JAYPEE NIGRIE SUPER THERMAL POWER PLANT
A DIVISION OF JAIPRAKASH POWER VENTURES LIMITED
ISO CERTIFIED : 9001: 2015, 14001: 2015 & 18001: 2007
QUALITY ENVIRONMENT HEALTH & SAFETY

JAIPRAKASH
POWER VENTURES LIMITED

JNSTPP/ EC/ MoEF/ 2020-21/21

Oct 26th, 2020

To
Additional Principal Chief Conservator of Forests (C),
Ministry of Env., Forest and Climate Change, Regional Office (WZ), E-5,
Kendriya Paryavaran Bhawan, E-5 Arera Colony, Link Road-3,
Ravishankar Nagar, Bhopal - 462016

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 (April 2020 – September 2020) 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.)

26/10/2020
Vinod Sharma
Sr. President (O & M)

Encl. – As above
CC to:

1. **The Regional Directorate (Central),** Central Pollution Control Board, 3rd Floor, Sahkar Bhawan, North T.T Nagar, Bhopal- 462003
2. **The Chairman,** Madhya Pradesh State Pollution Control Board, Paryavaran Parisar, E-5 Area Colony, Bhopal – 462016, Madhya Pradesh
3. **Regional office - MP Pollution control board,** Bhakuar, Naugarh, Singrauli – 486 887 (M.P.)

Site : Jaypee Nigrie Super Thermal Power Project, 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

Half - Yearly Compliance Report
Of
Environmental Clearance
Period: April 2020 - September 2020

Of

M/s Jaiprakash Power Ventures Ltd.

2 x 660 MW Jaypee Nigrie Super Thermal Power Plant
&
2.0 MTPA (Installed) 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
21st 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 to 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	Hydrogeological study of the Jaypee Nigrie Super Thermal Power Plant, Nigrie is being carried out every year by an independent agency M/s Hydro-geosurvey Consultants Pvt. Ltd, Jodhpur, Rajasthan a National Accreditation Board for Education and Training (NABET) Accredited & Quality Council of India (QCI) Accredited agency and reports are being submitted to concerned departments timely. The last study report was submitted in August 2020. Water level check from existing peizometer wells being carried out monthly.

	adverse impact on ground water shall be undertaken.	Periodic review is being done. Quality of ground water is being monitored in and around the plant premises. Ground water level in nearby villages is also being monitored to know the seasonal fluctuations. There is no adverse impact found in the quality & quantity of Ground Water.
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 Minimum recommended discharge is being released in the River during lean period (Summer Season from March to June). On the basis of Hydro geological studies, it shows that the River flow in the month of June, in last 8 years ranges from 1.798 cumecs (m3/sec) minimum to 2.97 cumecs (m3/sec) maximum, which is substantially more than minimum recommended flow of 0.50 cumecs (m3/sec). The lean flow of Gopad river and its tributaries could not be measured in the last week of May, 2020, as the team which used to measure the lean flow could not visit the area due to lock down effective from 24th March, 2020.However, the lean flow will be measured in May, 2021 when it will be feasible to mobilize the team for the field studies. 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	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 (Roll Press & Ball Mill) with guaranteed emission level of <30 mg/Nm3 at full load. Each Bag House has 1188 & 780 bags respectively.

