

Ref.No: - MEL/EC/APPCB/2025-26/007

July 06, 2025

To,
The Environmental Engineering,
Andhra Pradesh Pollution Control Board (APPCB)
Regional Office, Tirupati, Dr. Y.S.R Paryavaran Bhawan, N.T.Road,
Andhra Pradesh – 517502

Subject:

Submission of Six-monthly Compliance Status Report (January 2025 to June 2025) against Environment Clearance obtained for both Phase I (2x150 MW + 1x350 MW) & Phase II (1X350 MW) Coal based Thermal Power Plant of Meenakshi Energy Limited situated at village Thamminapatnam, district Tirupati, Andhra Pradesh.

Reference:

1. Environmental Clearance Compliance EC File No. J-13011/18/2008-IA.II (T) and amendments dated 02.07.2008, dated 30.06.2009, dated 25.10.2013. – Phase I
2. Environmental Clearance Compliance EC File No. J-13012/18/2009-IA.II (T) dated 19.10.2009, and amendments dated 25.02.2010, dated 01.02.2011, dated 25.10.2013. – Phase II.

Dear Sir,

With respect to the aforementioned subject and above cited reference, we would like to inform your good office that Meenakshi Energy Limited a Coal based Thermal Power Plant had obtained Environment Clearance for both its Phase I (2x150 MW + 1x350 MW) and Phase II (1X350 MW) units vide aforementioned Reference No. 1 & 2 respectively.

In this regard adhering to the statutory requirement of submitting the Six-monthly compliance report against the EC conditions mentioned in the afore-said Environment Clearance, we hereby submit to your good office the Six-monthly compliance report against the afore-said Environment Clearance along with the necessary supporting documents for the period from January 2025 to June 2025 (the Six-monthly compliance report is Annexed as **Annexure-A**)

We hope that the above is in line with the requirements under the referred Environment Clearance.

Thanking You,

For and on behalf of Meenakshi Energy Limited



Authorised Signatory



Meenakshi Energy Limited

Site Office: Thamminapatnam (Village), Chillakur (Mandal), Tirupati District, Pin Code 517541, Andhra Pradesh
CIN No. U40101TG1996PLC054239

MEENAKSHI ENERGY LIMITED
Thammenapatnam (V), Chillakur (M), Tirupati (Dist), Andhra Pradesh-524344

Half Yearly Compliance Status Report-Jan'2025 to Jun'2025

Compliances of conditions imposed in the environmental clearance (2*150 mw+ 300*1 MW) issued by MOEFF vide letter. No J-13011/18/2008- IA. II (T) and No J-13012/18/2009 -I A.II (T) dated 19.10.2009

Compliance of Conditions in EC No. J-13011/18/2008 -IA.II (T) dated 02/07/2008 – 540 MW (4*135 MW)		
Sl.No	Conditions	Compliance Status
1	No additional land in excess of 367.57 acres shall be acquired for any activity/ facility of this project	Noted and Complied
2	Ash pond area shall not exceed 55 acres	Noted and Complied
3	For the activities to be taken up in the CRZ, necessary prior approval from the competent authority under the CRZ notification 1991 shall be obtained	Noted and Complied
4	A CRZ map of the site demarcating the HTL,LTL, CRZ boundary (duly demarcated by one of the authorized agencies), superimposing there on the project layout including the activities to be taken up in the CRZ along with recommendations of state coastal zone management authority shall be submitted within 3 months or before starting work on the project whichever is earlier. In case there is a need to change the layout in view of CRZ regulation, prior permission of this ministry shall be obtained	Noted and Complied
5	Imported coal only shall be used as fuel. The sulphur and ash content in coal shall not exceed 1.3% and 11% respectively	Complied with
6	Lime injection with efficiency of sulphur removal up to 95% shall be provided	Complied with
7	Two twin flue stacks of 220 m height each shall be provided with continuous online monitoring equipments for Sox, NOx and particulate. Exit velocity of flue gases shall not be less than 22 m/sec.	Complied with Twin flue stack of height 220 Mtr. For 2*150 MW and Twin flue stack of height 275 Mtr. for 2*350 MW has been provided.
8	High efficiency electrostatic precipitator (ESP) shall be installed to ensure that particulate emission does not exceed 50 mg/nm ³	Complied with. ESP with high voltage rectifier transformer with dust collection rapping system and each ESP has two streams with 5 fields in each stream and outlet emission less than 50 mg/nm ³ Annexure-1
9	Space provision shall be kept for retrofitting of FGD, if required at a later date	Complied with Space available for any future expansion if required.
10	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.	Complied with Dust extraction system and water sprinkler system available at coal handling area. Annexure-2




