

R. Kumar
26/05/23
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**SIX MONTHLY COMPLIANCE REPORT
OF
ENVIRONMENTAL CLEARANCE**

1980 (3x660) MW THERMAL POWER PLANT

at

**MIRCHWARA, DISTRICT LALITPUR
UTTAR PRADESH**

Submitted to:

**Regional Office (Central Zone), MoEF, Lucknow
Member Secretary, UPPCB, Lucknow
Ministry of Environment & Forests, New Delhi
RO Office, UPPCB, Jhansi (UP)**

Submitted By:

**Environment, Occupational Health & Safety Department
Lalitpur Power Generation Co. Ltd.
B-10, Bajaj Bhawan, Sector-3,
Noida- 201301, UP**

PERIOD: October- 2022 to March- 2023

Compliance status on Environmental Clearance

(3 X 660 MW Coal based Thermal Power Plant)

LETTER NO. J-13012/118/2009-IA. II (T) Dated 31.03.2011 and

Subsequent amendment in Environmental Clearance vide

LETTER NO. J-13012/118/2009-IA.II (T) Dated 20.05.2014

LETTER NO. J-13012/118/2009-IA.II (T) Dated 30.05.2016

SL. NO.	SPECIFIC CONDITIONS	
	DETAILS	ACTION DETAILS
1.	Vision document specifying prospective plan for the site shall be formulated and submitted to the Ministry within six months	Vision document specifying prospective plan for the site was formulated and submitted to ministry within due time.
2.	Coal transportation to plant site shall be by rail. The project proponent shall take up the matter with the Railways and shall submit action taken and implementation status to the Ministry from time to time.	Being Complied, The coal is being transported to plant site through rail line only.
3.	Existing de-generated water bodies (if any) in the study area shall be regenerated at the project proponent's expenses in consultation with the state Government.	Not Applicable There are no any existing degenerated water bodies in the study area.
4.	Hydrogeology of the area shall be reviewed annually from an institute/ organization of repute to assess impact of surface water and ground regime (especially around ash dyke). In case and deterioration is observed specific mitigation measures shall be undertaken and reports/ data of water quality monitored regularly and maintained shall be submitted to the Regional Office of the Ministry.	Hydro-geological study of the area has been carried out from a reputed agency. Water quality (ground and surface) is being monitored and submitted regularly to the Regional Office of the Ministry. The Hydrogeology report is attached as annexure-1 .
5.	Source of water for meeting the requirement during lean season shall be specified and submitted to the Regional Office of the Ministry within three months	We are having agreement with UP Irrigation to cater the water from Kachnauda Dam during lean season apart from Rajghat Dam.
6.	No ground water shall be extracted for use in operation of the power plant even in lean season.	Being Complied, Ground water is not being extracted for the use of power plant operation.
7.	No water bodies (including natural drainage system) in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.	Complied, No water bodies in the area have been disturbed due to activities associated with the setting up / operation of the power plant. "Our water management with sustenance of the sanctity of ground water and rivers

		in and around our plants has been appreciated by Ministry of Jal Shakti Department of Water Resources, Govt. of India with Awards and cash & citation in 2020"
8.	Minimum required environmental flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/Rivers (as applicable) even in lean season.	Not Applicable
9	Water requirement shall be restricted to 5000 cum/hr and COC of 5.0 shall be adopted	Being Complied, Our Water requirement is less than 5000 cum/hr and COC is >5.0.
10	Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted 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.	Being complied, Piezometers have been installed & quality monitoring particularly for heavy metals (Hg, Cr, As, Pb) around the ash pond is being carried out. Recent reports are enclosed as Annexure 2 . Comparison of data obtained with baseline data is also being done and report attached as annexure-3
11.	Monitoring surface water quality in the area 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 be undertaken.	Being complied, Surface water quality in the area is being monitored regularly and record is also maintained. Monitoring points are located as prescribed between the plant and drainage towards the direction of flow of ground water. The reports are enclosed as Annexure 4 .
12.	A well designed rainwater harvesting shall be put in place before commissioning of the plant. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology/design within a period of three months from the date of this clearance and details shall be furnished. The design of rain water harvesting shall comprise of rain water collection from the built up and open area in the plant premises. Action plan and road map for implementation shall be submitted to the Ministry within six months.	Complied; Rain Water Harvesting system/structures within the Plant have been constructed, comprising of: Check Dam - 1 No. Pond with Bore - 1 No. Nala revival - 880 mtrs Percolation well- 5 Nos. Bore well - 24 Nos.
13	Additional soil for leveling of the proposed site	Compiled,

	shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	During the construction phase, additional soil required for the leveling purpose had been generated within the site only to protect and improve the natural drainage system of the area.
14	Provision for installation of FGD shall be provided for future use.	Space is kept for the installation of FGD.
15	The project proponent shall undertake measures and ensure that no fugitive fly ash emissions take place at any point of time	Being complied, Fly ash silo are equipped with pneumatic chute to fill the ash in the Bulkheads as well as Silo area is isolated by the partition wall to control fugitive fly ash emission. Additionally, mobile water sprinklers are also deployed to suppress the occasional fugitive dust while movement of vehicles. The dust suppression and extraction equipment's are also installed to prevent the fugitive emission.
16	Stack of 275 m height shall be installed and provided with continuous online monitoring equipments for SO _x , NO _x and PM _{2.5} & PM ₁₀ . Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack may also monitored on periodic basis	Complied, A stack of 275 meters height has been constructed for better dispersion and continuous online monitoring equipments for SO _x , NO _x and PM are installed. Flue gas exit velocity is maintained as ≥ 22 m/sec.
17	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³ .	Complied, State of the art high efficiency Electrostatic Precipitators are installed to restrict particulate emissions below 50 mg/Nm ³ . Report is enclosed as Annexure 5 .
18	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, To control fugitive emission, rain gun type water sprinkling system has been installed in coal yard. Closed conveyor belts are provided. Cyclones followed by Dry fog dust suppression system are installed at each coal transfer points (JNT's). Additionally, mobile water sprinklers are deployed at CHP area to suppress fugitive dust while movement of vehicles.
19	Utilization of 100% Fly Ash generated shall be made from 4th year of operation. Status of implementation shall be reported to the Regional	Being complied, 100% utilization of Fly Ash has been achieved before 4 th year of the power

	Office of the Ministry from time to time.	plant operation. Status of implementation is submitted to the Regional Office of the Ministry.
20	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry 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.	Being complied, Fly ash is being collected in dry form at 6 fly ash storage silos. Unutilized fly ash along with bottom ash is being disposed of in ash pond in the form of slurry. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) are being monitored in the bottom ash and effluents emanating from the existing ash pond is being recycled using Ash Water Recirculation System (AWRS). Ash is being disposed as per the recent guidelines of MoEF & CC and CPCB. Recent analysis report is enclosed as Annexure-6.
21	Ash pond shall be lined with HDP/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, Well-designed Ash dyke with HDPE lining have been established as per guidelines of MoEF, CEA and CPCB. The lining is also covered with PCC. Regular monitoring also is being carried out.
22	Sulphur and ash contents in the imported coal to be used in the project shall not exceed 0.7 % and 10 % respectively at any given time. In case of variation of coal quality at any point of time fresh reference shall be made to the Ministry for suitable amendments to environmental clearance condition wherever necessary.	Environmental Compliance Conditions has been amended on dated 20 th May 2014 and 30 th May 2016 through which permission granted to use domestic coal for all 3 x 660 MW units.
23	Green Belt consisting of 3 tiers of plantations of native species around plant and at least 100 m width shall be raised. Wherever 100 m width is not feasible a 50 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not less than 2500 per ha with survival rate not less than 80 %.	Being Complied, Green belt development/ plantations are carried out extensively. Efforts are made to develop more greenery in and around plant premises. Full-fledged nursery has been developed for afforestation & horticultural activities. In last 6 years we have planted 4.75 lakh of saplings within the campus especially in dusty area like wagon Tripler, silos, etc, at local villages and 50000 plants are also adopted from irrigation department & regular care being taken. The green belt details are enclosed as annexure-7.
24	Atleast three nearest village shall be adopted and basic amenities like development of roads, drinking water supply, primary health centre, primary school etc shall be developed in co-	Being Complied Three nearest village viz. Mirchwara, Badagaon and Surikalan have already