	from the Grinding Unit shall not exceed 50 mg/Nm3.	
vi.	Fugitive emission in the Grinding Unit shall be controlled and data on fugitive emission shall be maintained in a log book and duly signed by the Head, Environment on a daily basis.	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 haulage roads.
vii.	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm3.	Highly efficient BHEL make Electro Static Precipitators (ESPs) with efficiency of 99.95%, have been installed for each boiler to meet particulate emission less than 50 mg/Nm3. Online Continuous Emission Monitoring System is installed to Monitor Emissions for both boiler stacks and data is being transmitted to MPPCB & CPCB servers on real time basis and the results are within the Norms. For stack (Unit-I) average concentration of PM is 39.28 mg/Nm3, maximum concentration is 48.33 mg/Nm3 & the minimum concentration is 27.34 mg/Nm3 during April 2020 – September 2020. For stack (Unit-II) average concentration of PM is 39.83 mg/Nm3, maximum concentration is 48.61 mg/Nm3 & the minimum concentration is 15.27 mg/Nm3 during April 2020 – September 2020.
viii.	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.	Adequate Air Pollution Control measures such as Dust Extraction System (Cyclone followed by Bag Filters) in coal crusher house and coal transfer points, Jet Sprinkler type Dust Suppression System in coal yard and Dry Fog type Dust Suppression System in belt conveyors 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 systems are installed 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 is installed in Coal Yard area for Bucket wheel stacker cum reclaimer. D) Dry Fog Dust Suppression system installed at all transfer points. Elaborate 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 in each Unit, one number of Bag Filter for each Coarse Ash Surge Hopper (Unit #1 & 2) and two bag filters at Main Fly Ash Silo have been installed.
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.	94.17 % of Fly Ash has been utilized during April 2020 to September 2020 as per MoEF & CC Notification No. 763 (E) dated September 14, 1999, notification No. 2804 (E) dated November 03, 2009 and S.O.254 (E) dated January 25, 2016 for fly ash utilization. Status of Implementation is being reported to Authorized Regulatory Boards 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. 94.17 % of Fly Ash has been utilized during April 2020 to September 2020 as per MoEF & CC Notification No. 763 (E) dated September 14, 1999, notification No. 2804 (E) dated November 03, 2009 and S.O.254 (E) dated January 25, 2016 for fly ash utilization. Bottom ash is being disposed off in the ash pond in lean Slurry Disposal mode with ash to water ratio typical 1:2.8, with 100% recirculation of ash water. Regular monitoring of heavy metals is being carried out Half Yearly.
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.	Design of Ash Pond has been done by M/s Development Consultants Pvt. Ltd. (DCPL) a renowned designing agency. M/s DCPL drawing has been submitted to MPPCB vide letter no. JPVL/COORD/POLL/2013-14 dated January 21, 2014.The drawing No. is K6A24–DWG-C-595 Rev. 4. The Ash Dyke has been constructed with upstream & downstream slopes (1V:2H). Ash Dyke has been constructed with HDPE lining on inner side and over that PCC (75mm) layer has been provided to protect it and eliminates any possibility of breach of embankment. Ash Pond is built over an area of 21.2 ha and is consisting of two ponds & equipped with 100% Ash Water Recirculation facility to prevent any ash mixed water discharge to outside. The Ash Dyke is situated within intact

<table>
<tr><td></td><td></td><td>boundary wall of Power Plant.</td></tr>
<tr><td>xii.</td><td>For disposal of Bottom Ash (if proposed to be undertaken) in abandoned mines it shall be ensured that the bottom and sides 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>Not applicable, as presently bottom ash is not disposed in any abandoned mines.</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 Reverse Osmosis (RO) system and reused in Cooling Tower Makeup, Service Water and HVAC system. The RO reject water is used for Dust Suppression in Coal Handling Plant Areas.

TREATED EFFLUENT ANALYSIS
For the period of April 2020 – September 2020

<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>Apr-20</td><td>7.16</td><td>NIL</td><td>9.50</td><td>2.6</td><td>NIL</td><td>NIL</td><td>1.99</td></tr>
<tr><td>May-20</td><td>7.79</td><td>NIL</td><td>11.60</td><td>2.9</td><td>NIL</td><td>NIL</td><td>2.18</td></tr>
<tr><td>Jun-20</td><td>7.76</td><td>NIL</td><td>14.00</td><td>4.0</td><td>NIL</td><td>NIL</td><td>3.80</td></tr>
<tr><td>Jul-20</td><td>7.66</td><td>NIL</td><td>13.20</td><td>3.8</td><td>NIL</td><td>NIL</td><td>2.64</td></tr>
<tr><td>Aug-20</td><td>7.89</td><td>NIL</td><td>13.50</td><td>5.3</td><td>NIL</td><td>NIL</td><td>3.93</td></tr>
<tr><td>Sep-20</td><td>7.48</td><td>NIL</td><td>12.60</td><td>4.2</td><td>NIL</td><td>NIL</td><td>3.27</td></tr>
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</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</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>
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<tr><td></td><td>monsoon.
Arrangements shall be made that effluents and storm water do not get mixed.</td><td></td></tr>
<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 Plants have been installed and treated water reused suitably within the plant premises for green belt development.