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11	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 of the commissioning of the expansion plant. The bottom ash shall be disposed off in the ash pond in the conventional slurry mode.	Noted and being complied 100% utilization done in the FY 2024-2025
12	The cooling tower blow down shall be discharged from cold end side and it shall be ensured that the temperature of discharged water shall be at the ambient temperature of the receiving waters	Complied with Outlet temperature being monitored and ensured.
13	The treated effluents conforming to the prescribed standards shall be recirculated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangements shall be made that effluents and storm water do not get mixed.	Complied with All the saline effluents are being treated to discharge standards mentioned in EC .
14	A sewage treatment plant shall be provided and the treated sewage shall be used for raising green belt / plantation	Complied with STP of capacity 35 KLD in phase-1 and 350 KLD in phase –2 is available. Annexure-3
15	Rainwater harvesting should be adopted. Central groundwater authority/ Board shall be consulted for finalization of appropriate rain water harvesting technology within a period of three months from the date of clearance and details shall be furnished.	Noted and will be complied.
16	Adequate safety measures shall be provided in the plant area to check/Minimize spontaneous fires in coal yard, especially during summer season. Details of these measures along with location plant layout shall be submitted to the ministry as well as top the regional office of the ministry at lucknow.	Complied with 16 water sprinklers available in coal yard area and healthiness checked everyday. Fire protection system available nearby coal yard. Annexure-4
17	Storage facilities for liquid fuel such as LDO shall be made in the plant area where risk is minimum to the storage facilities. Disaster management plan shall be prepared to meet any eventuality 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.	Complied with LDO fuel storage tanks two numbers are available with capacity 75 KL each with appropriate fire protection system. Mock drill being conducted as per schedule.
18	Regular monitoring of ground water in and around the ash pond area shall be carried out, records maintained and periodic reports shall be furnished to the regional office of this ministry.	Complied with Regular monitoring of ground water being done. Annexure-5
19	A greenbelt shall be developed around the plant periphery preferably with local species. The total area under greenbelt shall cover about 128 acres of project area.	Being Complied Green belt of 90 acres developed and Commercial process in progress for balance green belt development. Annexure-6




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20	First aid and sanitation arrangements shall be made from the drivers and the other contract workers during construction phase.	Complied with OHC and sanitation available for all employees and workers including drivers.
21	The location of colony should be shifted from the proposed location such that it does not fall in the predominant down wind direction.	Noted and will be complied
22	Leq of noise levels emanating from turbines 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 periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas.	Complied with Acoustic enclosure provided in TG area and noise level controlled. Ear plug is available for all employees and earmuff will be given as per requirement. Audiometry test is a part of premedical examination and Risk based medical examination
23	Regular monitoring of ground level concentration of So2, Nox,SPM,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. six monthly reports shall be submitted to the regional office of this ministry.	Being Complied with.
24	The project proponent shall advertise in atleast 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	Complied with.
25	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards	Complied with
26	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to this ministry/Regional office/CPCB/SPCB	Complied with Half yearly compliance being submitted




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27	Regional office of the ministry of environment and forest located at Bangalore 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.	Noted.
28	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.	Being Complied with.
29	The project authorities shall inform the regional office as well as the ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant	Noted.
30	Full cooperation shall be extended to the scientists/Officers from the ministry/regional office of the ministry at Bangalore /the CPCB/the SPCB who would be monitoring the compliance of environmental status.	Noted and will be complied with.

Compliance of Conditions in EC No. J-13011/18/2008 -IA.II (T) dated 03/06/2009 – 540 MW (4*135 MW) to 600 MW (2*150 Mw+1*300MW)

31	Land Requirement shall not exceed to 367.57 acres	Complied with.
32	Imported coal for 2*150 Mw units and blended coal in the ratio of 70 :30 (indigenous and imported) shall be used as fuel. The sulphur and ash content in coal shall not exceed 1.3% and 27% respectively. In case of variation of coal quality at the time of issue of LOA, a fresh reference shall be made to MOEF for suitable amendments to environmental clearance conditions wherever necessary.	Complied with.
33	Lime injection with efficiency of sulphur removal up to 90% shall be provided.	Complied with
34	Two stacks of 220 m height, one bi- flue and one single flue each shall be provided with continuous online monitoring equipments for Sox, Nox and particulate. Exit velocity of flue gases shall not be less than 25m/sec.	Complied with Twin flue stack of height 220 Mtr. for 2*150 MW and Twin flue stack of height 275 Mtr. for 2*350 MW has been provided.
35	100% fly ash and gypsum utilization from 4th year onward shall be ensured.	Being Complied with
36	An amount of Rs 2.5 crores as capital and Rs 40 lakh as	Noted and will be complied.



