

Government of Maharashtra

SEAC-3012/ CR-321/TC-2
Environment department
Room No. 217, 2nd floor,
Mantralaya Annex,
Mumbai- 400 032.
Dated: 12th January, 2015

To,
Mr. Vishwanath Shinde.
Kuditre, Tal: Karveer,
Dist: Kolhapur

Subject: Environment clearance for proposed Modernization & expansion of sugar & Co-generation Sugar Plant: 3000 TCD to 5000 TCD Co-generation: 2 MW to 19.5 MW at village Kuditre, Tal: Karveer, Dist: Kolhapur

Sir,

This has reference to your communication on the above mentioned subject. The proposal was considered as per the EIA Notification, 2006, by the State Level Expert Appraisal Committee-I, Maharashtra in its 78th meeting and decided to recommend the project for prior environmental clearance to SEIAA. Information submitted by you has been considered by State Level Environment Impact Assessment Authority in its 80th meeting.

2. It is noted that the proposal is considered by SEAC-I under screening category 1 (d) & 5(j) B1 as per EIA Notification 2006.

Brief Information of the project submitted by Project Proponent is as:

Name of the Project	Kumbhi Kasari S. S. K. I. d.,
Project Proponent	Name: Mr. Vishwanath Shinde. Address: Kuditre, Tal: Karveer, Dist: Kolhapur Telephone number: 0231-2444222 to 2444226 Mobile number: 09422047387 Email ID: info@kumbhisugar.com
Consultant	SAITECH Research and Development Organisation.
New Project / Expansion in existing project/ Modernization/Diversification in exiting project	Modernization & expansion of sugar & Co-generation units Sugar Plant: 3000 TCD to 5000 TCD Co-generation : 2 MW to 19.5 MW
Activity schedule in the EIA Notification	'B' category under EIA notification activity schedule of 1(d) for Co-generation power plant and 5 (j) for sugar Industry
Area Details	Total Plot area – 60 Hectors. Total Built up area – 33746 m2

TOR given by SEAC?	In the meeting held on 25/03/2014.
Estimated capital cost	Total Project Cost: Rs.123.84 Cr.
Location details of the project :	Latitude:- 16° 36' 47.99"N Longitude:- 74° 22' 27.97"E

	Location: - A/P: Kuditre, Tal: Karveer, Dist: Kolhapur Elevation above Mean Sea Level (metres):- 900 M				
Raw materials (including process chemicals, catalysts, & additives).	List of raw materials to be used	Physical and chemical nature of raw material	Quantity (tonnes/ Month) Full production capacity	Source of materials	Means of transportation (source to storage site) with justification
	Sugar cane		1,50,000		Truck
	Sulphur		75		Truck
	Lime		225		Truck
	Caustic soda		4.0		Truck
Production details	Sugar		19,050		
	Electricity		19.5 MW/hr		
	Molasses		5,250		
	Baggase		43,875		
	Pressmud		5,550		
Process details /manufacturing details	<p>SUGAR MANUFACTURING PROCESS</p> <p>The Sugar industry is an agro based industry. In sugar manufacturing process various stages are occurred during process. Firstly sugar cane is brought to factory site by trucks, tractors & bullock carts. After the weightment of cane it is unloaded by cane unloader on feeder table & dump in to cane carrier. Preparation of cane is done in to fine pieces by cane kicker, leveler & fiberizer. Prepared cane is passed through mill tandem, from which juice is extracted up to 95 % with addition of water 25% on cane, residue of prepared cane is called bagasse used as a fuel for boiler.</p> <p>Extracted juice from mill tandem is called raw juice send for further process. Weightment of raw juice is done by on line mass flow meter, weighed juice is heated up to 70 °C to 75 °C. after heating juice is treated with milk of lime $Ca(OH)_2$ & SO_2 gas to remove the non sugars & coloring matter. This Sulphur juice is further heated of to 100 °C to 105 °C & Sulphur juice transfer to clarifier for settling of impurities like suspended & colloidal. From clarifier clear juice & muddy juice are get separated, muddy juice send to vacuum filter in which further juice recovered mud.</p> <p>Obtained clear juice from clarifier having brix 15 ° to 17 ° which rise up to 60 ° brix in to evaporator set, this concentrated juice is called syrup. Obtained syrup is bleached by SO_2 gas is called sulphured syrup, this transferred to pan floor.</p> <p>On pan section three massecuite boiling system is followed A-massecuite, B- massecuite & C- massecuite. In the pan sulphur syrup is boiled and a mixture of crystals and mother liquor called as massecuite prepared. This massecuite is stored in Crystallizer. Then it send to centrifugal section through pug mill. At centrifugal section sugar crystals and molasses are</p>				