TREATED SEWAGE ANALYSIS (1000 KLD STP in Township Area)
For the period of April 2020 – September 2020

<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>Apr-20</td><td>7.56</td><td>12.4</td><td>90.8</td><td>9.2</td><td>2.10</td></tr><tr><td>May-20</td><td>7.62</td><td>11.1</td><td>93.4</td><td>8.8</td><td>1.96</td></tr><tr><td>Jun-20</td><td>7.68</td><td>12.0</td><td>91.6</td><td>9.0</td><td>2.00</td></tr><tr><td>Jul-20</td><td>7.19</td><td>12.0</td><td>90.2</td><td>11.3</td><td>2.22</td></tr><tr><td>Aug-20</td><td>7.22</td><td>18.0</td><td>106.1</td><td>15.5</td><td>2.02</td></tr><tr><td>Sep-20</td><td>7.02</td><td>13.0</td><td>93.7</td><td>10.3</td><td>2.15</td></tr></table>
TREATED SEWAGE ANALYSIS (100 KLD STP in Plant Area)
For the period of April 2020 – September 2020

<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>Apr-20</td><td>7.25</td><td>10.1</td><td>72.6</td><td>8.5</td><td>1.52</td></tr><tr><td>May-20</td><td>7.44</td><td>9.8</td><td>70.6</td><td>8.0</td><td>1.34</td></tr><tr><td>Jun-20</td><td>7.54</td><td>10.0</td><td>72.8</td><td>6.0</td><td>1.00</td></tr><tr><td>Jul-20</td><td>7.31</td><td>10.0</td><td>69.4</td><td>9.2</td><td>1.32</td></tr><tr><td>Aug-20</td><td>7.53</td><td>13.0</td><td>86.5</td><td>11.5</td><td>1.50</td></tr><tr><td>Sep-20</td><td>7.24</td><td>9.0</td><td>62.4</td><td>7.7</td><td>1.71</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.

Rain water harvesting pit within the township area has been 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</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.</td></tr>
</table>

	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.	Mock drills are being conducted periodically. Fire hydrant and water jet type sprinklers established in the coal yard. Reviewed On Site Emergency Plan of Jaypee Nigrie Super Thermal Power Plant was Submitted to The Director, Industrial Health & Safety, Indore vide OSEP No.RE01121811507294 date 21/01/2019. Approval was granted on 28.01.2019.
xviii.	Storage facilities for auxiliary liquid fuel such as LDO and HFO/LSHS shall be 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 eventuality in case of an accident taking place due to storage of oil.	The design of the plant meets the requirements. Storage facilities for auxiliary liquid fuel are made in the plant area and license obtained from Department of Explosives, Nagpur/ Bhopal. Validity of license No. P/HQ/MP/15/2876(P311713) from Deputy Chief Controller of Explosives, Bhopal for Petroleum Class C (LDO & HFO) in bulk installation is up to 31st December 2022. Onsite Emergency Plan (Disaster Management Plan) has been approved by Director, Industrial Health and Safety, M.P., vide. OSEP NO: RE01121811507294, Indore Dated: 28/01/2019. This plan covers all type of emergency including storage of oil.
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	Eight Piezometer bore wells were laid around the Ash ponds. Regular (Six Monthly) monitoring of heavy metals is being carried out. Third Party Test Report is annexed as **Annexure – I.**

	compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	
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 shall be submitted to the Ministry. Tree density shall not less than 2500 per ha with survival rate not less than 70%.	➢ Complied with and Green belt development/ plantation is 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 is being developed in a phased manner along the periphery of the Power Plant and Grinding Unit. ➢ More than 33% of area in and around Power plant including Cement plant i.e. around 182 hectares of green belt has been developed as per guidelines given by CPCB. ➢ Total number of Plants Planted up to 30.09.2020 is approximately 4.525 lakhs. ➢ During this period (April, 2020 – September, 2020) total of 0.32 lakhs of Trees have been planted in 12.8 Ha.
xxi.	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	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.
xxii.	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	Complied, the steam turbines (ST) are 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 levels are 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 monthly. Noise levels are well under the limit. All safety items like Ear muffs, Ear Plugs are provided to all the workers & employees and made mandatory. Periodic audiometric check up is being carried out and records are being maintained. Further the Company has obtained IMS - Integrated Management System Certificate covering ISO 9001:2015 (QMS – Quality Management System), ISO 14001:2015 (EMS - Environmental Management Systems) & ISO