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	recurring expenditure for the activities shall be available as projects cost to be take up activities under CSR	
37	Regular monitoring of groundwater in and around the ash pond area including heavy metals (Hg,cr,as,Pb) shall be carried out, records maintained and six monthly reports shall be furnished to the regional office of this ministry. The data so obtained should be compared with the baseline data so as to ensure that the groundwater quality is not adversely affected due to the project	Complied with. Regular monitoring of ground water being done by third party
38	Regular monitoring of ground level concentration of So2, Nox,hg,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 data so monitored shall be put on the website of the company	Complied with
39	A copy of the clearance letter shall be sent by the proponent to concerned panchayat, zila parisad/Municipal corporation, urban local body and the local NGO is any, from whom suggestions/representations, if any received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent	Complied with.
40	The proponent shall upload the status of compliance of the stipulated EC conditions including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the regional office of MOEF, the respective zonal office of CPCB and the SPCB. the criteria pollutant levels namely, SPM,RSPM,So2,NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Being Complied with
41	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well by e mail) to the respective regional office of MoEF, the respective zonal office of CPCB and the SPCB.	Complied with. Six monthly compliance report being submitted.
Compliance of Conditions in EC No. J-13012/18/2008 -IA.II (T) dated 19/10/2009 -1*300 MW (Phase- II expansion)		
42	A bi- flue stack of 220 m height shall be provided with continuous online monitoring equipments for Sox,NOx,	Complied with Twin flue stack of height 220 Mtr. for




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	and particulate matter. Exit velocity of flue gases shall not be less than 25 m/sec, mercury emissions from stack shall also be monitored on periodic basis	2*150 MW and Twin flue stack of height 275 Mtr. for 2*350 MW has been provided.
43	High efficiency electrostatic precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/ Nm3.	Complied with. ESP with high voltage rectifier transformer with dust collection rapping system and each ESP has two streams with 5 fields in each stream and outlet emission less than 50 mg/nm3
44	Adequate dust extraction system such as cyclones/ bag filters and water spray systems in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided	Complied with. 16 water sprinklers available in coal yard area and healthiness checked everyday.
45	Fly ash shall be collected in dry form and storage facility (silos) shall be provided.100% fly ash utilization shall be ensured from 4th year onwards. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other heavy metals (as, hg, cr, Pb etc..) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.	Noted and will be complied
46	Ash pond shall be lined with HDP lining. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	Complied with
47	Closed cycle cooling system with natural draft cooling towers shall be provided. The effluents shall be treated as per the prescribed norms COC of 5 shall be adopted	Complied with.
48	No ground water shall be extracted for the project work at any stage	Noted and Complied
49	The treated effluents conforming to the prescribed standards only shall be recirculated and re used within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangements shall be made that effluents and storm water do not get mixed.	Complied with.
50	A sewage treatment plant shall be provided and the treated sewage shall be used for raising green belt/Plantation	Complied with STP of capacity 35 KLD is available in phase 1 and treated water used for green belt development.
51	Rain water harvesting should be adopted. Central groundwater authority/Board shall be consulted for finalization of appropriate rain water harvesting technology within a period of three months from the date of clearance and details shall be furnished	Will be Complied with
52	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 lay out shall be submitted to the ministry as well as to the	Complied with



