JAYPEE NIGRIE SUPER THERMAL POWER PLANT
A DIVISION OF JAIPRAKASH POWER VENTURES LIMITED

JAIPRAKASH
POWER VENTURES LIMITED

JNSTPP/ EC/ MoEF/ 2017-18/16

May 21st , 2018

To
MoEF and CC, Headquarters,
Indira Paryavaran Bhavan,
Jorbagh Road, New Delhi - 110 003 INDIA

Sub: Submission of Half Yearly Environmental Clearance Compliance Report of Jaypee Nigrie Super Thermal Power Project (A Division of Jaiprakash Power Ventures Limited) of 2x660 MW Coal Based Super Critical Thermal Power Plant and 4.0 MTPA Cement Grinding Unit at village Nigrie, Tehsil Sarai, Singrauli Dist. in Madhya Pradesh.

Sir,
With reference to the above mentioned subject we are submitting the compliance report to Stipulated conditions of E.C. in hard and soft copy for the period (Oct 2017 – March 2018) of Jaypee Nigrie Super Thermal Power Project, EC reference nos.: J-13012/223/2007-IA-II (T) dated 25.02.2010 and its amendment dated 13.07.2012 for the JNSTPP (2x660 MW) & JNCGU (4.0 MTPA) for your kind records please.

Thanking You
Yours Faithfully
For Jaypee Nigrie Super Thermal Power Project
(A Division of Jaiprakash Power Ventures Ltd.)

21/05/18

Vinod Sharma
Sr. President (O & M)

Encl. – As above
CC to:

1. **Additional Principal Chief Conservator of Forests (C), Regional Office (WZ), Ministry Of Environment, Forest and Climate Change,**
   E-5, Kendriya Paryavaran Bhawan, E-5 Arera Colony,
   Link Road-3, Ravishankar Nagar, Bhopal – 462016
2. **Central Pollution Control Board, Head Office,**
   Parivesh Bhawan, East Arjun Nagar, Delhi-110032
3. **Central Pollution Control Board, Regional Directorate,**
   Sahkar Bhawan, Bhadbhada Road, North TT Nagar, Bhopal,
   Madhya Pradesh 462003
4. **Madhya Pradesh State Pollution Control Board, Head Office,**
   Paryavaran Parisar, Sector E-5, Arera Colony, Bhopal - 462 016
   Madhya Pradesh, India
5. **M.P. Pollution Control Board, Regional Office,**
   Navjeevan Vihar, Plot No.217,
   Post: Vindhyanagar, Sector-2, Singrauli

Site : Jaypee Nigrie Super Thermal Power Plant, Village & P.O. Nigrie, Tehsil Sarai, Distt. Singrauli (M.P.)
Ph. : +91 (7801) 286021 - 36 Fax : +91 (7801) 286020 Email : jpthermal.sidhi@jalindia.co.in
Corp. Office : 'JA House', 63 Basant Lok, Vasant Vihar, New Delhi - 110 057 (India)
Ph. : +91 (11) 49828679, 49828642 Fax : +91 (11) 26145389
Regd. Office : Complex of Jaypee Nigrie Super Thermal Power Plant, Nigrie Tehsil Sarai, Distt. Singrauli 486669, (Madhya Pradesh)
Ph. : +91 (7801) 286021-39 Fax : +91 (7801) 286020
Website: www.jppowerventures.com **CIN** : L40101MP1994PLC042920

JAYPEE GROUP

Six Monthly Compliance Report
Of
Environmental Clearance
Period: October' 2017- March' 2018

Of

M/s Jaiprakash Power Ventures Ltd.

2x660 MW Jaypee Nigrie Super Thermal Power Plant
&
2.0 MTPA Jaypee Nigrie Cement Grinding Unit
At
(V) Nigrie, (T) Sarai, (D) Singrauli, Madhya Pradesh

Submitted To:

Regional Office, Western Zone
Ministry Of Environment, Forest & Climate Change
&
Zonal Office, Central Pollution Control Board, Bhopal
&
Madhya Pradesh Pollution Control Board, Bhopal

JAIPRAKASH POWER VENTURES LIMITED
1320 MW Coal based Thermal Power Project
16th Half Yearly Environmental Compliances statement of the stipulation of MoEF