<table>
<tr><td></td><td>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>18001:2007 (OHSAS - Occupational Health and Safety Assessment Series).</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 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.</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.
Four Continuous Ambient Air Quality Monitoring Stations (Online/ Real Time) are provided along the boundary considering the wind rose/wind directions and the data of the CAAQMS, CEMS and CEQMS 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.
Quarterly Environmental Monitoring Reports are also made available on the website of the company.
Regular monitoring of PM10, PM2.5, SO_2 & NO_2 and CO 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 April 2020 – September 2020
<table>
<tr><th colspan="6">LOCATION : Near STP - Colony area</th></tr>
<tr><th></th><th>SO_2 (µg/m3)</th><th>NO_2 (µg/m3)</th><th>PM10 (µg/m3)</th><th>PM2.5 (µg/m3)</th><th>CO (mg/m3)</th></tr>
<tr><td>Minimum</td><td>4.8</td><td>10.2</td><td>30.1</td><td>13.4</td><td>0.313</td></tr>
<tr><td>Maximum</td><td>7.5</td><td>11.7</td><td>54.0</td><td>23.9</td><td>0.486</td></tr>
<tr><td>Average</td><td>5.9</td><td>10.8</td><td>42.1</td><td>18.5</td><td>0.421</td></tr>
<tr><th colspan="6">LOCATION : Near H2 Gas cylinder shed</th></tr>
<tr><th></th><th>SO_2 (µg/m3)</th><th>NO_2 (µg/m3)</th><th>PM10 (µg/m3)</th><th>PM2.5 (µg/m3)</th><th>CO (mg/m3)</th></tr>
<tr><td>Minimum</td><td>6.8</td><td>12.4</td><td>39.9</td><td>16.6</td><td>0.489</td></tr>
<tr><td>Maximum</td><td>10.1</td><td>16.5</td><td>66.1</td><td>30.3</td><td>0.582</td></tr>
<tr><td>Average</td><td>8.3</td><td>13.8</td><td>51.2</td><td>22.8</td><td>0.547</td></tr>
</table>
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		LOCATION : Near Watch tower 22 (Grinding Unit) **SO₂ (µg/m3) / NO₂ (µg/m3) / PM10 (µg/m3) / PM2.5 (µg/m3) / CO (mg/m3)** Minimum: 6.5 / 12.1 / 42.4 / 18.1 / 0.402 Maximum: 9.5 / 15.4 / 69.1 / 32.1 / 0.724 Average: 7.8 / 13.4 / 55.3 / 24.9 / 0.547 **LOCATION : Near fuel storage tank** **SO₂ (µg/m3) / NO₂ (µg/m3) / PM10 (µg/m3) / PM2.5 (µg/m3) / CO (mg/m3)** Minimum: 6.9 / 13.7 / 44.7 / 18.9 / 0.542 Maximum: 10.1 / 15.9 / 67.1 / 33.6 / 0.748 Average: 7.8 / 14.5 / 56.1 / 26.7 / 0.644
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 policy **within three months** from the date of issue of this letter.	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.
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. ➢ For CSR activities capital outlay of more than Rs. 24 crores has been made. ➢ 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 (Nigrie, Niwas, katai & Hardi & Mahua Ganv and Chamrach and Joba). ➢ Unit is also investing on CSR Activities on Rural Development Projects like conducting Medical camps in villages (Nigrie, Niwas, katai & Hardi & Mahua Ganv and Chamrach), Plantation programs (Nigrie, Niwas, katai & Hardi & Mahua Ganv and Joba), Road development activities (Nigrie), women empowerment & providing furniture/building material to local offices (Govt. Office, School), Promotion of Safety/Cultural/ sports in Rural Areas/villages & providing Medicine Distributed to nearby Villagers Construction of Temples in Papal Gaon, katai, Niwas & Restoration of Ponds in Katai, Niwas, Nigrie & Contribution of Diasaster Management (Groceries Distributed) and Promoting Education through Sardar Patel School