	<p>separated. Final molasses send to steel tank for storage and other molasses is re-used in process. Sugar crystal are in wet condition dried on hopper with Hot & Cold air blowers. Dried sugar crystals separated grade wise from sugar grader & graded sugar filled in 'A' Twill Gunny bags & then weighed, labled and stitched and then send to sugar godown for storage.</p> <p>b) CO-GENERATION</p> <p>Bagasse would be utilised as a primary fuel for the boiler. The boiler would have steam generating capacity of two 25 TPH & 100 TPH at 21 kg/cm² & 87 kg/cm² pressure & 450°C temperature. The combustion system of boiler is dumping grate with spreader stoker type furnace suitable for firing bagasse at the full rating. The boiler would also supplied with super heater, air heater, and economizer. Boiler heating surface shall be sized to maintain the design conditions throughout the sugar process season without shutting down to clean the water side of the tube.</p> <p>The steam from the boiler is expanded in a single condensating turbine. The turbine will have provision for steam extraction points. The extracted steam from the extraction points would be used to supply process steam to sugar mill and to the deareator at appropriate pressure. The extraction steam system would be designed to supply steam for sugar process and to run the turbines.</p> <p>Fire protection and detection system will be provided in line with the requirement of Tariff Advisory Committee (TAC) and to protect the equipment from fire hazards. This will consist of hydrant systems, automatic and manual high velocity water spray system, medium velocity water spray system, foam system and portable fire extinguishers suitable for the respective areas.</p> <p>Power Evacuation</p> <p>Power from the co-generation plant will be evacuated at 110 kV to the MSEDCL substation through a double circuit transmission line.</p>
Rain Water Harvesting(RWH)	<p>Level of the Ground water table: 4 m</p> <p>Budgetary allocation (Capital cost and O&M cost)</p> <p>Capital Cost : 40 Lakhs O & M Cost : 10 Lakhs</p>
Total Water Requirement	<p>Total water requirement:</p> <p>Fresh water (CMD) : 4800 one time & daily 575 m³/day</p> <p>Recycled water (CMD) : 3685 m³/day</p> <p>Use of the water:</p> <p>Process (CMD) : 370 m³/day.</p> <p>Cooling water (CMD) : 100 m³/day.</p> <p>DM Water (CMD): 125 m³/day.</p> <p>Drinking (CMD) : 75 m³/day.</p> <p>Green belt (CMD) : Treated Water.</p>
Storm water drainage	Natural water drainage pattern : Yes
Sewage generation and treatment	<p>Amount of sewage generation (CMD) : 60 m³/day</p> <p>Proposed treatment for the sewage : Septic Tanks followed by anaerobic filters.</p>

