



# DB Power Limited

CIN: U40109MP2006PLC019008

Business Office : Village – Badadarha, Post – Kanwali, Dist – Jangir – Champa, Chhattisgarh, PIN – 495695  
Tel. : 07762-252507

No. DBPL/ENV/191

Date: 27.11.2020

To,

The Director  
Ministry of Environment and Forests, Climate Change  
Regional Office (WCZ), Ground Floor  
East Wing, New Secretariat Building,  
Civil Line, Nagpur-440001  
[ecompliance-cg@gov.in](mailto:ecompliance-cg@gov.in)  
[apcccentral-ngp-mef@gov.in](mailto:apcccentral-ngp-mef@gov.in)

Subject: Six Monthly Compliance Report for the period of April – September 2020

Ref: Environment Clearance granted by MOEF vide letter no. J-13012/79/2008-IA. II (T)  
Dated 16/09/2010 to our 2X600 MW Thermal Power Plant located at village –  
Badadarha, Taluka- Dabhra, Dist – Janjgir Champa, Chhattisgarh, DB Power Limited.

Dear Sir,

We are pleased to enclose herewith six monthly Compliance Status Report for the conditions stipulated in subject EC granted to our Thermal power plant located at Village - Badadarha, Taluk - Dabhra, District-Janjgir Champa, Chhattisgarh. The report has following enclosures –

1. CSR Report & Expenses Annexure IA & IB
2. FGD Phase Plan Annexure IIA & IIB
3. Fly Ash Utilization Annexure III
4. Env. Monitoring Report Annexure IV
5. Env. Statement Report Annexure V

Thanking you

Sincerely Yours,  
For M/s. DB Power Limited

  
Manoj Kumar Panda  
Head - Environment

Enclosures: as above

Copy to:

The Member Secretary, Chhattisgarh Environment Conservation Board,  
Paryavas Bhavan, North Block Sector-19, Atal Nagar, Raipur (C.G.) 492002

Regional Officer, Chhattisgarh Environment Conservation Board  
Vyapar Vihar, Near Pt. Dindayal Upadhyay Garden, Dist: Bilaspur (C.G.)

Registered Office:

Block 1A, 5TH Floor, Corporate Block, DB City Park, DB City Arera Mills, Opposite M. P. Nagar Zone – I, Bhopal – 462016 (M. P.)  
Tel. : +91-755-3988884 Fax: +91-755-267 5190

Status of compliance of conditions of Environment Clearance granted by MOEF vide letter no. J-13012/79/2008-IA.II (T) dated 16.09.2010 to M/S DB Power limited, 2X600 MW Thermal Power Plant located at Baradarha, Janjgir- Champa, Chhattisgarh  
(Period : April 2020 – September 2020)

**A. Specific Conditions**

S. No.	Stipulation	Compliance Status
i.	Vision document specifying prospective plan for the site shall be formulated and submitted to the Ministry within six months.	Complied.
ii.	Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5% and 34% respectively at any given time. In case of variation of coal quality at any point of time, fresh reference shall be made to MoEF for suitable amendments to environmental clearance condition wherever necessary.	Company is procuring coal from Coal India subsidiaries namely SECL & MCL. We are committed to comply MOEF&CC notification vide S.O. 1561(E) dated 21.05.2020.
iii.	A bi-flue stack of 275 m height shall be provided with continuous online monitoring equipments for SO <sub>x</sub> , NO <sub>x</sub> and Particulate Matter. Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack may also monitored on periodic basis.	A 275 meter tall twin flue stack has been constructed for effective dispersion of fumes aimed at proper dilution. We have installed continuous online monitoring system each attached to stack for SO <sub>x</sub> , NO <sub>x</sub> and Particulate Matter. The exit velocity of flue gas > 22 m/s.
iv.	Source sustainability study of water requirement shall be carried out by an institute of repute. The study shall also specify the source of water for meeting the requirement during lean season. The Report shall be submitted to the Regional Office of the Ministry within six months.	Complied.  Source sustainability study, once again carried out by ISM Dhanbad and same is submitted along with compliance report vide our Letter No. DBPL/ENV/41 Dated 28.05.2018.
v.	Hydro-geological study of the area shall be reviewed annually and report submitted to the Ministry.	No ground water extraction for any industrial & domestic purpose. Hydro-geological study being carried out. Report shall be submitted during filing of annual report.
vi.	No ground water shall be extracted for use in operation of the power plant even in Lean season. COC of 5.0 shall be adopted.	Ground water is not extracted for use. COC of > 5.0 is maintained in water circulated through the cooling tower during operation. This is aimed at water conservation.
vii.	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. 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.	Being complied.
viii.	Local employable youth shall be trained in skills relevant to the project for eventual employment in the project itself. The action taken report and details thereof to this effect shall be submitted to the Regional Office of the	The local youths are being trained in skills such as Plumbing, Masonry, Hand pump repair etc by DB Power CSR team. CSR Report indicating such

	Ministry and the State Govt. Dept concerned from time to time.	initiatives is attached as <b>Annexure I A</b> .
ix.	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	Complied
x.	Provision for installation of FGD shall be provided for future use. High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm <sup>3</sup> . 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.	<p>1. Adequate space for installation for Flue Gas De-Sulphurisation(FGD) Plant has been provided for future use. DBPL has awarded EPC work to meet the MOEF emission norms.</p> <p>Contract awarded to Chinese EPC contractor M/s TUNA Corporation in Sep 2019.</p> <p>Status of FGD implementation program and phase plan is attached as <b>Annexure IIA and IIB</b> submitted to CPCB &amp; CEA respectively.</p> <p>2. High Efficiency (99.94%) Electrostatic precipitator having 80 fields have been installed. This has kept particulate emission from stack &lt; 50 mg/Nm<sup>3</sup>.</p> <p>3. We have provided dust extraction system (DE) complete with filter bags, cage and hopper fitted to Crusher unit, transfer points (5,6,7 and 8) and bunkers. We have also provided dust suppression system (DS) at crusher house, TP-1,2,3 and 4 and also at MUH and ERH. The conveyors have been closed on all sides using color coated galvanized profile sheet (CCGP) to confine fugitive emissions. We have provided water cannons at strategic locations in coal handling. Water sprinkling using tankers is done for dust suppression on road. Ash transportation from generation point to silo and to ash pond is done using closed MS pipes.</p> <p>Above actions have immensely helped us contain fugitive emission and meet ambient air quality norms in the area.</p>
xi.	Utilization of 100% Fly Ash generated shall be made from 4th year of operation of the plant. Status of implementation shall be reported to the Regional Office of the Ministry from time to time. Fly ash shall be collected in dry form and storage facility (silos) shall be	<p>Fly ash generation &amp; utilization report of 2020-21 (April to Sep 20)is attached as <b>Annexure III</b>.</p> <p>Heavy metal monitoring is done</p>

	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.	periodically and analysis report is attached as <b>Annexure IV</b> .
xii.	Ash pond shall be lined with HDPE / LDPE lining or any other suitable impermeable media such that no leaching takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached. For disposal of Bottom Ash in abandoned mines (if proposed to be undertaken) it shall be ensured that the bottom and sides of the mined out areas are adequately lined with clay before Bottom Ash is tilled up. The project proponent shall inform the State Pollution Control Board well in advance before undertaking the activity.	Complied. LDPE liners used for lining of Ash pond.
xiii.	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 75 %.	The total plantation done in the area of 210 acre by ending FY 2020 is 2,10,300 (33% of total area of 630 acres).
xiv.	Two 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 coordination with the District administration. For the tribal families (if any) affected directly or indirectly by the proposed project, specific schemes for upliftment of their sustainable livelihood shall be prepared with time bound implementation and in built monitoring program me. The status of implementation shall be submitted to the Regional Office of the Ministry from time to time.	We have adopted 2 villages Tundri and Badadrha located near the plant as required. Basic amenities like development of roads, drinking water supply, health camps, infrastructure and other support in schools, etc are being done. <b>Annexure I A</b> .
xv.	An action plan for R&R (as applicable) 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.
xvi.	An amount of Rs 26.0 Crores shall be earmarked as one time capital cost for CSR program. Subsequently a recurring expenditure of Rs 5.2 Crores per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within one month along with road map for implementation.	Expenses incurred towards implementation of CSR program for the FY 20120-21 (till Sep-20) is attached as <b>Annexure 1B</b> .
xvii.	While identifying CSR programme the company shall conduct need based assessment for the nearby villages to study economic measures with action plan which can help in upliftment of poor Section of society. Income generating projects consistent with the traditional skills of the people besides development of fodder farm, fruit bearing orchards, vocational training etc. can form a part	CSR activities have been undertaken by DB Power Ltd. CSR activity is attached as <b>Annexure IA</b>

	of such program. Company shall provide separate budget for community development activities and income generating program. This will be in addition to vocational training for individuals imparted to take up self employment and jobs.	
xviii.	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.	Annual Social Audit is being done for the year 2020 and a report shall be submitted.

### B. General Conditions

S. No.	Stipulation	Compliance Status
i.	The treated effluents conforming to the prescribed standards only shall be re-circulated 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.	<ul style="list-style-type: none"> <li>● Treated water of ETP is reused green belt irrigation besides in ash handling plant.</li> <li>Ash Dyke overflow is treated and re-circulated to ash water sump for reuse.</li> <li>The plant is designed for zero discharge.</li> <li>● Process and storm water is kept separate.</li> </ul>
ii.	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt / Plantation.	Sewage Treatment Plants (15 in number) have been installed and commissioned. These are working fine. The treated water from STPs is used for green belt nursing.
iii.	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 issue of clearance and details shall be furnished to the Regional Office of the Ministry.	We have constructed 7 number of Rain water harvesting structures for the purpose. This is complete with receiving pond, gravel/sand bed filter besides bore well. The collected water is subjected to ground water recharging.
iv.	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 plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	Complied. We have provided a Fire Detection & Protection System (FDPS) including fire hydrants at all strategic points. The detail of same has already been submitted to your office.
v.	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.	A storage facility for LDO is in place after obtaining license from PESO. We are also owning onsite Disaster/emergency plan duly approved by Factory inspectorate for meeting emergencies.
vi.	Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around	The ground water monitoring is done at regular intervals and records are maintained.

	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.	
vii.	Monitoring 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 be undertaken.	The monitoring is done at regular intervals and records maintained. <b>Annexure IV</b>
viii.	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Complied
ix.	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 areas, 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.	<ul style="list-style-type: none"> <li>● Turbine is housed in a specially designed acoustic insulated box.</li> <li>● Compressors are kept in isolated closed chambers.</li> <li>● Boiler safety valves are fitted with silencers to contain noise.</li> <li>● In high noise areas PPE like Ear plugs / Ear Muffs are provided to keep impact minimum.</li> <li>● High noise area kept unmanned as far as practical.</li> </ul> <p>Above arrangements have helped keep noise level below 75 dB (A) and impact negligible..</p> <p>The ambient noise monitoring is conducted regularly and records maintained. See <b>Annexure IV</b></p>
x.	Regular monitoring of ground level concentration of SO <sub>2</sub> , NO <sub>x</sub> , PM <sub>2.5</sub> & PM <sub>10</sub> 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.	<p>Regular monitoring for AAQM is carried in the impact zone. Values are well within norms. The monitoring report is enclosed as <b>Annexure IV</b>.</p> <p>We have installed on line AAQMS for real time monitoring of ground level concentration. These are working fine.</p>
xi.	Provision shall be made for the housing of construction labor (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.
xii.	The project proponent shall advertise in at least two local newspapers widely circulated in the region around	Complied

	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, informs 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.	
xiii.	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
xiv.	An Environmental Cell shall be created at the project site itself and shall be headed by an officer of appropriate seniority and qualification. It shall be ensured that the head of the Cell shall directly report to the head of the organization.	Environmental Cell is in place and is suitably staffed. It is headed by a senior officer. He reports directly to the head of the organization.
xv.	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 (PM2.5 & PM10), SO2, NOX (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.
xvi.	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 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 environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.	Complied. Environment Statement submitted for FY 2019-20 vide letter dated 24.08.2020. <b>Annexure V</b>
xvii.	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 bye-mail to the Regional Office, Ministry of Environment and Forests.	Complied. The last 6 monthly compliance report to EC conditions was submitted via e mail to MOEF Regional office at Nagpur vide our Email dated 30.05.2020.
xviii.	Regional Office of the Ministry of Environment & Forests	Being Complied as and when required.