EC Letter No.:- **J-13012/223/2007-IA.II** dated 25.02.2010 and
Subsequent amendment in Environmental Clearance vide
Letter No.**J-13012/223/2007-IA.II (T)** Dated 13.07.2012

Clause No.	Terms and Conditions Description as per EC letter	Compliance Status report
i.	Environmental Clearance is subject submission of complete details of R & R action plan (as applicable) with time schedule for implementation to the Regional Office of the Ministry and the Competent Authority in the state govt. The details shall include name of head of family wise details, the area of homestead land and other land to be acquired and the compensation paid/proposed to be paid etc. The time schedule of implementation shall be given.	Our R&R plan has been submitted to the Regional Office of the Ministry vide our letter No. JPVL/JNSTPP/MOEF/2010 dated 20th January 2011. It was subsequently modified incorporating suggestions of MoEF and was resubmitted vide letter no. - JPVL/JNSTPP/MOEF/2011 dated 29.06.2011.
ii.	Hydro-geological study of the area shall be **reviewed annually** and results submitted to the Ministry and concerned agency in the State Govt. In case adverse impact on ground water quantity & quality is observed, immediate mitigating steps to contain any	Hydro-geological study of the area is being carried out by M/s. Hydro Geo-survey Consultants Pvt. Ltd. Jodhpur, Rajasthan and reports submitted to concerned departments timely. The last study was done in 2017. Water level from existing peizometer wells being carried out four times a year in premonsoon (**April**), monsoon (**August**), post-monsoon (**November**) and winter (**January**) seasons. Periodic review is being done. Quality of ground water is being monitored in and around the plant premises. Ground water level in

	adverse impact on ground water shall be undertaken.	nearby villages is also being monitored to know the seasonal fluctuations. There is no adverse impact found in the quality & quantity of Ground Water. Presently, JPVL is drawing water from surface water source (Gopad River) within quantity allocated (42 MCM) by **DoWR, Madhya Pradesh.**
iii.	Minimum required environmental flow suggested by the competent authority of the State Govt. shall be maintained in the Channel/Rivers even in lean season. It shall be ensured that natural drainage in the region is not disturbed due to activities associated with operation of the plant.	Being Complied, **The Water Resource Department, Government of Madhya Pradesh** has permitted JPVL to draw 42 MCM of water from Gopad River for Thermal Power Project. The above quantity is adequate to meet the plant's requirement including lean season. The Minimum recommended discharge is being released in the River during lean period (summer season). Natural Drainage in the region is not being disturbed due to the activities associated with the operation of the plant. The Project is not obstructing the flow of River Gopad; The natural drainage of the region is not being affected.
iv.	A stack of 275 m height (Bi-flue) shall be provided with continuous online monitoring equipments for SOx NOx and PM. Exit velocity of flue gases shall not be less than 25 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.	Bi-flue Stack of 275 m height is installed with Online monitoring equipments for PM, SO_2, NOx & Hg. The exit velocity of flue gases is more than 25.0 m/sec as stipulated. Mercury measurement is also being done through online analyzers.
v.	For cement Grinding Unit two stacks of 55 m each with exit velocity not less than 10 m /s shall be installed. Emission from the Grinding Unit shall not exceed 50 mg/Nm3.	Two stacks of 55m each with exit velocity not less than 10 m/s have been installed with Online monitoring equipments for PM in Cement Grinding Unit. 2 nos. of Bag Houses attached to cement mills (Ball & Roll Press Mill) with guaranteed emission level of <30 mg/Nm3 at full load. Each Bag House has 780 & 1188 bags respectively.
vi.	Fugitive emission in the grinding Unit shall be controlled and data on fugitive emission	Noted, To control fugitive emissions all raw material conveying belts are covered. Cyclones followed by bag filters are provided at all transfer points. Additionally, mobile water sprinklers are deployed in grinding Unit area to suppress fugitive dust while movement of vehicles on

<table>
<tr><td></td><td>shall be maintained in a log book and duly signed by the Head, Environment on a daily basis.</td><td>haulage roads.</td></tr>
<tr><td>vii.</td><td>High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm3.</td><td>Highly efficient Electrostatic Precipitators (ESPs) with efficiency of 99.93 % have been installed for each boiler to meet particulate emission less than 50 mg/Nm3.

Continuous Online Emission Monitoring meters installed to Monitor emissions for both boiler stacks and data is being transmitted to MPPCB & CPCB Website, and the results are within the Norms.

