

Date: 04 .06.2018

**M/S Desh Bhakt Ratnappa Kumbhar Panchaganga SSK Ltd,  
Inchalkaraji, Kolhapur.  
Compliance to the Environmental Clearance for Co-generation Plant 30 MW.**

**Ref: SEAC 2009/CR16/TC2, Dated: 18<sup>th</sup> November 2009**

**Sub: 30 MW Co-generation Project at Desh Bhakt Ratnappa Kumbhar Panchaganga SSK Ltd, Inchalkaraji, Kolhapur- Environmental clearance reg.**

<b>Sr. No</b>	<b>Conditions</b>	<b>Compliance</b>
1	This has reference to your communication No. SREL/panchaganaga/Co-gen/09-10 dated 4 <sup>th</sup> July, 2009 on the above mentioned subject. The proposal was considered as per the EIA Notification-2006, by the state Level Environment Committee in its 12 <sup>th</sup> meeting & recommended for prior Environmental Clearance by State Level Environment Impact Assessment Authority (SEIAA). Proposal was considered by the state Level Environment Impact Assessment Authority in its 16 <sup>th</sup> meeting held on 7 <sup>th</sup> November, 2009.	Noted the contents
2.	It is noted that the proposal is for grant of Environmental Clearance for 30 MW CO-generation Project at Desh Bhakt Ratnappa Kumbhar Panchaganga SSK Ltd, Inchalkaranji, Kolhapur. The Project considered by SEAC under Category 'B2' of EIA Notification 2006, and Screening category is 1(d).	Noted.
	Project information from documents submitted by you and considered by SEAC & SEIAA is summarized as below: Name of the Project: Environmental clearance for 30 MW Cogeneration Project at Desh Bhakt Ratnappa Kumbhar Panchganga SSK Ltd, Inchalkaranji, Kolhapur.  Project Proponent: M/s. Desh Bhakt Ratnappa Kurnbhar Panchganga SSK Ltd, Inchalkaranji, Kolhapur. Location of the project: Inchalkaranji, Hatkanangale Dist - Kolhapur. Latitude: 17°04'N Longitude: 76° 14'E	Noted and the project 30 MW Co-generation plant is implemented and operated on location M/s. Desh Bhakt Ratnappa Kumbhar Panchganga SSK Ltd, Inchalkaranji, Tal: Hatkanagale, Dist: Kolhapur, Stat: Maharashtra. The existing Sugar plant capacity -5000 TCD is established and operated since from 1976 year.

	<p>Type of Project: Power  Project: Power Generation:  30 MW Co-generation.  Total Plot Area: 8000 Sq.m.  Built up Area: 2000 Sq.m,  Estimated Cost of the project:  Rs.94.19 Cr.</p>	
	<p>Water Requirement: 574cum/day; source:  Sugar factory scheme.  Wastewater Generated: Effluent generated  from sugar factory shall be 46 cum/day  (Consent to establishment-16 cum/day)</p>	<p>The water requirement and effluent generation from sugar factory and implemented Co-generation plant is attached as an <b>Annexure- Ia</b>. The water consumption and waste water generation for sugar and co-generation plants are within the stipulated limits mentioned in consent to operate condition. The generated effluent from sugar and co-generation plant is being treated in ETP plant. The existing ETP capacity is having 850 cum/day. Further we proposed primary clarifier and tertiary treatment like Multi Media filter and Activated Carbon filter with existing ETP facility to further improve the treated effluent quality. The schematic process flow sheet of ETP and the recent analysis report of ETP treated effluent attached as <b>Annexure I b &amp; I c</b></p>
	<p>Process:  Co- generation will be done through steam turbines of double extraction condensing route (DEC). Saving of bagasse has become possible with modern instrumentation. It is proposed to install machinery and equipment in the power manufacturing process.</p>	<p>The high pressure 67 ata Boiler having capacity 140 THP is provided with turbine having double extraction cum condensate mode .The boiler and turbine are provided with fully automated DCS system.</p>
	<ul style="list-style-type: none"> <li>• One Boiler of 140 TPH capacity and 67 bar steam pressure. Boilers at 485 degree C temp and using steam turbines for T.G set.</li> </ul>	<p>One Boiler capacity having 140 THP with 67 ata, steam temperature 485 degree C and steam turbines is established and operated in place of earlier old 7 No.s Boilers.</p>
	<ul style="list-style-type: none"> <li>• The surplus power is generated by the steam required for process, passing through Turbo alternator set of 30 MW working rating of DEC type suitable for boiler steam parameters</li> </ul>	<p>The extracted steam from Turbo alternator set of 30 MW is utilized for captive Co-generation plant and sugar process and surplus power is</p>