	<p>will monitor the implementation of the stipulated conditions.</p> <p>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 up-date the same from time to time at least six monthly basis. Criteria pollutants levels including NOX (Stack &amp; ambient air) shall be displayed at the main gate of the power plant.</p>													
xix.	<p>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.</p>	<p>The Expenditure incurred in environmental protection measures are – Capital Expenditure upto March 2018 = 1237.48 Crore Recurring Expenditure :</p> <table border="1" data-bbox="959 734 1474 1099"> <thead> <tr> <th>Department</th> <th>Expenses in FY 2018-19 (in Crore)</th> </tr> </thead> <tbody> <tr> <td>Environment</td> <td>1.12</td> </tr> <tr> <td>Horticulture</td> <td>0.01</td> </tr> <tr> <td>Flyash utilization</td> <td>19.6</td> </tr> <tr> <td>Ash Handling Plant</td> <td>0.19</td> </tr> <tr> <td><b>Total</b></td> <td><b>20.88</b></td> </tr> </tbody> </table>	Department	Expenses in FY 2018-19 (in Crore)	Environment	1.12	Horticulture	0.01	Flyash utilization	19.6	Ash Handling Plant	0.19	<b>Total</b>	<b>20.88</b>
Department	Expenses in FY 2018-19 (in Crore)													
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Flyash utilization	19.6													
Ash Handling Plant	0.19													
<b>Total</b>	<b>20.88</b>													
xx.	<p>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.</p>	<p>Complied. Informed vide letter dated 06.06.2011.</p>												
xxi.	<p>Full cooperation shall be extended to the Scientists / Officers from the Ministry / Regional Office of the Ministry at Bhopal / CPCB / SPCB who would be monitoring the compliance of environmental status.</p>	<p>Full cooperation will be extended to the Scientists / Officers from the Ministry / Regional Office of the Ministry at Bhopal / CPCB / SPCB as and when required.</p>												





***A Glimpses  
on  
CSR Activities  
(April to September-2020)***

***DB Power Ltd., Badadarha***

***Corporate Social Responsibility***



❖ Constructed 150 meter CC road along with 300 meter Drain in village Badadarha.



❖ Drilling of bore well & Installation of Hand pump in village Amapali & Kunkuni.



❖ Constructed Boundary wall (65 meter) of Govt. Hospital at Tundri.



❖ Constructed shed near cremation ground at Badadarha.



❖ Cleaning & repairing of kachcha canal for irrigation near bypass road at Badadarha.



❖ Construction of water tank (10000 ltr) is in progress near dussehra chowk at Tundri.



❖ Drilling of bore well at Tundri village.



❖ Construction of boundary wall of cremation shed at Badadarha.

❖ 3 nos. hume pipe provided to villagers rampur for water filling in bhadri pond at Rampur.



❖ Repairing of 15 Hand pump have been done at Badadarha, Rampur, Tundri & Kunkuni\* Repairing of 19 Motor pumps have been done at Badadarha Tundri & Rampur. \* Repairing of 28 Bio gas units at Badadarha & Rampur \* Repairing of street lights of 112 different poles at Badadarha & Rampur have been done. \* Repairing of 12 time Personal light connection of villagers at Badadarha & Rampur \*Repairing of 8 stand post at Badadarha.



❖ Writing work on wall of CSR activities- constructed CC Road & Drain Badadarha, Drilling of bore well & installation of hand pump at Amapali & Kunkuni, Boundary wall of Govt. primary health center at Tundri village.



❖ Ambulance referral services have been provided to 176 cases.



❖ 734 Cases attended in CHC.



❖ Sprinkling of water from tank at Main road Tundri to Kanwali & Tundri to By pass road Badadarha to avoid fugitive emission.



❖ Mask Made during COVID-19 ( 500 Mask provided to MLA Chandrapur, 1000 mask provided to Administration Dept. Raigarh.



❖ Provided grocery item (Rice 5 kg., Arhar dall 1kg, Potato 2 kg. Onions 2kg. Shop 2 nos.) to 12 families (9 Sondka & 3 Badadarha) who have completed quarantine period .

❖ Provided Rs. 500000/- District Administration Janjgir-champa, Rs. 100000/- to Tundri panchayat & Rs. 50000/- to Badadarha panchayat, 500 food packets to Ram Kumar Yadav (MLA, Chandarpur constituency), 164 Packets to Tahsildar Dabhara and kharsia respectively to help poor and helpless families during COVID-19



❖ Provided ventilator machine to District Govt. hospital Janjgir-Champa.



❖ Provided Ambulance facility to District Administration Raigarh for Covid-19.

❖ Provided 1 nos. AC to office, DIC Janjgir-Champa

❖ Grocery items provided to Rohit Kumar Yadav on the occasion of Daskarm at Badadarha.







**Fwd: IMPORTANT: Compliance of new emission norms for power plants notified on 07.12.2015 within the timelines specified in the directions issued by CPCB.**

From: **Manu Namboothiri** <[manu.namboothiri@dbpower.in](mailto:manu.namboothiri@dbpower.in)>

Date: Fri, 6 Nov 2020 at 08:33

Subject: Re: IMPORTANT: Compliance of new emission norms for power plants notified on 07.12.2015 within the timelines specified in the directions issued by CPCB.

To: Sanjeev Paliwal <[sanjeevpaliwal.cpcb@nic.in](mailto:sanjeevpaliwal.cpcb@nic.in)>

Cc: Balijepalli Subrahmanya Prasad <[bs.prasad@dbpower.in](mailto:bs.prasad@dbpower.in)>, Manoj Kumar Panda <[manojkumar.panda@dbpower.in](mailto:manojkumar.panda@dbpower.in)>, <[nazim.cpcb@nic.in](mailto:nazim.cpcb@nic.in)>

Sir,

As desired, Status of the compliance wrt Unit 2 and also Unit I, is given herein.

S. No.	Direction	Status
i	ESP up-gradation	Respective emission norm is Complied
ii	FGD installation	<ul style="list-style-type: none"> <li>• Contract awarded to Chinese EPC contractor M/s TUNA Corporation in Sep 2019.</li> <li>• Basic &amp; design engineering completed, detailed engineering under progress.</li> <li>• Site mobilization and work at site was to commence during 1st quarter 2020, however, primarily delayed due to Covid'19 impact while other factors such as delay in               <ul style="list-style-type: none"> <li>a) approval of loan by some of the Banks,</li> <li>(b) collection of backlog of receivables from Discoms (to in turn infuse equity) and</li> <li>(c) regulatory approval by CERC, have also contributed to the delay.award, on 26.09.2019.</li> </ul> </li> <li>• Completion of FGD project is 23 &amp; 26 months from the approval from CERC and financial closure, respectively for unit#1 &amp; 2.</li> <li>• Requested time extension due to Covid-19 pandemic impact.</li> </ul>

Likely Commissioning dates keeping the above are as below

Unit	Timeline as per phasing plan	Time line extension requested	Extension in months (from CEA / CPCB phasing]
Unit#1	30.06.2021	31.12.2022	18 Months
Unit#2	30.09.2020	30.09.2022	24 Months

iii	Installation of primary NOx control measures	During tendering, the Company had received only one proposal, from BHEL, for NOx control. As you are aware, the revised norm for NOx is 450 mg/Nm <sup>3</sup> , in place of the earlier limit of 300 mg/Nm <sup>3</sup> . As such, any decision on award for NOx control package has been reinitiated in line with the revised ceiling limits.	
iv	Compliance status of new norm for respective parameters	Complied	

2. Further, we wish to convey you that The Secretary, Ministry of Power conducted a one to one review of the status of compliance of New environment Norms, on 13th Oct 2020 and we were asked to send the revised timelines in order to complete FGD installation, for onward take up with MoEF. Enclosed herewith our letter to CEA / MoP in this regard.

We earnestly request CPCB to appropriately appraise the MoEFCC, the practical difficulties being faced by DB Power including the Covid-19 lockdown and may facilitate extension of 2 years in this regard.

Thanking You

Yours faithfully,

For DB Power Ltd

  
(Authorised signatory)

**Manu Krishnan Namboothiri,**

**Head (Strategy, Power sales & Corporate Relationships)**

Email: [manu.namboothiri@dbpower.in](mailto:manu.namboothiri@dbpower.in), Mob: +91 7506256244, Land Line: +91 22 7156 6011



# DB POWER LIMITED

CIN: U40109MP2006PLC019008

Corporate Office: Naman Corporate Link, 3rd Floor, C-31 G Block, Bandra Kurla Complex, Bandra (E) Mumbai-400051  
Tel No +91-22-3930 6000, Fax No +91-22-3930 6008

**DBPL/CEA/FGD/15102020****Date: 15.10.2020**

To,  
**Shri. Bikash Chandra Mallick,**  
Chief Engineer (TPR&M)  
Central Electricity Authority,  
R. K. Puram, Sector-1,  
New Delhi - 110 066  
E Mail: [cetprm-cea@gov.in](mailto:cetprm-cea@gov.in)

**Sub:** FGD implementation status of DB Power (2X600MW) post review meeting held by MoP on 13.10.2020 on the status/timelines of implementation of emission control equipment's in Thermal Power Plants - reg

**Ref:** VC conducted by MoP & CEA on 13<sup>th</sup> Oct 2020

Sir,

We write with reference to the captioned review meeting, held by Secretary [Power], regarding status of FGD implementation by Thermal Power Generators across the country, including Private, Central and State Genco's.

