

Jaypee Bina Thermal Power Plant

Status of Compliance of Environmental Clearance (EC) granted vide letter no. I-13011/28/92-IA II (T) dated 23.04.1996

Period : October, 2014 to March, 2015

S.N.	Compliance Conditions	Status
1.	All the conditions stipulated by the Madhya Pradesh Pollution Control Board vide letter No 19980/TS/EZ/Sagar/MPPCB/95 dated 16 th October, 1995 and No 4209 /TS/EZ/MPPCB dated 14.03.96 should be strictly implemented.	All the conditions stipulated by MPPCB have been complied.
2.	Only washed coal with ash content not exceeding 30% should be used , Fly ash generated to the tune of 0.828 MT/day should be utilized in Fal-G-Cement , brick making etc. Full utilization should be ensured by end of 9 th year as proposed. Use of coal should be restricted to 8100 tonnes /day.	<p>The Condition of use of washed coal was waived off vide MOEF letter no J-13011/28/92-IA-II (T) dated 15.10.1997. Copy attached as Annexure-1. Following actions have been made to abide by MoEF notification No.2804(E) dated 3rd November, 2009 for fly ash utilization in phased manner and full utilization after 4 years:-</p> <ul style="list-style-type: none">(i) A fly ash brick/ block manufacturing unit has been installed, having capacity of 45Lac/pa bricks. The photograph of Fly Ash brick manufacturing unit is attached as Annexure - 2.(ii) MOU's have been signed with following industries/enterprises for supply of Fly Ash:<ul style="list-style-type: none">(a) M/s. Heidelberg Cement India Limited (Diamond Cements) to supply 1000MT/per day fly ash for utilization in cement.(b) M/s Shree Traders, Mandideep for supply of 300 MT per day Fly Ash for trading to bricks manufacturer and cement plant.(c) M/s Panna Lal Ahirwar, Khurai for supply of 50 MT per month of Fly Ash for manufacture of bricks.(d) M/s Richhariya Industries, Sagar for supply of 100 MT per month of Fly Ash for manufacture of bricks.(e) M/s Cenosphere India Pvt Ltd, Kolkata.(f) M/s ACC Ltd., Kymore Cement Works, Katni.(g) M/s KJS Cement Ltd, Maihar. <p>Following companies are also taking fly ash for utilization in cement manufacturing and MOU's are likely to be signed shortly for bulk supply of fly ash with these companies:</p>

		<p>1) Ultra Tech, Khor, Neemach (M.P.) 2) Birla Corporation Ltd., Chittorgarh (Rajasthan) 3) ACC Ltd. , Bundi, Lakheri, (Rajasthan) 4) Birla Cement, Satna (M.P.) 5) Wonder Cement Ltd., Chittorgarh (Rajasthan) 6) Narmada Cement Industries, Sagar (M.P.)-for brick 7) Satnaam Waheguru grinder, Sagar (M.P.)-for brick 8) Everest Industries Ltd., Kymore Katni (M.P.) 9) JAL Cement Division, Rewa (M.P.)</p> <p>(iii) Besides the above, a 2MTPA Cement Grinding Unit is planned within the premises to utilize the fly ash for which Public Hearing has been conducted on 30.10.2012 and final EIA-EMP report has been submitted to MOEF on 08, April 2013 for grant of environment clearance.</p> <p>(iv) Fly ash has also been utilized in internal road construction.</p> <p>(v) Managing Director, MP Road Development Corporation Limited, Bhopal has been requested for promotion of utilization of Fly Ash in Road Construction activities. Earlier, Collector, Sagar has also been requested for utilization of Fly Ash in civil works.</p> <p>Consumption of coal is less than permissible limit of 9000 MT/Day (This condition has been revised by MOEF vide letter no J-13011/28/97-IA-II (T) dated 17.11.1997). Copy attached as Annexure-3.</p>
3.	A closed cycle circulating water system with cooling towers should be incorporated in the project design and only make up water should be drawn.	Closed circuit Natural Draft Cooling towers have been provided and only makeup water is drawn. Photograph of cooling tower is attached as Annexure-4 .
4.	A barrage proposed across Betwa river from where a 4 km long pipe will be drawn be so designed as to restrict the pondage to 385 m and within the river banks to avoid acquisition of additional land.	The barrage has been designed to restrict the pondage to 385.75m and pondage is limited within the river banks.
5.	Continuous stack monitoring equipment for SPM, SO2 and NOX should be provided and data collected should be regularly analyzed for ascertaining the pollution levels within prescribed standards.	Continuous stack monitoring equipments for SPM, SO2 and NOX have been installed (Annexure-5). The Stack particulate monitoring data is given as Annexure-6 .

