

## KERALA STATE POLLUTION CONTROL BOARD

### SITING CRITERIA

i) Siting criteria for industrial units other than stone crushers, quarry, high rise buildings, hospitals, hotels, plywood industries, hollow/ solid cement bricks units, furniture, saw mill, laterite quarry and pig farm shall be as per PCB/TAC/18/2004 dated 9-8-2004.

No.	Industry		Minimum distance in m	
	Scale	Category	Distance to the nearest residence, dR (m)	Distance to the nearest educational institution/court/public office/hospital/place of worship/community hall/similar establishment excluding other industries dO (m)
1.	Small	Red	25	50
		Orange	10	15
		Green	3	5
2.	Medium	Red	50	100
		Orange	15	25
		Green	5	10
3.	Large	Red	100	100
		Orange	40	60
		Green	15	30

For industries having noise potential, proposed in silence zones as per the Noise (Management and Handling) Rules, the minimum distance shall be two times the dO subject to a minimum of 100m.

It is desirable to have a minimum set back of 3m between the boundary and the plant building to avoid construction of factor building along or close to the boundary wall. The setback can be utilised for the development of green belt. In case of industries falling in green/orange categories of Small Scale Industries, the requirement of minimum set back may be dispensed with.

ii) Siting criteria for plywood industries, hollow/ solid cement bricks units, furniture, saw mill, laterite quarry and pig farm shall be as per circular no. PCB/T4/115/97 dated 20-7-2011.

No.	Industry	Minimum distance to residences and other establishments (m)	Minimum set back(m)
1	Plywood industries	50	25
2	Hollow block units, Furniture and saw mill	25	10
3	Laterite quarry	50	25
4	Pig farm	100	25

	iii)	<p>Siting criteria for crusher shall be as per circular no. PCB/TAC/St.Cr.Com/65/2005 dated 17-10-2007</p> <ol style="list-style-type: none"> <li>1. There should be a minimum clear distance of 200 m from the centre of the proposed crusher unit to the periphery of the structure of any residence, public building or place of worship. Exception is allowed for store room and office room.</li> <li>2. In cases where environmental factors such as terrain and greenery are conducive to reduce spread of pollution and where advanced technology that reduces noise and dust is employed, the minimum distance may be further reduced to 150m with stringent control measures such as enclosure of crushers, classifiers, screens and other noise/dust producing units with 40 cm thick solid wall (not hollow brick), false roofing and dust extraction system.</li> <li>3. There should be a minimum clear distance of 100 m from the centre of crusher of one industry to the centre of crusher of another industry.</li> <li>4. There should be a clear distance of 200 m from the centre of the proposed crusher to State or National Highway. For crushers fulfilling the requirements of 2<sup>nd</sup> above, the minimum distance is reduced to 150m.</li> <li>5. Crushers, classifiers, screens and other noise and/or dust producing units should be housed in buildings with solid wall (not hollow block) of minimum 23 cm thickness and with suitable roofing.</li> <li>6. To establish a crusher unit with a crushing capacity <math>\leq 30</math>HP, the applicant should own the site at least to an extent of 0.5 hectare. For a crusher unit with crushing capacity <math>&gt; 30</math>HP, the applicant should own the site at least to an extent of 1 hectare. The capacities (HP) of the auxiliary units like screen, conveyor etc., are not taken into account.</li> <li>7. The crusher unit should be located within the applicant's own site providing a minimum distance of 30 m in the case of crushers of capacity <math>\leq 30</math> HP and 50 m in the case of crushers of capacity <math>&gt; 30</math> HP from the centre of the crusher unit to the boundary of the site.</li> <li>8. Permanent source of adequate water supply (minimum 6000l/day for crushers of capacity <math>&lt; 30</math>HP and 10000 l/day for those <math>&gt; 30</math>HP) has to be identified at the site and specified in the consent to establish.</li> </ol>
	iv)	<p>Siting criteria for quarry shall be as per circular no. PCB/TAC/WP/236/2006 dated 13-6-2007. The minimum distance from boundary of quarry operation area to residential buildings, places of worship, public buildings, public road, river or lake, railway line and bridges is 100m</p>
	v)	<p>Stringent control measures shall be provided for the following industries permitted to be operated in rented buildings, commercial and in industrial areas. In such cases, minimum distance criteria as well as set back may not be insisted.</p> <ol style="list-style-type: none"> <li>a) Industries with no discharge or discharge <math>&lt; 250</math> litre/day with facilities for treatment and disposal.</li> <li>b) Chicken stall</li> <li>c) Bakery</li> </ol>

