plant having installed capacity 2920(2x210 +5x500) MW.

The plant site is located at Urjanagar, 10 Km away from Chandrapur city. The total factory area is 10907 hectare, out of these 9790 hectare is operational area and remaining 1117 hectare open space is available for plantation. The villages Kachrala, Gunjala, Tadali, Kawathi, Tirvanja, Chhota Nagpur, Ambhora, Khairgaon, Chargaon along with western coal field Bhatadi, Durgapur and Padmapur surrounds the plant site.

CSTPS has been granted Environmental Clearances from Ministry of Environment & Forest, Consent to Establish and Consent to Operate from Maharashtra Pollution Control Board. As of the compliance of statutory requirement, environmental quality monitoring is being done regularly at locations suggested by Regional Officer, MPCB, Chandrapur. Four numbers of Continuous Ambient Air Quality Monitoring Station have been installed at four different locations inside the plant boundary as per wind rose and suggested by RO, MPCB, Chandrapur. Also environmental monitoring & analysis is being carried out by MoEF & CC recognized laboratory M/s. Ashwamedh Engineers & Consultants.

Point wise compliance status of Environmental clearance for Chandrapur Super Thermal Power Station, Chandrapur is furnished herewith.

Compliance Status of Environmental clearance Unit No – 7: 1x500 MW

Letter from Additional Director, MoEF Bhopal No. 4-9/92(ENV)/589 dated 24.03.2009.
MoEF New Delhi Environmental clearance Letter No. J-13011/15/87-I/(II) dated 03-07-1990.

Sr No.	EC Conditions	Compliance Status
1	Electrostatic precipitators having an operational efficiency of not less than 99.6% should be installed so as to ensure that particular emission are not exceeding 150 mg per cubic meter.	Efficiency of installed ESP for Unit – 7 is 99.88%. The design of ESP for particulate emission is 100 mg/NM ³
2	Multi flue stack of not less than 275 meters height should be provided.	Chimney height is 275 meters.
3	The plant will put up flue gas de-sulphuration unit as part of unit – 7 since the ground level concentration of SO ₂ and NO _x will beyond standard prescribed.	As per MoEF&CC notification dated 07.12.2015 & amended notification dated 05.09.2022 applicable from 01.01.2026, emission of SO _x is beyond standard prescribed. Hence to achieve the SO _x within limit, the matter of installation of flue gas de- sulphurization unit is in process at corporate office, Mumbai. Emission of No _x is within limit.
4	The temperature of cooling water discharged to the reservoir should not exceed 5.0 °C above ambient temperature.	Cooling water temperature is in range. Cooling water is not discharged to any reservoir but it is circulated in closed system. The Cooling Tower pond blow down water is treated at ETP-II and reused for ash slurry disposal.
5	The bleed off from the boiler house, from cooling towers, effluent from DM plant will be fully treated and reused so that there is no effluent discharge to the river.	All the effluents from power plant are treated at Effluent Treatment Plant. There is no discharge in river. The capacities of 3 ETP's are: ETP-I 1600 M ³ /hr ETP – II 500 M ³ /hr ETP – III 100 M ³ /hr The treated water from ETP-I & II is utilized for ash slurry disposal and treated water of ETP-III is reused for spraying in CHP area & ash slurry disposal.
6	Effluent from ash pond shall be totally re circulated within the plant.	Ash water recovery system is operational at ash bund. Ash water recovery reused for ash slurry disposal to ash pond.
7	Adequate number of air and water quality, including ground water, monitoring stations will be set up at different locations in and around the plant. The location of these monitoring stations should be selected in consultation with state pollution control board, India meteorological department. The monitored data on air and water quality should be furnished to these ministries and state pollution control board once in three months.	1) Ambient Air Quality Monitoring is carried out at 5 regular locations in and around power station. 2) Ground water quality from 14 locations selected in consultation with state pollution control board around power station and ash bund area is monitored in all 3 seasons to assess the impact please see (Annexure - II) . 3) The effluent analysis of all 4 ETP's, Boiler blow down, Cooling Tower pond blow down, DM plant waste and Ash bund is regularly analyzed from MoEF recognized agency.
8	The stack will be provided with automatic monitoring instrument for measuring and recording SO ₂ and NO _x .	Online SO ₂ and NO _x monitoring analyzers are installed & it is connected to CPCB server & MPCB server.
9	Adequate measures for control of noise due to various operations within different plant units should be taken.	Adequate measures have been taken for control of noise level of different plant auxiliary units and all necessary precautions have also been taken to

	The noise levels should confirm to standards prescribed by ministry under the Environment (Protection) Act.	maintain noise level. The noise level measurement for ambient noise and workplace noise is regularly monitored. Noise levels are within permissible limit.
10	Precautionary measures for control of fire and explosion hazards arising due to transportation, use of storage of coal and oil should be taken.	All adequate measures are being taken up for control of fire & explosion hazardous arising due to transportation, use & storage of coal and oil. Fire alarm, fire hydrant, spray system are installed.
11	A green belt development plan covering the entire area of the west bank thermal power station should be prepared and submitted to this ministry within 6 months time. The plant species selected should be native to the area and they should given maximum green cover. The species so selected should be sensitive as well as resistant varieties to emission SO ₂ .	CSTPS has carried out massive tree plantation in and around power station. The area covered under green belt is 48.78% of open area. The present status is as below: Total area under CSTPS: - 10907 Hectare. Open Space available for Plantation:-1117 Hectare. Total area under tree plantation:-544.88 Hectare. Total Tree Plantation: - 1322286 Nos. Plant species such as; Acacia nilotica (babul), Lencaena Lencoephala (subabul), Shivan, Sisam, Ponogamia pinnata (karanj), Casia, Gulmohar, Petraform, Banyan, Encalyptus (Nilgiri), Neem, Albirra lebback (Sirus), Nerium indicum, Jambolana, Ocimum basiticum (Tulsi),bamboo species which are resistance to dust & gases are planted.
12	They should carry out regular monitoring of flora and fauna, fisheries and bottom sediments of the reservoir to monitor the impact of any discharges from the thermal power station.	Power station effluents are not discharged to any natural source. CSTPS, Chandrapur has ETPs where plant effluents are treated. Treated effluents are utilized for ash disposal to ash bund.
13	Protective and control measures in coal transportation areas and the conveyor belts system should be taken to minimize the coal dust pollution in these zones.	Coal that transported through trucks/wagons is covered with tarpaulin. Necessary protective and control measures for reduction and control of dust in Coal Handling Plant area is carried out. Dust Extraction, Dust Suppression system, water spraying system at conveyers and crushing section, fogger system at wagon tippler, water spraying at coal stack yard, cladding to all conveyer belts etc is provided.
14	An environment cell should be set up with complete laboratory facilities to look into the implementation of various conditions mentioned above. Adequate financial provision should be made for implementation of these stipulations. The capital cost and maintenance of these stipulations. The capital cost and recurring cost made in this regard should be communicated to this ministry. The provision so made should not be diverted for any other purpose.	The Environment cell is already formed at CSTPS. It is headed by officer of the rank of Superintendent Engineer and assisted by Senior Chemist & Section Head. This unit is looking after Environment monitoring activities. Laboratory facility is also available. Stack emission monitoring, AAQM, Metrological data, Noise level, GLC, Ground water, Soil etc is carried out by MoEF&CC recognized agency. Adequate financial provision is always made in O & M budget for abatement of Environment pollution. Environment Statement for the year 2022-23 is enclosed for references please see (Annexure – VII) .

Compliance Status of Environmental clearance
Unit No – 8&9: 2x500 MW

EC letter No. J- 13011/ 53 / 2008- IA.II (T) dated 15.06.2018.
 EC letter No. J- 13011/ 53 / 2008- IA.II (T) dated 31.03.2016.
 EC letter No. J- 13011 / 53 /2008- IA.II (T) dated 30.01.2009.

EC Cond No.	EC Conditions	Compliance Status
i	No additional land shall be acquired for any activity/facility of this project.	Required land is already in the possession of MAHAGENCO
ii	Sulphur and ash contents in the coal to be used in the project shall not exceed 0.4% and 34% respectively at any given time.	The matter of supply of desired quality of coal is taken up MSPGCL Corporate Office with coal companies.
iii	A bi-flue stack of 275 m height shall be provided with continuous online monitoring equipments for SO _x , NO _x and Particulate. Exit velocity of flue gases shall not be less than 22 m/sec.	A bi-flue stack of 275 m height is provided with Continuous online monitoring equipments for SO _x , NO _x and Particulate & its connectivity to MPCB/CPCB server is completed.
iv	High efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³ .	Erection of ESP for both unit with efficiency of 99.99 % and particulate emission not exceeding 50 mg/Nm ³ is completed.
v	Space provision shall be kept for retrofitting of FGD, if required at a later date.	Provision of space is made for retrofitting of FGD.
vi	Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	AHP: Dry ash Silo:-02 out of 02 Ash silo with Bag filters is in operation. HSCD silo: 02 out of 02 Ash silo construction completed. Bag filter & vent blower erection completed. System is in operation. CHP: The work of Dust Extraction system at Crusher House, bunkers is completed. Dry fog dust suppression system provided in wagon tippler area.
vii	Fly ash shall be collected in dry form and storage facility (silos) shall be provided, 100% fly ash utilization shall be ensured from day one. Unutilized fly ash, in emergency and bottom ash shall be disposed of in the ash pond in the form of slurry.	Dry ash silo (02) established to collect dry ash for further utilization, unutilized fly ash and bottom ash are disposed off in the ash pond in the form of slurry with recirculation of ash water.
viii	Existing ash pond shall be for disposal of bottom ash. No ash pond shall be created for this expansion project.	Existing ash pond is sufficient for disposal of bottom ash. No separate ash pond is created for this expansion project.
ix	Closed cycle cooling system with cooling towers shall be provided. COC of at least 6 shall be adopted and the effluent shall be treated as per the prescribed norms.	Being followed.
x	The treated effluents conforming to the prescribed standards shall be re-circulated	All the effluent treated adequately in the ETP. Treated water is being reused

	and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed.	within the plant at AHP for ash slurry disposal to ash bund and at CHP for dust suppression. CSTPS has adopted "Zero Discharge Policy"
xi	A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.	Sewage treatment plant of adequate capacity is provided. Arrangement is made for utilizing treated water for gardening and plantation.
xii	Rainwater harvesting should be adopted. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished.	Total three numbers of Trapezoidal section of open bottom settling tanks/open recharge basin namely 1) RB-1- 35mx35mx3.5m 2) RB-2- 35mx35mx3.5m 3) RB-3- 25mx25mx3.5m
xiii	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry at Bhopal.	Ventilation system, Dust suppression system, water sprinkler system, Dry fog system and rain gun are being provided wherever required. Fire hydrant system is provided in coal stack yard and Water spray system is provided in conveyers, crusher house, tower etc.
xiv	Storage facilities for auxiliary liquid fuel such as LDO and HFO/LSHS shall be made in the plant area where risk is minimum to the storage facilities. Disaster Management Plan shall be prepared to meet any eventually in case of an accident taking place, Mock drills shall be conducted regularly and based on the same, modifications required, if any shall be incorporated in the DMP, Sulphur content in the liquid fuel will not exceed 0.5%.	Storage facilities for LDO/HFO located considering minimum risk. Sulphur content specified for FO is 4.5 % max. By weight. Mock Drills is conducted regularly and based on the feedback of the same, modification if required, if any, shall be done. HFO/ LDO storage tank work is completed. Disaster management plan is prepared. Please see Annexure-XIII .
xv	Regular monitoring of ground water including heavy metals (Hg, Cr, As and Pb) in and around the ash pond area shall be carried out, records maintained and six monthly reports shall be furnished to the Regional Office of this Ministry.	Regular monitoring of ground water carried out around ash pond area. Monitoring results are being submitted to Regional Officer, MPCB and MoEF regularly. Please refer Annexure – II .
xvi	A green belt of adequate width and density shall be developed around the plant periphery covering 34 acres of area preferably with local species.	CSTPS has carried out massive tree plantation in and around power station. The area covered under green belt is 48.78% of open area. Annexure – VIII .
xvii	Adequate funds shall be allocated for undertaking CSR activities.	Work completed.
xviii	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Completed.
xix	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 db (A). For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be	Acoustic enclosure is provided in the high noise area D.G. Set, Compressed Air System, Turbine. Protective equipments are provided as per the requirement.

	periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy/ less noisy areas.	
xx	Regular monitoring of the ambient air quality in the impact zone shall be carried out and records maintained. In case the air quality levels exceed the prescribed standards, necessary corrective measures, shall be taken.	Monitoring of AAQ is carried out regularly. Please see (Annexure-I)
xxi	Regular monitoring of ground level concentration of SO ₂ , NO _x , SPM and RSPM shall be carried out in the Impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location 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 this Ministry. The date shall also be put on the website of the company.	Regular monitoring of ground level concentration of SO ₂ , NO _x , SPM and RSPM shall be carried out in the Impact zone decided in consultation with SPCB and records maintained. Please see (Annexure-X) . Periodic reports are submitted to the Regional Office of this Ministry & MPCB.
xxii	A detailed plan for health monitoring in the area within the impact zone shall be prepared and implemented along with local administration. The plan should, besides others, also provide for monitoring of respiratory disorders. The plan should be submitted within 3 months to this Ministry and its Regional Office at Bhopal.	Health Monitoring camp were arranged recently on 06.06.2024 for residents of Urjangar colony & nearby villages like Durgapur, Khairgaon, Ambhora at Snehbandh Sabhagruh, Urja Nagar, Chadrapur. Details of health camp & photographs are attached Please see (Annexure-IV) .
xxiii	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	The Project Construction work is completed & hand over to O&M.
xxiv	The project proponent shall advertise in at least two local newspapers widely 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 environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in	Copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in .
xxv	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated Environmental safeguards.	A separate environment management cell with qualified staff is already formed at CSTPS for implementation of the stipulated Environmental safeguards. It

		is headed by officer of the rank of Superintendent Engineer and assisted by Executive Chemist.
xxvi	Half yearly report on the status implementation of the stipulated conditions and environmental safeguards shall be submitted to his Ministry/ Regional Office/CPCB/SPCB.	Report is submitted to Ministry/ Regional Office/CPCB/SPCB.
xxvii	Regional Office of the Ministry of Environment & Forests located at Bhopal will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental 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. Criteria pollutant levels (stack and ambient levels) will be displayed at the main gate of the power plant.	Compliance status is submitted to MoEF, Regional office, Nagpur. Criteria pollutant levels (stack and ambient levels) are displayed at the main gate of the power plant. Please see (Annexure-VI) .
xxviii	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included 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.	Separate funds are allocated for implementation of environmental protection measures. The year-wise expenditure is regularly reported to SPCB. Please see (Annexure-VII) .
xxix	The project authority shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	Work Completed.
xxx	Full cooperation shall be extended to the Scientists/Officers from the Ministry/ Regional Office of the Ministry at Bhopal / the CPCB/the SPCB who would be monitoring the compliance of environmental status.	CSTPS, Chandrapur gives full cooperation to the Scientists/Officers from the statutory bodies that would be monitoring the compliance of environmental status.
Extended EC Conditions		
xxxi	The action plan formulated by CPCB and SPCB for the Critically Polluted Area (CPA) of Chandrapur shall be strictly complied.	Being followed.
xxxii	The standards stipulated by the Ministry vide Notification dated 07.12.2015 for Thermal Power Plants shall be duly complied.	CSTPS, Chandrapur is complied all the standards stipulated by the Ministry vide Notification dated 07.12.2015 & amended notification dated 05.09.2022 for Thermal Power Plants except SO ₂ emission. Present status of Wet limestone FGD for Unit No. 5 to 9 (500MW) & Dry Sorbent FGD system for

		Unit 3 & 4 (210 MW) is attached herewith.
xxxiii	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.	CSTPS Chandrapur has already Solar plant in operation having capacity 5 MW. A consolidated tender for Solar Roof Top at all Power Stations of Mahagenco is being processed at SPGD. In this tender 1 MW capacity is included for CSTPS, Chandrapur.
xxxiv	A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute and results thereof analyzed every two year 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.	The radioactivity analysis & heavy metals analysis of Coal, fly ash & bottom ash is carried on February 2024 from Radio analytical laboratory BARC, Mumbai & results are attached Please see (Annexure-XI) .
xxxv	Fugitive emission shall be controlled to prevent impact on agricultural or non-agricultural land. In case of any proven damage to agricultural land/ crop, necessary compensation shall be paid by the PP.	CSTPS, Chandrapur has rain gun in coal stack yard, water sprinkler at wagon tippler and transfer point at coal conveyor belt to control the fugitive dust emission. (Photograph attached) Please see (Annexure-V) .
xxxvi	Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of 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.	Surface water sample is daily collected from plant premises as well as plant periphery & sample is analyzed from recognized laboratory. Report is attached Please see (Annexure-III) . For monitoring of ground water quality refer Please see Annexure-II .
xxxvii	No water bodies including natural drainage system in the area shall be disturbed due to activities associated with setting up / operation of the plant.	AS 'Zero Discharge Policy" has been adopted, all effluent generated are treated in ETP. Treated effluent is reused for ash disposal to ash bund.
xxxviii	No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control board and implementation done in close co-ordination with the state Pollution control Board.	No mine void filling is undertaken as an option for ash utilization; However, Ash is utilized for cement/brick manufacturing & road construction purpose.
xxxix	Green belt shall also be developed around the ash pond over and above the Green Belt around the plant boundary.	In 2023 about 6000 of bamboo were planted near Unit 8 & 9 cooling tower area. Upto July 2024 7500 Number of bamboo trees planted in U# 8 & 9 area &

		120 No. of trees planted at Biodiversity Orchid near Grit filter area.
xl	CSR schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of 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 programmes.	Being followed
xli	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.	Agreed.
xlii	An Environment Cell comprising of at least one expert in environmental 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 impact improvement/ mitigation measures.	A separate environment management cell with qualified staff is already formed at CSTPS for implementation of the stipulated Environmental regulations and social impact improvement/ mitigation measures.
xliii	The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.	We have implemented ISO 18001:2007, ISO 14001:2015, ISO 9001:2015 under Integrated Management System consist of Environment, Health & Safety, Quality and Energy Management Systems. Please see (Annexure-XII) .
Extended EC Conditions For coal transporting through closed pipe conveyor		
i.	Construction of pillars in the water bodies (Rivers & Nallahs) shall be carried out in the dry seasons only.	Construction of pillars in the water bodies Erai river was carried out in the dry seasons & completed.
ii	Dust suppression system such as mist/dry fog jet sprinklers to be set up at the transfer points to arrest the fugitive dust emissions.	Being followed.
iii	For every tree cut along the proposed route in the non-forest area, guidelines of Forest (Conservation) Act, 1980 shall be followed in consultation with the local State Forest department.	Being followed.
iv	Noise level shall be in accordance with the Noise Pollution Rule.	Being followed.