	and 11KV volt, 3 phases in 50 cycles per second generation volt.	exported to Maharashtra Govt. The power generated is having 11KV volt and in 3 phases.																																									
	<p>Fuel: Bagasse          Bagasse requirement: 60 T/Hr          Boiler: 1 of 140 TPH (instead of existing 7 of total capacity 157 TPH)          Comparison of boilers:</p> <table border="1"> <thead> <tr> <th>Sr. No</th> <th>Particulars</th> <th>Old Boiler</th> <th>New Boiler</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Boiler Capacity</td> <td>157 TPH</td> <td>140 TPH</td> </tr> <tr> <td>2</td> <td>Working Pressure</td> <td>21 Bar</td> <td>76 Bar</td> </tr> <tr> <td>3</td> <td>Fuel used</td> <td>Bagasse</td> <td>Bagasse</td> </tr> <tr> <td>4</td> <td>Calorific value</td> <td>2270 Kcal/kg</td> <td>2270 Kcal/kg</td> </tr> <tr> <td>5</td> <td>Moisture</td> <td>50%</td> <td>50%</td> </tr> <tr> <td>6</td> <td>Manner feeding</td> <td>Spreader stroker</td> <td>Spreader stroker</td> </tr> <tr> <td>7</td> <td>Heat transfer factor</td> <td>Less than 70%</td> <td>More than 70%</td> </tr> <tr> <td>8</td> <td>Quality of feed water</td> <td>Less</td> <td>DM water</td> </tr> <tr> <td>9</td> <td>Bagasse consumption</td> <td>78.5 TPH</td> <td>60 TPH</td> </tr> </tbody> </table>	Sr. No	Particulars	Old Boiler	New Boiler	1	Boiler Capacity	157 TPH	140 TPH	2	Working Pressure	21 Bar	76 Bar	3	Fuel used	Bagasse	Bagasse	4	Calorific value	2270 Kcal/kg	2270 Kcal/kg	5	Moisture	50%	50%	6	Manner feeding	Spreader stroker	Spreader stroker	7	Heat transfer factor	Less than 70%	More than 70%	8	Quality of feed water	Less	DM water	9	Bagasse consumption	78.5 TPH	60 TPH	<p>The bagasse is used as fuel for 140 TPH Boiler and Co-gen plant is established and operated with only one 140 TPH boiler in place of 7 No. earlier old Boilers to reduce the emission load.</p>	
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	<p>Solid waste generation:          Fly ash: 21.6 MT/day, Disposal : sold to brick manufacturers, composting.</p>	<p>The daily generated fly ash is being sold to brick manufacturing and Farmers as soil conditioner.</p>																																									