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	regional office of the ministry at lucknow	
53	Storage facilities for auxiliary liquid fuel such as LDO and HF O/I SHS shall be made in the plant area in consultation with department of explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster management plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	Complied with LDO fuel storage tanks two numbers are available with capacity 75 KL each with appropriate fire protection system. Mock drill being conducted as per schedule.
54	Regular monitoring ground water in and around the ash pond area including heavy metals (Hg, Cr,As,Pb) shall be carried out, records maintained and six monthly reports shall be furnished to the regional office of this ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project	Complied with
55	A green belt of adequate width and density shall be developed around the plant periphery covering 1/3 of total area preferably with local species.	Will be Complied
56	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Complied with OHC and sanitation facility available for all employees and workers
57	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 Dba , 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 periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy / less noisy areas	Complied with Acoustic enclosure provided in TG area and noise level controlled. Ear plug is available for all employees and earmuff will be given as per requirement. Audiometry test is a part of premedical examination.
58	Regular monitoring of ground level concentration of So2, Nox, RSPM and Hg 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 data shall also be put on the website of the company	Complied with
59	A good action plan for R&R with package for the project affected persons be submitted and implemented as per prevalent R & R policy within three months from the date of issue of this letter.	Complied with
60	An amount of Rs 12.0 crores shall be earmarked as one-time capital cost for CSR programme. Subsequently a recurring expenditure of Rs 2.0 crore per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities	Will be Complied



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	to be undertaken shall be submitted within one month along with road map for implementation.	
61	Provision shall be made for the housing 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 project.	Being Complied with
62	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	Complied with
63	A copy of the clearance letter shall be sent by the proponent to the concerned panchayat, zilla parisad/Municipal corporation urban local body and the local NGO, if any from whom suggestions/representations, if any received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Complied with
64	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safe guards	Complied with
65	The proponent shall upload the status of compliance of the stipulated EC conditions including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the regional office of MOEF, the respective zonal office of CPCB and the SPCB. The criteria pollutant levels namely SPM, RSPM, SO ₂ , NO _x (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain	Complied with
66	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well by E-mail) to the respective regional office of MOEF, the respective zonal office of CPCB and the SPCB	Complied with
67	The environment statement for each financial year ending 31 st march in form -V as is mandated to be submitted by the project proponent to the concerned state pollution control board as prescribed under the	Being Complied with




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	environment (Protection) rules 1986 as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective regional offices of the ministry by E-mail.	
68	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safe guards to the ministry of environment and forests, its regional office, bangalore central pollution control board and state pollution control board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously sent the same by E-mail to the regional office, ministry of Environment and forests bangalore	Being Complied with
69	Regional office of the ministry of environment & forests located at bangalore will monitor the implementation of the stipulated conditions. A complete set of documents including environmental impact assessment report and environment management plan along with additional information submitted from time to time shall be forwarded to the regional office for their use during monitoring. Project proponent will up- load the compliance status in their website and update the same from time to time at least six monthly basis. Criteria pollutants levels including Nox (from stack and ambient air) shall be displayed at the main gate of the power plant	Noted and being Complied with
70	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	Noted and being Complied with
71	The project authorities shall inform the regional office as well as the ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work and commissioning of plant	Complied with
72	Full cooperation shall be extended to the scientists/officers from the ministry/regional office of the ministry at Bangalore/ CPCB/SPCB who would be monitoring the compliance of environmental status.	Noted
Compliance of Conditions in EC No. J-13012/18/2009 -IA.II (T) dated 25/02/2010 -1*300 MW (Phase- II expansion)		
73	Ash pond shall be lined with HDP/LDP or any other suitable impermeable lining material such that at any instances no leachate takes place. Adequate safety measures shall also be implemented to protect the ash	Being Complied with