As advised during the meeting, we are pleased to submit the following information w.r.t our Power Project:

SI	Particulars	Response
1	Current status of FGD implementation	<p><b>Construction status:</b> Contract awarded to Chinese EPC contractor M/s TUNA Corporation in Sep 2019. Basic &amp; design engineering completed, detailed engineering under progress. Site mobilization and work at site was to commence during 1st quarter 2020, however, primarily delayed due to Covid'19 impact while other factors such as delay in (a) approval of loan by some of the Banks, (b) collection of backlog of receiveables from Discoms (to in turn infuse equity) and (c) regulatory approval by CERC, have also contributed to the delay.</p> <p><b>Status of Change in law approval by CERC:</b> Change in law against long term PPA petition filed in CERC [366/MP/2019 &amp; 377/MP/2019] in Oct'19. Final hearing was done on 27th Aug'20 and order awaited.</p>

**Registered Office:**

Office Block 1A, 5th Floor, Corporate Block, DB City Park, DB City Arera Hills, Opposite M. P. Nagar Zone – I, Bhopal – 462016 (M. P.)  
Tel: +91-755-398 888 Fax: +91-755-267 5190



# DB POWER LIMITED

CIN: U40109MP2006PLC019008

Corporate Office: Naman Corporate Link, 3rd Floor, C-31 G Block, Bandra Kurla Complex, Bandra (E) Mumbai-400051  
Tel No +91-22-3930 6000, Fax No +91-22-3930 6008

Sl	Particulars	Response												
		<p><b>Funding Status:</b> Lead lender (SBI) approved in Feb-20. Received sanctions from 54% of consortium lenders including lead lender for FGD total debt. Remaining sanctions are under progress. An early CERC order would facilitate draw down of debt fund.</p> <p><b>Infusion of Equity:</b> <u>Await collection of backlog of receivables from Discoms to infuse equity</u>, which is one of the pre-requisite to draw debt funds</p>												
2	Reasons for delay if any	<p>a) Delay in financial closure [pending to tie up 46% of the Debt, expected tie-up by Feb 21]</p> <p>b) Large dues with Discoms Viz Tangedco &amp; RUVNL [over Rs 1400 Crs. dues as on Oct 20] is delaying our ability to infuse equity, a pre-requisite to draw debt funds.</p> <p>c) Covid'19 lockdown and subsequent restrictions [site mobilisation was planned from April 20, which has been primarily delayed due to the Nationwide lock down imposed on 26<sup>th</sup> March 2020. Upon achieving Financial Closure (i.e. sanction of FGD debt by balance 46% lenders), CERC approval and realizing past dues from Discoms, it is proposed to release the advance to EPC contractor to mobilize at site to commence work</p> <p>Altogether, the revised 'Zero' date for the project [which is the date of advance as per the contract] is expected as Jan 2021. Based on the best effort construction and commissioning schedule as per the contract, 21 months &amp; 24 Months would be required for Unit II &amp; I, respectively.</p> <p><b>Unit I –By Dec 22 [24 Months]</b> <b>Unit II –By Sep 22 [21 Months]</b></p>												
3	Revised expected timelines for: a) NIT b) Award of contract c) Commissioning of FGD	<p>a) <b>Completed on 30.03.2018</b> b) <b>Completed on 26.09.2019</b> c) Commissioning dates as below</p> <table border="1"> <thead> <tr> <th>Unit</th> <th>Timeline as per phasing plan</th> <th>Time line extension requested</th> <th>Extension in months (from CEA phasing]</th> </tr> </thead> <tbody> <tr> <td>Unit#1</td> <td>30.06.2021</td> <td>31.12.2022</td> <td>18 Months</td> </tr> <tr> <td>Unit#2</td> <td>30.09.2020</td> <td>30.09.2022</td> <td>24 Months</td> </tr> </tbody> </table>	Unit	Timeline as per phasing plan	Time line extension requested	Extension in months (from CEA phasing]	Unit#1	30.06.2021	31.12.2022	18 Months	Unit#2	30.09.2020	30.09.2022	24 Months
Unit	Timeline as per phasing plan	Time line extension requested	Extension in months (from CEA phasing]											
Unit#1	30.06.2021	31.12.2022	18 Months											
Unit#2	30.09.2020	30.09.2022	24 Months											

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CIN: U40109MP2006PLC019008

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We earnestly request CEA/ MoP to suitably appraise MoEF on the practical difficulties being faced by DB Power as enumerated above including the Covid-19 lockdown and facilitate extension of 2 years in this regard.

Thanking You

Yours faithfully,

For **DB Power Ltd**

(Authorised signatory)

**Manu Krishnan Namboothiri,**

**Head (Strategy, Power sales & Corporate Relationships)**

Email: [manu.namboothiri@dbpower.in](mailto:manu.namboothiri@dbpower.in), Mob: +91 7506256244, Land Line: +91 22 7156 6011

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## Fly Ash Utilization Report

Month **April 2020 - September 2020**

S. No	Name of Industry & Address	Production Capacity	Solid Waste	Generation of Solid Waste / Flyash MT	Utilizaion in Cement Plant (MT)	Brick Manufacturing (MT)	Land filling (MT)	Ash Dyke Height Raising (MT)	Agriculture (MT)	Mine Filling (MT)	Other (MT)	Total utilizationion (MT)	Total Fly Ash Utilization (MT)	% Total Ash Utilization
1	M/s. DB Power Limited Badadarha, PO. Kanwali Teh Dabhra, Dist. Janjgir-Champa (CG) PIN – 495695	Unit 1 (1X600 MW)	Flyash	507586	229912	17639	275860	0	0	263794	3044	790249	<b>1105959</b>	<b>93</b>
2		Unit 2 (1X600 MW)		451268										
3		Unit 1 (1X600 MW)	Bottom Ash	123835	-	0	-	-	-	-	-	0		
4		Unit 2 (1X600 MW)		112696										
5		Pond Ash	-	-	170789	0	-	144921	-	315710				

## Environment Monitoring Report

S. No.	Monitoring Report	Page No.
1	Stack Emission Monitoring Report	1
2	Ambient Air Quality Monitoring Report - Plant	3
3	Ambient Air Quality Monitoring Report - Village	4
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5	Noise Level Monitoring Report - Village	6
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11	Waste Water Analysis Report at STP	17
12	Analysis Report of Piezometer sample around Ash Pond	19





Laboratory: Plot No. 24, 25, Narayan Vihar B Block, Jaipur (Raj.) 302035  
Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
MoEF & CC Recognised [ISO 9001 | OHSAS 45001]

## Test Report

Sample Number: VEL/ DBP/ST/01 Report No.: VEL/ST/2008040001  
Name & Address of Party: M/s DB Power Limited Format No.: 5.10 F-01  
Village- Badadhara, Janjgir – Champa, Party Reference No.: NIL  
Chhattisgarh Reporting Date: 06/08/2020  
Receipt Date: 04/08/2020

Sample Description : STACK EMISSION MONITORING

Sample Collected : Vardan EnviroLab Team  
Date of Sampling : 31/07/2020  
Stack Location : Stack Unit-1  
Air Pollution Control Device Used : ESP  
Sampling duration (Minutes) : 48  
Meteorological Condition : Clear Sky  
Stack Dia : 7.3 m  
Stack Height : 275 m  
Unit Load MW : 500  
Fuel Feed Rate TPH : 445  
Absolute Pressure (mmHg) : 756  
Instrument calibration status : Calibrated  
Ambient Temperature – Ta (°C) : 34.0  
Temperature of Stack Gases - Ts (°C) : 113.0  
Velocity of Stack Gases (m/sec.) : 14.28  
Flow rate of PM (LPM) : 21  
Sampling condition : Isokinetic  
Protocol used : IS-11255 & CPCB Guidelines

## RESULTS

S. No.	Parameter	Protocol	Units	Results	Limits as per MOEF Gazette Notification Dated 07.12.2015
1.	Particulate Matter (PM) (6% dry O <sub>2</sub> basis)	IS- 11255 (P-1); RA 2014	mg/Nm <sup>3</sup>	31.4	50
2.	Oxides of Nitrogen (as NO <sub>x</sub> ) (6% dry O <sub>2</sub> basis)	IS- 11255 (P- 7); RA- 2017	mg/Nm <sup>3</sup>	254.5	300
3.	Sulphur Dioxide (as SO <sub>2</sub> ) (6% dry O <sub>2</sub> basis)	IS- 11255(P- 2); RA 2014	mg/Nm <sup>3</sup>	1062.2	600
4.	Oxygen (O <sub>2</sub> )	IS 13270:1992/USEPA 3A	%	5.82	--
5.	Water Vapor	USEPA 4	%	3.15	--
6.	Total Mercury	US EPA Method No. 29	mg/Nm <sup>3</sup>	BDL (DL 0.005)	0.03
7.	CO (6% dry O <sub>2</sub> basis)	APHA III, METHOD 133: 2016	mg/Nm <sup>3</sup>	0.006	--

(Checked By) 

(Approved By) 



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Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
MoEF & CC Recognised | ISO 9001 | OHSAS 45001

## Test Report

Sample Number:	VEL/ DBP/ST/02	Report No.:	VEL/ST/2008040002
Name & Address of Party:	M/s DB Power Limited Village- Badadhara, Janjgir – Champa, Chhattisgarh	Format No.:	5.10 F-01
		Party Reference No.:	NIL
		Reporting Date:	06/08/2020
		Receipt Date:	04/08/2020
Sample Description :	STACK EMISSION MONITORING		

Sample Collected	:	VardanEnviroLab Team
Date of Sampling	:	31/07/2020
Stack Location	:	Stack Unit-2
Air Pollution Control Device Used	:	ESP
Sampling duration (Minutes)	:	52
Meteorological Condition	:	Clear Sky
Stack Dia	:	7.3 m
Stack Height	:	275 m
Unit Load MW	:	510
Fuel Feed Rate THP	:	405
Absolute Pressure (mmHg)	:	756
Instrument calibration status	:	Calibrated
Ambient Temperature – Ta (°C)	:	35.0
Temperature of Stack Gases - Ts (°C)	:	125.0
Velocity of Stack Gases (m/sec.)	:	13.40
Flow rate of PM (LPM)	:	19
Sampling condition	:	Isokinetic
Protocol used	:	IS-11255 & CPCB Guidelines

### RESULTS

S. No.	Parameter	Protocol	Units	Results	Limits as per MOEF Gazette Notification Dated 07.12.2015
1.	Particulate Matter (PM) (6% dry O <sub>2</sub> basis)	IS- 11255 (P-1); RA 2014	mg/Nm <sup>3</sup>	38.3	50
2.	Oxides of Nitrogen (as NO <sub>x</sub> ) (6% dry O <sub>2</sub> basis)	IS- 11255 (P- 7); RA- 2017	mg/Nm <sup>3</sup>	274.6	300
3.	Sulphur Dioxide (as SO <sub>2</sub> ) (6% dry O <sub>2</sub> basis)	IS- 11255(P- 2); RA 2014	mg/Nm <sup>3</sup>	1094.0	600
4.	Oxygen (O <sub>2</sub> )	IS 13270:1992/USEPA 3A	%	7.16	--
5.	Water Vapor	USEPA 4	%	2.98	--
6.	Total Mercury	US EPA Method No. 29	mg/Nm <sup>3</sup>	BDL (DL 0.005)	0.03
7.	CO (6% dry O <sub>2</sub> basis)	APHA III, METHOD 133: 2016	mg/Nm <sup>3</sup>	0.006	--

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 Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
 MoEF & CC Recognised ISO 9001 | OHSAS 45001

## Test Report

Sample Number: **VEL/DBP/A/01** Report No.: **VEL/AA/2008040001-04**  
 Name & address of the Party: **M/s DB Power Limited** Format No.: **5.10 F-01**  
**Village- Badadhara, Janjgir – Champa,** Party Reference No.: **---**  
**Chhattisgarh**  
 Protocol Used: **CPCB Guidelines/IS-5182** Reporting Date: **06/08/2020**  
 Parameter required: **As per Work Order** Receipt Date: **04/08/2020**  
 Sample Description : **Ambient Air Quality Monitoring** Sampled By: **VEL Representative**