6.	<p>Land requirement should be restricted to 850 Ha with following break up;</p> <p>a) Power plant - 330 ha (262 ha for plant plus 68 ha for green belt)</p> <p>b) Ash disposal - 380 ha (306 ha ash pond plus 74 ha green belt)</p> <p>c) Township - 115 ha</p> <p>d) Rail , road , pipeline etc – 25 ha</p>	<p>MoEF vide letter no.J.13011/28/92-IA.II. dated 4-12-1996 restricted the land requirement to 726 ha (Annexure-7) with following break up :</p> <p>Power plant Area - 260 ha Ash Pond Area - 326 ha Other Area - 115 ha Pipeline etc. - 25 ha Total 726 ha</p>
7.	<p>Guard pond with two sections each of 3960 M3 capacity should be created for collection and treatment of effluents from various plant activities before its discharge to Betwa river as per the standards laid down by central pollution control board / Madhya Pradesh Pollution Control Board.</p>	<p>An Effluent Treatment Plant (ETP) along with guard pond has been commissioned to treat the effluents (Annexure-8). The ETP consists of:</p> <ul style="list-style-type: none"> • Collection cum equalization sump : 1680M³ • Flash mixer cum flocculation tank : 22.5 M³ • Tube settler chambers(2Nos.) : 316.88 M³ each • Guard pond(2Nos.) : 3600M³ each <p>Effluents from various sections such as Bottom ash over flow, SSF back wash, Oil-water separator, recycled water from ash pond, neutralized effluent from DM plant, boiler blow down are brought to the ETP. Arrangement for Acid / Alkali dosing is provided for neutralizing the treated effluent, if required before recycling for various uses. The effluent is treated to conform to the prescribed norms of CPCB/MPPCB. The treated effluent is recycled in the plant for reuse. The treated effluent is not discharged to Betwa river.</p>
8.	<p>For Socio-economic upliftment of local and affected person's facilities such as hospital, school etc. should be created at project site. Adequate employment facilities should be provided to affected people and if need be, training should be imparted to them in suitable fields.</p>	<p>A hospital with two doctors is already established for medical support to local people and employees. A Hindi medium school is also running for education of children of local people and employees. Renovation of a worship place of Jain Community has been done. Hand pumps for drinking water have been installed in Jodh village. Renovation of Govt. public road from Ambedkar Chauk, Bina to Gate No.3 BORL, Agasod taken up.</p> <p>To the extent possible, local people have been employed for various activities in the plant. Necessary training has been given to them before inducting them. To provide easy access for skill enhancement of the local people, an ITI has been constructed and academic session has started in the year 2014. A polytechnic school is also proposed under CSR activities.</p>