**SIX MONTHLY ENVIRONMENTAL MONITORING
REPORT
FOR**

The Period of January-2024 to June-2024

Of

**Chandrapur Super Thermal Power
Station**

Chandrapur

Urja Nagar, Chandrapur-442404

(Annexure-I)
CHANDRAPUR SUPER THERMAL POWER STATION, CHANDRAPUR.

For the period of January-2024 to June-2024
MONTHLY AVERAGE STACK MONITORING REPORT

MONTH	PARAMETERS	UNIT # 3 (210 MW)	UNIT # 4 (210 MW)	UNIT # 5 (500 MW)	UNIT # 6 (500 MW)	UNIT # 7 (500 MW)	UNIT # 8 (500 MW)	UNIT # 9 (500 MW)
Jan-24	SPM (mg/NM ³)	96	96	96	94	93	21	24
	SO ₂ (mg/NM ³)	1215	1215	1222	1239	1212	1217	1202
	NO _x (mg/NM ³)	300	292	307	303	297	304	299
	Hg (mg/Nm ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	NH ₃ (PPM)	2.55	2.60	2.56	2.47	2.59	ND	ND
Feb-24	SPM (mg/NM ³)	87	91	94	91	94	25	27
	SO ₂ (mg/NM ³)	1160	1172	1194	1244	1229	1219	1205
	NO _x (mg/NM ³)	301	286	305	301	316	334	324
	Hg (mg/Nm ³)	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
	NH ₃ (PPM)	2.59	2.44	2.57	2.52	2.57	NA	NA
Mar-24	SPM (mg/NM ³)	91	94	97	97	96	31	27
	SO ₂ (mg/NM ³)	1189	1160	1248	1248	1269	1257	1238
	NO _x (mg/NM ³)	300	295	286	286	291	288	299
	Hg (mg/Nm ³)	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
	NH ₃ (PPM)	2.68	2.80	2.66	2.71	2.75	NA	NA
Apr-24	SPM (mg/NM ³)	90	89	95	94	88	25	23
	SO ₂ (mg/NM ³)	1270	1229	1311	1249	1216	1280	1199
	NO _x (mg/NM ³)	302	334	289	308	294	320	317
	Hg (mg/Nm ³)	BLQ	BLQ	BLQ	BLQ	BLQ	ND	ND
	NH ₃ (PPM)	2.57	2.71	2.78	2.76	2.81	NA	NA
May-24	SPM (mg/NM ³)	92	88	93	96	94	27	29
	SO ₂ (mg/NM ³)	1207	1185	1263	1283	1299	1234	1241
	NO _x (mg/NM ³)	299	287	316	309	328	269	293
	Hg (mg/Nm ³)	BLQ	BLQ	BLQ	BLQ	BLQ	ND	ND
	NH ₃ (PPM)	2.63	2.60	2.75	2.74	2.77	NA	NA
Jun-24	SPM (mg/NM ³)	96	89	94	91	88	31	21
	SO ₂ (mg/NM ³)	1316	1268	1311	1270	1253	1233	1207
	NO _x (mg/NM ³)	320	313	281	299	278	329	319
	Hg (mg/Nm ³)	BLQ	BLQ	BLQ	BLQ	BLQ	ND	ND
	NH ₃ (PPM)	2.65	2.76	2.71	2.77	2.83	NA	NA

Note: -1) ND = Not Detectable

As per M. P. C. B. Consent: **NH₃ : Not to exceed 50 ppm.**

As per MPCB consent and MoEF & CC Notification effected from 07/12/2017

Parameter	U# 3 to 7	U#8&9
SPM (mg/NM³)	100	50
SO₂ (mg/NM³)	U#3&4=600 U#5,6&7=200	200
NO_x (mg/NM³)	600	450 as per MoEF notification dated 19.10.2020
Hg (mg/NM³)	U#3&4=N/A, U#5-7=0.03	0.03

(Annexure-I)
CHANDRAPUR SUPER THERMAL POWER STATION, CHANDRAPUR.

For the period of January-2024 to June-2024
MONTHLY AVERAGE AMBIENT AIR QUALITY MONITORING REPORT

Location	Parameters	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
Location No.1 (Major Store Adm. Bldg.)	PM _{2.5} (µg/M ³) (60)	24.25	30.63	31.57	32.75	36.25	43.17
	PM ₁₀ (µg/ M ³)(100)	90.25	92.88	92.14	95.00	92.63	91.50
	SO ₂ (µg/ M ³)(80)	19.40	21.04	22.33	23.01	27.65	29.28
	NOx (µg/ M ³)(80)	31.80	33.04	37.70	36.83	38.33	44.25
	Ozone (µg/ M ³)(180)	BDL	BDL	BDL	BDL	BDL	BDL
	Lead (µg/ M ³)(1.0)	BDL	BDL	BDL	BDL	BDL	BDL
	CO (mg/ M ³)(4.0)	1.11	1.12	1.34	1.54	1.47	1.50
	NH ₃ (µg/ M ³)(400)	30.75	30.38	31.29	31.38	32.25	36.17
	Benzene (µg/ M ³) (5.0)	BDL	BDL	BDL	BDL	BDL	BDL
	BaP (ng/ M ³)(1.0)	BDL	BDL	BDL	BDL	BDL	BDL
	Arsenic (ng/ M ³)(6.0)	BDL	BDL	BDL	BDL	BDL	BDL
	Nickel (ng/ M ³)(20.0)	BDL	BDL	BDL	BDL	BDL	BDL
Location No.2 (Colony E/M Office)	PM _{2.5} (µg/M ³) (60)	15.88	25.75	20.00	22.00	21.63	23.33
	PM ₁₀ (µg/ M ³)(100)	82.63	79.75	82.43	84.75	76.63	79.00
	SO ₂ (µg/ M ³)(80)	13.98	15.36	17.21	17.94	19.21	24.03
	NOx (µg/ M ³)(80)	19.73	22.65	23.87	22.81	26.44	30.65
	Ozone (µg/ M ³)(180)	BDL	BDL	BDL	BDL	BDL	BDL
	Lead (µg/ M ³)(1.0)	BDL	BDL	BDL	BDL	BDL	BDL
	CO (mg/ M ³)(4.0)	0.68	0.75	0.80	0.93	0.69	0.88
	NH ₃ (µg/ M ³)(400)	24.00	25.50	26.14	25.75	24.88	26.50
	Benzene (µg/ M ³) (5.0)	BDL	BDL	BDL	BDL	BDL	BDL
	BaP (ng/ M ³)(1.0)	BDL	BDL	BDL	BDL	BDL	BDL
	Arsenic (ng/ M ³)(6.0)	BDL	BDL	BDL	BDL	BDL	BDL
	Nickel (ng/ M ³)(20.0)	BDL	BDL	BDL	BDL	BDL	BDL
Location No.3 (Chummery)	PM _{2.5} (µg/M ³) (60)	19.63	25.00	21.00	20.63	26.00	31.33
	PM ₁₀ (µg/ M ³)(100)	75.25	63.00	78.43	82.50	79.50	83.50
	SO ₂ (µg/ M ³)(80)	12.84	17.71	17.84	19.39	20.24	21.25
	NOx (µg/ M ³)(80)	17.94	22.14	21.17	25.41	27.98	33.10
	Ozone (µg/ M ³)(180)	BDL	BDL	BDL	BDL	BDL	BDL
	Lead (µg/ M ³)(1.0)	BDL	BDL	BDL	BDL	BDL	BDL
	CO (mg/ M ³)(4.0)	1.05	1.08	1.11	1.35	1.18	1.32
	NH ₃ (µg/ M ³)(400)	27.50	28.63	28.57	28.88	27.25	31.50
	Benzene (µg/ M ³) (5.0)	BDL	BDL	BDL	BDL	BDL	BDL
	BaP (ng/ M ³)(1.0)	BDL	BDL	BDL	BDL	BDL	BDL
	Arsenic (ng/ M ³)(6.0)	BDL	BDL	BDL	BDL	BDL	BDL
	Nickel (ng/ M ³)(20.0)	BDL	BDL	BDL	BDL	BDL	BDL

Note: - ND = Not Detectable, BDL=Below Detection Level.

(Annexure-I)
CHANDRAPUR SUPER THERMAL POWER STATION, CHANDRAPUR.

For the period of January-2024 to June-2024
MONTHLY AVERAGE AMBIENT AIR QUALITY MONITORING REPORT

Location	Parameters	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
Location No.4 (Railway Cabin U # 8 & 9.)	PM _{2.5} (µg/M ³) (60)	21.38	29.75	21.57	28.75	29.50	33.33
	PM ₁₀ (µg/ M ³)(100)	83.50	86.63	85.43	90.88	83.25	88.83
	SO ₂ (µg/ M ³)(80)	17.64	19.34	20.11	22.35	21.45	30.08
	NO _x (µg/ M ³)(80)	26.48	28.74	26.24	28.80	32.16	36.57
	Ozone (µg/ M ³)(180)	BDL	BDL	BDL	BDL	BDL	BDL
	Lead (µg/ M ³)(1.0)	BDL	BDL	BDL	BDL	BDL	BDL
	CO (mg/ M ³)(4.0)	0.98	0.99	1.01	1.15	0.93	1.05
	NH ₃ (µg/ M ³)(400)	28.13	28.25	28.57	28.13	28.00	29.50
	Benzene (µg/ M ³) (5.0)	BDL	BDL	BDL	BDL	BDL	BDL
	BaP (ng/ M ³)(1.0)	BDL	BDL	BDL	BDL	BDL	BDL
	Arsenic (ng/ M ³)(6.0)	BDL	BDL	BDL	BDL	BDL	BDL
	Nickel (ng/ M ³)(20.0)	BDL	BDL	BDL	BDL	BDL	BDL
Location No.5 (ETP U # 8 & 9)	PM _{2.5} (µg/M ³) (60)	22.50	29.38	22.00	30.25	27.13	38.33
	PM ₁₀ (µg/ M ³)(100)	82.00	88.25	84.71	91.75	79.13	90.50
	SO ₂ (µg/ M ³)(80)	14.18	17.63	20.23	20.71	23.75	28.5
	NO _x (µg/ M ³)(80)	21.15	24.48	25.30	30.23	34.93	39.3
	Ozone (µg/ M ³)(180)	BDL	BDL	BDL	BDL	BDL	BDL
	Lead (µg/ M ³)(1.0)	BDL	BDL	BDL	BDL	BDL	BDL
	CO (mg/ M ³)(4.0)	0.96	0.99	1.01	1.09	0.97	1.14
	NH ₃ (µg/ M ³)(400)	28.00	28.13	28.43	27.75	27.00	29.50
	Benzene (µg/ M ³) (5.0)	BDL	BDL	BDL	BDL	BDL	BDL
	BaP (ng/ M ³)(1.0)	BDL	BDL	BDL	BDL	BDL	BDL
	Arsenic (ng/ M ³)(6.0)	BDL	BDL	BDL	BDL	BDL	BDL
	Nickel (ng/ M ³)(20.0)	BDL	BDL	BDL	BDL	BDL	BDL

Note: - ND = Not Detectable, BDL=Below Detection Level.

(Annexure-I)
CHANDRAPUR SUPER THERMAL POWER STATION, CHANDRAPUR.

For the period of January-2024 to June-2024

MONTHLY AVERAGE FUGITIVE DUST EMISSION MONITORING REPORT

Location		Parameters	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
CHP- A	Crusher House	RSPM ($\mu\text{g}/\text{M}^3$)	108.00	116.00	122.50	127.00	133.50	133.00
		SPM ($\mu\text{g}/\text{M}^3$)	127.00	134.00	144.00	147.00	156.50	154.00
		SO ₂ ($\mu\text{g}/\text{M}^3$)	14.95	16.10	18.85	20.50	21.45	24.75
		Nox ($\mu\text{g}/\text{M}^3$)	20.85	26.70	33.10	35.85	39.80	38.55
	L. T. Bunker	RSPM ($\mu\text{g}/\text{M}^3$)	94.50	101.50	104.50	108.50	115.50	104.50
		SPM ($\mu\text{g}/\text{M}^3$)	117.00	124.00	125.50	128.50	137.00	135.00
		SO ₂ ($\mu\text{g}/\text{M}^3$)	14.15	13.05	15.00	17.00	19.90	17.85
		Nox ($\mu\text{g}/\text{M}^3$)	17.85	16.60	19.55	22.75	26.30	25.70
	Wagon Tippler	RSPM ($\mu\text{g}/\text{M}^3$)	94.00	102.50	108.00	117.50	104.50	115.00
		SPM ($\mu\text{g}/\text{M}^3$)	105.00	117.50	122.00	131.50	123.00	137.00
		SO ₂ ($\mu\text{g}/\text{M}^3$)	13.80	13.40	16.20	18.80	16.90	19.05
		Nox ($\mu\text{g}/\text{M}^3$)	18.10	21.55	24.40	28.85	22.40	27.75
	Coal Stack Yard	RSPM ($\mu\text{g}/\text{M}^3$)	110.50	117.00	124.00	130.00	117.50	129.50
		SPM ($\mu\text{g}/\text{M}^3$)	123.50	133.00	140.50	146.00	134.00	152.50
		SO ₂ ($\mu\text{g}/\text{M}^3$)	15.90	16.45	20.30	23.45	17.95	20.30
		Nox ($\mu\text{g}/\text{M}^3$)	21.15	26.30	34.80	37.15	26.95	34.25
CHP-B	Crusher House	RSPM ($\mu\text{g}/\text{M}^3$)	112.00	113.00	126.50	124.50	125.50	129.50
		SPM ($\mu\text{g}/\text{M}^3$)	128.00	131.00	149.50	140.00	137.00	148.00
		SO ₂ ($\mu\text{g}/\text{M}^3$)	14.80	16.70	19.30	19.20	20.35	20.45
		Nox ($\mu\text{g}/\text{M}^3$)	19.90	23.10	30.90	31.00	34.15	36.30
	Coal Stack Yard	RSPM ($\mu\text{g}/\text{M}^3$)	109.50	117.00	115.00	118.00	129.00	132.00
		SPM ($\mu\text{g}/\text{M}^3$)	123.50	137.50	133.50	134.50	145.00	150.00
		SO ₂ ($\mu\text{g}/\text{M}^3$)	14.95	15.30	16.50	18.05	23.80	22.75
		Nox ($\mu\text{g}/\text{M}^3$)	20.95	23.30	23.90	24.85	37.40	36.40
	Wagon Tippler	RSPM ($\mu\text{g}/\text{M}^3$)	99.50	104.00	107.00	106.50	110.00	119.00
		SPM ($\mu\text{g}/\text{M}^3$)	118.50	118.50	127.00	126.50	123.00	131.50
		SO ₂ ($\mu\text{g}/\text{M}^3$)	12.80	15.20	16.05	15.85	17.90	18.40
		Nox ($\mu\text{g}/\text{M}^3$)	16.75	19.75	22.10	20.55	20.85	26.25
	T. P. - 103	RSPM ($\mu\text{g}/\text{M}^3$)	115.50	117.50	124.00	122.50	129.50	133.50
		SPM ($\mu\text{g}/\text{M}^3$)	129.50	135.50	142.00	138.50	148.00	156.50
		SO ₂ ($\mu\text{g}/\text{M}^3$)	15.70	17.35	19.35	18.60	21.10	21.50
		Nox ($\mu\text{g}/\text{M}^3$)	23.05	25.45	32.30	30.90	35.40	34.30

(Annexure-I)
CHANDRAPUR SUPER THERMAL POWER STATION, CHANDRAPUR.