For stack U-I average concentration of PM is 34.23 mg/Nm3, maximum concentration is 45.83 mg/Nm3 & the minimum concentration is 24.43 mg/Nm3.

For stack U-II average concentration of PM is 37.65 mg/Nm3, maximum concentration is 48.17 mg/Nm3 & the minimum concentration is 27.44 mg/Nm3.</td></tr>
<tr><td>viii.</td><td>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.</td><td>Adequate air pollution control measures such as dust extraction system (Cyclone followed by bag filters) in coal crusher and coal transfer points, jet sprinkler type dust suppression system in coal yard and dry fog type dust suppression system in belt conveyor have been provided.

A) 2 numbers of Dust extraction systems in Crusher House are Bag house type with Capacity 46,000 m^3, 1 number of Bag house for each Bunker (Unit #1 & 2) with Capacity 41,000 m^3

B) Dust Suppression system in Track Hopper for all 4 Paddle Feeders, for rake unloading at track hopper & for Emergency reclaiming hopper.

C) Jet sprinkler type Dust Suppression system in Coal Yard area for Bucket wheel stacker cum reclaimer.

D) Dry fog dust suppression system for all transfer points.

Elaborated dust extraction & dust suppression system have been incorporated in the design of ash handling plant.
➢ One number of Dust extraction systems in Intermediate Silo is Bag Filter type with Capacity 14,890 m3/hr in each Unit, one number of Bag Filter for each Coarse Ash Surge Hopper (Unit #1 & 2) with Capacity 8.6 m3/hr and one bag filter at Main Fly Ash Silo with capacity 20,830 m3/hr have been installed.
<table>
<tr><th></th><th>Number of Bags</th><th>Filtering Area</th></tr>
<tr><td>Intermediate Silo</td><td>108</td><td>229 sq. mt</td></tr>
<tr><td>Coarse Ash Surge Hopper</td><td>20</td><td>30 sq. mt</td></tr>
<tr><td>Main Fly Ash Silo</td><td>108</td><td>279.68 sq. mt</td></tr>
</table>
</td></tr>
</table>

ix.	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.	100% Fly Ash is being utilized as per MoEF Notifications, related to fly ash utilization, issued from time to time. Status of Implementation is being reported to Regional Office regularly.
x.	Fly Ash shall be collected in dry form and storage facility (silos) shall be provided. 100% fly ash utilization shall be ensured from 4th year onwards. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry. 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.	Compliance assured. We have established 2 Intermediate silos with capacity 450 metric tonnes each to collect dry fly ash & a fly ash bin of 400 metric tonnes capacity for utilization of ash in cement grinding unit and a storage silo of 20,000 metric tonnes capacity for utilization of dry ash. 100% Fly Ash is being utilized as per Fly Ash Notifications 1999 and its subsequent amendments issued by the MoEF & CC. Bottom ash is being disposed off in the ash pond in lean Slurry Disposal mode with ash to water ratio typical 1:3, with recirculation of ash water. Regular monitoring of heavy metals is being carried out periodically.
xi.	Ash pond shall be lined with HDP/LDP lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	Well designed ash dyke with HDP lining has been established as per the guidelines of MoEF, CEA & CPCB. Adequate safety measures were taken for any unforeseen incidents. Adequate safety measures also taken to protect the ash dyke from getting breached.
xii.	For disposal of Bottom Ash (if proposed to be undertaken) in abandoned mines it shall be ensured that **the bottom and sides**	Not applicable, as the disposal of bottom ash is not envisaged in any abandoned mines. Bottom ash is being disposed off in the ash dyke situated inside the plant premises in the form of lean slurry Disposal System.

<table>
<tr><td></td><td>of the mined out areas are adequately lined with clay before Bottom Ash is filled up. The project proponent shall inform the state Pollution Control Board well in advance before undertaking the activity.</td><td></td></tr>
<tr><td>xiii.</td><td>Closed cycle cooling system with natural draft cooling towers shall be provided. The Effluents shall be treated as per the prescribed norms.</td><td>Recirculation type Closed cycle Cooling water system with Natural Draft Cooling Towers has been provided. The blow down is being treated adequately to meet the prescribed norms through High Rate Solid Contact Clarifier (HRSCC), Dual Media Filter (DMF), Ultra Filtration Unit (UF) and RO system and reused in Cooling Tower Makeup, Service Water and HVAC system. The RO reject water is used in Dust Suppression in Coal Handling Plant Areas.