			<p>d) Industries with machinery capacity <math>\leq 10</math>HP</p> <p>d) Flour mill with machinery capacity <math>\leq 10</math>HP</p> <p>e) <math>\leq 5</math>HP for furniture (without plainer or drill)/ particle board units. Set back need not be insisted.</p> <p>f) <math>\leq 5</math>HP for engineering work shop, automobile work shop without spray painting and water servicing.</p> <p>g) Tyre vulcanizing units.</p> <p>h) Oil mills without copra dryer.</p> <p>i) Restaurants with seating capacity <math>&lt; 36</math>.</p> <p>j) Industries with no hazardous waste generation.</p>
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#### CONDITIONS PRESCRIBED FOR DIFFERENT INDUSTRIAL UNITS AND ESTABLISHMENTS

I GENERAL CONDITIONS			
<b>1.1</b>	<b>CONSENT TO ESTABLISH</b>	1.1.1	At the end of the validity period if the construction is in progress, the same shall be got renewed. If the construction is not started in the consent period, the applicant shall apply afresh for consent to establish.
		1.1.2	The applicant shall comply with the instructions that the Board may issue from time to time regarding the prevention and control of air, water, land and sound pollution.
		1.1.3	The date of commissioning shall be intimated, at least one month in advance, to the District Office of the Board.
		1.1.4	Consent to Operate / Authorisation shall be obtained, before commissioning the industry, under the Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981 and the relevant Rules under Environment (Protection) Act 1986
		1.1.5	The location of all buildings and structures shall be as per the approved site plan. No change or alteration of the industrial plant is to be made without the prior written permission of the Board. Any change in the particulars furnished and/or in the identity of the occupier/authorised agent is to be intimated to the Board forthwith.
		1.1.6	The D. G. sets shall be provided with a minimum chimney height $0.2\sqrt{KVA}$ meters above roof level of the highest nearby building (Where KVA is the capacities of all DG sets). The D. G. sets shall be placed at a minimum distance of $\sqrt{(KVA/2)}$ meters from the neighbouring residences / worship places / institutions (where KVA is the capacity of DG sets).
		1.1.7	Water consumption returns under the Water (Prevention and Control of Pollution) Cess Act shall be furnished on or before 5th of every calendar month in Form-I showing the quantity of water consumed in the previous month if the consumption is more than 10 kilolitre/day or if there is generation of hazardous wastes.

		1.1.8	Water meter shall be fixed to record consumption of water. Separate meters should be fixed if cess at differential rates is claimed for use of water such as cooling/boiler feed, domestic, process where the effluent is easily biodegradable and / or not toxic and process where the effluent is not easily biodegradable and / or toxic
		1.1.9	If operations are planned to be done with backup power, the generator shall have adequate capacity to run all the associated pollution control devices.
		1.1.10	The construction debris and mud discharges etc from the construction site shall be disposed safely and the details of disposal of the same shall be intimated to the Board's office in advance.
		1.1.11	Proper precautionary measures shall be provided during construction phase to minimize disturbance due to excavation, piling, transportation of materials etc.
		1.1.12	Sanitation facilities shall be provided to the workers and the effluent shall be disposed off safely.
		1.1.13	All operations likely to produce dust or noise shall be carried out with appropriate enclosure.
		1.1.14	Necessary arrangement for collection, segregation, storage, handling and disposal of solid waste including garbage shall be provided before commissioning.
		1.1.15	Sewage effluent shall be treated in septic tank as per IS 2470 (Part I): 1985 and discharged through soak pit with concreted bottom, honey comb brick work or perforated ring side wall, 75cm thick 2mm sand envelope outside it.
		1.1.16	The consentee shall put up a sign board of size 6x4 ft. near the main entrance of the plant to display the name of the unit and important consent conditions
		1.1.17	Adequate fire safety measures shall be provided in accordance with fire safety regulations.
		1.1.18	The ambient air quality measured at 1 m outside the boundary of the premises shall not exceed the ambient air quality applicable to the adjoining area.
		1.1.19	The sound level measured at 1 m outside the boundary of the premises shall not exceed the ambient sound level applicable to the adjoining area.
<b>1.2</b>	<b>CONSENT TO OPERATE</b>	1.2.1	For renewal of the consent in case of continuance of discharge/operation of the industry, application in the prescribed form shall be submitted to the through the web portal of the Board for Online Consent Management & Monitoring System on or before the end of validity period. Late application will be accepted only with a fine / late fee as applicable
		1.2.2	The applicant shall comply with the instructions that the Board may issue from time to time regarding the prevention and control of air, water, land and sound pollution.
		1.2.3	No change or alteration of the industrial plant is to be made without the prior written permission of the Board. Any change in the particulars furnished and/or in the identity of the occupier/authorized agent is to be intimated to the Board forthwith.
		1.2.4	Water consumption returns under the Water (Prevention and Control of Pollution) Cess Act shall be furnished on or before 5th of every calendar month in Form-I showing the quantity of water consumed in the previous month if the consumption is more than 10 kilolitre/day or if there is generation of hazardous wastes.
		1.2.5	If operations are done with backup power, the generator shall have adequate capacity to run all associated pollution control devices.