### Ambient Air Quality Monitoring

S. No.	Location Name	Date of Monitoring	PM <sub>2.5</sub> (µg/m <sup>3</sup> )	PM <sub>10</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (µg/m <sup>3</sup> )	Pb(µg/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	B(a)P (ng/m <sup>3</sup> )	O <sub>3</sub> (µg/m <sup>3</sup> )	Ni, (ng/m <sup>3</sup> )	Arsenic (ng/m <sup>3</sup> )
			IS 5182(P-24), 2019	IS: 5182 (P-23), 2006 RA 2017	IS: 5182 (P-6), 2006 RA-2017	IS: 5182 (P-2), 2001 RA-2017	IS: 5182 (P-10), RA-2014	Methods of air sampling and analysis, 3rd ed., 1988, M. No. 401	IS: 5182 (P-22), 2004 Reaffirmed-2014	IS: 5182 (P-11), 2006 RA 2017	IS: 5182 (P-12), 2004 RA 2014	IS: 5182 (P-9), Reaffirmed-2014	USEPA compendium IO-3.2	Methods of air sampling and analysis, 3rd ed., 1988, M. No. 302
1	Near NDCT-1 (AAQMS #1)	31/07/2020	21.3	58.6	12.66	11.55	0.72	9.12	0.08	BDL (DL 1.0)	BDL (DL 0.5)	12.3	BDL (DL 5.0)	BDL (DL 1.0)
2	Near ASH Pond (AAQMS #2)	31/07/2020	32.5	68.3	14.35	12.53	0.95	8.29	0.09	BDL (DL 1.0)	BDL (DL 0.5)	11.6	BDL (DL 5.0)	BDL (DL 1.0)
3	Near Raw Water Pump House (AAQMS #3)	31/07/2020	27.5	54.5	11.76	7.26	0.45	7.69	0.05	BDL (DL 1.0)	BDL (DL 0.5)	10.9	BDL (DL 5.0)	BDL (DL 1.0)
4	Near Coal Yard (AAQMS #4)	31/07/2020	26.4	45.6	13.27	13.75	0.56	7.45	0.06	BDL (DL 1.0)	BDL (DL 0.5)	8.7	BDL (DL 5.0)	BDL (DL 1.0)
Limits as per NAAQS, Schedule-VII			60	100	80	80	4	400	1	05	01	180	20	6

\*NAAQS – National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

\*DL=Detectable limit

  
(Checked By)

  
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Page of 1

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Laboratory: Plot No. 24, 25, Narayan Vihar B Block, Jaipur (Raj.) 302035  
Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
MoEF & CC Recognised | ISO 9001 | OHSAS 45001

## Test Report

Sample Number:	<b>VEL/DBP/A/02</b>	Report No.:	<b>VEL/AA/2008040005-08</b>
Name & address of the Party:	<b>M/s DB Power Limited Village- Badadhara, Janjgir – Champa, Chhattisgarh</b>	Format No.:	<b>5.10 F-01</b>
Protocol Used:	<b>CPCB Guidelines/IS-5182</b>	Party Reference No.:	<b>---</b>
Parameter required:	<b>As per Work Order</b>	Reporting Date:	<b>06/08/2020</b>
Sample Description :	<b>Ambient Air Quality Monitoring</b>	Receipt Date:	<b>04/08/2020</b>
		Sampled By:	<b>VEL Representative</b>

### Ambient Air Quality Monitoring

S. No.	Location Name	Date of Monitoring	PM <sub>2.5</sub> (µg/m <sup>3</sup> )	PM <sub>10</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (µg/m <sup>3</sup> )	Pb(µg/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	B(a)P (ng/m <sup>3</sup> )	O <sub>3</sub> (µg/m <sup>3</sup> )	Ni, (ng/m <sup>3</sup> )	Arsenic (ng/m <sup>3</sup> )
			IS 5182(P-24): 2019	IS: 5182 (P-23), 2006 RA 2017	IS: 5182 (P-6), 2006 RA-2017	IS: 5182 (P-2), 2001 RA-2017	IS: 5182 (P-10), RA-2014	Methods of air sampling and analysis, 3rd ed., 1988, M. No. 401	IS: 5182 (P-22), 2004 Reaffirmed-2014	IS: 5182 (P-11), 2006 RA 2017	IS: 5182 (P-12), 2004 RA 2014	IS: 5182 (P-9), Reaffirmed-2014	USEPA compendium IO-3.2	Methods of air sampling and analysis, 3rd ed., 1988, M. No. 302
1.	Village-Badadhara	31/07/2020	35.3	62.3	13.25	11.70	0.56	8.94	0.10	BDL (DL 1.0)	BDL (DL0.5)	12.35	BDL (DL5.0)	BDL (DL1.0)
2.	Village-Tundri	31/07/2020	29.5	56.9	16.10	10.38	0.76	9.95	0.08	BDL (DL 1.0)	BDL (DL0.5)	14.65	BDL (DL5.0)	BDL (DL1.0)
3.	Village-Rampur	31/07/2020	30.6	51.6	12.66	12.77	0.85	8.43	0.05	BDL (DL 1.0)	BDL (DL0.5)	9.56	BDL (DL5.0)	BDL (DL1.0)
4.	Village-Kanwali	31/07/2020	34.6	59.4	16.32	13.26	0.67	9.17	0.09	BDL (DL 1.0)	BDL (DL0.5)	11.43	BDL (DL5.0)	BDL (DL1.0)
Limits as per NAAQS, Schedule-VII			60	100	80	80	4	400	1	05	01	180	20	6

\*NAAQS – National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

\*DL=Detectable limit

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Laboratory: Plot No. 24, 25, Narayan Vihar B Block, Jaipur (Raj.) 302035  
Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
MoEF & CC Recognised (ISO 9001 | OHSAS 45001)

## Test Report

Sample Number: **VEL/DBP/AN/01** Report No.: **VEL/N/2008040001-04**  
Name & Address of the Project: **M/s DB Power Limited** Format No.: **5.10 F-01**  
**Village- Badadhara, Janjgir – Champa, Chhattisgarh** Party Reference No.: **--**  
Reporting Date: **06/08/2020**  
Sample Description: **Ambient Noise Level Monitoring** Receipt Date: **04/08/2020**  
Sample Collected by: **Vardan EnviroLab Team** Protocol Used: **IS: 9989/CPCB Guidelines**

### Ambient Noise Level Monitoring Results

SL.No.	Locations	Monitoring Date	Leq. In dB (A)	
			Day Time Noise Level (6:00AM-10:00PM)	Night Time Noise Level (10:00PM-6:00AM)
1.	Near NDCT-1 (AAQMS #1)	30-31/07/2020	63.5	53.6
2.	Near Ash Pond (AAQMS #2)	30-31/07/2020	55.8	49.3
3.	Near Raw Water Pump House (AAQMS #3)	30-31/07/2020	56.2	50.5
4.	Near Coal Yard (AAQMS #4)	30-31/07/2020	57.6	53.2
CPCB Limits in dB(A) Leq (Commercial Area)			65.00	55.00
Industrial Area			75.00	70.00
Residential Area			55.00	45.00
Silence Zone			50.00	40.00

  
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Page 1 of 1

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Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
MoEF & CC Recognised | ISO 9001 | OHSAS 45001

## Test Report

Sample Number:	VEL/DBP/AN/02	Report No.:	VEL/N/2008040005-08
Name & Address of the Project:	M/s DB Power Limited Village- Badadhara, Janjgir – Champa, Chhattisgarh	Format No.:	5.10 F-01
Sample Description:	Ambient Noise Level Monitoring	Party Reference No.:	--
Sample Collected by:	Vardan EnviroLab Team	Reporting Date:	06/08/2020
		Receipt Date:	04/08/2020
		Protocol Used:	IS: 9989/CPCB Guidelines

### Ambient Noise Level Monitoring Results

SL.No.	Locations	Monitoring Date	Leq. In dB (A)	
			Day Time Noise Level (6:00AM-10:00PM)	Night Time Noise Level (10:00PM-6:00AM)
1.	Village - Badadhara	30-31/07/2020	54.1	42.8
2.	Village - Rampur	30-31/07/2020	52.8	41.6
3.	Village - Kanwali	30-31/07/2020	53.2	42.4
4.	Village - Tundri	30-31/07/2020	51.6	41.3
CPCB Limits in dB(A) Leq (Commercial Area)			65.00	55.00
Industrial Area			75.00	70.00
Residential Area			55.00	45.00
Silence Zone			50.00	40.00

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Page 1 of 1

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Laboratory: Plot No. 24, 25, Narayan Vihar B Block, Jaipur (Raj.) 302035  
Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
MoEF & CC Recognised | ISO 9001 | OHSAS 45001

## Test Report

Sample Number: **VEL/DBP/WN/01** Report No.: **VEL/WN/2008040001-10**  
Name & Address of the Project: **M/s DB Power Limited** Format No.: **5.10 F-01**  
**Village- Badadhara, Janjgir – Champa, Chhattisgarh** Party Reference No.: **--**  
Reporting Date: **06/08/2020**  
Sample Description: **Work Zone Noise Level Monitoring** Receipt Date: **04/08/2020**  
Sample Collected by: **Vardan EnviroLab Team** Protocol Used: **IS: 9989/CPCB Guidelines**

### Work Zone Noise Level Monitoring Results

Sl No.	Locations	Monitoring Date	Leq. In dB (A)
1.	BFP, Unit #1	31/07/2020	80.2
2.	BFP, Unit #2	31/07/2020	80.6
3.	TG, Unit #1	31/07/2020	79.5
4.	TG, Unit #2	31/07/2020	78.6
5.	DM Plant	31/07/2020	76.9
6.	Compressor House	31/07/2020	80.5
7.	TAC Building	31/07/2020	79.4
8.	CHP Crusher	31/07/2020	79.1
9.	MUH Area	31/07/2020	76.5
10.	ASH Silo Area	31/07/2020	77.4
Limits			85.0

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(Approved By)



Page 1 of 1

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Laboratory: Plot No. 24, 25, Narayan Vihar B Block, Jaipur (Raj.) 302035  
Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
MoEF & CC Recognised | ISO 9001 | OHSAS 45001

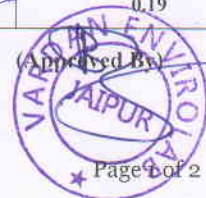
## Test Report

Sample Number:	VEL/DBP/SW/01-03	Report No.:	VEL/SW/2008040001-03
Name & Address of the Party:	M/s DB Power Limited Village- Badadhara, Janjgir – Champa, Chhattisgarh	Format No.:	5.10 F-01
Sample Description:	SURFACE WATER SAMPLE	Party Reference No.:	NIL
Sample Collected by:	Vardan EnviroLab Representative	Reporting Date:	06/08/2020
Preservation:	Refrigerated	Period of Analysis:	04/08/2020 to 06/08/2020
Parameter Required:	As per IS 10500-2012	Receipt Date:	04/08/2020
Sampling and Analysis Protocol:	IS-10500-2012, APHA 23rd Edition 2017	Sampling Date:	31/07/2020
		Sampling Quantity:	2.0 Ltr
		Sampling Type:	Grab