28	It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time	Being complied, The annual social audit has been conducted and report submitted. For current year, annual report is enclosed as Annexure 8.
29.	The source of coal has been changed from imported to domestic coal, resulting in higher generation of fly ash there by the project proponent should ensure 100% fly ash utilization as per the Notification, 1999 and its amendments thereof. An action plan and its implementation status in compliance to the fly ash utilization shall be submitted to the Regional Office of MoEF on an annual basis.	Being complied, we have achieved the 100% Ash utilization before 4th year of operation.
30.	The coal transportation by road shall be through tarpaulin covered trucks for a maximum period of two years and thereafter shall be only through mechanically covered trucks.	Not Applicable, All the coal is transported through Rail rakes.
31.	Avenue plantation of 2/3 rows all along the road shall be carried out by the project proponent at its own expenses in consultation with the State Government Authorities.	Not Applicable, The coal is transported through Rail rakes only.
32.	Periodic maintenance of the road shall be done by the project proponent at its own expenses and shall also facilitate the traffic control on the road in consultation with the State Government Authorities.	Not Applicable We are not using the road transport. The coal is transported through Rail rakes only.
33.	Sulphur and ash contents in the domestic coal to be used in the project shall not exceed 0.5% and 33% at any given time. In case of variation of coal quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments to environmental clearance condition wherever necessary.	Being Complied Sulphur contents in coal <0.5%. Please refer notification S.O. 1561 (E) dated 21.5.2020 for use of unwashed coal irrespective of Ash content. Analysis report is attached as Annexure-9.
34.	A long term study of radio activity 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 radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.	Radioactivity in coal is being analyzed through the Laboratory of Bhabha Atomic Research Centre, Trombay, Mumbai. Thereafter, mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place. The recent report is enclosed as annexure-10.
35.	Harnessing solar power within the premises of	Solar lamps, lights & lanterns, etc. are

	the plant particularly at available roof tops shall be undertaken and status of implementation shall be submitted periodically to the Regional Office of the Ministry.	provided to the villagers. A consultant was engaged to prepare pre-feasibility reports particularly on harnessing solar power at available roof tops. Implementation is in process. A 5.76 KW solar panel is already installed on Canteen roof.
36.	Fugitive emissions shall be controlled to prevent impact on agricultural or non-agricultural land.	Complied, All the appropriate measures are in place to control the fugitive emissions to prevent impact on agricultural or non-agricultural land.
37.	Fly ash shall not be used for agricultural purpose. 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 PCB.	Noted for Compliance.
38.	Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary.	Being Complied, Green belt around the Ash pond and around the boundary are developed and maintained. The photographs are attached as annexure-11.
39.	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.	Environmental Management Cell is already in place since inception headed by the Chief Sustainability Officer reporting to Head of the organization. The detail of Environment Management Cell has already been submitted. The details off Environment Management Cell are attached as annexure-12.
Sl. No.	GENERAL CONDITIONS	
	Details	Action Details
1.	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed.	Treated effluent is conforming to the prescribed standards and is being recycled & reused gainfully in process within the Plant. Both storm water & effluent drains are separate and there are no chances of its mixing. Recent effluent analysis report is enclosed as annexure-13.
2.	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used	An appropriate capacity sewage treatment plant has already been installed