For the period of January-2024 to June-2024

MONTHLY AVERAGE FUGITIVE DUST EMISSION MONITORING REPORT

Location		Parameters	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
CHP- D (U#8&9)	Wagon Tippler	RSPM ($\mu\text{g}/\text{M}^3$)	93.00	96.00	102.00	105.00	109.00	106.00
		SPM ($\mu\text{g}/\text{M}^3$)	110.00	115.00	121.00	127.00	132.00	127.00
		SO ₂ ($\mu\text{g}/\text{M}^3$)	13.80	12.30	14.30	15.70	16.20	19.50
		Nox ($\mu\text{g}/\text{M}^3$)	19.30	17.50	20.20	21.30	23.50	21.30
	T. P. - 105	RSPM ($\mu\text{g}/\text{M}^3$)	113.00	116.00	122.00	129.00	131.00	118.00
		SPM ($\mu\text{g}/\text{M}^3$)	130.00	137.00	143.00	144.00	143.00	137.00
		SO ₂ ($\mu\text{g}/\text{M}^3$)	15.50	17.20	20.30	21.60	22.40	20.10
		Nox ($\mu\text{g}/\text{M}^3$)	22.80	31.40	34.60	36.20	37.60	35.40
	Crusher House	RSPM ($\mu\text{g}/\text{M}^3$)	96.00	--	--	118.00	124.00	120.00
		SPM ($\mu\text{g}/\text{M}^3$)	115.00	--	--	138.00	147.00	142.00
		SO ₂ ($\mu\text{g}/\text{M}^3$)	12.30	--	--	18.10	19.10	19.90
		Nox ($\mu\text{g}/\text{M}^3$)	17.50	--	--	29.70	28.90	25.70
	T. P. - 107	RSPM ($\mu\text{g}/\text{M}^3$)	109.00	--	--	124.00	129.00	124.00
		SPM ($\mu\text{g}/\text{M}^3$)	122.00	--	--	142.00	155.00	147.00
		SO ₂ ($\mu\text{g}/\text{M}^3$)	13.30	--	--	19.50	20.40	21.40
		Nox ($\mu\text{g}/\text{M}^3$)	21.50	--	--	31.40	35.20	37.10
Closed pipe conveyor belt	Bhatadi	RSPM ($\mu\text{g}/\text{M}^3$)	95.00	85.00	93.00	96.00	99.00	112.00
		SPM ($\mu\text{g}/\text{M}^3$)	111.00	106.00	101.00	109.00	112.00	124.00
		SO ₂ ($\mu\text{g}/\text{M}^3$)	13.10	12.90	13.10	14.20	13.40	15.30
		Nox ($\mu\text{g}/\text{M}^3$)	16.30	17.20	18.40	20.40	19.70	20.50
	Padmapur	RSPM ($\mu\text{g}/\text{M}^3$)	91.00	89.00	95.00	103.00	108.00	118.00
		SPM ($\mu\text{g}/\text{M}^3$)	105.00	100.00	106.00	117.00	121.00	127.00
		SO ₂ ($\mu\text{g}/\text{M}^3$)	12.20	11.80	12.90	14.80	15.20	17.10
		Nox ($\mu\text{g}/\text{M}^3$)	17.5	15.4	17.6	19.5	22.2	22.3

CHANDRAPUR SUPER THERMAL POWER STATION, CHANDRAPUR.

For the period of January-2024 to June-2024
MONTHLY AVERAGE EFFLUENT WATER ANALYSIS REPORT

Month	Location of Samples	Except pH all parameters are in mg / liters											
		pH	S. S.	O&G	DO	BOD	COD	Phosp hate	Free Cl ₂	Copper	Iron	Zinc	Chromium
Jan-24	Ash bund weir well discharge	7.80	5.0	BQL	5.8	8.5	28.0	0.505	BQL	BQL	0.080	0.021	BQL
	C. T. Pond B/D	8.30	6.0	BQL	5.8	7.0	24.0	0.458	BQL	BQL	0.177	0.117	BQL
	Boiler B/D	8.30	BQL	BQL		3.6	12.0	0.219	BQL	BQL	0.258	0.053	0.015
	STP Effluent	7.3	6	BQL	5.2	12	48	0.631	BQL	BQL	BQL	BQL	7.3
Feb-24	Ash bund weir well discharge	7.80	6.0	BQL	5.9	8.9	32.0	0.69	BQL	BQL	0.302	0.047	BQL
	C. T. Pond B/D	8.40	12.0	BQL	5.8	9.3	32.0	0.638	BQL	BQL	0.273	0.062	BQL
	Boiler B/D	8.50	BQL	BQL	--	3.0	10.0	0.404	BQL	BQL	0.232	0.020	BQL
	STP Effluent	6.9	21	BQL	5	14	48	0.315	BQL	BQL	0.03	BQL	6.9
Mar-24	Ash bund weir well discharge	7.80	11.0	BQL	5.4	11.0	40.0	0.613	BQL	BQL	0.086	0.048	BQL
	C. T. Pond B/D	8.70	BQL	BQL	5.8	6.8	24.0	0.482	BQL	BQL	0.1	BQL	BQL
	Boiler B/D	8.20	BQL	BQL	--	2.9	10.0	0.234	BQL	BQL	0.041	BQL	BQL
	STP Effluent	6.9	9	BQL	5.1	12	44	0.646	BQL	BQL	BQL	BQL	6.9
Apr-24	Ash bund weir well discharge	8.00	10.0	BQL	6.5	6.8	22.0	0.251	BQL	BQL	0.676	BQL	BQL
	C. T. Pond B/D	8.70	7.00	BQL	5.8	6.3		0.059	BQL	BQL	0.156	BQL	BQL
	Boiler B/D	9.30	BQL	BQL	--	5.1	16.0	0.366	BQL	BQL	0.151	BQL	BQL
	STP Effluent	7.1	13	BQL	5.7	9.7	32	0.316	BQL	BQL	BQL	BQL	7.1
May-24	Ash bund weir well discharge	7.80	BQL	BQL	5.4	5.10	16.0	0.285	BQL	BQL	0.12	0.032	BQL
	C. T. Pond B/D	8.70	BQL	BQL	6.5	2.9	10.0	0.830	BQL	BQL	0.154	0.034	BQL
	Boiler B/D	9.30	BQL	BQL	--	2.7	9.0	0.237	BQL	BQL	0.052	BQL	BQL
	STP Effluent	7.3	BQL	BQL	6	5	16	0.842	BQL	BQL	0.04	BQL	7.3
Jun-24	Ash bund weir well discharge	--	--	--	--	--	--	--	--	--	--	--	--
	C. T. Pond B/D	7.40	19.0	BQL	6.4	8.90	30.0	1.1	BQL	BQL	0.585	0.09	BQL
	Boiler B/D	8.30	BQL	BQL	--	4.8	16	0.387	BQL	BQL	BQL	BQL	BQL
	STP Effluent	7.3	5	BQL	5.6	7.3	24	0.740	BQL	BQL	BQL	BQL	7.3

All parameters are within limits.

M. P. C. B. LIMITS:

1. pH : Between 5.5 to 9.5
2. S. S. : Not to Exceed 100.00 mg/litre
3. O & G : Not to Exceed 20.00 mg/litre
4. D.O. : Not to be less than 5.00 mg/litre
5. B.O.D. (Effluent) : Not to Exceed 30.00 mg/litre
6. B.O.D. (Sewage) : Not to Exceed 100.00 mg/litre
7. C.O.D. : Not to Exceed 250.00 mg/litre
8. CHROMIUM : Not to Exceed 2.00 mg/litre
9. PHOSPHATE : Not to Exceed 5.00 mg/litre
10. COPPER : Not to Exceed 1.50 mg/litre
11. IRON : Not to Exceed 1.00 mg/litr
12. ZINC : Not to Exceed 0.01 mg/litre

CHANDRAPUR SUPER THERMAL POWER STATION, CHANDRAPUR.

For the period of January-2024 to June-2024
ASH UTILIZATION IN RESPECT OF CSTPS, CHANDRAPUR

Ash Utilization Purpose	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	TOTAL (MT)
Ash Generated (MT)	388600	395406	741884	461695	449684	398015	2373589
For Blending with Cement (ACC, Ambuja, Manikgarh & Ultratech)	124622	152501	165423	155672	144728	122374	865320
Bricks	8771	17304	9194	6889	9311	250	51719
Agriculture	0	0	0	0	0	0	0
Road / Bridge Construction	0	0	0	0	0	0	0
Land filling	70	2415	350	3245	3539	1250	11219
Other	0	0	0	14124	10666	252	15442
Ash Utilization (MT)	124622	152501	165423	155672	144728	122374	865320
% Ash Utilisation	33	39.51	38.70	33.72	32.18	25.42	202.53

NOTE: - ACC Cement Chandrapur, Ultratech Cement Chandrapur, Ambuja Cement Chandrapur and Manikgarh Cement Chandrapur have lifted Ash with the arrangement made by them from ESP Hopper's.

CHANDRAPUR SUPER THERMAL POWER STATION, CHANDRAPUR.

For the period of January-2024 to June-2024

NOISE LEVEL MONITORING IN RESPECT OF CSTPS, CHANDRAPUR

Month	Location													
	Time office-I		Time office-II		Power station gate		Major store		E/M colony office		Padmapur conveyor pipe		Bhatadi conveyor pipe	
	Day (75dBA)	Night (70 dBA)	Day (75 dBA)	Night (70 dBA)	Day (75 dBA)	Night (70 dBA)	Day (75 dBA)	Night (70 dBA)	Day (75 dBA)	Night (70 dBA)	Day (75 dBA)	Night (70 dBA)	Day (75 dBA)	Night (70 dBA)
Jan-24	68.1	65.8	68.5	65.2	69.3	65.1	69.3	67.2	48.4	42.6	--	--	--	--
Feb-24	67.9	65.3	68.1	65.7	68.5	65.5	70.4	67.7	48.7	42.3	--	--	--	--
Mar-24	68.9	66.1	68.5	65.9	67.3	64.3	71.5	68.5	48.6	42.7	72.3	68.4	71.5	67.7
Apr-24	69.3	67.5	69.8	66.3	68.3	65.7	70.9	68.5	48.3	43.6	72.1	68.3	71.4	67.3
May-24	69.7	66.2	69.4	66.9	67.5	64.7	70.3	68.1	48.6	42.3	72.5	68.5	71	67
Jun-24	69.5	67.4	69.6	66.3	68.2	65.1	70.1	68.4	48.3	42.5	71.4	68.7	71.6	67.3

Annexure II
MAHARASHTRA STATE POWER GENERATION CO. LTD.
CHANDRAPUR SUPER THERMAL POWER STATION, CHANDRAPUR
GROUNDWATER SAMPLE ANALYSIS SUMMARY REPORT
Sampling and Analysis done by M/s. MAHABAL ENVIRO ENGINEERS Pvt. Ltd.
Samples collected on 15.03.2024

Sample numbers ->	1	2	3	4	5	6	7	Unit of Measurement
PHYSICAL PARAMETERS								
Colour	BQL	BQL	BQL	BQL	BQL	BQL	BQL	Hazen
Turbidity	1.4	1.5	1.8	0.6	1.7	2.2	0.9	NTU
CHEMICAL PARAMETERS								
pH	7.8	7.5	7.5	7.4	7.3	7.6	7.5	--
Total Dissolved Solids	633	1174	1124	620	738	605	1360	mg/L
Total Suspended Solids	5	6	5	BQL	5	6	BQL	mg/L
Phenolphthalein Alkalinity	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as CaCO ₃
Total Alkalinity	348	434	306	394	378	290	356	mg/L as CaCO ₃
Total Hardness	384	516	552	400	358	328	394	mg/L as CaCO ₃
Carbonate Hardness	348	434	306	394	358	290	356	mg/L as CaCO ₃
Sodium	68.5	205	179	56.4	121	87.5	347	mg/L as Na
Chlorides	118	165	334	36.0	95.0	57.0	388	mg/L as Cl
Fluorides	0.66	0.71	0.52	0.47	0.76	0.66	0.69	mg/L as F
Calcium	92.2	130	132	96.2	76.2	70.5	97.0	mg/L as Ca
Magnesium	37.4	46.7	54.4	38.9	40.8	36.9	36.9	mg/L as Mg
Sulphate	32.1	297	162	49.5	121	146	241	mg/L as SO ₄
Phosphate Total	0.323	0.217	0.547	0.374	0.355	0.532	0.556	mg/L as PO ₄
Ammonical Nitrogen	0.28	0.34	0.30	0.25	0.32	0.26	0.33	mg/L
Reactive Silica	10.9	11.6	12.5	9.65	9.30	11.9	15.9	mg/L as SiO ₂
Cyanide	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as CN
Phenolic Compound	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as C ₆ H ₅ OH
Free Ammonia	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L
Oxygen absorbed in 4 hrs at 37°C (Permanganate Value)	0.16	0.12	0.20	0.16	0.16	0.20	0.12	mg/L
METALS / HEAVY METALS								
Iron	0.164	0.365	0.095	0.066	0.051	0.143	0.134	mg/L as Fe
Copper	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/lit as Cu
Zinc	0.049	0.037	0.031	0.025	0.031	0.064	0.062	mg/L as Zn
Manganese	BQL	BQL	0.042	0.029	0.027	BQL	BQL	mg/L as Mn
Lead	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as Pb
Nickel	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as Ni
Chromium	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as Cr

Mercury	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as Hg
Arsenic	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as As
MICROBIOLOGICAL PARAMETERS								
Total Coliform	5.1	6.9	3.6	5.1	3.6	6.9	5.1	MPN Index/100 mL
Escherichia coli	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	MPN Index/100 mL
Standard Plate Count (35°C, 48 hrs)	26	34	23	28	34	24	21	CFU/mL
PROBABLE SALT CONCENTRATIONS								
Calcium Carbonate	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L
Calcium Sulphate	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L
Calcium Chloride	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L
Magnesium Carbonate	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L
Magnesium Sulphate	40	231	202	62	151	182	182	mg/L
Magnesium Chloride	2	BQL	52	BQL	BQL	BQL	BQL	mg/L
Sodium Carbonate	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L
Sodium Sulphate	BQL	166	BQL	BQL	BQL	BQL	141	mg/L
Sodium Chloride	174	272	455	59	157	94	640	mg/L

Locations: - (1) Tadali (Borewell) (5) Ghodpeth Saiwan (Borewell)
(2) Kachrala (BoreWell) (6) Gunjala (BoreWell)
(3) New Chargaon No. 1 (Borewell) (7) New Chargaon No. 2 (Borewell Water)
(4) Morva (Borewell)

Note: - 'NIL' indicates 'zero value'

BQL = Below Quantification Limit

Annexure II
MAHARASHTRA STATE POWER GENERATION CO. LTD.
CHANDRAPUR SUPER THERMAL POWER STATION, CHANDRAPUR
GROUNDWATER SAMPLE ANALYSIS SUMMARY REPORT
Sampling and Analysis done by M/s. MAHABAL ENVIRO ENGINEERS Pvt. Ltd.

Samples collected on 15.03.2024

Sample numbers ->	8	9	10	11	12	13	14	Unit of Measurement
PHYSICAL PARAMETERS								
Colour	BQL	BQL	BQL	BQL	BQL	BQL	BQL	Hazen
Turbidity	0.7	1.5	1.8	1.7	1.6	0.9	0.6	NTU
CHEMICAL PARAMETERS								
pH	7.0	7.3	7.2	7.5	7.4	7.3	7.7	--
Total Dissolved Solids	992	1216	1095	710	1489	634	163	mg/L
Total Suspended Solids	BQL	5	5	5	BQL	BQL	BQL	mg/L
Phenolphthalein Alkalinity	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as CaCO ₃
Total Alkalinity	356	410	412	294	440	386	82	mg/L as CaCO ₃
Total Hardness	580	570	652	434	584	406	104	mg/L as CaCO ₃
Carbonate Hardness	356	410	412	294	440	386	82	mg/L as CaCO ₃
Sodium	118	200	117	68.0	278	62.2	12.1	mg/L as Na
Chlorides	187	284	220	70.0	254	66.0	20.0	mg/L as Cl
Fluorides	0.46	0.43	0.57	0.62	0.55	0.66	0.61	mg/L as F
Calcium	136	148	159	100	156	103	25.7	mg/L as Ca
Magnesium	58.3	48.6	62.2	44.7	47.6	36.5	9.7	mg/L as Mg
Sulphate	200	174	188	188	387	51.6	22.3	mg/L as SO ₄
Phosphate Total	0.477	0.421	0.387	0.414	0.396	0.406	0.640	mg/L as PO ₄
Ammonical Nitrogen	0.33	0.26	0.33	0.33	0.29	0.33	0.35	mg/L
Reactive Silica	11.9	12.2	11.4	9.4	14.5	9.20	3.70	mg/L as SiO ₂
Cyanide	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as CN
Phenolic Compound	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as C ₆ H ₅ OH
Free Ammonia	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L
Oxygen absorbed in 4 hrs at 37°C (Permanganate Value)	0.30	0.20	0.24	0.28	0.20	0.16	0.32	mg/L
METALS / HEAVY METALS								
Iron	0.521	0.104	0.242	0.504	0.195	0.063	0.104	mg/L as Fe
Copper	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/lit as Cu
Zinc	0.029	0.032	0.054	0.028	0.067	0.035	0.032	mg/L as Zn
Manganese	0.059	0.021	0.057	0.059	0.050	0.029	0.022	mg/L as Mn
Lead	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as Pb
Nickel	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as Ni
Chromium	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as Cr

Mercury	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as Hg
Arsenic	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L as As
MICROBIOLOGICAL PARAMETERS								
Total Coliform	2.2	6.9	3.6	5.1	3.6	5.1	3.6	MPN Index/100 mL
Escherichia coli	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	MPN Index/100 mL
Standard Plate Count (35°C, 48 hrs)	20	30	22	26	21	28	24	CFU/mL
PROBABLE SALT CONCENTRATIONS								
Calcium Carbonate	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L
Calcium Sulphate	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L
Calcium Chloride	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L
Magnesium Carbonate	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L
Magnesium Sulphate	250	217	235	221	235	64	28	mg/L
Magnesium Chloride	7	104	43	BQL	BQL	BQL	BQL	mg/L
Sodium Carbonate	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/L
Sodium Sulphate	BQL	BQL	BQL	17	295	BQL	BQL	mg/L
Sodium Chloride	300	331	298	115	419	109	31	mg/L

Locations: - (8) Chhota Nagpur (BoreWell) (12) Kawathi (Bore Well)
(9) Wichoda (BoreWell) (13) Near Ash Bund Pump House (Borewell)(Gohane Farm)
(10) Padoli (Borewell) (14) CSTPS One day Reservoir
(11) Tirwanja (Borewell)

Note: - 'NIL' indicates 'zero value'

BQL = Below Quantification Limit

Annexure II
MAHARASHTRA STATE POWER GENERATION CO. LTD.
CHANDRAPUR SUPER THERMAL POWER STATION, CHANDRAPUR
SOIL SAMPLE ANALYSIS REPORT BY MAHABAL ENVIRO ENGINEERS Pvt. Ltd.