TREATED EFFLUENT ANALYSIS
For the period of October 2017- March 2018
<table>
<tr><th>Month</th><th>pH</th><th>SS (ppm)</th><th>TDS (ppm)</th><th>COD (ppm)</th><th>BOD (ppm)</th><th>O&G (ppm)</th><th>Chlorides (ppm)</th></tr>
<tr><td>Oct - 17</td><td>7.57</td><td>32.6</td><td>952</td><td>60.1</td><td>18.76</td><td>1.09</td><td>498.0</td></tr>
<tr><td>Nov - 17</td><td>7.49</td><td>25.1</td><td>1055</td><td>59.8</td><td>16.87</td><td>1.13</td><td>476.5</td></tr>
<tr><td>Dec - 17</td><td>7.56</td><td>26.28</td><td>1047</td><td>55.9</td><td>18.23</td><td>1.22</td><td>390.0</td></tr>
<tr><td>Jan - 18</td><td>7.49</td><td>24.88</td><td>1032</td><td>53.59</td><td>17.1</td><td>1.29</td><td>384.0</td></tr>
<tr><td>Feb - 18</td><td>7.44</td><td>25.33</td><td>1053</td><td>56.12</td><td>19.71</td><td>1.38</td><td>372.1</td></tr>
<tr><td>March-18</td><td>7.49</td><td>21.29</td><td>1037</td><td>54.1</td><td>17.41</td><td>1.22</td><td>362.4</td></tr>
</table></td></tr>
<tr><td>xiv.</td><td>The treated effluents conforming to the prescribed standards only shall be recirculated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon.
Arrangements shall be made that effluents and storm water do not get mixed.</td><td>All the effluents are being treated adequately in the ETP. Treated water is being reused within the plant. The concept of “Zero Discharge Condition” implemented.

Separate drainage network established for storm water.

Upstream & downstream water quality of Gopad River is also being monitored.</td></tr>
</table>

<table>
<tr><td>xv.</td><td>A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.</td><td>Sewage Treatment Plant has been installed & treated water reused suitably within the plant premises for green belt development.

TREATED SEWAGE ANALYSIS
For the period of October 2017- March 2018

<table>
<tr><th>Month</th><th>pH</th><th>SS (ppm)</th><th>COD (ppm)</th><th>BOD (ppm)</th><th>O & G (ppm)</th></tr>
<tr><td>Oct - 17</td><td>7.35</td><td>7.5</td><td>43.1</td><td>9.14</td><td>2.30</td></tr>
<tr><td>Nov - 17</td><td>7.49</td><td>8.8</td><td>38.4</td><td>8.4</td><td>2.14</td></tr>
<tr><td>Dec - 17</td><td>7.53</td><td>7.69</td><td>36.8</td><td>8.4</td><td>1.20</td></tr>
<tr><td>Jan - 18</td><td>7.48</td><td>8.69</td><td>35.40</td><td>7.6</td><td>1.35</td></tr>
<tr><td>Feb - 18</td><td>7.40</td><td>9.12</td><td>32.60</td><td>8.20</td><td>1.29</td></tr>
<tr><td>March-18</td><td>7.38</td><td>8.57</td><td>35.10</td><td>7.90</td><td>1.33</td></tr>
</table>
</td></tr>
<tr><td>xvi.</td><td>Rainwater harvesting should be adopted. Central Groundwater Authority/Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished.</td><td>Rain Water Harvesting scheme has been prepared & sent to obtain Approval of the technology from Regional Director, Central Ground Water Board, Bhopal and submitted the same to MoEF along with the EC Compliance Report of June, 2013.

Rainwater harvesting pit within the township area was constructed to augment the ground water table and to recharge surface water in monsoon season.</td></tr>
<tr><td>xvii.</td><td>Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant lay out shall be submitted to the Ministry as well as to the Regional Office of the Ministry.</td><td>Fire engines with requisite team are in place at site which is also supporting the requirements in the neighboring villages with adequate safety measures to take preventive control measures.

Mock drills are being conducted periodically.

Fire hydrant and water jet type sprinklers established in the coal yard.