## Test Results

S. No.	Parameter	Unit	Village Badadharha Pond	Village Tundri Pond	Village Rampur Pond
1.	pH (at 25 °C)	--	7.41	7.32	7.28
2.	Temperature	°C	25.8	25.8	25.8
3.	Colour	Hazen	*BDL (**DL 5)	*BDL (**DL 5)	*BDL (**DL 5)
4.	Turbidity	NTU	1.0	1.2	1.8
5.	Odour	--	Agreeable	Agreeable	Agreeable
6.	Taste	--	Agreeable	Agreeable	Agreeable
7.	Total Hardness as CaCO3	mg/l	142.1	152.4	138.02
8.	Calcium as Ca	mg/l	58.6	51.2	53.7
9.	Alkalinity as CaCO3	mg/l	90.6	98.5	82.7
10.	Chloride as Cl	mg/l	61.93	81.2	73.1
11.	Residual free Chlorine	mg/l	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)
12.	Chemical Oxygen Demand	mg/l	14.9	9.9	14.8
13.	BOD (3 Days at 27 °C)	mg/l	*BDL (**DL 2.0)	*BDL (**DL 2.0)	*BDL (**DL 2.0)
14.	Total Suspends Solid	mg/l	8.5	7.2	12.3
15.	Cyanide as CN	mg/l	*BDL (**DL 0.05)	*BDL (**DL 0.05)	*BDL (**DL 0.05)
16.	Magnesium as Mg	mg/l	*BDL (**DL 2.0)	6.01	*BDL (**DL 2.0)
17.	Total Dissolved Solids	mg/l	210.0	246.0	204.0
18.	Sulphate as SO4	mg/l	*BDL (**DL 5.0)	*BDL (**DL 5.0)	*BDL (**DL 5.0)
19.	Fluoride as F	mg/l	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)
20.	Nitrate as NO3	mg/l	0.42	0.35	0.28
21.	Iron as Fe	mg/l	0.14	0.21	0.19

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Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
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## Test Report

Sample Number: VEL/DBP/SW/01-03			Report No.: VEL/SW/2008040001-03		
22.	Aluminium as Al	mg/l	*BDL(**DL 0.03)	*BDL(**DL 0.03)	*BDL(**DL 0.03)
23.	Boron	mg/l	*BDL(**DL 0.2)	*BDL(**DL 0.2)	*BDL(**DL 0.2)
24.	Total Chromium as Cr	mg/l	*BDL(**DL 0.02)	*BDL(**DL 0.02)	*BDL(**DL 0.02)
25.	Phenolic Compounds	mg/l	*BDL(**DL 0.001)	*BDL(**DL 0.001)	*BDL(**DL 0.001)
26.	Anionic Detergents as MBAS	mg/l	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)
27.	Zinc as Zn	mg/l	*BDL(**DL 0.20)	*BDL(**DL 0.20)	*BDL(**DL 0.20)
28.	Copper as Cu	mg/l	*BDL(**DL 0.02)	*BDL(**DL 0.02)	*BDL(**DL 0.02)
29.	Manganese as Mn	mg/l	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)
30.	Cadmium as Cd	mg/l	*BDL(**DL 0.002)	*BDL(**DL 0.002)	*BDL(**DL 0.002)
31.	Lead as Pb	mg/l	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
32.	Selenium as Se	mg/l	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
33.	Arsenic as As	mg/l	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
34.	Mercury as Hg	mg/l	*BDL (**DL 0.0005)	*BDL (**DL 0.0005)	*BDL (**DL 0.0005)
35.	Total Coliform	MPN/100ml	135	110	96
36.	E Coli	MPN/100ml	Absent	Absent	Absent

Note: - \*BDL-Below Detection Limit, \*\*DL- Detection Limit

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 Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
 MoEF & CC Recognised (ISO 9001 | OHSAS 45001)

## Test Report

Sample Number:	VEL/DBP/SW/04-06	Report No.:	VEL/SW/2008040004-06
Name & Address of the Party:	M/s DB Power Limited Village- Badadhara, Janjgir – Champa, Chhattisgarh	Format No.:	5.10 F-01
Sample Description:	SURFACE WATER SAMPLE	Party Reference No.:	NIL
Sample Collected by:	Vardan EnviroLab Representative	Reporting Date:	06/08/2020
Preservation:	Refrigerated	Period of Analysis:	04/08/2020 to 06/08/2020
Parameter Required:	As per IS 10500-2012	Receipt Date:	04/08/2020
Sampling and Analysis Protocol:	IS-10500-2012, APHA 23rd Edition 2017	Sampling Date:	31/07/2020
		Sampling Quantity:	2.0 Ltr
		Sampling Type:	Grab

## Test Results

S. No.	Parameter	Unit	Village Kanwali Pond	Mand River Near Tarapur	Nala Near AWRS
1.	pH (at 25 °C)	--	7.22	7.16	7.34
2.	Temperature	°C	25.8	25.8	25.8
3.	Colour	Hazen	*BDL (**DL 5)	*BDL (**DL 5)	*BDL (**DL 5)
4.	Turbidity	NTU	1.5	1.1	1.6
5.	Odour	--	Agreeable	Agreeable	Agreeable
6.	Taste	--	Agreeable	Agreeable	Agreeable
7.	Total Hardness as CaCO <sub>3</sub>	mg/l	164.8	146.3	173.04
8.	Calcium as Ca	mg/l	61.1	58.6	60.3
9.	Alkalinity as CaCO <sub>3</sub>	mg/l	90.6	70.9	86.7
10.	Chloride as Cl	mg/l	61.9	54.8	51.8
11.	Residual free Chlorine	mg/l	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)
12.	Chemical Oxygen Demand	mg/l	9.9	14.8	4.9
13.	BOD (3 Days at 27 °C)	mg/l	*BDL (**DL 2.0)	*BDL (**DL 2.0)	*BDL (**DL 2.0)
14.	Total Suspends Solid	mg/l	6.0	12.3	5.6
15.	Cyanide as CN	mg/l	*BDL (**DL 0.05)	*BDL (**DL 0.05)	*BDL (**DL 0.05)
16.	Magnesium as Mg	mg/l	3.0	*BDL (**DL 2.0)	5.51
17.	Total Dissolved Solids	mg/l	196.0	182.0	205.0
18.	Sulphate as SO <sub>4</sub>	mg/l	*BDL (**DL 5.0)	*BDL (**DL 5.0)	*BDL (**DL 5.0)
19.	Fluoride as F	mg/l	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)
20.	Nitrate as NO <sub>3</sub>	mg/l	0.42	0.56	0.49

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## Test Report

Sample Number: VEL/DBP/SW/04-06			Report No.: VEL/SW/2008040004-06		
21.	Iron as Fe	mg/l	0.19	0.16	0.15
22.	Aluminium as Al	mg/l	*BDL(**DL 0.03)	*BDL(**DL 0.03)	*BDL(**DL 0.03)
23.	Boron	mg/l	*BDL(**DL 0.2)	*BDL(**DL 0.2)	*BDL(**DL 0.2)
24.	Total Chromium as Cr	mg/l	*BDL(**DL 0.02)	*BDL(**DL 0.02)	*BDL(**DL 0.02)
25.	Phenolic Compounds	mg/l	*BDL(**DL 0.001)	*BDL(**DL 0.001)	*BDL(**DL 0.001)
26.	Anionic Detergents as MBAS	mg/l	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)
27.	Zinc as Zn	mg/l	*BDL(**DL 0.20)	*BDL(**DL 0.20)	*BDL(**DL 0.20)
28.	Copper as Cu	mg/l	*BDL(**DL 0.02)	*BDL(**DL 0.02)	*BDL(**DL 0.02)
29.	Manganese as Mn	mg/l	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)
30.	Cadmium as Cd	mg/l	*BDL(**DL 0.002)	*BDL(**DL 0.002)	*BDL(**DL 0.002)
31.	Lead as Pb	mg/l	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
32.	Selenium as Se	mg/l	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
33.	Arsenic as As	mg/l	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
34.	Mercury as Hg	mg/l	*BDL (**DL 0.0005)	*BDL (**DL 0.0005)	*BDL (**DL 0.0005)
35.	Total Coliform	MPN/100ml	76	84	93
36.	E Coli	MPN/100ml	Absent	Absent	Absent

Note: - \*BDL-Below Detection Limit, \*\*DL- Detection Limit

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## Test Report

Sample Number:	VEL/DBP/W/01-04	Report No.:	VEL/W/2008040001-04
Name & Address of the Party:	M/s DB Power Limited Village- Badadhara, Janjgir – Champa, Chhattisgarh	Format No.:	5.10 F-01
Sample Description:	DRINKING WATER SAMPLE	Party Reference No.:	NIL
Sample Collected by:	Vardan EnviroLab Representative	Reporting Date:	06/08/2020
Preservation:	Refrigerated	Period of Analysis:	04/08/2020 to 06/08/2020
Parameter Required:	As per IS 10500-2012	Receipt Date:	04/08/2020
Sampling and Analysis Protocol:	IS-10500-2012, APHA 23rd Edition 2017	Sampling Date:	31/07/2020
		Sampling Quantity:	2.0 Ltr
		Sampling Type:	Grab

### Drinking Water Test Result

S. No.	Parameter	Unit	Limits of IS:10500 -2012		Water Filter Near ESP-2	Potable Water Tank at DM plant	Service building	Old Technical building
			Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source				
1.	pH (at 25 °C)	--	6.5 to 8.5	No Relaxation	7.23	7.24	7.09	7.02
2.	Colour	Hazen	5	15	*BDL (**DL 5)	*BDL (**DL 5)	*BDL (**DL 5)	*BDL (**DL 5)
3.	Turbidity	NTU	1	5	*BDL (**DL 0.1)	*BDL (**DL 0.1)	*BDL (**DL 0.1)	*BDL (**DL 0.1)
4.	Odour	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
5.	Taste	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	mg/l	200	600	62.5	78.3	59.7	68.0
7.	Calcium as Ca	mg/l	75	200	19.8	32.2	21.5	24.8
8.	Alkalinity as CaCO <sub>3</sub>	mg/l	200	600	38.6	51.2	43.3	35.5
9.	Chloride as Cl	mg/l	250	1000	18.4	28.4	25.4	28.4
10.	Residual free Chlorine	mg/l	0.2	1	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)
11.	Cyanide as CN	mg/l	0.05	No Relaxation	*BDL (**DL 0.05)	*BDL (**DL 0.05)	*BDL (**DL 0.05)	*BDL (**DL 0.05)
12.	Magnesium as Mg	mg/l	30	100	3.00	*BDL (**DL 2.0)	*BDL (**DL 2.0)	*BDL (**DL 2.0)
13.	Total Dissolved Solids	mg/l	500	2000	87.0	128.0	95.0	85.0
14.	Sulphate as SO <sub>4</sub>	mg/l	200	400	*BDL (**DL 5.0)	*BDL (**DL 5.0)	*BDL (**DL 5.0)	*BDL (**DL 5.0)
15.	Fluoride as F	mg/l	1.0	1.5	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)
16.	Nitrate as NO <sub>3</sub>	mg/l	45	No Relaxation	0.38	0.42	0.49	0.56
17.	Iron as Fe	mg/l	0.3	No relaxation	0.13	0.15	0.12	0.16
18.	Aluminium as Al	mg/l	0.03	0.2	*BDL (**DL 0.03)	*BDL (**DL 0.03)	*BDL (**DL 0.03)	*BDL (**DL 0.03)
19.	Boron	mg/l	0.5	1	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)
20.	Total Chromium as Cr	mg/l	0.05	No Relaxation	*BDL (**DL 0.02)	*BDL (**DL 0.02)	*BDL (**DL 0.02)	*BDL (**DL 0.02)
21.	Phenolic Compounds	mg/l	0.001	0.002	*BDL (**DL 0.001)	*BDL (**DL 0.001)	*BDL (**DL 0.001)	*BDL (**DL 0.001)