		under Jaiprakash Sewa Sansthan & Jay Jyoti School under Jaiprakash Sewa Sansthan & Gopad Viklang Sikasha Vikas Samiti,Village-Katai. ➢ Construction of Kitchen Shed in Gopad Viklang Sikasha Vikas Samiti,Village-Katai. ➢ Hand Pumps repaired in Nigrie, katai Villages. ➢ Total expenditure incurred up to September, 2020 is Rs 4.264 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 programmes. This will be in addition to vocational training for individuals imparted to take up self employment and jobs.	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 started for up to class five w.e.f. July, 2011 and subsequently upgraded up to 10th class in July'2016 session. ➢ Free Education & Free Mid Day Meals provided to the children of affected village Nigrie & Sardar patel School, Nigrie. ➢ Free Health Check Up & Health cards provided to the 245 students. ➢ Roads have been laid down in Nigrie Village & free electricity supply to the Street Lights is provided in R & R Colony. ➢ Undulated land in the Primary School, Nigrie has been converted into Play Ground. ➢ Restoration & Refurbishment of water reservoirs & ponds taken place in nearby villages (Gambhira Talab & Bandhwatara Talab, Katai). ➢ Providing Mobile Hospital & Ambulance Service to affected villages (Nigrie, Niwas, katai & Hardi & Mahua Ganv and Chamrach and Joba). ➢ An Average of 3453 patients are being benefited every month by the Primary Health Center. ➢ A Dispensary was also setup in R & R colony. An Average of 600 patients are being benefited every month. ➢ **"Trasform Singrauli" Project under Indian government and MP Government:-** 1. Provided Free Medical Checkup facility & Free Medicines in

		Nigrie, Niwas, katai & Hardi & Mahua Ganv and Chamrach Villages. 2. Continual supply of Protein Powder, Iron Syrups & Jaggery and Horse Gram to Pregnant Women in above mentioned 6 villages. 3. Multi Vitamin Drops & Zinc Drops have been provided to Malnourished Babies in the villages. 4. Expenditure incurred under "**Disaster Management"** during COVID -19 Pandemic Lockdown is 1.40 Lakhs. 5. Groceries distributed in the vicinity of the project area Due to COVID -19 Pandemic Disease. 6. 5000 Nose Masks have been distributed in the villages nearby the project area to protect villagers from COVID -19 Pandemic Disease. ➢ **Swatch Bharath Mission:-** 1. 300 Fruit Yielding plants & 200 other plants have been planted through Gram Panachayath in 6 villages. 2. Provided Utensil (Bartan) for Gopad Viklang Samiti. 3. Eye cataract surgery under Phacoemulsification of villagers. 4. Construction of Public toilet in Nigrie Village.
xxvii.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the	Labour hutments had been established & developed with all required amenities like toilet, drinking water & infrastructure like internal road etc.

	project.	
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 Environment and Forests at http: / /envfor.nic.in.	As mandated, We have informed the public through the local newspaper announcements 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.
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 Vice President, & supported by Dy. General Manager & Environment 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, 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.	Complied, We are regularly sending six monthly compliance reports to MOEF & CC Regional Office, CPCB Zonal Office and SPCB every 6 monthly, 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 website and we have also made available ambient air quality levels as well as stack emissions from both units in LED Display in front of the main gate.
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 is also being sent by email. Last compliance report had submitted on 19th May 2020 for the period of October, 2019 - March, 2020 vide our letter no: **JNSTPP/ EC/ MoEF/2020-21/20** dated May 16th, 2020. It is uploaded on the website of the company.

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 on 28th May 2020 for the financial year 2019 -20 vide letter no. JVPL/EC/ES/2019 -20 dated May 27th, 2020. It is uploaded 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	Being complied, six monthly Environmental Clearance compliance status report is regularly submitted to MoEF, CPCB and SPCB. Compliance status updated on Company's website.

	the same by email to the Regional Office, Ministry of Environment and Forests.	
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 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.**	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 installed in front of main gate. Results are being displayed at Main gate of the plant.

<table>
<tr>
<td>xxxvi.</td>
<td>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.</td>
<td>Complied, Dedicated fund has already been allocated and being utilized for Environmental Protection Measures i.e., Low NOx Burners, Constructions of 275m Stack with CEMS, protection from Noise, 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. are being undertaken on regular basis.