	<ul style="list-style-type: none"> <li>Green belt development: 2400 sq. m. area for green belt. Total 1500 trees shall be planted</li> </ul>	<p>The Bagasse yard surrounding 2400 sq an area is green developed with having 1710 Nos of trees are planted. The trees are Casurina, Silver Oka, Eucalyptus, Ashok etc The tree planted photographs are attached as an <b>Annexure –II</b></p>
	<p>Air pollution control Measures:</p> <ul style="list-style-type: none"> <li>Electrostatic precipitator will be installed to reduce dust emission level &amp; RCC Chimney is of the height of 75 meters.</li> <li>The project proponent shall install regular monitoring system for SPM and SO2.</li> <li>In place of 7 Existing boilers, provision of one new will be a better idea.</li> <li>Stacks being less in numbers but more in height, better dispersion will be achieved.</li> <li>Presently only mechanical dust collector is in place, Electrostatic precipitator will be introduced which will arrest more dust from escaping into the atmosphere.</li> </ul>	<ul style="list-style-type: none"> <li>Electrostatic precipitator as air pollution control equipment and RCC stack height of 75 meter are provided for 140 TPH Boiler.</li> <li>The regular online monitoring system is installed and operated for SPM as per CPCB directions and Consent condition. The analysis report of online monitoring offline data, JVS report and empanelled laboratory reports are attached as an <b>Annexure- III</b></li> <li>One high pressure Boiler is provided instead of earlier seven No. low pressures Boiler.</li> <li>The ESP is provided in place of mechanical dust collector for Boiler 140 TPH. The photograph of ESP and stack is attached as an <b>Annexure –IV</b>. Boiler 140 TPH is operating only.</li> </ul>
xi	<p>Environmental Management Plan: EMP capital cost will be Rs. 4 crores and recurring cost will be Rs. 50 Lakhs</p>	<p>The capital cost For Environmental management plan is Rs. 4.77 Crores and recurring cost per year is Rs. 28.75 . The detail of EMP expenditure cost is attached as <b>Annexure V</b></p>
3	<p>The proposal has been considered by SEIAA in its 16<sup>th</sup> meeting dated on 7<sup>th</sup> November 2009 and decide to accord Environmental Clearance to the said project under the provisions of Environment Impact Notification, 2006 subject to implementation of the following terms and conditions.</p>	<p>Noted.</p>
i	<p>"Consent for Establishment" shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the Environment department before start of any construction work at the site.</p>	<p>The consent for establishment is obtained from Maharashtra Pollution Control Board.</p>

ii	No land development/construction work preliminary or otherwise relating to the project shall be taken up without obtaining due clearance from respective authorities	Noted the condition and agreed.
ii	No additional land shall be used /acquired for any activity of the project without obtaining proper permission.	The project is established and operated within the factory premises and there is no additional land is used for implementation of the project.
Iv	No fuel other then mentioned above including coal shall be used without obtaining proper permission	Only bagasse is used as fuel. No other fuels are used.
V	For controlling fugitive natural dust, regular sprinkling of water & wind shields at appropriate distances in vulnerable areas of the plant shall be ensured.	The water spray tanker is being operated on the roads and open area to avoid fugitive and natural dust emission.
vi	Regular monitoring of the air quality, including SPM & SO2 levels both in work zone and ambient air shall be carried out in and around the power plant and records shall be maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with Maharashtra Pollution Control Board (MPCB) & submit report accordingly to MPCB.	The three location of the monitoring station are provided for mentoring the AAQ. The monitoring is being carried out regularly from the empanelled laboratory and same is being submitted to MPCB office regularly. The recent summery of AAQ analysis and analysis report of Xerox copies are attached as <b>Annexure –VI</b>
vii	A detailed scheme for rainwater harvesting shall be prepared and implemented to recharge ground water.	We are in process for rain water harvesting to recharge the ground water.
viii	Periodic monitoring of ground water shall be undertaken and results analyzed to ascertain any change in the quality of water. Results shall be regularly submitted to the Maharashtra Pollution Control Board.	The ground water is analyzed regularly. The recent analysis report report are attached as an <b>Annexure -VII</b>
ix	Leq of Noise level shall be maintained as per standards. For people working in the high noise area, requisite personal protective equipment like earplugs etc. shall be provided.	The earplugs and ear muffs are provided to workers those are working in high noise area.