		The plant is participating in Sanjeevani Project of the state government for healthcare of malnourished children in the age group of 05 months to 05 years of 30 villages around the plant site in Bina Tehsil.										
9.	Noise level should be maintained within 85 dB (A) by proper maintenance of equipments and isolation etc. for people working in generator hall, ear plugs should be provided.	All equipments have been designed and fitted with adequate noise control measures so as to keep the noise level below 85 dB(A). Personal protective equipments like ear plug/ear muff are provided to workers who work in noisy area.										
10.	For easy access of the areas on northern side of plant, a corridor should be maintained between plant and proposed ash disposal area.	Has been complied.										
11.	Continuous monitoring of ground water should be undertaken in consultation with central ground water board. Data collection should be analyzed for ascertaining if leaching through ash pond is taking place affecting the water quality. Continuous monitoring of flue gases should also be ensured.	Ground water Monitoring has been done through MPPCB, Sagar. The ash pond has been lined with impervious HDPE liner and has been concreted to ensure that there is no leaching (Annexure-9). Continuous stack emission monitoring equipments have been installed.										
12.	For controlling NOX emission, low NOX burners and steam injection system should be provided.	Secondary over fire air burner have been provided to reduce NOx emission level.										
13.	Project authorities must create sufficient in house capability (Environmental Cell) supported by full-fledged laboratory to monitor and implement environment related issues.	Project has established a separate Environmental Management cell with qualified and experienced executives. A full-fledged laboratory has been set-up to monitor the Environmental parameters. Organogram of the Environment Management Cell is attached as Annexure-10 . List of equipments provided in the laboratory is attached as Annexure-11 .										
14.	Adequate financial provision, item wise and year wise, must be made for implementation of above stipulated conditions. Detail on these aspects should be submitted to the ministry by 31st May 1996.	Rs.265.98 crores have been provided for implementation of environmental protection measures such as ESP, ETP, dust separation and extraction system, ash effluent recycling system, on line stack monitoring and continuous AAQ monitoring equipments, plantation, etc as per details given below: <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Environment protection systems</u></th> <th style="text-align: right;"><u>Cost(Rs Crores)</u></th> </tr> </thead> <tbody> <tr> <td>ESP</td> <td style="text-align: right;">100.00</td> </tr> <tr> <td>Online Stack Monitoring system for PM 2.5,PM10, SO2,CO,NOX</td> <td style="text-align: right;">35.00</td> </tr> <tr> <td>Ash handling system</td> <td style="text-align: right;">37.00</td> </tr> <tr> <td>Effluent & Sewage treatment</td> <td style="text-align: right;">12.50</td> </tr> </tbody> </table>	<u>Environment protection systems</u>	<u>Cost(Rs Crores)</u>	ESP	100.00	Online Stack Monitoring system for PM 2.5,PM10, SO2,CO,NOX	35.00	Ash handling system	37.00	Effluent & Sewage treatment	12.50
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		Dust suppression in coal yard	0.23
		Ash Pond	80.00
		AAQ Monitoring Systems	0.25
		Green belt plantation	1.0
		Total	265.98
		Recurring expenditure towards environmental protection measures has been included in the Operational & Maintenance budget of the plant.	
15.	Full co-operation should be extended to Scientists/Officials from Regional Office Of Ministry at Bhopal who would be monitoring the compliance of environmental measures by providing environmental data, plans and related documents requested from time to time.	Full co-operation is extended to the visiting officials.	

Jaypee Bina Thermal Power Plant

Status of Compliance of Additional conditions stipulated in Environmental Clearance (EC)
vide Letter no J-13012/45/08-IA II (T) dated 05.08.2009

Period: October, 2014 to March, 2015.

S.N.	Compliance Conditions	Status
1.	A sewage treatment plant shall be provided and the treated sewage shall be used for raising green belt / plantation	A sewage treatment plant (STP) of 1000KLD has been installed and is in operation (Annexure-12). The STP comprises of:- <ul style="list-style-type: none">• Screen Bar,• Equalization tank,• Aeration tank,• Secondary clarifier and chlorination system. The treated sewage water is used for green belt development / plantation and sprinkling. The sludge of STP is used as manure in Greenbelt Development.
2.	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season.	Adequate safety measures such as water sprinklers have been provided in coal yard to check / minimize spontaneous fires in coal yard.
3.	Storage facilities for auxiliary liquid fuel such as LDO and HFO/LSHS shall be made in the plant area in consultation with the dep't of Explosive, Nagpur. Sulphur content in the liquid fuel shall 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.	Approval for storage of liquid fuel from Chief Controller of Explosive, Nagpur has already been obtained vide letter no P/HQ/MP/15/2848(P271672) dtd 13.03.2012. This has been renewed and is valid up to 31.12.2023. Copy of renewed approval is enclosed as Annexure-13 . The liquid fuel is sourced from Govt. owned agencies like IOCL/HPCL/BPCL etc. to ensure sulfur content within permissible limits of 0.5%. Disaster Management plan has been prepared which has been approved by Directorate, Industrial Health and Safety, MP, Indore vide letter no 15/32/B-2/MHC/VI/12/4201 dated 27.07.2012. Copy of the approval of On-Site Emergency Plan and Disaster Measure is attached as Annexure-14 . This plan will take care of any eventuality in case of any accident.