Recurring expenditures for the period April 2020 to September 2020 is as below:

<table>
<tr><td>Green Belt Development</td><td>-</td><td>Rs</td><td>34,32,000/-</td></tr>
<tr><td>Maintenance cost in CHP</td><td>-</td><td>Rs</td><td>41,08,487/-</td></tr>
<tr><td>Operation cost in ESP</td><td>-</td><td>Rs</td><td>9,05,77,846/-</td></tr>
<tr><td>Operation Cost of ETP</td><td>-</td><td>Rs</td><td>1,02,51,943/-</td></tr>
<tr><td>Operation Cost of STP</td><td>-</td><td>Rs</td><td>9,93,770/-</td></tr>
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<td>xxxvii.</td>
<td>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.</td>
<td>Complied, The project has achieved Financial Closure on 07/05/2010.

Unit- I was commissioned on 01/09/2014 & information was sent to MPPCB vide letter No. JNSTPP/PCB/2014-15 Dated November 3, 2014.

Unit- II was commissioned on 24/03/2015 & information was sent to MPPCB vide letter No. JNSTPP/PCB/2015-16 Dated May 26th, 2015.

Cement Grinding Unit was commissioned on 09/10/2014 & information was sent to MPPCB vide letter No. JNSTPP/PCB/2015-16 Dated May 28th, 2015.</td>
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<td>xxxviii.</td>
<td>Full cooperation shall be extended to the Scientists/Officers from the Ministry /Regional Office of the Ministry at Bangalore/CPCB/SPCB who would be</td>
<td>Company has been fully cooperating and extending full support to the concerned authorities.</td>
</tr>
</table>

	monitoring the compliance of environmental status.	
xxxix.	Bag house and dust suppression shall be installed in packing area to control the particulate and fugitive emissions.	2 nos. of Bag Houses attached to Cement Mills (Roll Press & Ball Mill) with guaranteed emission level of <30 mg/Nm3 at full load. Each Bag House has 1188 & 780 bags respectively. 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 haulage roads.

Vardan EnviroLab

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/JPSTPP/W/01	Report No.:	VEL/WW/2006250001
Name & Address of Party:	M/s Jaypee Nigrie Super Thermal Power Plant (A Division Of Jaiparkash Power Venture Limited) Village & PO, Nigrie, Tehsil: Sarai, District: Singrauli, (MP)	Format No.:	5.10 F-01
		Party Reference No.:	NIL
		Reporting Date:	29/06/2020
		Period of Analysis:	25/06/2020-29/06/2020
Sample Description:	Heavy Metals in Ground Water	Receipt Date:	25/06/2020
Sample Collected by:	Vardan EnviroLab Representative	Sampling Date:	24/06/2020
Preservation:	Refrigerated	Sampling Quantity:	2.0 Ltr.
Parameter Required:	As Per Client Requirement		
Sampling & Analysis Protocol:	APHA 23rd Edition 2017	Sampling Type:	--

TEST RESULTS

S. No.	Locations	Arsenic as As	Mercury as Hg	Chromium as Cr	Lead as Pb
Instrument used for Analysis		AAS Thermo Scientific Model No. AA 303	AAS Thermo Scientific Model No. AA 303	AAS Thermo Scientific Model No. AA 303	AAS Thermo Scientific Model No. AA 303
1.	Near ND-CT	BDL	BDL	BDL	BDL
2.	Near Crusher	BDL	BDL	BDL	BDL
3.	Near STP Plant Colony	BDL	BDL	BDL	BDL
4.	Nr. Sardar Patel School	BDL	BDL	BDL	BDL
5.	Nr. Reservoir II	BDL	BDL	BDL	BDL
6.	Nr. Gate No.3	BDL	BDL	BDL	BDL
7.	Nr. Awas Gate	BDL	BDL	BDL	BDL
8.	Wagon Tippler	BDL	BDL	BDL	BDL
Instrument Detection Limit		0.005 mg/l	0.0005 mg/l	0.005 mg/l	0.005 mg/l
	Limit as per IS 10500:2012				
	Requirement (Acceptable Limits)	0.01	0.001	0.005	0.01
	Permissible Limit in the Absence of Alternate Source	0.05	No Relaxation	No Relaxation	No Relaxation

Checked By

VARDAN ENVIROLAB JAIPUR Authorised Signatory

Approved By

Note: a) The results listed refer only to the tested samples & applicable parameters
b) Total liabilities of our lab will be restricted to the invoice amount only
c) The Sample will be destroyed after retention time unless otherwise specified