x	The overall noise levels in and around the plant shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures, etc. On all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989	The high noise equipments like turbine, DG sets are provided with acoustic enclosures and these area are separated with other working area. The ambient Noise level is being monitored regularly. The recent monitoring report is attached as <b>Annexure -VIII</b>
xi	Green belt shall be developed & maintained around the plant periphery. Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.	The total area is 59.4 hectare, out of that for green belt 15% (8.9 hectare) area is provided for development of plantation. Out of 33% green belt area about 15% is planted and proposed for green belt is 18 % which will be completed within two year. The existing and year wise proposed plantation detail with layout map is attached as an <b>Annexure IX</b>
xii	Adequate safety measures shall be provided to limit the risk zone within the plant boundary, in case of an accident. Leak detection devices shall also be installed at strategic places early detection and warning.	The Fire hydrant system is installed at manufacturing process and wherever necessary like bagasse yard, Boiler area etc. The fire extinguisher and sand buckets are kept in fire sensitive zones. The First aid are provided at each section.
xiii	Occupational health surveillance of the workers shall be done on a regular basis and record maintained as per Factories Act.	The occupational health surveillance of the workers is carried on a regular basis and records are maintained as per the factories act.
xiv	Project Proponent shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.	The Fire hydrant system is installed at manufacturing process and wherever necessary like bagasse yard, Boiler area etc. The fire extinguisher and sand buckets are kept in fire sensitive zones.
xv	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Waste (Management and Handling ) Rules, 2003. Authorization from the MPCB shall be obtained for collections /treatment/storage/disposal of hazardous wastes.	The Hazardous waste authorization is obtained from MPCB. the hazardous waste waste oil and residue containing oil are being stored and disposed as per the Hazardous Waste (Management and Handling ) Rules, 2003. The every year Form IV is submitted to MPCB.

xvi	Regular mock drills for the on-site emergency management plan shall be carried out. Implementation of changes / improvements required, if any, in the on-site management plan shall be ensured.	The mock drills for the on-site emergency management plan is carried regularly.
xvii	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	The separate environment management cell with qualified staff is established. The list of environment management staff is attached as <b>Annexure -X</b>
xviii	Transportation of ash will be through closed containers and all measures should be taken to prevent spilling of the ash.	The ash transportation is being done through tractor and is covered with HDPE sheet.
xix	Separate silos will be provided for collecting and storing bottom ash and fly ash.	The silos are provided for collecting and storing of bottom ash and fly ash.
xx	Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-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 reported to the MPCB & this department	The capital cost For Environmental management plan is Rs. 4.77 Crores and recurring cost per year is Rs. 28.75 .
xxi	The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at <a href="http://envis.maharashtra.gov.in">http://envis.maharashtra.gov.in</a>	The advertise for accorded Environmental Clearance is published in two local paper one Marathi and other one is in English language.
xxii	Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1 <sup>st</sup> June and 1 <sup>st</sup> December of each calendar year.	The half yearly compliance report for EC conditions will be submitted to your good office and MPCB office with hard and soft copies.

xxiii	A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	The copy of the clearance is provided to the concerned authorities and also put on website of company.
xxiv	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,SO2 and NOx (ambient levels as well as stack emissions) or critical sectorai parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the factory in the public domain.	The EC stipulated conditions compliance and results of monitored data is being updated in our website and simultaneously sent to the Regional Office of the SPCB.
xxv	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 as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	The EC conditions compliance and results of monitored data will be submitted half yearly to the respective Regional Office of MoEF (by e-mail ), the respective Zonal Office of CPCB and the SPCB.
xxvi	The environmental statement for each financial year ending 31 <sup>st</sup> March in Form- V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules,1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the Respective Regional offices of MoEF by e-mail.	The every year Environment statement for each financial year ending 31 <sup>st</sup> march in Form V is submitted to State Pollution Control Board. The Environment statement last financial year 2016-17 is attached as an <b>Annexure XI</b> . and will be put into our company website and sent to respective regional offices of MoEF by e-mail.
xxvii	The environmental clearance is being issued without prejudice to the court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision of the Hon'ble court will be binding on	Noted the condition and agreed.

	the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him.	
4	The Environment department reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.	Noted the condition and agreed.
5	<b>Validity of Environment Clearance:</b> The environmental clearance accorded shall be valid for a period of 5 years to start of production operations by the power plant.	Noted the condition. The Co-generation plant is established in 2009 year.
6	In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any	Noted the condition and agreed.
7	The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution ) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling ) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.	Noted.