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## Test Report

Sample Number: VEL/DBP/W/01-04						Report No.: VEL/W/2008040001-04		
S. No.	Parameter		Limits of IS:10500 -2012		Water Filter Near ESP-2	Potable Water Tank at DM plant	Aditya Canteen	Urja Bhawan
			Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source				
22	Anionic Detergents as MBAS	mg/l	0.2	1.0	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)
23	Zinc as Zn	mg/l	5	15	*BDL(**DL 0.20)	*BDL(**DL 0.20)	*BDL(**DL 0.20)	*BDL(**DL 0.20)
24	Copper as Cu	mg/l	0.05	1.5	*BDL(**DL 0.02)	*BDL(**DL 0.02)	*BDL(**DL 0.02)	*BDL(**DL 0.02)
25	Manganese as Mn	mg/l	0.1	0.3	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)
26	Cadmium as Cd	mg/l	0.003	No Relaxation	*BDL(**DL 0.002)	*BDL(**DL 0.002)	*BDL(**DL 0.002)	*BDL(**DL 0.002)
27	Lead as Pb	mg/l	0.01	No Relaxation	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
28	Selenium as Se	mg/l	0.01	No Relaxation	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
29	Arsenic as As	mg/l	0.01	0.05	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
30	Mercury as Hg	mg/l	0.001	No Relaxation	*BDL (**DL 0.0005)	*BDL (**DL 0.0005)	*BDL (**DL 0.0005)	*BDL (**DL 0.0005)
31.	Total Coliform	MPN/100ml	Shall not be detectable in any 100 ml sample		Absent	Absent	Absent	Absent
32.	E. Coli				Absent	Absent	Absent	Absent

Note: - \*BDL-Below Detection Limit, \*\*DL- Detection Limit

  
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## Test Report

Sample Number:	VEL/DBP/W/05-07	Report No.:	VEL/W/2008040005-07
Name & Address of the Party:	M/s DB Power Limited Village- Badadhara, Janjgir – Champa, Chhattisgarh	Format No.:	5.10 F-01
Sample Description:	GROUND WATER SAMPLE	Party Reference No.:	NIL
Sample Collected by:	Vardan EnviroLab Representative	Reporting Date:	06/08/2020
Preservation:	Refrigerated	Period of Analysis:	04/08/2020 to 06/08/2020
Parameter Required:	As per IS 10500-2012	Receipt Date:	04/08/2020
Sampling and Analysis Protocol:	IS-10500-2012, APHA 23rd Edition 2017	Sampling Date:	31/07/2020
		Sampling Quantity:	2.0 Ltr
		Sampling Type:	Grab

### Ground Water Test Result

S. No.	Parameter	Unit	Limits of IS:10500 -2012		Village Badadarha (Handpump)	Village Tundri (Handpump)	Village Kanwali (Handpump)
			Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source			
1.	pH (at 25 °C)	--	6.5 to 8.5	No Relaxation	7.24	7.35	7.42
2.	Colour	Hazen	5	15	*BDL (**DL 5)	*BDL (**DL 5)	*BDL (**DL 5)
3.	Turbidity	NTU	1	5	*BDL (**DL 0.1)	*BDL (**DL 0.1)	*BDL (**DL 0.1)
4.	Odour	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
5.	Taste	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	mg/l	200	600	156.6	173.0	152.4
7.	Calcium as Ca	mg/l	75	200	54.5	61.9	57.0
8.	Alkalinity as CaCO <sub>3</sub>	mg/l	200	600	173.4	189.1	161.5
9.	Chloride as Cl	mg/l	250	1000	48.7	69.04	53.8
10.	Residual free Chlorine	mg/l	0.2	1	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)
11.	Cyanide as CN	mg/l	0.05	No Relaxation	*BDL (**DL 0.05)	*BDL (**DL 0.05)	*BDL (**DL 0.05)
12.	Magnesium as Mg	mg/l	30	100	5.01	4.51	2.50
13.	Total Dissolved Solids	mg/l	500	2000	245.0	310.0	260.0
14.	Sulphate as SO <sub>4</sub>	mg/l	200	400	*BDL (**DL 5.0)	*BDL (**DL 5.0)	*BDL (**DL 5.0)
15.	Fluoride as F	mg/l	1.0	1.5	*BDL (**DL 0.2)	0.22	*BDL (**DL 0.2)
16.	Nitrate as NO <sub>3</sub>	mg/l	45	No Relaxation	2.96	3.66	2.82
17.	Iron as Fe	mg/l	0.3	No relaxation	0.21	0.16	0.18
18.	Aluminium as Al	mg/l	0.03	0.2	*BDL (**DL 0.03)	*BDL (**DL 0.03)	*BDL (**DL 0.03)
19.	Boron	mg/l	0.5	1	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)
20.	Total Chromium as Cr	mg/l	0.05	No Relaxation	*BDL (**DL 0.02)	*BDL (**DL 0.02)	*BDL (**DL 0.02)
21.	Phenolic Compounds	mg/l	0.001	0.002	*BDL (**DL 0.001)	*BDL (**DL 0.001)	*BDL (**DL 0.001)

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MoEF & CC Recognised [ISO 9001 | OHSAS 45001]

## Test Report

Sample Number: VEL/DBP/W/05-07					Report No.: VEL/W/2008040005-07		
S. No.	Parameter	Unit	Limits of IS:10500 -2012		Village Badadarha (Handpump)	Village Tundri (Handpump)	Village Kanwali (Handpump)
			Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source			
22.	Anionic Detergents as MBAS	mg/l	0.2	1.0	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)
23.	Zinc as Zn	mg/l	5	15	*BDL(**DL 0.20)	*BDL(**DL 0.20)	*BDL(**DL 0.20)
24.	Copper as Cu	mg/l	0.05	1.5	*BDL(**DL 0.02)	*BDL(**DL 0.02)	*BDL(**DL 0.02)
25.	Manganese as Mn	mg/l	0.1	0.3	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)
26.	Cadmium as Cd	mg/l	0.003	No Relaxation	*BDL(**DL 0.002)	*BDL(**DL 0.002)	*BDL(**DL 0.002)
27.	Lead as Pb	mg/l	0.01	No Relaxation	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
28.	Selenium as Se	mg/l	0.01	No Relaxation	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
29.	Arsenic as As	mg/l	0.01	0.05	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
30.	Mercury as Hg	mg/l	0.001	No Relaxation	*BDL (**DL 0.0005)	*BDL (**DL 0.0005)	*BDL (**DL 0.0005)
31.	Total Coliform	MPN/10 0ml	Shall not be detectable in any 100 ml sample		Absent	Absent	Absent
32.	E. Coli				Absent	Absent	Absent

Note: - \*BDL-Below Detection Limit, \*\*DL- Detection Limit

(Checked By)



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Laboratory: Plot No. 24, 25, Narayan Vihar B Block, Jaipur (Raj.) 302035  
 Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
 MoEF & CC Recognised | ISO 9001 | OHSAS 45001

## Test Report

Sample Number:	VEL/ DBP /WW/06-08	Report No.:	VEL/WW/2008040006-08
Name & Address of Party:	M/s DB Power Limited Village- Badadhara, Janjgir – Champa, Chhattisgarh	Format No.:	5.10 F-01
Sample Description:	Treated/Untreated Water	Party Reference No.:	NIL
Sample Collected by:	Vardan EnviroLab Representative	Reporting Date:	06/08/2020
Sampling & Analysis Protocol	IS 3025, APHA 23rd Edition 2017	Receipt Date:	04/08/2020
		Sampling Date:	31/07/2020
		Sampling Quantity:	2.0 Ltr
		Parameter Required:	As per Work Order

### WASTE WATER TEST RESULTS

S. No.	Parameter	Test-Method	Unit	Standards			Ash Pond	Ash Water Recovery Pond	ETP-AWRS Outlet
				In-Land Surface Water	Public Sewers	Land for Irrigation			
1.	pH (at 25 °C)	APHA (23rd Edition)2017, 4500-H+ B	--	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	7.16	7.33	7.28
2.	Oil and Grease	APHA (23rd Edition)2017,5520 B	mg/l	10	20	10	0.78	0.86	0.76
3.	Temperature	APHA (23rd Edition)2017, 2550 B	°C	--	--	--	25.9	25.9	25.9
4.	Total Suspended Solids	APHA (23rd Edition)2017, 2540 D	mg/l	100	600	200	15.6	13.2	10.5
5.	Total Dissolved Solids	APHA (23rd Edition)2017, 2540 C	mg/l	--	--	--	346.0	264.0	292.0
6.	BOD	IS 3025,P-44,1999	mg/l	30	350	100	21.0	18.0	26.0
7.	COD	APHA (23rd Edition)2017, 5220 B	mg/l	250	--	--	69.4	64.4	74.3
8.	Arsenic as As	APHA (23rd Edition)2017, 3114 B	mg/l	0.2	0.2	0.2	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
9.	Mercury as Hg	APHA (23rd Edition)2017, 3112 B	mg/l	0.01	0.01	--	*BDL (**DL 0.005)	*BDL (**DL 0.005)	*BDL (**DL 0.005)
10.	Cadmium as Cd	APHA (23rd Edition)2017, 3111 B	mg/l	2.0	1.0	--	*BDL(**DL 0.002)	*BDL(**DL 0.002)	*BDL(**DL 0.002)
11.	Lead as Pb	APHA (23rd Edition)2017, 3111 B	mg/l	0.1	1.0	--	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)
12.	Chromium as Cr	APHA (23rd Edition)2017, 3111 B	mg/l	0.1	2.0	--	*BDL(**DL 0.02)	*BDL(**DL 0.02)	*BDL(**DL 0.02)
13.	Sulphide	IS 3025 (P-29)	mg/l	2.0	--	--	*BDL(**DL 1.0)	*BDL(**DL 1.0)	*BDL(**DL 1.0)

BDL= Below Detection limit

(Checked By)



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Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
MoEF & CC Recognised (ISO 9001 | OHSAS 45001)

## Test Report

Sample Number:	VEL/ DBP /WW/01-03	Report No.:	VEL/WW/2008040001-03
Name & Address of Party:	M/s DB Power Limited Village- Badadhara, Janjgir – Champa, Chhattisgarh	Format No.:	5.10 F-01
Sample Description:	STP Treated Water	Party Reference No.:	NIL
Sample Collected by:	Vardan EnviroLab Representative	Reporting Date:	06/08/2020
Sampling & Analysis Protocol	IS 3025, APHA 23rd Edition 2017	Receipt Date:	04/08/2020
		Sampling Date:	31/07/2020
		Sampling Quantity:	2.0 Ltr
		Parameter Required:	As per Work Order

### WASTE WATER TEST RESULTS

S. No.	Parameter	Protocol	Unit	STP-12 ESP CR-1	STP- 9 main Control Room	STP- 8 Service Building
1.	pH (at 25 °C)	IS: 3025 (P-11), 1983 RA: 2017	--	7.38	6.84	6.95
2.	Total Suspended Solids	IS: 3025 (P-17), 1984 RA: 2017	mg/l	10.2	24.5	16.3
3.	Chemical Oxygen Demand	IS: 3025 (P-58), 2006 RA: 2017	mg/l	84.2	79.3	89.2
4.	BOD (3 Days at 27 °C)	IS: 3025 (P-44), 1993 RA 2019	mg/l	24.0	22.0	26.0
5.	Oil and Grease	IS 3025(P-39):1991 RA 2019	mg/l	0.64	0.72	0.82
6.	Total Kjeldhal Nitrogen as N	IS: 3025 (P- 34): 1988, RA. 2019	mg/l	7.6	9.23	8.15
7.	Dissolved Phosphate as P	IS:3025 (P-31):1988,RA 2019	mg/l	0.52	0.68	0.56
8.	Fecal Coliform	IS: 1622,1981 RA 2003	MPN/100ml	78.0	94.0	82.0