	for raising greenbelt/plantation.	and treated sewage is being utilized in horticulture/raising greenbelt & toiletry flush. The recent analysis report is enclosed as annexure-14 .
3.	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.	<p>Being Complied,</p> <p>All the standard safety practices are in place apart from effective control measures. Well-designed Fire hydrant system covering entire Plant is in place. Details are :</p> <p>Fire extinguishers- 1230 Nos., Fire Hydrant Point- 353 Nos., Hose reel- 55 Nos., Water monitor- 69 Nos., Fire tender- 2 Nos., Jet gun (CHP)-80 Nos., MVWS & HVWS- In cable gallery, conveyors & transformer area</p>
4.	Storage facilities for auxiliary liquid fuel such as LDO and/HFO/LSHS 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.	<p>Complied,</p> <p>The fuel LDO properly stored in minimum risk area & as per the norms fixed by the Chief Controller of Explosive. Disaster management plan and On-site emergency plan prepared & Mock drills are being conducted periodically to meet any eventuality in case of an accident taking place due to storage of oil.</p>
5.	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	<p>Complied,</p> <p>Presently the plant is under operation phase.</p>
6.	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dBA from source. 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.	<p>Being complied</p> <p>Noise level in the work zone is restricted to 85 dBA from source. Personnel protective equipment like earplugs/ear muffs are provided to people working in noisy area. Audiometric test are carried out periodically and records maintained for treatment for any hearing loss apart from shifting to non noisy/less noisy areas. Analysis report attached as Annexure-15.</p>
7.	Regular monitoring of ambient air ground level concentration of SO _x , NO _x , PM _{2.5} & PM ₁₀ 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	<p>Being complied,</p> <p>Regular monitoring of ambient air ground level concentration of SO_x, NO_x, PM 2.5 & PM 10 and Hg carried out in the impact zone on the locations and frequency as decided in consultation with SPCB. Reports are enclosed as Annexure-16.</p>

	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.	
8.	Provision shall be made for the housing of construction labour (as applicable) 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.	Complied, Temporary housing to construction labour was provided within the site with all necessary infrastructure and facilities. Temporary housing and facilities has already been removed after the completion of the project. Presently the plant is under operation phase.
9.	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, Environmental clearance detail had already been published in two local news papers for public information.
10.	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, 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, Copy of the Environment Clearance letter had also been sent to concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO. The copy of Environment Clearance is also available on the web site of the company.
11.	An Environmental Cell comprising of atleast one expert in environmental science / engineering, occupational health and social scientist, shall be created at the project site itself and shall be headed by an officer of appropriate superior and qualification. It shall be ensured that the Head of the Cell shall directly report to the head of the organization and he shall be held responsible for implementation of environmental regulations and social impact improvement/mitigation measures.	Complied, Environmental Management Cell is already in place headed by Chief Sustainability Officer reporting to Head of the organization. The details are enclosed as annexure-12 .
12.	The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.	Being complied, Report on status of compliance of conditions of Environmental Clearance is being submitted to Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB and reports are also web hosted on company web site. SPM, RSPM (PM2.5 & PM10), SOx,

	The criteria pollutant levels namely; SPM, RSPM (PM _{2.5} & PM ₁₀), SO _x , 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.	NO _x , (ambient levels as well as stack emissions) being arranged to be displayed at a suitable location near the main gate of the company.
13.	The environment statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State PCB as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.	Being complied, Environmental Statement for the each financial year ending 31 st March is being submitted in Form-V to State Pollution Control Board. Environmental Statement along with compliance status of Environmental Clearance is also put on company web site. Last Environmental statement compliance report was submitted vide letter dated 09.09.2022.
14.	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, 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 send the same by e-mail to the Regional Office, Ministry of Environment and Forests.	Being Complied, Six monthly compliance status reports along with data is being submitted regularly to UPPCB/CPCB/MoEF and also has been made available on the Website. Last EC compliance report was submitted on dated 05.11.22
15.	Regional Office of the Ministry of Environment & Forests 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 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 NO _x (from stack & ambient air) shall be displayed at the main gate of the power plant.	Environmental Impact Assessment Report and Environment Management Plan have already been submitted to Regional office of MoEF, Lucknow. Compliance status uploaded on company web site. Criteria pollutants levels including NO _x (from stack & ambient air) displayed at the main gate of the power plant.
16	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.	Being Complied, funds allocated for implementation of environmental protection measures are fully dedicated by utilizing for Environmental Protection