4	Adequate funds shall be allocated for undertaking CSR activities.	<p>A Separate fund has already been allocated for undertaking CSR activities. Fund allocation for various CSR activities is as below:</p> <ul style="list-style-type: none"> (1) One time expenditure : Rs 35 Crores (2) Recurring expenses is met from annual budget as per requirement. <p>Following CSR activities have been implemented for the benefits of surrounding area:</p> <ul style="list-style-type: none"> (a) Senior secondary school and Hospital (b) ITI (c) Renovation of 16 KM approach road (d) Deepening of Kanera Canal (e) Various community welfare activities such as medical camps, family planning camps, temple and school renovation etc. (f) Funds have been allocated for setting up Polytechnic, women/ adult education, forty bedded Hospital, Sanitation, Community center etc. (g) The plant is participating in Sanjeevani Project of the state government for healthcare of malnourished children in the age group of 05 months to 05 years of 30 villages around the plant site in Bina Tehsil.
5.	First aid and sanitation arrangement shall be made for the drivers and other contract workers during construction phase.	<p>A hospital with doctors & other paramedical facilities has been set up for the employees including drivers & contract workers.</p> <p>Sanitation facilities for contract workers and drivers have been provided.</p>
6.	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.	<p>Facilities for housing construction labours within the site with necessary arrangements such as Annapurna (Community Mess), drinking water, toilets and power connection etc. have been provided. Further, medical facilities including doctor and paramedical staff have been provided for the workers.</p> <p>Since both the units of the plant have been commissioned, the number of construction labour has been reduced substantially and only skeleton construction labours are working in the premises.</p>

7.	A copy of the compliance 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, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Already Complied.
8.	The proponent shall upload the status of compliance of the stipulated EC condition, 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 SPCB. The criteria pollutant levels namely; SPM, RSPM, SO2 and NOX (ambient levels as well as stack emissions) shall be monitored and displayed at a convenient location near main gate of the company in the public domain.	<p>The previous six monthly Compliance report of Environmental Clearance has been sent to the Regional Office of MoEF, Zonal Office CPCB at Bhopal and MPPCB vide letter no. JBTPP/EC Compl./2014-15/1751, dated. 11/11/2014. It has also been uploaded on Company website.</p> <p>Four no's of Continuous Ambient Air Quality Monitoring stations have been established in consultation with SPCB and displaying arrangement near main gate of the company in the public domain has been made. Photograph of AAQMS is attached as Annexure-15. Monitoring result of Ambient Air Quality is attached as Annexure-16.</p>
9.	The environmental 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 Pollution Control Board as prescribed under The Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MOEF by e-mail.	Environment Statement for the financial year April 2013 – March 2014 has been submitted on 10/09/2014 to MPPCB, Bhopal
10.	The project authorities shall inform the Regional Office as well as Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and dates of start of land development work and commissioning of plant.	<p>The financial closure has already been achieved in November 2009. Consent to establish has been granted by MPPCB vide letter no 64/TS/MPPCB/2011 dtd 3rd January 2011.</p> <p>Two units (2x250 MW) have been commissioned after obtaining Consent for Operation by MPPCB, vide letter No.1818/TS/MPPCB/2013 dated 04.03.2013 under Air Act,1981 and 1816/TS/MPPCB/2013 dated 04.03.2013 under Water Act,1974.</p> <p>The Consents under Water and Air Acts have been renewed by MPPCB vide letters dtd. 09 .07.2014 which is valid up to 31.03.2017.</p>