BDL= Below Detection limit

  
(Checked By)

  
(Approved By)

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Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
MoEF & CC Recognised | ISO 9001 | OHSAS 45001

## Test Report

Sample Number:	VEL/ DBP /WW/04-05	Report No.:	VEL/WW/2008040004-05
Name & Address of Party:	M/s DB Power Limited Village- Badadhara, Janjgir – Champa, Chhattisgarh	Format No.:	5.10 F-01
Sample Description:	STP Treated Water	Party Reference No.:	NIL
Sample Collected by:	Vardan EnviroLab Representative	Reporting Date:	06/08/2020
Sampling & Analysis Protocol	IS 3025, APHA 23rd Edition 2017	Receipt Date:	04/08/2020
		Sampling Date:	31/07/2020
		Sampling Quantity:	2.0 Ltr
		Parameter Required:	As per Work Order

### WASTE WATER TEST RESULTS

S. No.	Parameter	Protocol	Unit	STP-6 HGP Area	STP-15 CHP Area
1.	pH (at 25 °C)	IS: 3025 (P-11), 1983 RA: 2017	--	7.21	6.73
2.	Total Suspended Solids	IS: 3025 (P-17), 1984 RA: 2017	mg/l	8.2	17.5
3.	Chemical Oxygen Demand	IS: 3025 (P-58), 2006 RA: 2017	mg/l	79.3	84.2
4.	BOD (3 Days at 27 °C)	IS: 3025 (P-44), 1993 RA 2019	mg/l	21.3	24.5
5.	Oil and Grease	IS 3025(P-39):1991 RA 2019	mg/l	0.68	0.74
6.	Total Kjeldhal Nitrogen as N	IS: 3025 (P- 34): 1988, RA. 2019	mg/l	11.41	13.58
7.	Dissolved Phosphate as P	IS:3025 (P-31):1988,RA 2019	mg/l	0.54	0.59
8.	Fecal Coliform	IS: 1622,1981 RA 2003	MPN/100ml	76.0	89.0

BDL= Below Detection limit

(Checked By)



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 Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
 MoEF & CC Recognised | ISO 9001 | OHSAS 45001

## Test Report

Sample Number:	VEL/DBP/W/08-11	Report No.:	VEL/W/2008040008-11
Name & Address of the Party:	M/s DB Power Limited Village- Badadhara, Janjgir – Champa, Chhattisgarh	Format No.:	5.10 F-01
Sample Description:	PIEZOWELL WATER SAMPLE	Party Reference No.:	NIL
Sample Collected by:	Vardan EnviroLab Representative	Reporting Date:	06/08/2020
Preservation:	Refrigerated	Period of Analysis:	04/08/2020 to 06/08/2020
Parameter Required:	As per IS 10500-2012	Receipt Date:	04/08/2020
Sampling and Analysis Protocol:	IS-10500-2012, APHA 23rd Edition 2017	Sampling Date:	31/07/2020
		Sampling Quantity:	2.0 Ltr
		Sampling Type:	Grab

### Piezowell Test Result

S. No.	Parameter	Unit	Limits of IS:10500 -2012		Piezometer 1- Near Security Gate	Piezometer 2- Near Ash Pond Hill	Piezometer 3- Near Ash Brick Plant	Piezometer 4- Near Hydrogen plant
			Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source				
1.	pH (at 25 °C)	--	6.5 to 8.5	No Relaxation	7.32	7.26	7.15	7.18
2.	Colour	Hazen	5	15	*BDL (**DL 5)	*BDL (**DL 5)	*BDL (**DL 5)	*BDL (**DL 5)
3.	Turbidity	NTU	1	5	*BDL (**DL 0.1)	*BDL (**DL 0.1)	*BDL (**DL 0.1)	*BDL (**DL 0.1)
4.	Odour	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
5.	Taste	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	mg/l	200	600	72.1	76.2	59.7	53.6
7.	Calcium as Ca	mg/l	75	200	24.8	28.1	20.6	17.3
8.	Alkalinity as CaCO <sub>3</sub>	mg/l	200	600	59.1	70.9	39.4	35.5
9.	Chloride as Cl	mg/l	250	1000	40.6	59.9	43.7	38.6
10.	Residual free Chlorine	mg/l	0.2	1	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)
11.	Cyanide as CN	mg/l	0.05	No Relaxation	*BDL (**DL 0.05)	*BDL (**DL 0.05)	*BDL (**DL 0.05)	*BDL (**DL 0.05)
12.	Magnesium as Mg	mg/l	30	100	2.50	*BDL (**DL 2.0)	2.00	2.50
13.	Total Dissolved Solids	mg/l	500	2000	125.0	180.0	125.0	94.0
14.	Sulphate as SO <sub>4</sub>	mg/l	200	400	5.65	645	6.05	3.95
15.	Fluoride as F	mg/l	1.0	1.5	0.21	*BDL (**DL 0.2)	0.23	*BDL (**DL 0.2)
16.	Nitrate as NO <sub>3</sub>	mg/l	45	No Relaxation	0.56	0.49	0.35	0.49
17.	Iron as Fe	mg/l	0.3	No relaxation	0.18	0.26	0.21	0.29
18.	Aluminium as Al	mg/l	0.03	0.2	*BDL (**DL 0.03)	*BDL (**DL 0.03)	*BDL (**DL 0.03)	*BDL (**DL 0.03)
19.	Boron	mg/l	0.5	1	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)	*BDL (**DL 0.2)
20.	Total Chromium as Cr	mg/l	0.05	No Relaxation	*BDL (**DL 0.02)	*BDL (**DL 0.02)	*BDL (**DL 0.02)	*BDL (**DL 0.02)
21.	Phenolic Compounds	mg/l	0.001	0.002	*BDL (**DL 0.001)	*BDL (**DL 0.001)	*BDL (**DL 0.001)	*BDL (**DL 0.001)

(Checked By)



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 Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
 MoEF & CC Recognised | ISO 9001 | OHSAS 45001

## Test Report

Sample Number: VEL/DBP/W/08-11					Report No.: VEL/W/2008040008-11			
S. No.	Parameter		Limits of IS:10500 -2012		Piezometer 1- Near Security Gate	Piezometer 2- Near Ash Pond Hill	Piezometer 3- Near Ash Brick Plant	Piezometer 4- Near Hydrogen plant
			Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source				
22.	Anionic Detergents as MBAS	mg/l	0.2	1.0	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)
23.	Zinc as Zn	mg/l	5	15	*BDL(**DL 0.20)	*BDL(**DL 0.20)	*BDL(**DL 0.20)	*BDL(**DL 0.20)
24.	Copper as Cu	mg/l	0.05	1.5	*BDL(**DL 0.02)	*BDL(**DL 0.02)	*BDL(**DL 0.02)	*BDL(**DL 0.02)
25.	Manganese as Mn	mg/l	0.1	0.3	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)	*BDL(**DL 0.05)
26.	Cadmium as Cd	mg/l	0.003	No Relaxation	*BDL(**DL 0.002)	*BDL(**DL 0.002)	*BDL(**DL 0.002)	*BDL(**DL 0.002)
27.	Lead as Pb	mg/l	0.01	No Relaxation	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
28.	Selenium as Se	mg/l	0.01	No Relaxation	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
29.	Barium as Ba	mg/l	0.7	No Relaxation	*BDL(**DL 0.01)	*BDL(**DL 0.01)	*BDL(**DL 0.01)	*BDL(**DL 0.01)
30.	Cobalt as Co	mg/l	--	--	*BDL(**DL 0.01)	*BDL(**DL 0.01)	*BDL(**DL 0.01)	*BDL(**DL 0.01)
31.	Nickel as Ni	mg/l	0.02	No Relaxation	*BDL(**DL 0.01)	*BDL(**DL 0.01)	*BDL(**DL 0.01)	*BDL(**DL 0.01)
32.	Arsenic as As	mg/l	0.01	0.05	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)	*BDL(**DL 0.005)
33.	Mercury as Hg	mg/l	0.001	No Relaxation	*BDL(**DL 0.0005)	*BDL(**DL 0.0005)	*BDL(**DL 0.0005)	*BDL(**DL 0.0005)
34.	Conductivity	µS/cm	--	--	185	282	186	152
35.	Sodium as Na	mg/l	--	--	16.3	28.4	18.3	14.6
36.	Potassium as K	mg/l	--	--	2.3	2.5	2.2	2.4
37.	Phosphate as PO4	mg/l	--	--	*BDL(**DL 0.2)	*BDL(**DL 0.2)	*BDL(**DL 0.2)	*BDL(**DL 0.2)
38.	Total Coliform	MPN/100ml	Shall not be detectable in any 100 ml sample		Absent	Absent	Absent	Absent
39.	E. Coli				Absent	Absent	Absent	Absent

Note: - \*BDL-Below Detection Limit, \*\*DL- Detection Limit

  
(Checked By)

  
(Approved By)  
Page 2 of 2

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Corp. Off.: Plot No. 82A, Sector- 5, IMT Manesar, Gurugram- 122051  
MoEF & CC Recognised | ISO 9001 | OHSAS 45001)

## Test Report

Sample Number:	VEL/DBP/WL/01-04	Report No.:	VEL/WL/2008040001-04
Name & Address of Party:	M/s DB Power Limited Village- Badadhara, Janjgir – Champa, Chhattisgarh	Format No.:	5.10 F-01
Sample Description:	Ground Water Level Monitoring	Party Reference No.:	NIL
Sample Collected by:	Vardan EnviroLab Representative	Reporting Date:	06/08/2020
		Receipt Date:	04/08/2020
		Monitoring Date:	31/07/2020

### WATER LEVEL RESULTS

S. No.	Location	Depth (In meter)
1.	Piezometer – Near Security Gate	4.3
2.	Piezometer – Near Ash Pond Hill	3.7
3.	Piezometer – Near Ash Brick plant	3.2
4.	Piezometer – Near Hydrogen Plant	3.4

Checked By

Approved By



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Page 1 of 1



## DB Power Ltd

CIN: U40109MP2006PLC019008

Business Office : Village – Badadarha, Post – Kanwali, Dist – Jangir – Champa, Chhattisgarh, PIN – 495695  
Tel. : +91-7389912699

No. DBPL/ENV/167

Date: 24.08.2020

To,

The Regional Officer  
Chhattisgarh Environment Conservation Board  
Vyapar Vihar, Near Pt. Dindayal Upadhyay Garden  
Dist: Bilaspur (C.G.)

Sub: Submission of Environmental Statement Report (Form V) for DB Power Limited, 2X600 Thermal Power Plant, Village - Badadarha, Teh - Dabhra, Dist. Jangir-Champa, Chhattisgarh.

Dear Sir,

Please find enclosed herewith the Environmental Statement Report for the period of 2019-20 in Form V for our 2X600 Thermal Power Plant.

This is for your information and record please.