	1.2.6	In case of process disturbance / failure of pollution control equipments, the respective units shall be shut down and shall not be restarted until the control measures are rectified to achieve the desired efficiency.																	
	1.2.7	In case of discharge / apprehended discharge of any water / air pollutant or hazardous waste due to any accident or other unforeseen act or event, it shall be immediately intimated to the Board and the consentee / authorizee shall make all possible efforts to mitigate / prevent / remediate the discharge.																	
	1.2.8	Log book shall be maintained to check the quantity of raw material used / products despatched, effluent discharge and power consumption of pollution control equipment and shall be made available to inspecting officers as and when demanded																	
	1.2.9	Arrangements for collection, segregation, storage, handling and disposal of solid waste including garbage shall be provided and maintained properly.																	
	1.2.10	E-waste shall be disposed in an environmentally sound manner. The details shall be submitted in the following format to the Board on or before 31 <sup>st</sup> December every year. <table border="1" data-bbox="634 821 1539 1104"> <thead> <tr> <th>Sl. No.</th> <th>Particulars of e-waste</th> <th>Quantity of e-waste disposed in the previous</th> <th>Quantity of e-waste proposed to be disposed in the current</th> <th>Mode of disposal</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Sl. No.	Particulars of e-waste	Quantity of e-waste disposed in the previous	Quantity of e-waste proposed to be disposed in the current	Mode of disposal												
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	1.2.11	Periodical reports, as applicable, as detailed below shall be submitted to the respective District Office of the Board. <table border="1" data-bbox="540 1266 1539 1866"> <thead> <tr> <th rowspan="2">Statues</th> <th rowspan="2">Details</th> <th colspan="2">Periodicity</th> <th rowspan="2">Form No.</th> </tr> <tr> <th>Analysis</th> <th>Submission</th> </tr> </thead> <tbody> <tr> <td>Water (Prevention and Control of Pollution) Act 1974</td> <td>Effluent and storm water analysis report and flow details</td> <td>Once in a week</td> <td>10<sup>th</sup> of every month</td> <td>-</td> </tr> <tr> <td>Water (Prevention and Control of Pollution) Cess Act 1977</td> <td>Water consumption returns</td> <td>Monthly consumption for various uses</td> <td>5<sup>th</sup> of the next month</td> <td>I of Water Cess Rules</td> </tr> </tbody> </table>	Statues	Details	Periodicity		Form No.	Analysis	Submission	Water (Prevention and Control of Pollution) Act 1974	Effluent and storm water analysis report and flow details	Once in a week	10 <sup>th</sup> of every month	-	Water (Prevention and Control of Pollution) Cess Act 1977	Water consumption returns	Monthly consumption for various uses	5 <sup>th</sup> of the next month	I of Water Cess Rules
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			Air (Prevention and Control of Pollution) Act 1981	Emission analysis report and flow measurement	Once in a month	10 <sup>th</sup> of the next month	-
			Hazardous Wastes (Management and Handling) Rules 1989	Accident reporting during handling and transportation	-	Whenever required	5 of Hazardous Wastes Rule
			”	Hazardous wastes disposal	-	Annually by 31 <sup>st</sup> January	4 of Hazardous Wastes Rule
			”	Hazardous wastes – Auction and sales	-	Annually by 31 <sup>st</sup> January	13 of Hazardous Wastes Rule
			”	Hazardous wastes - manifest	-	During transportation	9 of Hazardous Wastes Rules
			Environment (Protection) Rules 1986	Environment Statement	-	Annually by 30 <sup>th</sup> September	V of Environment Protection Rules
			Batteries (Management and Handling) Rules 2001	Submission of returns	-	Half yearly return by June and December	8 of Batteries Rules
		1.2.12	Suitable species of trees and curtain plants shall be planted and maintained within and along the periphery of the premises, forming a green belt to improve the environment. This is not applicable in the case of rented buildings.				
		1.2.13	All operations likely to produce dust or noise shall be carried out with appropriate enclosure.				
		1.2.14	Time of Day meter shall be installed exclusively for the effluent treatment and reuse system and shall be maintained properly.				
		1.2.15	Energy and water conservation measures shall be adopted as far as possible.				
		1.2.16	Renewable sources of energy such as solar energy shall be utilized for lighting and				