Samples collected on dated:- 15.03.2024

Sample numbers ->	1	2	3	4	5	6	7	UNIT
PARAMETERS								
pH of 10% Suspension	7.60	8.10	8.20	7.70	8.30	7.50	8.00	
Physical Parameters								
Organic Content	2.030	1.950	2.270	0.933	2.430	1.01	1.190	%
Moisture content	3.70	1.12	1.99	1.62	2.01	1.90	3.80	%
Fixed Residue	94.28	96.94	95.74	97.45	95.58	97.10	95.01	%
Chemical Parameters								
Water Leachate								
Chlorides as Cl	70.70	52.90	123.00	53.00	158.00	70.70	53.00	mg/kg
Fluorides	4.76	7.65	6.08	6.78	6.72	5.04	5.76	mg/kg
Sulphate as SO ₄	36.30	48.20	28.70	77.80	33.60	36.20	35.60	mg/kg
Chemical Parameters (Acid Leachate)								
Lead as Pb	17.80	10.00	13.10	10.20	16.10	11.30	20.80	mg/kg
Copper as Cu	41.60	19.90	19.70	27.50	29.20	20.60	49.70	mg/kg
Nickel as Ni	63.30	46.00	54.40	34.40	44.90	35.70	37.60	mg/kg
Chromium as Cr	56.00	38.80	40.10	46.70	51.60	41.50	57.20	mg/kg
Zinc as Zn	53.70	45.00	43	35.50	37.70	26.5	69.80	mg/kg
Cadmium as Cd	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/kg
Iron as Fe	27801	27495	29650	18437	22823	22045	33631	mg/kg
Specific Parameters								
Water retaining capacity	63.90	68.90	62.20	63.40	59.20	65.90	63.70	%
Kjeldahl Nitrogen as N	584.00	529.0	613.0	785	1113.00	585.00	670.00	%
Total Phosphate as PO ₄	220.0	241.0	341.00	396.0	453.0	313.0	388.0	%
Additional Specific Parameters								
Ammonia	--	--	--	--	--	--	--	%
Ammonium Sulphate	--	--	--	--	--	--	--	%
Ion Exchange Capacity								
Calcium as Ca	38.40	22.90	23.70	19.40	36.70	17.80	39.30	m eq/100gm
Magnesium as Mg	6.00	10.70	11.90	7.14	9.16	4.34	5.95	m eq/100gm
Sodium as Na	0.375	0.445	0.761	0.655	1.090	0.770	0.417	m eq/100gm
Potassium as K	0.516	0.20	1.080	0.248	0.911	0.276	0.402	m eq/100gm

Soil samples collected from: -

- | | |
|-------------------------------|--------------------|
| 1. Tadali (near Railway line) | 5. Morwa |
| 2. Kachrala | 6. Gunjala |
| 3. Chargaon No.1 | 7. Ghodpeth Saivan |
| 4. Datala Pump House | |

Annexure II
MAHARASHTRA STATE POWER GENERATION CO. LTD.
CHANDRAPUR SUPER THERMAL POWER STATION, CHANDRAPUR
SOIL SAMPLE ANALYSIS REPORT BY MAHABAL ENVIRO ENGINEERS Pvt. Ltd.

Samples collected on dated:- 15.03.2024

Sample numbers ->	8	9	10	11	12	13	14	UNIT
PARAMETERS								
pH of 10% Suspension	8.10	7.90	8.10	7.90	7.80	7.90	7.90	
Physical Parameters								
Organic Content	1.270	1.810	1.220	2.38	1.03	0.68	2.41	%
Moisture content	6.67	3.09	4.39	1.63	3.24	3.05	4.33	%
Fixed Residue	92.06	95.11	94.39	95.99	95.73	96.27	93.26	%
Chemical Parameters								
Water Leachate								
Chlorides as Cl	70.60	88.20	105.00	53.10	88.20	176.00	70.70	mg/kg
Fluorides	6.60	5.49	9.77	3.83	7.50	4.10	7.16	mg/kg
Sulphate as SO ₄	50.20	68.40	95.10	81.90	41.20	56.20	46.60	mg/kg
Chemical Parameters (Acid Leachate)								
Lead as Pb	9.57	14.00	19.80	15.30	18.00	11.90	11.20	mg/kg
Copper as Cu	26.50	47.00	40.00	29.30	38.00	31.10	35.80	mg/kg
Nickel as Ni	21.80	24.40	71.40	26.10	20.60	21.60	42.80	mg/kg
Chromium as Cr	44.90	52.30	64.30	54.80	64.80	53.20	46.60	mg/kg
Zinc as Zn	33.60	52.70	54.30	38.50	50.30	30.30	54.00	mg/kg
Cadmium as Cd	BQL	BQL	BQL	BQL	BQL	BQL	BQL	mg/kg
Iron as Fe	18068	26433	30195	22774	28763	22022	23307	mg/kg
Specific Parameters								
Water retaining capacity	62.2	62.7	61.9	65.2	66.6	61.30	65.1	%
Kjeldahl Nitrogen as N	684	618	640.0	870	863.0	585	697	%
Total Phosphate as PO ₄	461	390	354	418	322	324	301	%
Additional Specific Parameters								
Ammonia	--	--	--	--	--	--	--	%
Ammonium Sulphate	--	--	--	--	--	--	--	%
Ion Exchange Capacity								
Calcium as Ca	24.00	31.90	53.50	25.40	33.70	24.80	39.80	m eq/100gm
Magnesium as Mg	4.72	8.41	8.72	5.56	5.96	3.20	5.98	m eq/100gm
Sodium as Na	0.340	0.518	0.569	0.57	0.491	1.030	0.468	m eq/100gm
Potassium as K	0.596	0.558	0.619	0.576	0.476	0.189	0.319	m eq/100gm

Soil samples collected from: -

8. Chotta Nagpur
9. Wichoda
10. Padoli
11. Tirwanja

12. Kawathi
13. Ash bund area (Outside of Recycling Pump House)
14. CSTPS (Tulas Bagh)

Annexure III
CHANDRAPUR SUPER THERMAL POWER STATION, CHANDRAPUR.
For the period of Jan-2024 to Jun-2024
SURFACE WATER ANALYSIS REPORT

Month	Location	pH	Colour	Total Dissolved solids	Oil and Grease	Chloride (as Cl)	Dissolved Oxygen	COD	BOD	Sulphate (as SO ₄)
Jan-24	1	7.71	1	524	0	48	5.56	17.5	4.49	44.0
	2	7.63	1	545	0	51	5.57	17.5	4.50	46.4
	3	7.64	1	586	0	55	5.66	17.6	4.35	49.5
	4	7.64	1	465	0	48	5.53	15.9	4.33	47.0
	5	7.64	1	456	0	44	5.63	16.9	4.51	44.2
	6	7.66	1	450	0	45	5.59	16.7	4.45	43.1
	7	7.76	1	436	0	42	5.61	18.1	4.49	44.7
	8	7.60	1	451	0	45	5.60	16.4	4.53	47.1
	9	7.59	1	414	0	44	5.68	17.3	4.46	46.1
	10	7.65	1	430	0	46	5.63	17.2	4.46	46.2
	11	7.69	1	474	0	47	5.59	16.3	4.45	47.9
	12	7.63	1	517	0	48	5.68	17.3	4.45	44.6
	13	7.69	1	489	0	51	5.52	17.9	4.44	50.4
	14	7.63	1	583	0	57	5.66	17.7	4.52	55.2
	15	7.71	1	618	0	66	5.70	18.9	4.56	60.4
Feb-24	1	7.66	1	446	0	47	5.56	17.0	4.46	44.4
	2	7.60	1	466	0	50	5.56	17.5	4.48	46.0
	3	7.65	1	501	0	51	5.56	16.8	4.42	50.5
	4	7.63	1	434	0	49	5.59	16.2	4.51	46.9
	5	7.56	1	432	0	47	5.56	17.2	4.38	44.7
	6	7.60	1	430	0	46	5.51	16.5	4.41	44.5
	7	7.64	1	446	0	48	5.69	15.6	4.50	44.0
	8	7.57	1	439	0	49	5.56	17.6	4.46	44.5
	9	7.60	1	449	0	49	5.70	18.6	4.48	42.2
	10	7.64	1	466	0	50	5.62	16.7	4.48	43.6
	11	7.66	1	502	0	50	5.62	16.1	4.52	46.5
	12	7.62	1	480	0	54	5.61	17.3	4.48	48.1
	13	7.65	1	498	0	52	5.56	16.7	4.39	50.6
	14	7.59	1	531	0	56	5.61	17.4	4.46	51.7
	15	7.69	1	539	0	59	5.66	17.5	4.48	57.4

Month	Location	pH	Colour	Total Dissolved solids	Oil and Grease	Chloride (as Cl)	Dissolved Oxygen	COD	BOD	Sulphate (as SO ₄)
Mar-24	1	7.65	1	418	0	45	5.58	17.2	4.50	42.5
	2	7.55	1	427	0	44	5.56	16.4	4.40	44.9
	3	7.65	1	434	0	44	5.57	18.2	4.46	43.5
	4	7.63	1	445	0	43	5.56	16.7	4.38	42.7
	5	7.60	1	422	0	46	5.60	17.2	4.47	43.7
	6	7.60	1	429	0	44	5.62	17.2	4.46	45.1
	7	7.64	1	444	0	44	5.53	17.5	4.41	43.7
	8	7.63	1	452	0	44	5.60	16.5	4.48	44.3
	9	7.53	1	457	0	46	5.66	17.1	4.51	42.1
	10	7.59	1	478	0	44	5.64	17.9	4.48	45.1
	11	7.65	1	447	0	46	5.58	16.2	4.44	47.0
	12	7.63	1	471	0	48	5.67	16.8	4.45	43.5
	13	7.57	1	451	0	50	5.59	17.6	4.63	43.9
	14	7.60	1	458	0	48	5.66	17.4	4.40	42.4
	15	7.65	1	460	0	52	5.62	17.6	4.55	45.5
Apr-24	1	7.63	1	449	0	45	5.46	17.4	4.52	44.4
	2	7.50	1	458	0	46	5.54	16.6	4.42	45.9
	3	7.50	1	472	0	46	5.52	17.5	4.41	44.4
	4	7.57	1	476	0	48	5.55	16.1	4.53	46.1
	5	7.53	1	485	0	46	5.51	16.7	4.40	44.1
	6	7.48	1	477	0	44	5.48	17.1	4.42	46.6
	7	7.60	1	464	0	46	5.61	16.9	4.61	45.2
	8	7.51	1	480	0	47	5.52	16.3	4.38	44.7
	9	7.58	1	435	0	47	5.55	16.6	4.23	46.9
	10	7.52	1	453	0	46	5.48	16.8	4.48	49.1
	11	7.55	1	473	0	45	5.53	16.9	4.36	49.4
	12	7.53	1	472	0	46	5.52	16.2	4.51	47.3
	13	7.53	1	466	0	49	5.50	16.3	4.33	47.4
	14	7.57	1	471	0	48	5.49	17.7	4.49	45.9
	15	7.58	1	473	0	48	5.50	17.4	4.23	48.2

Month	Location	pH	Colour	Total Dissolved solids	Oil and Grease	Chloride (as Cl)	Dissolved Oxygen	COD	BOD	Sulphate (as SO ₄)
May-24	1	7.53	1	452	0	48	5.45	16.8	4.48	44.3
	2	7.48	1	455	0	46	5.46	17.9	4.45	46.6
	3	7.47	1	469	0	46	5.54	17.3	4.32	45.4
	4	7.50	1	488	0	48	5.59	16.5	4.54	45.3
	5	7.55	1	469	0	49	5.53	16.5	4.43	46.2
	6	7.53	1	483	0	47	5.51	17.2	4.32	45.9
	7	7.47	1	470	0	49	5.53	17.5	4.37	43.3
	8	7.45	1	476	0	48	5.64	17.6	4.48	46.2
	9	7.55	1	456	0	48	5.55	16.4	4.48	47.4
	10	7.54	1	487	0	49	5.49	17.0	4.32	46.7
	11	7.52	1	488	0	48	5.48	18.0	4.48	47.9
	12	7.64	1	483	0	46	5.53	16.8	4.37	46.3
	13	7.53	1	489	0	47	5.59	17.0	4.48	47.3
	14	7.52	1	501	0	50	5.49	17.5	4.39	47.7
	15	7.58	1	496	0	49	5.52	18.1	4.48	46.8
Jun-24	1	7.60	1	439	0	44	5.56	16.2	4.46	45.1
	2	7.62	1	439	0	43	5.55	17.0	4.42	44.1
	3	7.65	1	430	0	46	5.73	16.5	4.45	43.5
	4	7.63	1	437	0	43	5.57	16.8	4.37	44.7
	5	7.63	1	453	0	45	5.61	17.4	4.38	42.6
	6	7.60	1	446	0	45	5.61	16.5	4.45	42.8
	7	7.64	1	449	0	44	5.64	16.8	4.37	45.7
	8	7.59	1	450	0	41	5.58	17.0	4.43	47.1
	9	7.60	1	463	0	44	5.66	17.0	4.40	44.0
	10	7.67	1	463	0	44	5.62	16.5	4.44	47.5
	11	7.56	1	443	0	47	5.62	16.9	4.47	45.4
	12	7.63	1	452	0	47	5.65	17.3	4.47	46.0
	13	7.54	1	423	0	47	5.62	16.4	4.52	46.6
	14	7.64	1	448	0	46	5.62	16.4	4.34	44.5
	15	7.66	1	452	0	44	5.70	16.9	4.45	44.2

Location:

- 1- Ravendli Nallah before Reject Coal Area (CSTPS, Chandrapur)
- 2- Ravendli Nallah at Reject Coal Area (CSTPS, Chandrapur)
- 3- After Grit filter on Ranvedli Nallah
- 4- Ravendli Nallah before Erai river at Nagpur Road
- 5- Motghat Nallah near GAD office
- 6- Motghat Nallah before Erai river at Ash Bund Road
- 7- Storm water drain coming from unit 8 and 9 before security gate Nagpur Road
- 8- Storm water drain coming unit from 8 and 9 at security gate Nagpur Road
- 9- Storm water drain coming from unit 8 and 9 before meeting to river
- 10- Storm water drain coming from unit 3 to 7 CHP Site
- 11- confluence point of Ranvendli Nallah to Erai river
- 12- Erai River near Datala bridge pumping station
- 13- Nallah at Chhota Nagpur
- 14- Nallah at Vichoda
- 15- Nallaha at Ash Bund Chowki

Annexure-IV

Health Camp at CSTPS, Chandrapur was held on dated 06.06.2024 in Conjunction with Indian Medical Association, Chandrapur and Indian Redcross Society, Chandrapur & Tata Cancer Care Foundation.