Thanking you

Sincerely Yours,

**For M/s. DB Power Limited**

AGM - EHS

CC: The Superintending Engineer,  
Chhattisgarh Environment Conservation Board,  
Paryavas Bhavan, North Block Sector-19,  
Atal Nagar, Raipur (C.G.) 492002

Registered Office:

Block 1A, 5TH Floor, Corporate Block, DB City Park, DB City Arera Mills, Opposite M. P. Nagar Zone – I, Bhopal – 462016 (M. P.)  
Tel. : +91-755-3988884 Fax: +91-755-267 5190

# DB Power Limited

Badadarha, C.G

## Environmental statement Report Year 2019-20

### PLANT PROFILE



<b>Location</b>	Village-Badadarha, Tehsil-Dabhra, District- Janjgir Champa, State- Chhattisgarh.
<b>Nearest Town</b>	Raigarh - 24 km
<b>Nearest Railhead</b>	Robertson 12 km
<b>Approach Road</b>	All weather road
<b>National Highway</b>	NH 200 - 10km



FORM – V

Environmental statement for the financial year ending the 31<sup>st</sup> March 2019 for 2X600 MW Thermal Power Plant

PART – A

(i)	Name and address of the owner / occupier of the industry operation or process	:	Sh. Sumit Chakrabarti Factory Occupier DB Power Limited, Vill. Badadarha, P.O. Kanwali, Teh Dabhra Dist. Janjgir-Champa (CG) PIN – 495695
(ii)	Industry Category Primary (SIC Code)	:	--
(iii)	Production capacity – Units -	:	2X600 MW
(iv)	Year of establishment	:	Unit 1: date of COD 03.11.2014 Unit 2 : date of COD 26.03.2016
(v)	Date of last environmental statement submitted	:	20.08.2019

PART – B

WATER AND RAW MATERIAL CONSUMPTION:

1. Water consumption m<sup>3</sup>/d :

Process, Cooling & Domestic : 42303 m<sup>3</sup>/day

Name of products	Unit	Process water consumption per unit of product output m <sup>3</sup> /MWhr	
		During the previous financial year 2018-19	During the current financial year 2019-20
Power	Unit 1 & 2	2.2	2.0

2. Raw material consumption:

	Name of raw materials	Name of products	Unit	Consumption of raw material per unit of output MT/MWhr	
				During the previous financial year 2018-19	During the current financial year 2019-20
1.	Coal	Power	Unit 1	0.701	0.708
			Unit 2	0.697	0.722



PART – C  
Pollution discharged to environment / units of output  
(Parameter as specified in the consent issued)

(1)	Pollutants	Name of source	Quantity of pollutants discharged (Kg / day)	Concentrations of pollutants in discharged (mg/Nm <sup>3</sup> )	Percentage of variation from prescribed standards with reasons
(a)	Water	ETP	-	-	ZLD
(b)	Air	Boiler ESP Stack of Unit 1	2235	38.2	Complied
		Boiler ESP Stack of Unit 2	2396	41.0	

S. No	Air pollutant parameters	UOM	Boiler ESP Stack of Unit 1 (Average Concentration)	Boiler ESP Stack of Unit 2 (Average Concentration)
1	SO <sub>2</sub>	mg/Nm <sup>3</sup>	1349	1473
2	NO <sub>x</sub>	mg/Nm <sup>3</sup>	433	454
3	Hg	mg/Nm <sup>3</sup>	0.01	0.01

PART – D

HAZARDOUS WASTES

(As specified under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016)

Hazardous Waste	Waste Type	During the previous financial year 2018-19	During the current financial year 2019-20
a) From Process	Used oil / Spent oil Cat. 5.1	18.06	30.6
	Waste oil / Waste residues containing oil Cat. 5.2	Nil	Nil
	Empty barrels / containers / liners contaminated with HW / chemicals Cat. 31.1	Nil	Nil
	Spent Ion Exchange Resin Containing Toxic Chemicals Cat. 35.2	Nil	Nil
b) From pollution control facilities	Nil	NA	NA

Hazardous waste –

Disposed Quantity : Used oil: Cat. 5.1 - 15.6 Ton , Cat.5.2 - 1.0 through authorized recycler

Stored Quantity : Used oil: Cat. 5.1 – 30.6 Ton , Cat.5.2 – Nil as on 31<sup>st</sup> March 2020

PART – E  
SOLID WASTES

	Total quantity (MT)	
	During the previous financial year 2018-19	During the current financial year 2019-20
Fly ash		
a) From Process	1984788	2072253
b) From pollution control facilities	-	-
c) (1) Quantity recycled or re – Utilized within the unit.	-	
(2) Sold	-	-
(3) Disposed	1438789	1736671

PART – F

Please specify the characterization (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

The Solid waste (other than hazardous ones)

Fly ash :

Four numbers Fly Ash silos, each having capacity of 1600 MT is provided.

The fly ash is transported pneumatically into these silos and is used in cement and brick manufacturing industries, filling in abandoned mines and low lying areas.

Exploring mine void filling with CIL subsidiary SECL to achieve 100% ash utilization.

Other Wastes:

Other wastes are separated as ferrous and non-ferrous.

Ferrous wastes are sold once collected to a certain quantity.

Rubber & plastic wastes are collected and supplied to vendors.

Battery wastes are disposed of in buy back policy to vendors.

E-wastes are segregated and disposed of to authorized recyclers.

PART – G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

1. Recycling of solid waste material: -

Due to efficient working of air pollution control equipment (APCE) like ESP/ Bag Filter in the different sections, no fugitive emissions are developed.

Closed circuits pneumatically transported ash are collected through silos which in turn are loaded into bulkers for supply to cement plants for production of PPC cement.

Wed ash ,moist conditioned from silos and ash ponds is transported with covered conditions for disposal in brick manufacturing industries, road construction ,mine filling and low lying areas.

Coal conveyor system is also protected from spill and fugitive emission with additional dust suppression, dust extraction systems at transfer points to eliminate emission into the atmosphere.

## 2. Energy Conservation: -

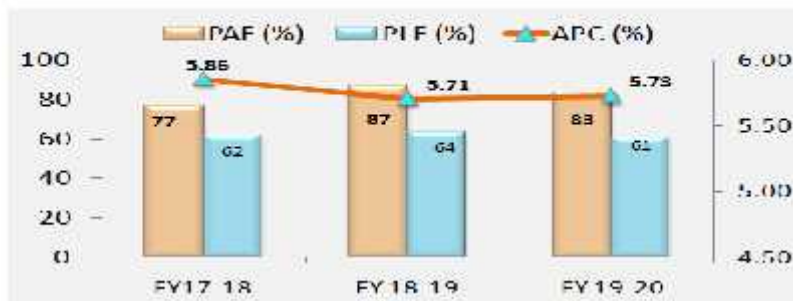
Reduction of APC by implementing ENCON projects. Total 16 Nos energy conservation projects implemented in FY 2019-20.

Combustion tuning of Boiler proposed to optimize heat rate.

Insulation survey, high energy drains passing survey and air leakage survey were conducted on regular basis to minimize unaccounted losses.

Capital Overhauling is planned in FY 21-22.

Auxiliary Power Consumption Trend:



## 3. Minimization of Health Hazards: -

As a result of different pollution abatement measures and their monitoring being adopted, the health hazard to the workers is minimized.

Periodical health check up for all employees are carried out with corrective action, if any.

Awareness and training in this regard with corrective actions in time by the O & M team has indirectly reduced the cost of production.

## 4. Plantation: -

We have achieved a targeted plantation of 10,000 numbers for the year 2019 as committed to CECB/Govt of CG.

Our continual effort to plant more and more saplings continues unabated.

This year too DBPL has already developed in house saplings of more than 10,000 for plantation during the monsoon.

The total plantation survived by 31st March 2020 is 2,10,300 (210 acres of total area of 630 acres). It is planned to plant 10000 saplings during the monsoon season.

We are also adopting greenbelt development outside our premises (Biodiversity and Afforestation Diversity):

1. Additional tree planted in coordination with local forest team
2. Restricted tree falling to conserve biodiversity
3. Inside plant project area, plantation of local species, fruit species for improvement of ecosystem.
4. Low lying areas in the project area are being developed for further greenbelt development.



#### PART – H

Additional measures / investment proposal for environmental protection including abatement of pollution prevention of pollution.

FGD installation project for controlling SO<sub>2</sub> emission from our power generation units is in progress. Status is as below:

LOI for FGD issued on 13 June 2019 and Contract awarded on 26th September 2019.

Vendor-Zhejiang TUNA Environmental Science & Technology Co., Ltd.

Drawing/Design Consultant-Black & Veatch

Total area for FGD installation : 3413 SqM

Project Status : Under Engineering stage

#### PART – I

Any other particulars for improving the quality of the environment.

Various awareness programs like world environment day, earth day, water day, etc are observed with the mark of plantation, light hour, energy/water conservations, etc.

##### 1. Water Management at DBPL:

Adopting suitable treatment (AVT –R to AVT –O) :

1. Reduction in CBD opening hrs. & in steam dumping hrs.

2. DM water requirement is reduced by 100,000 m<sup>3</sup>. (compared to 2016-17 & 2017-18).

Number of regeneration in WTP is reduced from 120 nos. /year to 80 nos. /year.

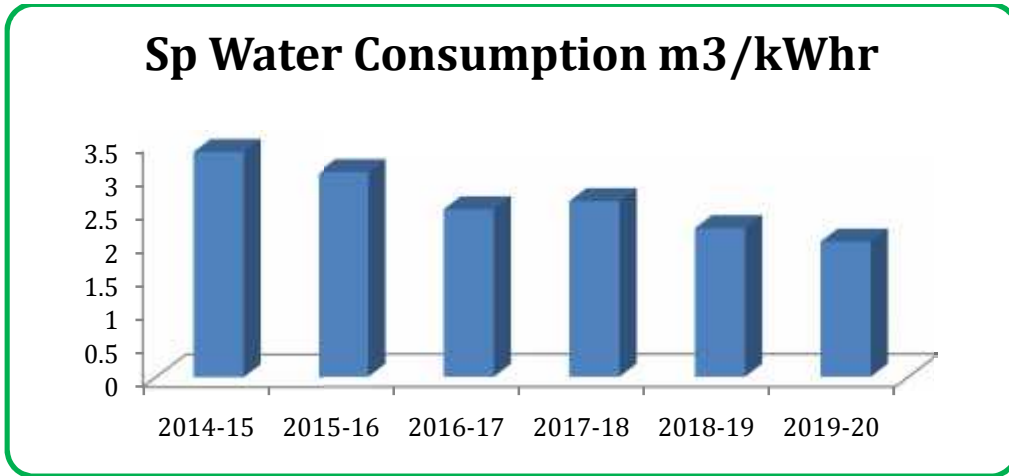
COC of circulating cooling water increased from 5.0 to 7.0

1. CT makeup reduced by 18,74,640 m<sup>3</sup>/year.

Ash Water Recovery System: Ash Dyke decant water is treated and re-circulated to ash water sump for reuse.

CPU output between regeneration increased from 135000 m<sup>3</sup> to 190000 m<sup>3</sup>

1. Thus the number of regeneration reduced from 52 nos./year to 36 nos./year.  
No ground water extraction for any industrial & domestic purpose.  
Treated water of ETP is reused for green belt irrigation and in ash handling plant.  
Specific water consumption per unit generation was 2.0 m<sup>3</sup>/kWhr.



2. Substitution of Conventional Energy with Renewable Energy:



For **DB Power Limited**

  
AGM - EHS