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	dyke from getting breached.	
74	Closed cycle cooling system with natural draft cooling towers shall be provided. The effluent shall be treated as per prescribed norms. COC 1.6 shall be adopted	Being Complied with
75	Waste water effluents from the plant (including domestic waste water and blower blowdown) shall be treated to conform to the prescribed standards and shall be re-circulated and re-used within the plant. Discharge (if any) to the sea shall be done so after treatment and meeting the standard norm for discharge in to marine coastal areas. Arrangements shall be made that effluents and storm water don't get mixed.	Complied with
Compliance of Conditions in EC No. J-13012/18/2009 -IA.II (T) dated 20/08/2010, Phase I 2*150 MW + 1*300 MW and Phase II 1*300 MW		
76	A multi flue stack of 275 M height shall be provided with continuous online monitoring equipments for Sox, Nox, and Pm10 and Pm2.5. exit velocity of flue gases shall not be less than 25 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.	Complied with Twin flue stack of height 220 Mtr. For 2*150 MW and Twin flue stack of height 275 Mtr. for 2*350 MW has been provided.
Compliance of Conditions in EC No. J-13012/18/2009 -IA.II (T) dated 01/02/2011, 1*300 MW (Phase- II expansion)		
77	Closed cycle cooling system with induced draft cooling towers shall be provided. The effluent shall be treated as per prescribed norms. COC 1.6 shall be adopted.	Complied with.
Compliance of Conditions in EC No. J-13011/18/2008 -IA.II (T) dated 25/10/2013, 2* 150 MW +1* 350 MW (Phase- I)		
78	Scheme for harnessing solar power within the premises of the plant (particularly available roof tops) shall be critically examined and status of implementation shall be submitted	Will be Complied with. Commercial process in progress for Roof top and ground solar installation.
79	Waste water generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB/CPCB and no effluent under any circumstances whatsoever should be discharged into low lying area or into estuary	Complied with Separate stream of water line maintained and no effluent water discharged in low lying area or estuary
80	A long term study on radioactivity and heavy metals contents on coal to be used shall be carried out through a reputed institute. 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	Noted and will be complied
81	Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached	Complied with
82	It shall be ensured that in built monitoring mechanism for CSR streams identified is in place and annual social	Noted and being complied with




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	audit shall be got done nearest Government institute of repute in region. The project proponent shall also submit the status of implementation of the scheme from time to time	
83	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 conditions stipulated in this clearance letter and other applicable environmental laws and regulations	Corporate environment policy in place and being complied.
84	The status of compliance of the conditions stipulated in the Environmental clearance letter shall be hosted in the web site and update from time to time on six monthly basis. Criteria pollutants levels including Nox (From stack and ambient air) shall be displayed in the main gate of the power plant and in public domain.	Noted and will be complied with.
Compliance of Conditions in EC No. J-13012/18/2009 -IA.II (T) dated 25/10/2013, 1* 350 MW (Phase- II)		
85	Scheme for harnessing solar power within the premises of the plant (particularly available roof tops) shall be critically examined and status of implementation shall be submitted	Will be Complied with.
86	Waste water generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB/CPCB and no effluent under any circumstances whatsoever should be discharged into low lying area or into estuary	Complied with Separate stream of water line maintained, and no effluent water discharged in low lying area or estuary
87	A long term study on radioactivity and heavy metals contents on coal to be used shall be carried out through a reputed institute. 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	Noted and will be complied as per the applicability.
88	It shall be ensured that in built monitoring mechanism for CSR streams identified is in place and annual social audit shall be got done nearest Government institute of repute in region. The project proponent shall also submit the status of implementation of the scheme from time to time	Noted and will be complied with.
89	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 conditions stipulated in this clearance letter and other applicable environmental laws and regulations	Corporate environment policy in place and being complied.



Meenakshi Energy Limited
Thamminapatnam, Tirupati Dist

Electrostatic Precipitators Phase#1 :