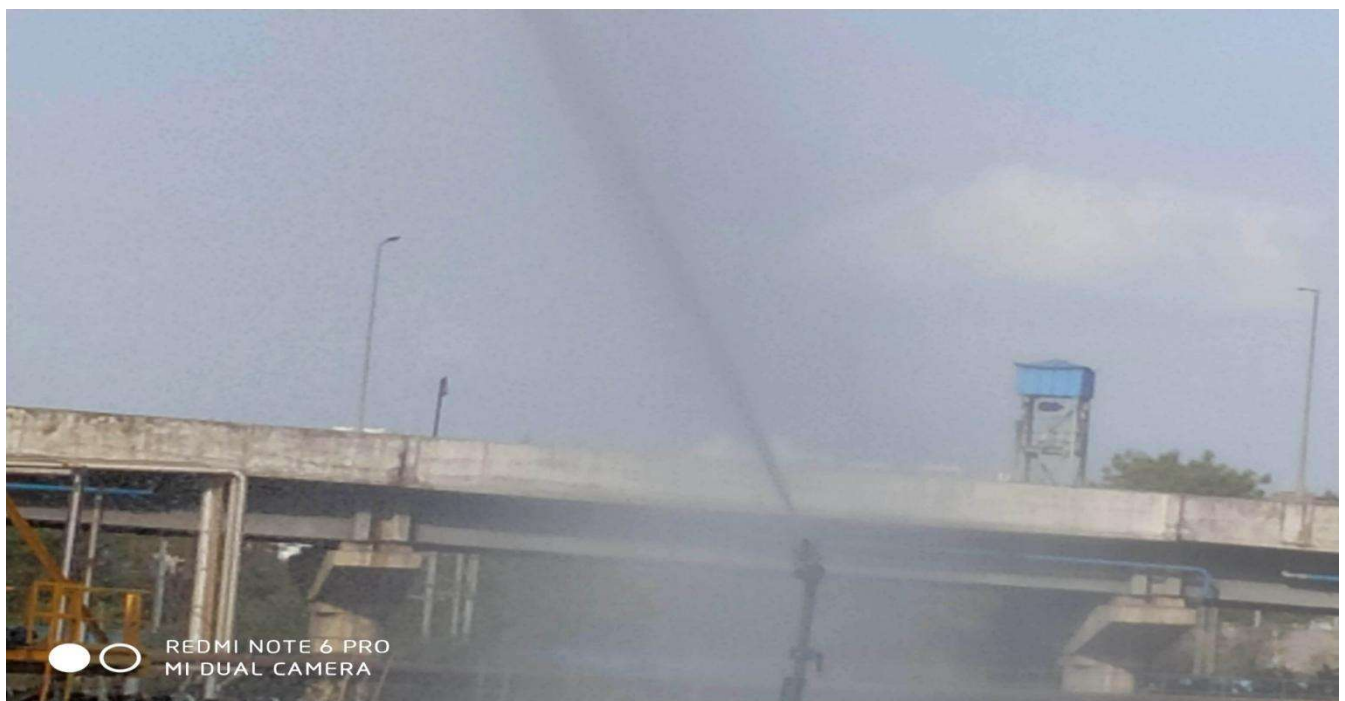




Annexure V

Control measure to prevent fugitive dust emission

- Joint vigilance with MPCB officer, Chandrapur





- **Dust Suppression using water canon fogger at LT Bunker Area for 24 hrs.**

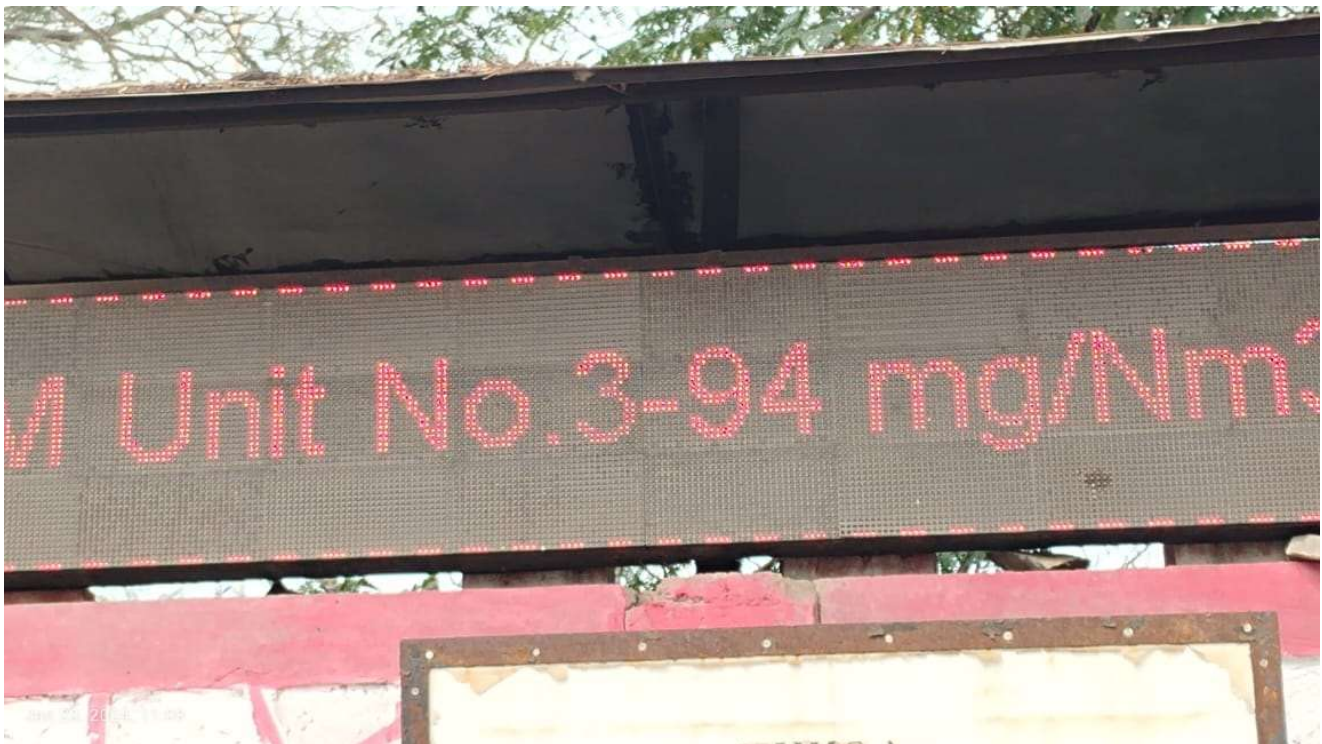
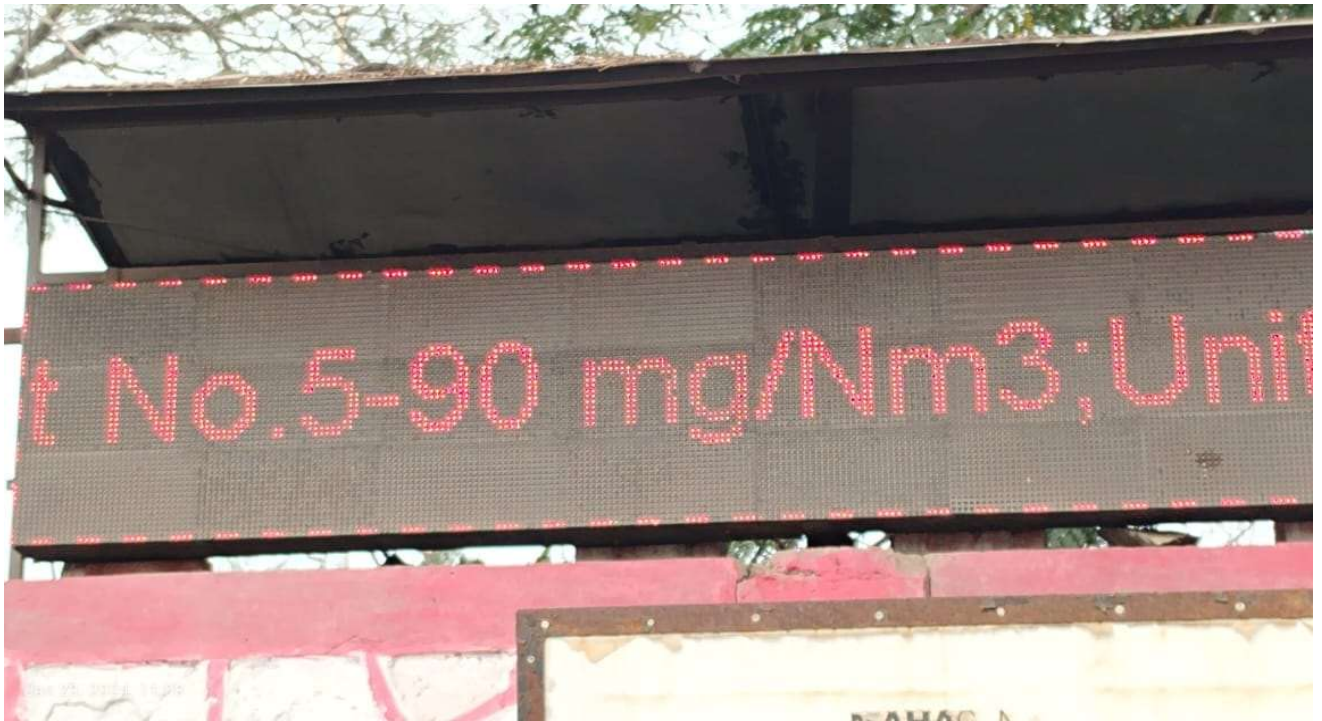


- **Dust Suppression at Reject Coal yard using water canon fogger.**

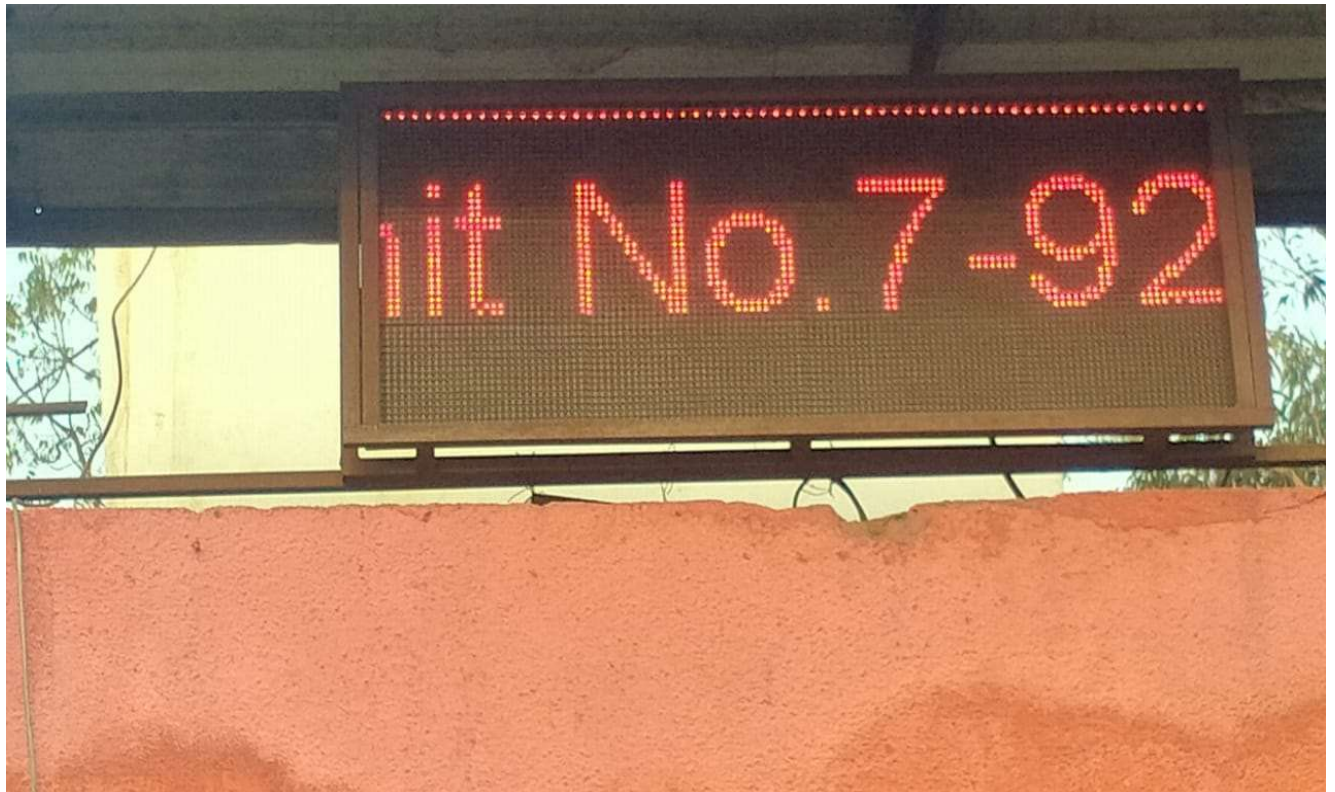


Annexure-VI

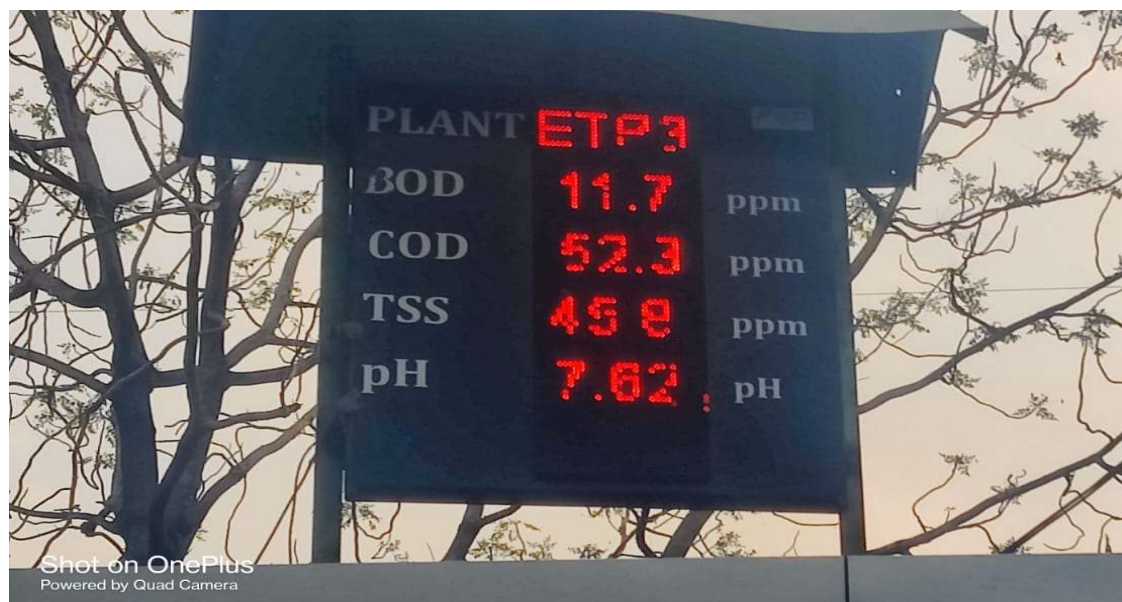
- Display of Stack & Ambient level at main gate



- Display of Stack & Ambient level at Major gate



- Display of ETP Parameters at main gate





- Display of ETP Parameters at Unit 8 & 9 area.



CHN/Env & Coal / ENV.Audit/

0 0 2 0 6 5

Date: 11 AUG 2023

To,
The Member Secretary,
MPCB, Kalpataru Point
Sion (East), Mumbai – 400 022

Subject: Submission of **Environmental Statement Report** in 'Form-V' for the year 2022-23.

Ref: 1) MPCB Consent UAN No. 0000112959/CR-2207000127 dated 03.07.2022

2) MPCB Consent UAN No. 0000163955/CR/2307001126 dated 18.07.2023

Dear Sir,

Please find enclosed herewith the "Environmental Statement Report" of Chandrapur Super Thermal Power Station, Chandrapur for the year 2022-23 (year ending 31st March 2023).

The "Environmental Statement Report" is prepared in prescribed Form-V as per provision of rule 14 of the Environment (Protection) (2nd Amendment) Rules 1992.

Thanking you,

Yours sincerely,


Chief Engineer
CSTPS, Chandrapur

Encl.: - As above.

Copy s.w.rs.to:

1. The Director (Op), MSPGCL, Mumbai.
2. The Joint Director (APC), MPCB, Mumbai.
3. The Executive Director (O&M-II/E&S), MSPGCL, Mumbai.
4. The Regional Officer, MPCB, Chandrapur.
5. The Sub Regional Officer, MPCB, Chandrapur.


Sr. Clerk
Regional Officer
M.P.C. Board,
Chandrapur

ENVIRONMENTAL STATEMENT

(2022-2023)

For
The Financial Year
Ending on 31st March 2023
of



Chandrapur Super Thermal Power Station

**'URJANAGAR' P.O. DURGAPUR,
DIST. CHANDRAPUR.**

(FORM – V)
(See Rule No. 14)

Environmental Statement for the Financial Year ending on 31st March 2023

PART – A
GENERAL INFORMATION ABOUT THE COMPANY

1. Name of the Company : Maharashtra State Power Generation Company Ltd.
Chandrapur Super Thermal Power Station,
Urjanagar, Dist. – Chandrapur.
☎ 07172-220155 to 220159
Fax - 07172-220203 Email - cegenchandrapur@mahag
2. Name of occupier : Chief Engineer
3. Registered Office Address : Plot No. G-9, 'Prakashgad' Bandra (E),
Mumbai – 400 051.
4. Factory Address : Chandrapur Super Thermal Power Station,
Urjanagar, Post-Durgapur, Dist.– Chandrapur.
Pin : 442 404.
5. Production Capacity(Installed) : 2920 MW
 - Consent to operate - U# 3 to 9:- consent no-
Format 1.0/CAC/UAN No:0000112959/CR/
2207000127 Dt. 03.07.2022 valid up to
31.05.2023 & applied for renewal vide UAN No.
0000163955/100027902000 Dt.02.03.2023.
 - Consent to operate closed pipe belt - Format
1.0/CAC/UAN NO.00000132095/CR-2007000313
Dt. 31.12.2023

6. Name of Product	Electricity Generation in Million Units (MU) as per actual during the year	
	2021-2022	2022-2023
Electricity Units	14992.010	15082.314

Year of Establishment :

Unit No.	Initial Installed Capacity	Date of commercial operation		
Unit No. III	210 MW	1 st	April	1986
Unit No. IV	210 MW	4 th	November	1986
Unit No. V	500 MW	1 st	December	1992
Unit No. VI	500 MW	1 st	December	1993
Unit No. VII	500 MW	1 st	March	1998
Unit No. VIII	500 MW	4 th	June	2016
Unit No. IX	500 MW	24 th	November	2016

7. Date of last Environmental Statement Submitted:- 28th July-2022.

PART - B**WATER & RAW MATERIAL CONSUMPTION**1. Total Water Consumption (m³/day) :

I. Water Consumption m ³ /day (Average) :-	Stage – I, II, III & IV	
1. Process	Year 2021-2022	Year 2022-2023
i. Boiler Feed/Make Up	4,032	4,093
ii. Cooling Water/Make Up	10,3708	10,7610
iii. Ash disposal (Raw Water)	20,082	18,662
Sub Total	1,27,822	1,30,366
2. Domestic – Consumption	13,422	13,438
3. Pre Treatment + Post Treatment Plant (Waste)	7,757	7,862
4. Fire Fighting & gardening	2200	2200
Sub Total	23379	23499
Grand Total	1,51,201	1,53,865
II. Water recovered and reused in process :-	Stage – I, II, III & IV	
	Year 2021-2022	Year 2022-2023
a) Water recovered for ash disposal from ETP – I, II, III & IV (Reused for ash disposal)	37,234	33,136
b) Water recovered for ash disposal from- STP (Reused for ash disposal & gardening)	3996	3905
c) Ash bund recovery water (Recycle & reused for ash disposal)	13325	7570
Total	54555	44612

1. Water Consumption per unit of the product

Name of the product	Process Water consumption per unit of Product Manufactured	
	<i>During the financial year 2021-2022</i>	<i>During the current financial year 2022-2023</i>
Electrical Energy	3.3301 Ltr./KWH OR 3330.00 KL/MU'S	3.3633 Ltr./KWH OR 3363.35 KL/MU'S

1. Raw Material Consumption

Name of Raw Material	Name of the Product	Consumption of raw material per unit of the product manufactured	
		<i>During the financial year 2021-2022</i>	<i>During the current financial year 2022-2023</i>
i. Coal	Electricity	0.7718 Kg/KWH	0.7896 Kg/KWH
ii. Fuel Oil (FO + LDO)		2.0172 ml/KWH	2.8153 ml/KWH
iii. Auxiliary Consumption		0.0827 MU/MU	0.0862 MU/MU
iv. Hydrochloric acid		1.4437 gm/Lit.	1.3356 gm/Lit.
v. Caustic soda Lye		0.2077 gm/Lit.	0.2511 gm/Lit.