		Capital Cost : 1.00 Lakhs O & M Cost : 0.10 Lakhs				
Effluent characteristic	Sr no	Parameters (ph,bod,cod,havy metal.ect	Inlet effluent characteristic	Outlet effluent characteristic	Effluent discharge standard (CPCB/MPCB)	
	1	PH	5.0- 5.5	7.0-8.0	5.5-9.0	
	2	TSS	200	<100	<100	
	3	COD	2000	<250	<250	
	4	BOD	1000	<30	<30	
	5	Oil Grease	15	Nil	<10	
	6	TDS	2000	<2100	<2100	
	7	Chloride	300	< 600	< 600	
	8	Sulphate	450	< 1000	< 1000	
ETP details		<input type="checkbox"/> Amount of effluent generation (CMD) : 360 M ³ /Day <input type="checkbox"/> Capacity of the ETP (CMD) :- 1500 m ³ /day Amount of treated effluent recycled (CMD): 3685 m ³ /day for green belt				
Note on ETP technology to be used		Activated Sludge Process				
Disposal of the ETP sludge (If applicable)		Used as manure				
Solid waste Management	Sr no	Source	Type	Quantity	Method of Disposal	
	1	Spent Oil	Inorganic	450 kg/year	Burnt along with bagasse in boilers	
	2	ETP	Organic	10MT/M	Used as manure	
Atmospheric Emissions (Flue gas characteristics SPM, SO ₂ , NO _x , CO, etc.)	Sr No	Pollutant	Source of Emission	Emmision Rate (Kg/hr)	Concentration in flue gas (g/m ³)	
	1	SPM	Boiler	36	0.1	
	2	SO ₂	Boiler	0.012	0.000071	
	3	NO _x	Boiler	0.011	0.000065	
Stack emission Details:	Plant section & units	Stack no	Height from ground level (M)	Internal diameter (top)(m)	Emission rate (kg/hr)	Temp.of exhaust
	Process & Co-gen	1 & 2	75 & 30	2.1 & 2.8	36	145 & 100
	Distillery	1	30	0.9	0.9	135
	D.G 700 KVA 2 Nos.	1	7 mtr.above roof	0.6	-	-

Emission Standard	Pollutants (SPM,SO ₂ ,ect)	Emission standard limit (mg/Nm ³)	Proposed limit (mg/Nm ³)	MPCB consent (mg/Nm ³)			
	SPM	100	150	150			
Ambient Air Quality Data	Pollutant	Permissible standard	Proposed concentration (in ug/m ³)	Remarks			
	SPM	500	250				
	RPM	150	100				
Details of Fuel to be used:	Sr no	Fuel	Daily Consumption (TPD/KLD)		Calorific value(kcal/kg)	% ash	% Sulphur
			Existing	Proposed			
	1	Bagasse	56.32 MT/Hr	52.76 MT/Hr	22000	1	Traces
	<input type="checkbox"/> Source of fuel: own						
Energy	Power supply: <input type="checkbox"/> Existing power requirement: 4 MW Proposed power requirement: 6 MW DG sets: Number and capacity DG sets to be used Proposed 700 KVA 2 nos. Additional Fuels - HSD 90 Lit / hr						
Green Belt Development	<input type="checkbox"/> Green belt area (Sq. m.): 236115 Sq. m Total Green Belt Area: 236115 Sq. m <input type="checkbox"/> Number and species of trees to be planted :- 15000 Nos.						
Details of Pollution Control Systems	Sr no		pollution control system				
	1	Air	ESP & Wet Scrubber				
	2	Water	ETP				
	3	Noise			Adequate measures for control of noise levels will be implemented to maintain noise levels.		
	4	Solid waste			SDB		
Environmental Management plan plan O&M cost (With break up) : Budgetary Allocation	<input type="checkbox"/> Capital cost (With break up) : <input type="checkbox"/> O&M cost (With break up) :						
	Sr no		Recurring Cost per annum Rs. lakh.		Capital Cost Rs. lakhs		
	1	Air Pollution Control	25.00		250.00		
	2	Septic tanks & Soak Pits	0.25		3.00		
	3	Waste water Treatment	5.00		90.00		
	4	Environment	5.00		2.0		

		Monitoring and Management		
	5	Occupational Health & Safety	10.0	50.00
	6	Green Belt	2.00	18.94
	7	Rain Water Harvesting	2.00	12.00
		Total	49.25	425.94