Reviewed On Site Emergency Plan (after a period of two years) of Jaypee Nigrie Super Thermal Power Plant was Submitted to The Director, Industrial Health & Safety, Indore vide letter No.3087 dated 17/10/2016. Approval was granted on 20.10.2016.</td></tr>
<tr><td>xviii.</td><td>Storage facilities for auxiliary liquid fuel such as LDO and HFO/LSHS shall be</td><td>The design of the plant meets the requirements. Storage facilities for auxiliary liquid fuel are made in the plant area in consultation and consent obtained from Department of Explosives, Nagpur.</td></tr>
</table>

	made in the plant area in consultation with the Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventually in case of an accident taking place due to storage of oil.	Quality of liquid fuel meets the standard stipulated. While procuring LDO/HFO, it is checked that limit of sulphur content shall not be more than 0.5%. The fuel LDO & HFO properly stored in minimum risk area & as per the norms fixed by the Chief Controller of Explosive. Disaster Management Plan has been in place prior to Commissioning of the Project. Mock drills are being conducted periodically. We have formed a separate full-fledged Fire Brigade in the Project Site which is also supporting the requirements in the neighboring villages. License No. P/HQ/MP/15/2877(P311712) dated 14th June 2013 has been obtained from Petroleum and Explosive Safety Organization (PESO), Nagpur for our Petroleum Class C in bulk installation.
xix.	Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	Eight Piezometer bore wells were laid around the Ash ponds. Regular monitor of heavy metals is being carried out.
xx.	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	➢ Complied with and Green belt development/ plantations are being carried out inside the plant premises. An effective green belt is being developed with local species as per CPCB guidelines, Efforts are further made to develop more green belt in the plant. A nursery is established at site. ➢ Required Green belt & Green cover being developed continuously. ➢ Greenbelt being developed in a phased manner along the periphery of the Power Plant and Grinding Unit.

<table>
<tr><td></td><td>shall be submitted to the Ministry. Tree density shall not less than 2500 per ha with survival rate not less than 70%.</td><td>➢ More than 33% of area in and around Power plant including Cement plant i.e. around 95 hectares of green belt has been developed as per guidelines given by CPCB.

➢ Total number of Plants Planted till date is approximately 2.35 lakhs.</td></tr>
<tr><td>xxi.</td><td>First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.</td><td>First Aid and sanitation facility provided for the drivers and contract workers during construction phase.

Site sanitation and housekeeping is maintained regularly.

10 beds Hospital at site is equipped with all required facilities for First Aid.</td></tr>
<tr><td>xxii.</td><td>Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like ear plugs/ear muffs etc shall be provided. Workers engaged in noisy area such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment of any hearing loss including shifting to non noisy /less noisy areas.</td><td>➢ Complied, the steam turbine (ST) is enclosed in the building and acoustic enclosures are provided to minimize noise from these machines.

➢ All The equipments are provided with acoustic hoods to control noise. The ambient noise level is well below 75 dBA (day time) and 70 dBA (night time) as prescribed under EPA rule, 1986.

➢ Ambient noise levels in and around the Plant area are monitored regularly by M/s Vardan Enviro lab, Gurgaon. Noise levels are well under the limit.

➢ All safety items like Ear muffs, Helmets, Shoes, Nose filters, spectacles are provided to all the employees and made mandatory. Periodic audiometric check up is being carried out and records are being maintained.

NOISE LEVELS
FOR THE PERIOD OF OCTOBER 2017- MARCH 2018

<table><tr><th>Month</th><th>ST-1</th><th>ST-2</th><th>Air Compressor House</th></tr><tr><td>Oct – 17</td><td>86.4</td><td>85.7</td><td>75.7</td></tr><tr><td>Nov – 17</td><td>82.8</td><td>82.0</td><td>78.2</td></tr><tr><td>Dec – 17</td><td>82.1</td><td>82.8</td><td>78.4</td></tr><tr><td>Jan – 18</td><td>82.3</td><td>81.0</td><td>79.3</td></tr><tr><td>Feb – 18</td><td>81.9</td><td>80.1</td><td>79.6</td></tr><tr><td>March- 18</td><td>81.2</td><td>81.5</td><td>79.8</td></tr></table>NOTE - Spot Noise Levels at 1 meter distance from turbine in db(A)</td></tr>
<tr><td>xxiii.</td><td>Regular monitoring of Ground level concentration of SO_2, NO_X, RSPM and Hg shall be carried out in the impact zone and</td><td>➢ Baseline monitoring was conducted during EIA. Weekly monitoring (Manual/ Offline) during operational phase is being carried out regularly.