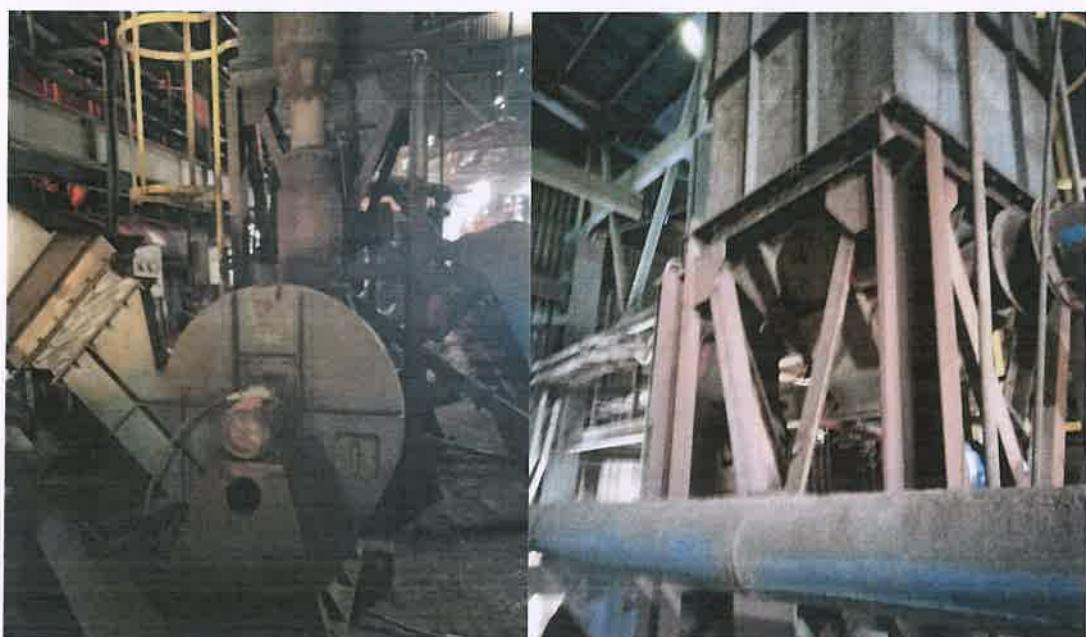
- ESP Two streams with 5 fields in each stream and less than 50mg/Nm³ outlet parameter and ESP Consisting of 20 ash unloading hoppers per unit in Phase#1. The Collecting efficiency is 99.94% based on inlet loading of 40mg/Nm³. ESP consists of Tubular air preheaters and Continuous environment monitoring system established. Fly ash evacuated through pneumatic conveying system up to fly ash silos. It is connected with twin flue stack of Height 225 meters and 275 meters.
Periodical inspection of ESP internals whenever required and necessary done.
Healthiness of collecting electrodes, discharge electrodes, its rapping mechanism, gearboxes/hoppers/chutes/scrapper conveyor rotary air lock valves and bottom hopper fluidizing system and root blowers etc., are maintained with expert crew.
Preventive maintenance of bag filters, solenoid valve, bag replacement, cleaning of bags, control system, PLC Logic setting and maintenance, electrical system and mechanical system are done in frequent intervals to maintain the healthiness of emission control system.



Water Sprinklers at Coal yard



Dust extraction system at coal handling area



Jem

SEWAGE TREATMENT PLANT @ Phase-I

Capacity: 35 KLD



SEWAGE TREATMENT PLANT @ Phase-II

Capacity: 350 KLD



Seenu

Sprinklers at Coal yard



Fire fighting system at coal yard



Devi

ANNEXURE - ~~III~~

TEST REPORT OF GROUND WATER SAMPLES

SOURCE OF COLLECTION	:	South East Side Ash Dyke Area
DATE OF COLLECTION OF SAMPLE	:	20-02-2025
DATE OF RECEIPT OF SAMPLE	:	22-02-2025
STARTING DATE OF ANALYSIS OF SAMPLE	:	24-02-2025
COMPLETION DATE OF ANALYSIS OF SAMPLE	:	27-02-2025

TEST REPORT

S.No	Parameter	Unit	Result	IS 10500:2012 Specifications
1.	Colour	Hazen	<1.0	5.0
2.	Odour	-	Agreeable	Agreeable
3.	Turbidity	NTU	0.57	1.0
4.	pH	-	7.67	6.5 – 8.5
5.	Total Dissolved Solids	mg/l	433	500
6.	Total Alkalinity as CaCO ₃	mg/l	175	200
7.	Total Hardness as CaCO ₃	mg/l	255*	200
8.	Calcium as Ca	mg/l	58.9	75
9.	Magnesium as Mg	mg/l	26.4	30
10.	Chlorides as Cl	mg/l	122	250
11.	Fluorides as F	mg/l	0.57	1.0
12.	Nitrates as NO ₃ ⁻	mg/l	7.41	45
13.	Sulphates as SO ₄	mg/l	48.6	200
14.	Iron as Fe	mg/l	0.15	0.3
15.	Free Residual Chlorine	mg/l	<0.1	0.2
16.	Phenolic Compounds as C ₆ H ₅ OH	mg/l	Nil	0.001
17.	Copper as Cu	mg/l	<0.01	0.05
18.	Manganese as Mn	mg/l	<0.01	0.1
19.	Zinc as Zn	mg/l	0.09	5.0
20.	Aluminum as Al	mg/l	<0.01	0.03
21.	Boron as B	mg/l	<0.1	0.5
22.	Sulphide as H ₂ S	mg/l	<0.01	0.05
23.	Ammonia as total ammonia-N	mg/l	<0.01	0.5
24.	Cadmium as Cd	mg/l	<0.001	0.003
25.	Cyanide as CN	mg/l	<0.01	0.05
26.	Lead as Pb	mg/l	<0.01	0.01
27.	Mercury as Hg	mg/l	<0.001	0.001
28.	Nickel as Ni	mg/l	<0.01	0.02
29.	Total Arsenic as As	mg/l	<0.01	0.01