1. Total Water Consumption (KL):

I. Water Consumption (KL)	Stage – I, II, III & IV	
	Year 2021-2022	Year 2022-2023
1. Process		
i. Boiler Feed/Make Up	14,71,850	14,93,970
ii. Cooling Water/Make Up	3,78,53,337	3,92,77,761
iii. Ash disposal	73,30,069	68,11,804
Sub Total	4,66,55,256	4,75,83,535
2. Domestic – Consumption	48,99,068	49,04,767
3. Pre Treatment +Post Treatment Plant (Waste)	28,31,335	28,69,497
4. Fire Fighting & gardening	8,03,000	8,03,000
Sub Total	85,33,403	85,77,264
Grand Total	5,51,88,659	5,61,60,799
II. Water recovered and reused process water	Stage – I, II, III & IV	
	Year 2021-2022	Year 2022-2023
a) Water recovered for ash disposal from ETP – I,II,III & IV (Reused for ash disposal)	1,35,90,360	1,20,94,709
b) Water recovered for ash disposal from- STP (Reused for ash disposal & gardening)	14,58,376	14,25,506
c) Ash bund recovery (Recycle & reused for ash disposal)	48,63,564	27,63,048
Total	1,99,12,300	1,62,83,263

2. Production Details

Name of the Product	<i>During the financial year 2020-2021</i>	<i>During the current financial year 2021-2022</i>
Electrical Energy	14992.010 MU	15082.314 MU

3. Raw Material Details

Raw Material Consumption	<i>During the financial year 2020-2021</i>	<i>During the current financial year 2022-2023</i>
i. Coal	1,15,71,233 MT	1,19,10,136 MT
ii. Auxiliary Power	1241.31 MU	1300.35 MU
iii. Furnace Oil	24091.84 KL	35929.84 KL
iv. LDO	6151.23 KL	6532 KL
v. Lubrication Oil	236.96 KL	272.72 KL
vi. Grease	34371 Kg.	29101 Kg.
vii. Hydrochloric Acid	2124.91 MT	1995.49 MT
viii. Caustic soda Lye	305.74 MT	375.27 MT

PART - C**POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT****1. Water Pollution :-**

Pollutants	Quantity of pollutants generated (Kg./day)	Concentration of pollutants in discharges (mg./ltr.)	Percentage of variation prescribed standards with reasons
----- Please see Annexure - I -----			

2. Air Pollution (Stack Monitoring) :-

Pollutants	Quantity of pollutants generated	Concentration of pollutants in emission (mg/Nm ³)	Percentage of variation prescribed standards with reasons
Particulate Matter U#3 to 7	4995.00 Kg /day OR 4.9950 MT/day	98.75	-
Particulate Matter U#8 & 9	1124.13 Kg /day OR 1.1241 MT/day	20.84	-

➤ For Stack Monitoring Details Please See **Annexure - II**

Air Pollution (Ambient Air) :-

Location	RSPM	SPM	SO ₂	NO _x
----- Please see Annexure - III -----				

PART - D HAZARDOUS WASTES

(As specified under Management and Transbondry Movement Handling Rules, 2010)

Hazardous Wastes	Total Quantity (MT)	
	During the year 2021-2022	During the current financial year 2022-2023.
From Process	Details of H.W. as per schedule - I Sr.No.5.1,5.2 & 34.4 is as below. 1) Used Oil given to CHWTSDF= 219.682 KL 2) Used Resin given to CHWTSDF= 78.332 MT 3) Used Glass wool given to CHWTSDF = 101.56 MT	Details of H.W. as per schedule - I Sr.No.5.1,5.2 & 34.4 is as below. 1) Used Oil given to CHWTSDF= 189.6 KL 2) Used Resin given to CHWTSDF= 75.5 MT 3) Used Glass wool given to CHWTSDF = 59.06 MT 4) Used oil Filters = Nil

PART - E SOLID WASTES

Solid waste	Total Quantity (MT)	
	During the financial year 2021-2022	During the current financial year 2022-2023
Ash Generation :		
1. From Process - Bottom Ash	1350384	1368695
2. From Pollution Control Facilities - Fly Ash	3150893	3193622
Total Quantity	45,01,275	45,62,318
Ash Utilisation :		
Quantity of Ash utilization.		
A] Ash utilised from Ash Pond :		
i. Agriculture	Nil	Nil
ii. Cement	16.0	Nil
iii. Bricks Manufacture	2214	16601
iv. Construction work- Bridge / Road filling	Nil	Nil
v. WCL for U/G mine stoving	Nil	Nil
vi. Tiles		
vii. Land filling /others	930	1548
B] Fly Ash utilised from ESP Hopper		
i. ACC	42185.50	52495
ii. Ultratech Cement	254119	268000
iii. Ambuja Cement	263038	249135
iv. Manikgarh Cement	194514	311269
v. Orient Cement	Nil	Nil
vi. Dalmiya cement	48018	55535
vii. Ash Tech	4200	Nil
viii. R.S.Saluja company	Nil	14448
xi. Other	71657	78410
Total Ash Utilised	8,80,886	10,47,441
Ash utilisation %	19.57	22.96
Total Ash Deposited in Ash Pond	36,20,338	35,14,877
Quantity Re-cycled or re-utilised within the unit (MT)		
i. Sludge from ETP - I (Silt & Ash)	5993.00	910.00
ii. Sludge from ETP - II (Silt & Ash)	1850.00	133.00
iii. Sludge from ETP - III (Re-utilised as coal powder)	136.50	77.00
iv. Sludge from STP - I & II (Utilised for Gardening)	143.50	95.00
Total Quantity	8123.00	1215.00
Composition of ETP Sludge is as per Annexure - V		

PART - F

CHARACTERISTICS OF HAZARDOUS/SOLID WASTE

Sr. No.	Description	Quantity (MT)	Constituent Parameter with concentration %	Method of Disposal
I.	Hazardous Waste			
	Used Oil	189.60 KL	As per schedule - I Sr. No. 34.4	Disposal at CHWTSDF.
	Used Resin	75.5 MT	As per schedule - I Sr. No. 34.4	Disposal at CHWTSDF.
	Glass wool	59.06 MT	As per schedule - I Sr. No. 34.4	Disposal at CHWTSDF.
II.	Solid Waste			
	a. Bottom Ash b. Fly Ash from ESP	1367695 3193622	Annexure - IV	Dry fly ash is collected by cement/bricks mfg & SSI units from silo & remaining ash is disposed off by making slurry of adequate concentration & pumping it hydraulically to ash bunds.
	c. Sludge from • ETP - I • ETP - II • ETP -III	910.00 133.00 77.00	Annexure - V (ETP - I & II sludge analysis parameters meet the limits as specified in Ann. - II consent given by MPCB)	ETP - I & II sludge Transported and deposited in Ash bund area. ETP - III Sludge is recovered as coal particles and reutilised as fuel.
	d. Sludge from • STP - I & II	95.00	--	Used as manure for plantation and gardening.

PART - G**IMPACT OF POLLUTION ABATEMENT MEASURES TAKEN ON
CONSERVATION OF NATURAL RESOURCES AND ON COST OF
PRODUCTION****Cost Expenditure for Pollution Control**

Description	Total Expenditure Rs. (<i>In Lacs</i>) During Financial Year 2021-2022	Total Expenditure Rs. (<i>In Lacs</i>) During Financial Year 2022-2023
1. Water Pollution Control	1066.95	1919.76
2. Air Pollution Control	2214.09	1824.43
3. Solid Waste Disposal	1081.24	3244.15
4. Green Belt Development	29.05	10.41
5. Others.		
i. MPCB Visit (JVS Charges)	3.60	3.10
ii. Consent Fees (MPCB)	205.93	205.23
iii. MPCB water cess charge	NA (Invoice not generated by MPCB, from sep-2015)	NA (Invoice not generated by MPCB, from sep-2015)
iv. Hazardous Waste Disposal	57.75	44.60
6. Environmental Monitoring	167.50	265.66
Total Expenditure	4826.11	7515.30

PART – H
ADDITIONAL MEASURES/INVESTMENT PROPOSALS
FOR ENVIRONMENTAL PROTECTION, ABATEMENT OF
POLLUTION, PREVENTION OF POLLUTION

Description	Proposed Modifications	Proposed date of Completion	Estimated cost Rs. (In Lacs.)	Purpose	Remarks
ESP retrofitting of U # 5 & 6 at CSTPS Chandrapur	Design, Engineering, Supply Assembly testing work, civil structural work erect testing and commissioning of ESP retrofitting of U # 5 & 6.	Dec -24	23276	To reduce Particulate matter emission from stack	-

2. Green Belt Development

	Up to year 2021-2022	Total up to March 2023
a. No. of trees planted cumulative	1315866	1316246
b. Area covered (Hectare)	544.73	544.88
c. Total % of area covered	48.77	48.78

- ❖ Future planning proposed for the year 2023-24 is to plant 50 no. of samplings & 10,000 Bamboo plant at U# 8&9 at CSTPS Chandrapur.

PART - I
ANY OTHER PARTICULARS FOR
IMPROVING QUALITY OF ENVIRONMENT

Description	Proposed date of Completion	Estimated cost Rs.	Purpose	Remarks
1) Engaging movable Water canon fogger machine for reduction in fugitive Dust Emission in Plant Area & around CSTPS Premises Chandrapur.	Work is in continuous in operation.	41.38 Lacs	To prevent Air pollution.	Work is in continuous in operation.
2) Convery Belt Bhatadi	Work is in continuous in operation.	24144 lacs	To prevent Air pollution.	Work is in continuous in operation

Annexure - I

Water Pollution Generated During 2022-2023

Pollutant	Quantity of effluent water (M ³ /day)	Parameters as per consent	Limits as per MPCB	Average as per actual analysis. Except pH all in mg/l	Quantity of pollutants generated (Kg/day)	% Variation from prescribed standard with reason
I Ash Pond Effluent	7570	1. pH	6.5-8.5	7.50		Within Limit
		2. Suspended Solids	NTE 100 mg/l	25.0	189.25	Within Limit
		3. Oil & Grease	NTE 10 mg/l	ND	ND	Within Limit
II Cooling Tower B/D	3211	1. Free Chlorine	NTE 0.5 mg/l	BDL	BDL	Within Limit
		2. Zinc	NTE 1 mg/l	0.038	0.122	Within Limit
		3. Chromium	NTE 0.2 mg/l	ND	ND	Within Limit
		4. Phosphate	NTE 5 mg/l	0.188	0.603	Within Limit
III Condensate Cooling Water		1. pH	6.5-8.5	7.50	-	Within Limit
		2. Temp.	Diff. in temp. Below 5°C	-	-	Within Limit
		3. Free Chlorine	NTE 0.5 mg/l	BDL	BDL	Within Limit
IV Boiler Water B/D	504	1. Suspended Solids	NTE 100 mg/l	8.0	4.032	Within Limit
		2. Oil & Grease	NTE 10 mg/l	ND	ND	Within Limit
		3. Copper	NTE 1.0 mg/l	ND	ND	Within Limit
		4. Iron	NTE 1.0 mg/l	0.14	0.0705	Within Limit
V DM Plant Effluent	1100	1. pH	5.5 - 9.0	7.0	-	Within Limit
		2. BOD 3 days	NTE 30 mg/l	9.90	10.89	Within Limit
		3. COD	NTE 250 mg/l	31.27	34.39	Within Limit
		4. Suspended Solids	NTE 100 mg/l	12.33	13.56	Within Limit
		5. Oil & Grease	NTE 10 mg/l	ND	ND	Within Limit
		6. TDS	NTE 2100mg/l	835.72	919.29	Within Limit
VI Domestic Effluent	3905	1. pH	N.S.	7.40		-
		2. Suspended Solids	NTE 50 mg/l	30.00	117.18	Within Limit
		3. BOD 3 days	NTE 30 mg/l	14.0	54.68	Within Limit
VII ETP I,II,III & IV	33136	1. pH	6.5 to 8.5	7.02	-	Within Limit
		2. Suspended Solids	NTE 100 mg/l	13.33	441.70	Within Limit
		3. BOD 3 days	NTE 30 mg/l	5.91	195.83	Within Limit
		4. COD	NTE 250 mg/l	18.66	618.31	Within Limit
		5. Oil & Grease	NTE 10 mg/l	ND	ND	Within Limit
		6. TDS	N.S.	206.55	8831.73	-
		7. Chloride	N.S.	37.07	1228.35	-
		8. Sulphate	NTE 1000 mg/l	47.16	1562.69	Within Limit
		9. DO	N.S.	5.29	175.28	-

Note :- 1. NTE - Not To Exceed 2. NS - Not Specified

Annexure – II**Stack Monitoring Data (2022-2023)**

Month	Parameters	Unit#3	Unit # 4	Unit # 5	Unit # 6	Unit # 7	Unit # 8	Unit # 9
Apr-22	SPM (mg/NM ³)	93	97	98	99	99	24	21
	SO ₂ (T/Day)	1207	1190	1305	1270	1309	1268	1296
	NOx (mg/NM ³)	326	325	343	318	342	316	298
	Hg (mg/NM ³)	0.013	0.014	0.013	0.014	0.014	0.013	0.013
	NH ₃ (PPM)	1.37	1.42	1.17	1.20	1.20	ND	ND
May-22	SPM (mg/NM ³)	97	96	99	95	98	22	20
	SO ₂ (T/Day)	1144	1147	1313	1272	1317	1273	1272
	NOx (mg/NM ³)	312	302	323	321	323	306	305
	Hg (mg/NM ³)	0.013	0.014	0.014	0.014	0.014	0.014	0.014
	NH ₃ (PPM)	1.43	1.48	ND	ND	ND	ND	ND
Jun-22	SPM (mg/NM ³)	100	99	97	93	100	21	23
	SO ₂ (T/Day)	1172	1242	1300	1269	1263	1275	1263
	NOx (mg/NM ³)	335	328	319	325	355	311	311
	Hg (mg/NM ³)	0.014	0.013	0.013	0.014	0.014	0.014	0.013
	NH ₃ (PPM)	ND	ND	ND	ND	ND	ND	ND
Jul-22	SPM (mg/NM ³)	92	97	95	94	SD	19	18
	SO ₂ (T/Day)	1237	1209	1258	1263	SD	1273	1291
	NOx (mg/NM ³)	313	310	322	324	SD	303	311
	Hg (mg/NM ³)	0.012	0.014	0.013	0.012	SD	0.014	0.014
	NH ₃ (PPM)	ND	ND	ND	ND	ND	ND	ND
Aug-22	SPM (mg/NM ³)	95	96	94	95	92	30	23
	SO ₂ (T/Day)	1261	1362	1239	1280	1261	1259	1280
	NOx (mg/NM ³)	333	328	313	329	306	304	306
	Hg (mg/NM ³)	0.013	0.013	0.014	0.013	0.014	0.013	0.013
	NH ₃ (PPM)	ND	ND	ND	ND	ND	ND	ND
Sep-22	SPM (mg/NM ³)	92	94	95	96	97	17	17
	SO ₂ (T/Day)	1251	1252	1292	1295	1250	1223	1256
	NOx (mg/NM ³)	304	307	309	312	316	318	298
	Hg (mg/NM ³)	0.013	0.013	0.013	0.013	0.013	0.014	0.013
	NH ₃ (PPM)	ND	ND	ND	ND	ND	ND	ND
Oct-22	SPM (mg/NM ³)	95	90	92	91	98	21	19
	SO ₂ (T/Day)	1221	1181	1298	1264	1284	1313	1283
	NOx (mg/NM ³)	319	308	309	312	318	321	311
	Hg (mg/NM ³)	0.012	0.012	0.012	0.012	0.014	0.012	0.013
	NH ₃ (PPM)	ND	ND	ND	ND	ND	ND	ND
Nov-22	SPM (mg/NM ³)	110	108	122	125	120	19	18
	SO ₂ (T/Day)	1263	1241	1280	1294	1258	1252	1266
	NOx (mg/NM ³)	313	312	336	315	302	291	291
	Hg (mg/NM ³)	0.013	0.014	0.014	0.014	0.014	0.014	0.014
	NH ₃ (PPM)	ND	ND	ND	ND	ND	ND	ND
Dec-22	SPM (mg/NM ³)	114	117	126	119	SD	22	23
	SO ₂ (T/Day)	1261	1206	1253	1264	SD	1304	1275
	NOx (mg/NM ³)	320	320	330	315	SD	308	293
	Hg (mg/NM ³)	0.013	0.013	0.014	0.014	SD	0.013	0.014
	NH ₃ (PPM)	ND	ND	2.1	ND	ND	ND	ND
Jan-23	SPM (mg/NM ³)	96	94	98	95	SD	20	22
	SO ₂ (T/Day)	1168	1165	1205	1247	SD	1298	1275
	NOx (mg/NM ³)	316	309	308	330	SD	299	303
	Hg (mg/NM ³)	0.013	0.013	0.014	0.014	SD	0.013	0.013
	NH ₃ (PPM)	1.63	1.85	2.13	1.91	ND	ND	ND