➢ In case of any exceedance, necessary control measures are ensured.</td></tr>
</table>

	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.	➢ Four Continues Ambient Air Quality Monitoring Stations (Online/ Real Time) are provided along the boundary considering the wind rose/wind directions and the total data of the CEMS and CAAQMS is connected with MPPCB server at Bhopal & CPCB server at Delhi. ➢ Compliance on EC conditions including results of monitoring data is being uploaded in company web site along with EC Compliance Report and displayed at the main gate of the company. ➢ Regular monitoring of PM10, PM2.5, SO_2 & NO_x is being carried out as per frequency & monitoring results are well within the norm. ➢ Offline Monitoring results are being submitted to MPPCB quarterly. **AAQM Results** **For the period of October 2017- March 2018**

LOCATION : Near STP - Colony area					
	PM2.5 (µg/m3)	**PM10 (µg/m3)**	**SO2 (µg/m3)**	**NOX (µg/m3)**	**CO (mg/m3)**
Minimum	25.80	54.00	6.80	13.70	0.55
Maximum	34.90	72.10	8.60	20.20	0.77
Average	30.02	66.48	7.63	16.22	0.63
LOCATION : Near H2 Gas cylinder shed					
	PM2.5 (µg/m3)	**PM10 (µg/m3)**	**SO2 (µg/m3)**	**NOX (µg/m3)**	**CO (mg/m3)**
Minimum	31.40	57.90	6.20	13.40	0.47
Maximum	35.20	68.40	8.40	18.10	0.58
Average	33.23	63.95	7.33	15.45	0.52
LOCATION : Near Watch tower 22 (Grinding Unit)					
	PM2.5 (µg/m3)	**PM10 (µg/m3)**	**SO2 (µg/m3)**	**NOX (µg/m3)**	**CO (mg/m3)**
Minimum	33.20	70.00	7.90	16.00	0.50
Maximum	44.10	80.00	10.30	23.80	0.80
Average	40.62	74.12	8.97	19.85	0.63
LOCATION : Near fuel storage tank					
	PM2.5 (µg/m3)	**PM10 (µg/m3)**	**SO2 (µg/m3)**	**NOX (µg/m3)**	**CO (mg/m3)**
Minimum	32.70	64.20	6.90	15.60	0.58
Maximum	39.40	73.80	10.00	22.00	0.83
Average	35.27	68.18	8.23	18.67	0.69

xxiv.	A good action plan for R & R (if applicable) with package for the project affected persons be submitted and implemented as per prevalent R & R	The report has been submitted to MoEF & CC on 20th Jan 2011 vide our letter No. JPVL/JNSTPP/MoEF/2010. It was subsequently modified incorporating suggestions of MOEF and was resubmitted vide letter no. - JPVL /JNSTPP/MoEF/2011 dated 29.06.2011.

	policy **within three months** from the date of issue of this letter.	
xxv.	An amount of Rs. 24.0 crores shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of Rs. 4.8 Crore 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.	➢ A separate budget earmarked for CSR activities. CSR study report already submitted to the ministry vide letter no. - JPVL/JNSTPP/MOEF/2010 dated 20.01.2011 and 29.06.2011. ➢ The capital fund of Rs 24 Crores is earmarked for CSR activities and Rs. 4.8 Crores per annum fund kept for recurring expenditure. ➢ The company is carrying out CSR activities in the vicinity of the Project as per the directions and guidance of the District Administration. ➢ Providing drinking water facility benefitting to the nearby villages. ➢ Unit is also investing on CSR Activities like conducting Medical camps in villages, Plantation programs, Road development activities, women empowerment, etc... ➢ Total expenditure incurred up to March, 2018 is Rs 2.33 Crores.
xxvi.	As part of CSR programme the company shall conduct need based assessment for the nearby villages to study economic measures with action plan which can help in up liftment 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 of such programme. Company shall provide separate budget for community development activities and income generating	Based on Need Base Assessment Study for development of nearby villages, an action plan was worked out for income generating projects for up-liftment of poor section of society. **The following activities were undertaken:** Sardar Patel Uchchtar Madhyamik Vidyalaya was started functioning up to class five w.e.f. July, 2011 and subsequently upgraded up to 10th class in July'2016 session. Annapurna mess is serving the free mid day meal to students. An ITI institute is being constructed for development of skilled man power in nearby areas of project. Other CSR activities include Stipend for secondary school students, Paying tribute to Old Age Persons, Vocational Training for students, and Drinking Water facility to local habitants.