30.	Total Chromium as Cr	mg/l	<0.01	0.05
31.	Polychlorinated biphenyls	mg/l	<0.0001	0.0005
32.	Polynuclear aromatic Hydrocarbons as PAH	mg/l	<0.0001	0.0001
33.	Pesticides	µg/l	Absent	Absent
MICROBIOLOGY:				
34.	<i>E. coli</i> forms	CFU/100mL	Not Detected	Shall not be detected in 100 ml
35.	<i>Total Coliforms</i>	CFU/100mL	Not Detected	Shall not be detected in 100 ml

Note: All the above parameters are tested as per APHA methods, 24th Edition, 2023.

Remarks: All the above results are exceeding the IS 10500:2012 Drinking Water Specifications. There are no specific standards for Ground Water. The above mentioned Standards are for Drinking Water.



ANNEXURE - 

TEST REPORT OF GROUND WATER SAMPLES

SOURCE OF COLLECTION	:	North East Side Ash Dyke Area
DATE OF COLLECTION OF SAMPLE	:	20-02-2025
DATE OF RECEIPT OF SAMPLE	:	22-02-2025
STARTING DATE OF ANALYSIS OF SAMPLE	:	24-02-2025
COMPLETION DATE OF ANALYSIS OF SAMPLE	:	27-02-2025

TEST REPORT

S.No	Parameter	Unit	Result	IS 10500:2012 Specifications
1.	Colour	Hazen	<1.0	5.0
2.	Odour	-	Agreeable	Agreeable
3.	Turbidity	NTU	0.77	1.0
4.	pH	-	7.53	6.5 – 8.5
5.	Total Dissolved Solids	mg/l	514*	500
6.	Total Alkalinity as CaCO ₃	mg/l	171	200
7.	Total Hardness as CaCO ₃	mg/l	208*	200
8.	Calcium as Ca	mg/l	42.5	75
9.	Magnesium as Mg	mg/l	24.9	30
10.	Chlorides as Cl	mg/l	167	250
11.	Fluorides as F	mg/l	0.72	1.0
12.	Nitrates as NO ₃ ⁻	mg/l	8.92	45
13.	Sulphates as SO ₄	mg/l	78.3	200
14.	Iron as Fe	mg/l	0.11	0.3
15.	Free Residual Chlorine	mg/l	<0.1	0.2
16.	Phenolic Compounds as C ₆ H ₅ OH	mg/l	Nil	0.001
17.	Copper as Cu	mg/l	<0.01	0.05
18.	Manganese as Mn	mg/l	<0.01	0.1
19.	Zinc as Zn	mg/l	0.12	5.0
20.	Aluminum as Al	mg/l	<0.01	0.03
21.	Boron as B	mg/l	<0.1	0.5
22.	Sulphide as H ₂ S	mg/l	<0.01	0.05
23.	Ammonia as total ammonia-N	mg/l	<0.01	0.5
24.	Cadmium as Cd	mg/l	<0.001	0.003
25.	Cyanide as CN	mg/l	<0.01	0.05
26.	Lead as Pb	mg/l	<0.01	0.01
27.	Mercury as Hg	mg/l	<0.001	0.001
28.	Nickel as Ni	mg/l	<0.01	0.02
29.	Total Arsenic as As	mg/l	<0.01	0.01



30.	Total Chromium as Cr	mg/l	<0.01	0.05
31.	Polychlorinated biphenyls	mg/l	<0.0001	0.0005
32.	Polynuclear aromatic Hydrocarbons as PAH	mg/l	<0.0001	0.0001
33.	Pesticides	µg/l	Absent	Absent
MICROBIOLOGY:				<1.0
34.	<i>E. coli</i> forms	CFU/100mL	Not Detected	Shall not be detected in 100 ml
35.	<i>Total Coliforms</i>	CFU/100mL	Not Detected	Shall not be detected in 100 ml

Note: All the above parameters are tested as per APHA methods, 24th Edition, 2023.

Remarks: All the above results, except * indicates parameters are exceeding the IS 10500:2012 Drinking Water Specifications. There are no specific standards for Ground Water. The above mentioned Standards are for Drinking Water.



Greenbelt in plant premises and coal yard surroundings