3. The proposal has been considered by SEIAA in its 80th meeting & decided to accord environmental clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implementation of the following terms and conditions :

General Conditions for Pre- construction phase:-

- (i) No additional land shall be used /acquired for any activity of the project without obtaining proper permission.
- (ii) For controlling fugitive natural dust, regular sprinkling of water & wind shields at appropriate distances in vulnerable areas of the plant shall be ensured.
- (iii) 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.
- (iv) Necessary arrangement shall be made to adequate safety and ventilation arrangement in furnace area.
- (v) Proper Housekeeping programmes shall be implemented.
- (vi) In the event of the failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.
- (vii) A stack of adequate height based on DG set capacity shall be provided for control and dispersion of pollutant from DG set.(If applicable)
- (viii) A detailed scheme for rainwater harvesting shall be prepared and implemented to recharge ground water.
- (ix) Arrangement shall be made that effluent and storm water does not get mixed.
- (x) 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.
- (xi) 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.
- (xii) The overall noise levels in and around the plant are 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 confirm to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989.
- (xiii) 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.

- (xiv) 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 for early detection and warning.
- (xv) Occupational health surveillance of the workers shall be done on a regular basis and record maintained as per Factories Act.
- (xvi) The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.
- (xvii) 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 (amended). Authorization from the MPCB shall be obtained for collections/treatment/storage/disposal of hazardous wastes.
- (xviii) The company shall undertake following Waste Minimization Measures :
 - Metering of quantities of active ingredients to minimize waste.
 - Reuse of by- products from the process as raw materials or as raw material substitutes in other process.
 - Maximizing Recoveries.
 - Use of automated material transfer system to minimize spillage.
- (xix) 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.
- (xx) A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
- (xxi) Transportation of ash will be through closed containers and all measures should be taken to prevent spilling of the ash.
- (xxii) Separate silos will be provided for collecting and storing bottom ash and fly ash.
- (xxiii) 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
- (xxiv) 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 <http://ec.maharashtra.gov.in>
- (xxv) 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 1st June & 1st December of each calendar year.
- (xxvi) 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.
- (xxvii) 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, NO_x (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 company in the public domain.
- (xxviii) 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.
- (xxix) The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.
4. The environmental clearance is being issued without prejudice to the action initiated under EP Act or any 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 under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.
 5. 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.
 6. **Validity of Environment Clearance:** The environmental clearance accorded shall be valid for a period of 5 years to start of production operations.
 7. 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.
 8. 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.
 9. Any appeal against this environmental clearance shall lie with the National Green Tribunal (Western Zone Bench, Pune), New Administrative Building, 1st Floor, D-, Wing, Opposite Council Hall, Pune, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.


(Ajoy Mehta)
Principal Secretary,
Environment department &
MS, SEIAA

Copy to:

1. Shri. R. C. Joshi, IAS (Retd.), Chairman, SEIAA, Flat No. 26, Belvedere, Bhulabhai desai road, Breach candy, Mumbai- 400026.

2. Shri T. C. Benjamin, IAS (Retired), Chairman, SEAC-I, 602, PECAN, Marigold, Behind Gold Adlabs, Kalyani Nagar, Pune – 411014. .
3. Additional Secretary, MoEF & CC, Indira Paryavaran Bhavan, Jorbagh Road, Aliganj, New Delhi-110003.
4. Member Secretary, Maharashtra Pollution Control Board, with request to display a copy of the clearance.
5. The CCF, Regional Office, Ministry of Environment and Forest (Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No- 3, E-5, Ravi-Shankar Nagar, Bhopal- 462 016). (MP).
6. Regional Office, MPCB, Kolhapur.
7. Collector, Kolhapur
8. Commissioner, Municipal Corporation, Kolhapur
9. IA- Division, Monitoring Cell, MoEF & CC, Indira Paryavaran Bhavan, Jorbagh Road, Aliganj, New Delhi-110003.
10. Select file (TC-3)

(EC uploaded on 20/02/2015)