	programmes. This will be in addition to vocational training for individuals imparted to take up self employment and jobs.	
xxvii.	Provision shall be made for the housing of construction labor 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.	Labor hutments had been established & developed with all required amenities like toilet, drinking water & infrastructure like internal road etc. for construction phase only.
xxviii.	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of	As mandated, We have informed the public through the local newspapers announcement in vernacular language that the project has been accorded environmental clearance by the ministry and copies of the clearance letter are available with state pollution control board and may also seen at website of the MoEF at http:/envfor.nic.in.

	Environment and Forests at http: / /envfor.nic.in.	
xxix.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/ 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.	Copy of EC accorded has been sent to local panchayat & Zila parishad. We have uploaded our EC in our company website.
xxx.	A separate Environment Management Cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	We have formed a separate full-fledged Environment Management Cell headed by Sr. President & supported by Add. General Manager, Dy. General Manager, Chief Engg. & Asst. Officer and Chemists of laboratory and Technician for implementation and compliance.
xxxi.	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 MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM,	Complied, We are regularly sending six monthly compliance reports to MOEF & CC Regional Office, CPCB Zonal Office and SPCB every 6 months, The same has been sent by email also. Six monthly Compliance on EC conditions including results of monitoring data is being uploaded on company's web site and we have also made available ambient air quality levels as well as stack emissions from both units in Display LED Display in front of the main gate.

	SO_2, NO_x (ambient levels as well as stack emission) shall be displayed as a convenient location near the main gate of the company in the public domain.	
xxxii.	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	Complied, six monthly compliance reports are regularly submitted to MoEF, CPCB & MPPCB. The same also being sent by email. Last compliance report had submitted in Nov'17 for the period of April' 2017- September' 2017 vide our letter no: JNSTPP/ EC/ MoEF/ 2017-18/15 dated Nov 01st, 2017
xxxiii.	The environment statement of 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 status of compliance of EC conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.	Compliance assured, Submitted Environmental Statement in Form- V to the State Pollution control Board authorities in the month of Sept'17 for the financial year 2016-17 vide letter no. JVPL/EC/ES/2016-17 dated September 25th, 2017. It is put on the website of the company.

xxxiv.	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 environmental clearance conditions on their website and update the same periodically and simultaneously send the same by email to the Regional Office, Ministry of Environment and Forests.	Being complied, six monthly Environmental Clearance compliance status report is regularly submitted to MoEF, CPCB and SPCB. Compliance status updated on Company's website.
xxxv.	Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for	Will be complied with, Six monthly Environmental Clearance compliance status report is regularly submitted to MoEF, CPCB and SPCB. Compliance status updated on Company's website. Display board already installed in front of main gate. Results are being displayed at Main gate of the plant.

	their use during monitoring. Project proponent will up-load 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 (from stack & ambient air) shall be displayed at the main gate of the power plant.**	
xxxvi.	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 environmental protection measures shall not be diverted for other purposes and year -wise expenditure should be reported to the Ministry.	➢ Complied, Environmental protection measures i.e., Low NOx burners, constructions of 275m stack with CEMS, Noise protection, effluent treatment, sewage treatment, green belt development have been included in project capital cost & Suppression of fugitive emission, plantation in the periphery of the project area, constant monitoring of the pollution affects within the project area etc. ➢ Dedicated fund has already been allocated and being utilize for Environmental Protection measures. ➢ Environmental protection during Construction is being complied as per normal procedure. **Recurring expenditures for the period October 17 to March 18 is as below:** Green Belt Development - Rs 30,12,000 /- Maintenance cost in CHP - Rs 37,64,682 / - Operation cost in ESP - Rs 5,47,36,044/ - Operation Cost of ETP - Rs 99,72,035/- Operation Cost of STP - Rs 7,43,909/ -
xxxvii.	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	Complied, The project has achieved Financial Closure on **07/05/2010.**

	commissioning of plant.	
xxxviii.	Full cooperation shall be extended to the Scientists/Officers from the Ministry /Regional Office of the Ministry at Bangalore/CPCB/SPCB who would be monitoring the compliance of environmental status.	Company will cooperate and extend full support to the concerned authorities.