Month	Parameters	Unit#3	Unit # 4	Unit # 5	Unit # 6	Unit # 7	Unit # 8	Unit # 9
Feb-23	SPM (mg/NM ³)	94	93	93	93	SD	22	22
	SO ₂ (T/Day)	1163	1173	1218	1271	SD	1277	1294
	NOx (mg/NM ³)	303	303	317	320	SD	299	285
	Hg (mg/NM ³)	0.014	0.014	0.014	0.013	SD	0.014	0.013
	NH ₃ (PPM)	1.79	1.93	2.65	2.05	ND	ND	ND
Mar-23	SPM (mg/NM ³)	93	92	93	92	94	20	21
	SO ₂ (T/Day)	1230	1175	1290	1236	1328	1278	1297
	NOx (mg/NM ³)	304	303	303	312	301	297	288
	Hg (mg/NM ³)	0.013	0.0125	0.0135	0.013	0.013	0.014	0.013
	NH ₃ (PPM)	2.13	2.12	2.18	1.74	ND	ND	ND

Annexure – III

Ambient Air Quality Monitoring Report 2022-2023

Location	Parameters	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Average
Location No. 1 (Major Store Adm. Bldg.)	PM _{2.5} (µg/M ³)	40.38	39.38	41.25	24.25	26.88	19.63	19.25	21.88	21.75	26.50	29.50	22.13	27.73
	PM ₁₀ (µg/M ³)	89.75	85.13	78.63	77.00	55.63	46.38	64.00	67.75	73.00	75.50	76.25	77.25	72.19
	SO ₂ (µg/M ³)	21.89	29.99	21.24	14.39	9.98	10.91	16.43	16.41	22.03	24.84	24.71	22.10	19.58
	NO _x (µg/M ³)	28.74	37.71	28.38	21.73	13.73	16.71	18.10	22.51	25.94	29.45	29.71	28.05	25.06
	Ozone(µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Lead (µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	CO (mg/M ³)	0.88	0.91	0.94	0.82	0.82	0.79	0.83	0.88	0.88	0.93	1.00	0.97	0.89
	NH ₃ (mg/M ³)	28.25	28.25	28.63	28.00	27.63	27.13	27.88	27.50	27.50	29.13	29.13	29.25	28.19
	Benzene(µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	BaP(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Arsenic(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Nickel(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Location No. 2 (Colony E/M Office)	PM _{2.5} (µg/M ³)	28.13	24.75	27.50	18.88	15.63	14.13	15.25	17.25	16.50	17.50	18.63	15.50	19.14
	PM ₁₀ (µg/M ³)	63.25	63.63	57.50	49.50	29.00	48.63	42.00	48.63	61.75	60.00	62.88	53.88	53.39
	SO ₂ (µg/M ³)	15.30	20.91	31.61	25.55	20.49	14.39	10.71	11.40	13.21	14.38	13.29	12.65	16.99
	NO _x (µg/M ³)	22.40	23.91	39.70	24.88	11.03	8.63	14.93	14.53	20.04	20.96	19.95	19.13	21.01
	Ozone(µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Lead (µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	CO (mg/M ³)	0.64	0.62	0.63	0.57	0.64	0.57	0.57	0.58	0.61	0.62	0.63	0.60	0.61
	NH ₃ (mg/M ³)	25.38	25.13	25.75	24.88	24.38	23.50	23.63	24.50	23.75	24.50	25.13	24.88	24.61
	Benzene(µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	BaP(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Arsenic(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Nickel(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Location No. 3 (Chummary)	PM _{2.5} (µg/M ³)	36.38	35.00	35.50	25.38	20.63	17.38	18.13	18.88	18.75	22.63	22.00	20.50	24.26
	PM ₁₀ (µg/M ³)	87.13	82.75	63.75	69.63	39.88	43.13	54.75	62.38	63.88	65.75	69.13	65.13	63.94
	SO ₂ (µg/M ³)	19.04	24.69	19.49	15.09	11.45	12.34	13.44	13.75	18.80	22.01	16.36	18.30	17.06
	NO _x (µg/M ³)	28.73	39.93	23.51	23.13	11.95	17.28	17.00	16.71	24.61	25.08	22.95	21.33	22.68
	Ozone(µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Lead (µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	CO (mg/M ³)	0.88	0.82	0.86	0.83	0.76	0.73	0.70	0.79	0.79	0.79	0.97	0.93	0.82
	NH ₃ (mg/M ³)	27.75	27.25	27.75	27.00	27.00	26.75	26.50	27.25	26.50	27.75	27.13	28.75	27.28
	Benzene(µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	BaP(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Arsenic(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Nickel(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note : (1) ND = Not Detectable, (2) Location No. 1 – Major Store – SE Direction, Location No. 2 – Colony E/M Office – NW Direction
 Location No. 3 – Chummary – NE Direction, Location No. 4 – Railway Cabin U#8 & 9 – SE Direction,
 Location No. 5 – ETP U#8 & 9 – SW Direction

Location	Parameters	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Average
Location No. 4 (Railway Cabin U# 8 & 9)	PM _{2.5} (µg/M ³)	34.63	34.63	33.50	21.50	21.88	17.00	18.25	19.38	19.50	20.50	23.75	19.25	23.65
	PM ₁₀ (µg/M ³)	76.38	76.38	79.25	65.63	51.75	48.63	57.13	60.75	67.50	71.13	71.38	70.13	66.33
	SO ₂ (µg/M ³)	25.35	25.35	20.39	14.65	11.81	10.24	13.29	14.35	19.56	23.24	22.06	21.30	18.47
	NO _x (µg/M ³)	30.75	30.75	23.85	19.41	13.63	17.21	16.50	18.09	23.24	27.63	26.50	24.13	22.64
	Ozone(µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Lead (µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	CO (mg/M ³)	0.77	0.77	0.76	0.65	0.73	0.70	0.63	0.69	0.78	0.73	0.90	0.91	0.75
	NH ₃ (mg/M ³)	26.75	26.75	27.00	26.25	26.25	25.88	25.25	26.00	25.25	23.80	27.13	27.50	26.15
	Benzene(µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Bap(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Arsenic(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Nickel(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Location No.5 ETP U# 8 & 9	PM _{2.5} (µg/M ³)	37.38	37.38	33.75	22.63	20.00	18.13	17.75	20.88	18.88	24.63	25.50	18.13	24.58
	PM ₁₀ (µg/M ³)	81.38	81.38	62.00	62.25	44.75	50.50	53.00	62.00	66.88	68.25	66.13	68.13	63.89
	SO ₂ (µg/M ³)	28.70	28.70	19.75	16.19	17.29	11.23	12.64	17.26	20.04	24.81	23.85	20.78	20.10
	NO _x (µg/M ³)	43.30	43.30	39.84	41.40	31.46	20.03	20.44	23.95	24.69	31.11	27.84	29.93	31.44
	Ozone(µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Lead (µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	CO (mg/M ³)	0.75	0.75	0.76	0.69	0.73	0.69	0.66	0.69	0.78	0.74	0.86	0.88	0.75
	NH ₃ (mg/M ³)	26.00	26.00	27.25	26.63	26.38	26.13	26.00	26.13	25.75	26.50	26.88	27.50	26.43
	Benzene(µg/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Bap(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Arsenic(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Nickel(ng/M ³)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Limits as per NAAQS :-

Parameters	Industrial		Sensitive	
	On 24 hr. basis	On Annual basis	On 24 hr. basis	On Annual basis
PM ₁₀ (µg/M ³)	100	60	100	60
PM _{2.5} (µg/M ³)	60	40	60	40
SO ₂ (µg/M ³)	80	50	80	20
NO _x (µg/M ³)	80	40	80	30
Ozone(µg/M ³)	180 (1 Hrs.)	100 (8 Hrs.)	180 (1 Hrs.)	100 (8 Hrs.)
Lead (µg/M ³)	1.00	0.50	1.00	0.50
CO (mg/M ³)	04 (1 Hrs.)	02 (8 Hrs.)	04 (1 Hrs.)	02 (8 Hrs.)
NH ₃ (mg/M ³)	400	100	400	100
Benzene (µg/M ³)	-	5.0	-	5.0
Bap(ng/M ³)	-	1.0	-	1.0
Arsenic(ng/M ³)	-	6.0	-	6.0
Nickel(ng/M ³)	-	20.0	-	20.0

Annexure – IV**Physio-chemical Properties of Ash**

Minerals in form of Oxides :-

Minerals	Percentage (%)
1 Silica as SiO_2	63.8
2. Aluminium as Al_2O_3	25.8
3. Iron as Fe_2O_3	4.24
4. Titanium as TiO_2	1.62
5. Calcium as CaO	2.16
6. Magnesium as MgO	0.55
7. Sodium as Na_2O	0.139
8. Potassium as K_2O	0.324
9. Sulphite as SO_3	0.206
10. Phosphorous Pent oxide as P_2O_5	0.236

- Parameters are analyzed by MOEF approved agency M/s. Mahabal Enviro Engineers Pvt. Ltd. Nagpur.

Annexure - V**Composition of Sludge from ETP – I, II, III & IV**

Annual average value for ETP-I, II, III & IV (2022-23) :-

Sr. No.	Parameters	MPCB Limit	Average value of ETP I, II,III & IV
1.	Sulphate as SO ₄	1000 mg/kg	534.78 mg/kg
2.	Chloride as Cl	1000 mg/kg	120.09 mg/kg
3.	Mixture of Toxic Metals (Cu+Ni+Cr+Zn+Cd)	25.0 mg/kg	0.576 mg/kg
4.	Lead as Pb	1.0 mg/kg	BDL
5.	Mercury as Hg	0.01 mg/kg	BDL

- Parameters are analyzed by MOEF approved agency M/s. Mahabal Enviro Engineers Pvt. Ltd. Nagpur.



MAHAGENCO
Maharashtra State Power Generation Co. Ltd.
CIN: U40100MH2005SGC153648

(A GOVERNMENT OF MAHARASHTRA UNDERTAKING)

CHANDRAPUR SUPER THERMAL POWER STATION
MAHARASHTRA STATE POWER GENERATION COMPANY LIMITED
(ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 & ISO 50001:2018)
Office of: Chief Engineer, C.S.T.P.S. Urjanagar, Chandrapur - 442404
Phone: 07172 - 220155 to 220159 Fax: 07172 - 220203
E-mail: cegenchandrapur@mahagenco.in

CSTPS/Env & Coal/Plantation/ 002462

Date: - 29 SEP 2023

To,
The Regional Officer,
Maharashtra Pollution Control Board,
Udyog Bhavan, First Floor,
Station Road, Chandrapur 442 401.

Subject: - Submission of yearly plantation statement.

Ref: Consent No: - 0000163955/CR/2307001126 dated 18.07.2023 valid up to 31.05.2024

Dear Sir,

Please find below the yearly plantation statement for the year 2023-24 (till date) in respect of **Chandrapur Super Thermal Power Station, Chandrapur**. This is as per the consent to operate condition.

S.N	Particulars	Details
1	Total factory area	10907 Hectare
2	Open Space Available	1117 Hectare.
3	Total trees planted up to 15 th September 2023.	1316286 Nos.+ 6000 Bamboo plantation
4	No. of Trees surviving	Total nos of trees surviwed cannot be measured due to large plantation area & dense vegetation. CSTPS has requested to MRSAC Nagpur for the same & report awaited.
5	Cumulative area of plantation	544.88 Hectare
6	Land area covered under plantation	48.78% (Statutory required 33%)

Thanking You.

Yours faithfully


Chief Engineer
CSTPS, Chandrapur

Copy s.w.rs.to:

The Executive Director (O&M-II/E&S), MSPGCL, Mumbai.

Copy f.w.cs.to:

1. The Chief Engineer(E&S/GPII) MSPGCL, Mumbai.
2. The Sub- Regional Officer, MPCB, Chandrapur.


Sr. Clerk
Regional Officer
Board



MAHAGENCO
Maharashtra State Power Generation Co. Ltd.
CIN: U40100MH2005SGC153648

(A GOVERNMENT OF MAHARASHTRA UNDERTAKING)

CHANDRAPUR SUPER THERMAL POWER STATION
MAHARASHTRA STATE POWER GENERATION COMPANY LIMITED
(ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 & ISO 50001:2018)
Office of: Chief Engineer, C.S.T.P.S. Urjanagar, Chandrapur - 442404
Phone: 07172 - 220155 to 220159 Fax: 07172 - 220203
Email: cegenchandrapur@mahagenco.in

CHN/ENV& Coal/ **000 793**

Date: **3 APR 2024**

To,
Additional Principal Chief Conservator of Forests,
Ministry of Environment Forest & Climate Change,
Regional Office (West Central Zone)
Ground floor, East Wing,
"New Secretary building"
Civil line Nagpur-440001

Sub: - Submission of information regarding quarterly report of average Ash % (AFB) in coal received at CSTPS, Chandrapur.

Ref: - Office Memorandum of MoEF & CC dated 26/08/2015.

Dear Sir,

With reference to above, please find quarterly report of average ash % in coal received at CSTPS, Chandrapur. The report for the month of "**January-2024 to March-2024**" is given below.

Sr. No.	Month	Average Ash % in Coal
1	January-2024	36.20 %
2	February-2024	37.94 %
3	March-2024	39.00 %

This is for your information please.

Thanking You.

Yours Sincerely

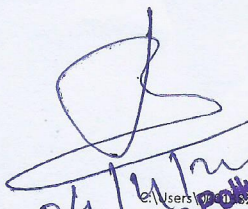

Chief Engineer
CSTPS, Chandrapur.

Copy s.w.rs.to:-

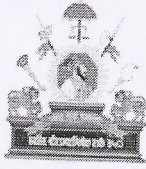
- 1) The Addl Director & I/c PCI-II,
Central Pollution Control Board,
Parivesh Bhavan, East Arjun Nagar
Delhi- 110032.
- 2) The Regional Officer, MPCB Chandrapur

Copy f.w.cs.to:-

The Chief Engineer (E&S/ GPII), MSPGCL, Mumbai.


Maharashtra Pollution Control Board
Regional Office
Parivesh Bhavan 1st Floor Station Road
Chandrapur-44240

C:\Users\mca\OneDrive\Desktop\100012301\Monthly Reports\QRTERLY\Quarterly report of Avg. Ash % in coal.docx



MAHAGENCO
Maharashtra State Power Generation Co. Ltd.
CIN: U40100MH2005SGC153648

(A GOVERNMENT OF MAHARASHTRA UNDERTAKING)

CHANDRAPUR SUPER THERMAL POWER STATION
MAHARASHTRA STATE POWER GENERATION COMPANY LIMITED
(ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 & ISO 50001:2018)
Office of: Chief Engineer, C.S.T.P.S. Urjanagar, Chandrapur - 442404
Phone: 07172 - 220155 to 220159 Fax: 07172 - 220203
Email: cegenchandrapur@mahagenco.in

CHN/ENV& Coal/ **002511**

Date: - **10 JUL 2024**

To,
Additional Principal Chief Conservator of Forests,
Ministry of Environment Forest & Climate Change,
Regional Office (West Central Zone)
Ground floor, East Wing,
"New Secretary building"
Civil line Nagpur-440001

Sub: - Submission of information regarding quarterly report of average Ash % (AFB) in coal received at CSTPS, Chandrapur.

Ref: - Office Memorandum of MoEF & CC dated 26/08/2015.

Dear Sir,

With reference to above, please find quarterly report of average ash % in coal received at CSTPS, Chandrapur. The report for the month of "**April-2024 to June-2024**" is given below.

Sr. No.	Month	Average Ash % in Coal
1	April-2024	38.81 %
2	May-2024	37.74 %
3	June-2024	35.62 %

This is for your information please.

Thanking You.

Yours Sincerely

One
Chief Engineer
CSTPS, Chandrapur.

Copy s.w.rs.to:-

- 1) The Addl Director & I/c PCI-II,
Central Pollution Control Board,
Parivesh Bhavan, East Arjun Nagar
Delhi- 110032.
- 2) The Regional Officer, MPCB Chandrapur

Copy f.w.cs.to:-

The Chief Engineer (E&S/ GPII), MSPGCL, Mumbai.

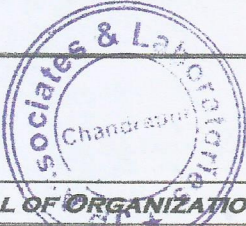
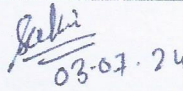
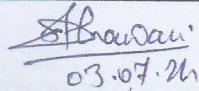
Ma
11-07-2024

Maharashtra Pollution Control Board
Regional office
Udyog Bhavan 1st Floor Station Road
Chandrapur-442401

ULR No. TC924024000000461F		REPORT No & DATE		C-JPAL/TR/07.2024/03 Dt.03.07.24	
CUSTOMER NAME & ADDRESS – CHANDRAPUR SUPER THERMAL POWER STATION, CHANDRAPUR					
DATE OF RECEIPT OF SAMPLE	01.07.2024	DATE OF ANALYSIS (START DATE)	02.07.2024		
CUSTOMER REF. No.	NA	DATE OF ANALYSIS (END DATE)	03.07.2024		
ANALYSIS DONE AT	At Lab.	ANALYSIS WITNESSED BY	NA		
DISCIPLINE	Chemical	PRODUCT GROUP	Solid fuel		
Sample Details					
SAMPLING METHOD#	NA	CONDITION OF SAMPLE	212 Micron Powder		
DATE OF SAMPLING#	29-06-2024	SAMPLE PARTICULARS	Coal Sample		
LAB. REF. No	C-JPAL/07.2024/U- 08- 14	SAMPLE STORED AT TEMP.	Ambient Condition.		
Analysis Details					
ENVIRONMENTAL CONDITIONS - Temp: 24.8°C & Humidity: 58%					
Test Results					

Sr. No	Parameters	Total Sulphur (%)
	Test Method	IS : 1350 (Part - 3: 2022)
	Sample Details	Air Dry Basis
1	*Unit-3	0.42
2	*Unit-4	0.39
3	*Unit-5	0.40
4	*Unit-6	0.44
5	*Unit-7	0.38
6	*Unit-8	0.45
7	*Unit-9	0.46

for JP Associates & Laboratories

 SEAL OF ORGANIZATION	 S.V. Randive	 D. S. Thawari
	REVIEWED BY	AUTHORIZED SIGNATORY

Notes: *NA Not Applicable,

*Customer provided information and it didn't affect any lab results.

1. Test results are only relate to the sample received at the laboratory at the stated conditions & tested.
2. No part of the test report be reproduced either in full or part without written consent of the laboratory.
3. Any corrections/erasure invalidates the test report.
4. Any abnormality/discrepancy in the test report should be brought to the notice of Laboratory within 07 days.

*****End of the Test Report****

Head Office

Document no: JP/R/TM/08/04 Issue date 01.10.2021 Amendment date 08/04/2024

X-4, MIDC, Ghugus Road, Chandrapur 442406,
Maharashtra

Contact us- 8208733252

Email - jplabsindia@gmail.com

Website - www.jplabsindia.com

Quality is our top priority



Certificate Tracking ID / CTID : 2402091
Date of Issue / DOI : 20-Jun-2024
Certificate Serial No. / CSN : ULR-TC1170324000002712F



TC-11703



Radioanalytical Laboratory

RADIOACTIVITY TEST CERTIFICATE

Ref : BRIT/RAL/DOM/1437-1476/MISC/1090-1129/23-24

To :
MSPGCL,
CHANDRAPUR SUPER THERMAL POWER STATION,
CSTPS, URJANAGAR CHANDRAPUR,
DIST. CHANDRAPUR - 442 404,
MAHARASHTRA.

This is regarding the sample of "COAL & ASH" sent for radioactivity analysis vide your letter ref.: MEEPL/GEN/2024/0015 dated 14.02.2024 which as per above letter is drawn from consignment with the following markings, as shown in italics:

NAME & ADDRESS OF THE CUSTOMER : **MAHABAL ENVIRO ENGINEERS PVT. LTD.,
PLOT NOS. 13, 14, 17, 18, GRAMPANCHAYAT
BOKHARA, 8 KM FROM NAGPUR CITY,
OPP. PATEL PETROL PUMP, CHHINDWARA ROAD,
KORADI, DIST. NAGPUR - 441 111.
MAHARASHTRA.**

SAMPLE NAME : **1. BUNKER COAL
2. FLY ASH
3. BOTTOM ASH
4. ASH BUND**

DATE OF RECEIPT OF SAMPLE: 27.02.2024

DATE OF COMPLETION OF TEST: 18.04.2024

The Samples were analysed by HPGe Gamma spectrometry and the values obtained for U-238, Ra-226, Th-232 and K-40 against each sample is shown in the table below :

Sr. No	SAMPLE NAME & LOCATION	QUANTITY	U-238 (Bq/Kg)	Th-232 (Bq/Kg)	Ra-226 (Bq/Kg)	K-40 (Bq/Kg)
1	BUNKER COAL UNIT NO.3 TO 7	1.5 KG X 1 NO. POLY BAG	27.1 ± 1.9	46 ± 1.9	15.1 ± 2.5	71.2 ± 5.5
2	BUNKER COAL UNIT NO.8	1.5 KG X 1 NO. POLY BAG	16.6 ± 1.3	27.7 ± 2.9	MDL 1.23	59.2 ± 4.6
3	BUNKER COAL UNIT NO.9	1.5 KG X 1 NO. POLY BAG	28.9 ± 2.5	48.7 ± 2.0	12.4 ± 2.1	188 ± 13.2
4	FLY ASH UNIT NO.3 TO 7	1.5 KG X 1 NO. POLY BAG	75.4 ± 3.0	125 ± 5.1	60.4 ± 6.3	351 ± 20.8
5	FLY ASH UNIT NO.8	1.5 KG X 1 NO. POLY BAG	59.3 ± 1.8	86.2 ± 1.8	52.2 ± 4.6	291 ± 15.7
6	FLY ASH UNIT NO.9	1.5 KG X 1 NO. POLY BAG	72.9 ± 2.2	111 ± 2.3	71.4 ± 6.0	388 ± 20.3
7	BOTTOM ASH UNIT NO.3 TO 7	1.5 KG X 1 NO. POLY BAG	52.5 ± 2.5	95 ± 4.3	60.9 ± 6.2	418 ± 23.2
8	BOTTOM ASH UNIT NO.8	1.5 KG X 1 NO. POLY BAG	48.1 ± 2.9	74.9 ± 6.1	23.7 ± 3.5	327 ± 20.2
9	BOTTOM ASH UNIT NO.9	1.5 KG X 1 NO. POLY BAG	29.6 ± 1.4	58.3 ± 3.0	24. ± 3.2	206 ± 12.9
10	ASH BUND - FLY ASH & BOTTOM ASH	1.5 KG X 1 NO. POLY BAG	71.4 ± 3.1	121 ± 4.6	55.5 ± 5.6	308 ± 18.1

1/2

The authenticity of this certificate is verifiable. Please scan the QR code using a QR scanning application on any mobile devices. Upon redirection you must enter the necessary information in landing page <https://eportal.britatom.gov.in>. We will then revert you back with a digital copy of the certificate in your verified e-mail ID. In accordance to IT Act 2000 (21 of 2000), this document is generated electronically through a validated s/w and need no physical/ digital signature(s).





Certificate Tracking ID / CTID : 2402091
Date of Issue / DOI : 20-Jun-2024
Certificate Serial No. / CSN : ULR-TC1170324000002712F



TC-11703



Opinion: The measurement values are below the clearance level for radionuclides of natural origin in bulk solid materials, as per AERB directive 01/2010 (table-3) dated 26/11/2010.

Note: (i) The report pertains to the given sample only. (ii) The sample will be retained in this laboratory for a period of 1 month from certificate date and thereafter it will be disposed off. (iii) This report shall not be reproduced except in full, without written approval of the laboratory. (iv) The sampling is not done by this laboratory.

Checked by:
GANPAT B NAKTI
Assistant

Authorized Signatory:
AJAY NANA THAMKE
OIC, RAL

***** End of Report *****

The authenticity of this certificate is verifiable. Please scan the QR code using a QR scanning application on any mobile devices. Upon redirection you must enter the necessary information in landing page <https://eportal.britatom.gov.in>. We will then revert you back with a digital copy of the certificate in your verified e-mail ID. In accordance to IT Act 2000 (21 of 2000), this document is generated electronically through a validated s/w and need no physical/ digital signature(s).



CHANDRAPUR SUPER THERMAL POWER STATION CHANDRAPUR

“IMS: Quality, Environment, Occupational Health & Safety Policy”

ISS/REV.NO.: 02/00

Chandrapur Super Thermal Power Station of MAHAGENCO is committed to generate Economical, Reliable and Sustainable Power and continual improvement of the Integrated Management System through -

- providing environment friendly, safe & healthy working conditions for the prevention of adverse impact on quality, environment and work-related injury and ill health;
- adopting best organizational practices specific to the strategic directions through risks and opportunities analysis for all our processes;
- fulfilling legal and other requirements;
- eliminating quality issues, environmental aspects, occupational health & safety hazards to reduce risks;
- ensuring up gradation of skill, knowledge & competence of our staff and adoption of new technology;
- ensuring consultation and participation of workers/workers' representatives.

Date: 09.04.2021


Chief Engineer
CSTPS, Chandrapur



CHANDRAPUR SUPER THERMAL POWER STATION
CHANDRAPUR
ENERGY MANAGEMENT POLICY

REV: 01

Chandrapur Super Thermal Power Station of Maharashtra State Power Generation Company Limited is committed to work for optimal utilization of various energy resources in cost efficient manner of electricity generation by continual improvement and complying with statutory requirements related to Energy Management System to enhance energy performance through –

- Continually reducing energy resource consumption (fuel and power) to generate one unit of electricity by energy savings measures,
- Cultivating a culture of studying and promoting use of latest cost effective trends and technologies for energy conservation,
- Creating awareness amongst employees about energy conservation by conducting regular training programmes and workshops,
- Setting measurable and time bound objectives to implement the action plans.

Date: 30.03.2021


Chief Engineer
CSTPS, Chandrapur



Certificate of Registration

GCPL hereby certifies that

Reg. No.: IMS110XX32022616

MAHARASHTRA STATE POWER GENERATION COMPANY LIMITED

Chandrapur Super Thermal Power Station Urjanagar, Chandrapur,
Dist. – Chandrapur, Maharashtra, 442 404, India

has been independently assessed and is compliant with the requirement of

Integrated Management System

(ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO 50001:2018)

This certificate is applicable to the following product or service ranges:

Generation of Electricity From Coal Based Thermal Power Plant.

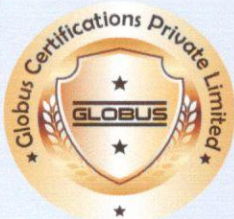
Initial Issue Date : 20. Nov. 2023
Expiry Date : 19. Nov. 2024

Current Issue Date : 20. Nov. 2023
Valid Period : 20. Nov. 2023 ~ 19. Nov. 2026

(Certificate validity is subject to clearing successful surveillance audit)

IMS Integrated
Management
Systems

Signed for and on behalf of GCPL



To verify the validity of this certificate please visit www.gcpl.co

Surveillance audits shall be conducted at least once a calendar year, except in re-certification years. This is to certify that the Management Systems of this company has been found to conform to the above. If the certified client does not allow surveillance, re-certification audits, certificate should be returned to GCPL. This certificate remains the property of GCPL and this certificate is recognized by GCPL.

Globus Certifications Private Limited- www.gcpl.co || info@gcpl.co



Gd01 V2



CERTIFICATE

This is to Certify that the Management System of
**MAHARASHTRA STATE POWER GENERATION
 COMPANY LIMITED**

**CHANDRAPUR SUPER THERMAL POWER STATION URJANAGAR,
 CHANDRAPUR, DIST. – CHANDRAPUR-442404, MAHARASHTRA (INDIA)**

has been audited and found to comply with the requirements of:

**ISO 9001:2015
 Quality Management System**

For the scope of activities described below:

**GENERATION OF ELECTRICITY FROM COAL BASED
 THERMAL POWER PLANT.**

IAF Code: 25

Certificate No: EGQ/2311MT/1450

Date of initial registration	Date of this Certificate	Surv. audit on or before/Certificate expiry	Re-certification Due
22.11.2023	22.11.2023	21.10.2024	21.11.2026

Validity of this certificate is subject to successful completion of surveillance audit on or before due date,
 in case surveillance audit not conducted this certificate shall be suspended/cancelled.

Director

For verification and upated information concerning the present certificate visit to www.thehawk-eye.com

This Certificate is the property of Hawk Eye Certifications Pvt. Ltd. and shall be returned immediately when demanded.





CERTIFICATE

This is to Certify that the Management System of
**MAHARASHTRA STATE POWER GENERATION
 COMPANY LIMITED**

**CHANDRAPUR SUPER THERMAL POWER STATION URJANAGAR,
 CHANDRAPUR, DIST. – CHANDRAPUR-442404, MAHARASHTRA (INDIA)**

has been audited and found to comply with the requirements of:

**ISO 45001:2018
 Occupational Health & Safety Management System**

For the scope of activities described below:

**GENERATION OF ELECTRICITY FROM COAL BASED
 THERMAL POWER PLANT.**

IAF Code: 25

Certificate No: EGO/2311MT/1452

Date of initial registration	Date of this Certificate	Surv. audit on or before/Certificate expiry	Re-certification Due
22.11.2023	22.11.2023	21.10.2024	21.11.2026

Validity of this certificate is subject to successful completion of surveillance audit on or before due date,
 in case surveillance audit not conducted this certificate shall be suspended/cancelled.

Director

For verification and updated information concerning the present certificate visit to www.thehawk-eye.com
 This Certificate is the property of Hawk Eye Certifications Pvt. Ltd. and shall be returned immediately when demanded.

Hawk Eye Certifications Private Limited
 A-27/H, Sector-16, Noida-201301, U.P., (India)
www.thehawk-eye.com
 email: admin@thehawk-eye.com





CERTIFICATE

This is to Certify that the Management System of
**MAHARASHTRA STATE POWER GENERATION
COMPANY LIMITED**

**CHANDRAPUR SUPER THERMAL POWER STATION URJANAGAR,
CHANDRAPUR, DIST. – CHANDRAPUR-442404, MAHARASHTRA (INDIA)**

has been audited and found to comply with the requirements of:

**ISO 14001:2015
Environment Management System**

For the scope of activities described below:

**GENERATION OF ELECTRICITY FROM COAL BASED
THERMAL POWER PLANT.**

IAF Code: 25

Certificate No: EGE/2311MT/1451

<u>Date of initial registration</u>	<u>Date of this Certificate</u>	<u>Surv. audit on or before/Certificate expiry</u>	<u>Re-certification Due</u>
22.11.2023	22.11.2023	21.10.2024	21.11.2026

Validity of this certificate is subject to successful completion of surveillance audit on or before due date,
in case surveillance audit not conducted this certificate shall be suspended/cancelled.

Director

For verification and upated information concerning the present certificate visit to www.thehawk-eye.com

This Certificate is the property of Hawk Eye Certifications Pvt. Ltd. and shall be returned immediately when demanded.





National Accreditation Board for
Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

**MWFETL, CHANDRAPUR SUPER THERMAL POWER
STATION, MSPGCL**

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

CSTPS, URJANAGAR, CHANDRAPUR, MAHARASHTRA, INDIA

in the field of

TESTING

Certificate Number: TC-6526

Issue Date: 28/02/2024

Valid Until: 27/02/2026

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: MAHARASHTRA STATE POWER GENERATION COMPANY LIMITED

Signed for and on behalf of NABL



N. Venkateswaran
Chief Executive Officer

CHANDRAPUR SUPER THERMAL POWER STATION

CSTPS

DISASTER MANAGEMENT PLAN

PREFACE (UPGRADATION)

DMP

Rev. No. : 08

Date : 05/03/2019

Page : 1 of 151

With the increasing demand of electricity; more capacity addition is eminent to fulfil the gap. It is also to be noted that more emphasis is given to workman safety and minimum tolerance for pollution; as statutory norms and its enforcement are getting more stringent.

To meet the above target, more advanced technologies with higher generation capacity units are adopted, to fulfil the demand as well compliance of statutory norms.

But bigger generation capacity units, calls for increases consequence of any accident to multi folds. Also increasing usage of various chemicals, few are toxic; may lead to any severe accident, if proper care is not taken. Even after taking all necessary precautions to prevent any miss-happenings, it is also to be kept in mind, a practical solution for handling any emergency; if it arises.

Electricity has become the utmost necessity in civil life. A sudden mass failure of electricity has the ability to stall a nation's economic activity in a whole or its part thereof. Bringing back to normalcy is a time & effort consuming activity. Northern Grid failure on 31st July, 2012 and subsequent Eastern Grid and North-Eastern Grid failure as the Domino Effect; which stalled the activities of about 22 States and Union Territories, affecting 600 million people; a vivid example. Crisis Management Plan is an afterthought to avert such situation.

The Disaster & Crisis Management Plan for Chandrapur Super Thermal Power Station is upgraded to guide our officials and employees for effective handling of any disastrous or crisis situation, with minimum injury and loss of human life, minimum damage to plant and machinery and minimum period for restoration to normalcy.



Jayant H. Bobde

**Occupier / Chief Engineer (Gen O&M)
Chandrapur Super Thermal Power Station**

CHANDRAPUR SUPER THERMAL POWER STATION

CSTPS

DISASTER MANAGEMENT PLAN

DMP

CONTENTS

Rev. No. : 08

Date : 05/03/2019

Page : 2 of 151

CHAPTER No	DETAILS	PAGE No.
	PREFACE (UPGRADATION)	01-01
I	Statutory aspects, objectives and action plan	03-09
II	Disaster and its management	10-12
III	Basic information of CSTPS	13-16
	Role and responsibilities of various co-coordinator	17-28
IV	Potential hazards in CSTPS and their management	29-45
VI	Organization structure, major departments and their role and responsibilities during disaster	46-48
VII	Infrastructure & System for emergency situation	49-50
VIII	Infrastructure available and procedural activities of key Service departments during disaster	51-58
IX	Disaster preparedness on the basis of meteorological data	59-63
X	Communication and evacuation during disaster	64-88
XI	Training and awareness	89-89
	Annexure	90-90
	Data Sheet For Cylinders	91-127
	Definition of Important Abbreviations Used in Chemical	128-128
	Inventory Status Sheet For Hazardous Chemical	129-130
	Emergency Actions within 5 minutes of Occurrence	131-131
XII	Crisis management Plan	132-136
XIII	Nominated various Task Force for Disaster Management	137-138
XIV	List of designated key personnel for Disaster management	139-142
XV	List of available Medical facilities nearby & additional information	143-147
XVI	Equipments available in DMP Control Room	148-149
	Site Plan of CSTPS	150-150

Prepared by



Dy. Chief Engineer – Admin /
Factory Manager

Approved by



Chief Engineer /Occupier