			heating wherever possible.
		1.2.17	There shall not be any fugitive emission from the premises.
			Good housekeeping shall be maintained in and around the plant.
		1.2.18	The ambient air quality measured at 1 m outside the boundary of the premises shall not exceed the ambient air quality applicable to the adjoining area.
		1.2.19	The sound level measured at 1 m outside the boundary of the premises shall not exceed the ambient sound level applicable to the adjoining area.
<b>2. SPECIFIC CONDITIONS</b>			
<b>2.1</b>	<b>Automobile service stations</b>		
		2.1.1	There shall not be any open burning of wastes in the premises.
		2.1.2	Waste oil shall be disposed of as per the provisions contained in the Hazardous Waste (Management & Handling) Rules.
		2.1.3	The unit shall not be operated during night time (6pm-6am) (if residences close by).
<b>2.2</b>	<b>Bakery</b>		
		2.2.1	All operations likely to produce dust or noise shall be carried out within sufficiently closed premises.
		2.2.2	The unit shall maintain hygienic condition.
		2.2.3	A chimney of height 15m from the ground level shall be maintained for making emission from the borma.
		2.2.4	There shall be no fugitive emission from the premises
		2.2.5	Solid waste shall be disposed off scientifically.
<b>2.3</b>	<b>Cashew factory</b>		
		2.3.1	All operations likely to produce dust or noise shall be carried out within closed premises due to working of unit.
		2.3.2	Facility for storing the cashew nut shell oil separated from the effluent of the cooking plant shall be provided with leak proof floor and roof.
		2.3.3	A coagulation cum settling unit shall be added to the effluent treatment system or arrangement shall be made to recycle the wastewater obtained after oil separation
		2.3.4	Wastewater treatment units shall be provided with cover slabs & roof to prevent entry of rainwater into the units.
		2.3.5	There shall not be any discharge of effluent into the public storm water drain
		2.3.6	Water spraying/wetting arrangements shall be provided to avoid dust spreading.
<b>2.4</b>	<b>Cement products</b>		
		2.4.1	All operations likely to produce dust or noise shall be carried out within enclosed area made up of solid bricks
		2.4.2	Proper enclosures should be provided to the shed containing the machineries. Bag filter shall be provided for pulverizer.
		2.4.3	Raw materials shall be stored in an enclosed area.
		2.4.4	Raw materials and products shall be transported with proper cover or after wetting to prevent spreading of dust during transportation.
		2.4.5	Water sprinkler arrangement shall be provided to suppress the spreading of dust.

		2.4.6	Unit and the premises shall be kept clean and facility for regular cleaning and wetting of the ground shall be provided
		2.4.7	There shall be no fugitive emission from the premises.
		2.4.8	Solid wastes generated shall be properly disposed
		2.4.9	The working times shall be restricted to 8 am to 6 pm.
<b>2.5</b>	<b>Chemical industry</b>		
	Consent to establish	2.5.1	Arrangements shall be provided for rain water harvesting and for utilization of harvested rain water. Ground water recharge facility shall also be made.
		2.5.2	Storm water shall be segregated from effluent.
		2.5.3	The processing tanks and effluent treatment tanks shall be corrosion resistant.
		2.5.4	Time of Day meter shall be installed exclusively for the effluent treatment and reuse system and shall be maintained properly.
		2.5.5	Online effluent quality monitoring system shall be provided at the outlets of effluent drains.
		2.5.6	Automatic pH monitor cum recorder shall be provided at the outlet of storm water drain.
		2.5.7	Delay ponds shall be provided in storm water drains to avoid the escape of any effluent to nearby premises.
		2.5.8	Port holes and platforms cum ladders shall be provided to the stack to facilitate monitoring of emissions.
		2.5.9	The occupier shall install or modify equipments, as necessary, to make the emission sound quality conform to the standards specified.
		2.5.10	Hazardous chemicals are to be safely stored and handled as per Manufacture, Storage and import of Hazardous Chemicals Rule.
	Consent to operate	2.5.11	Storm water shall be segregated from effluent.
		2.5.12	Harvested rain water shall be utilized. Ground water shall be recharged.
		2.5.13	There shall be easy access to each and every effluent treatment unit and the final outlet for inspection and drawing of effluent samples.
		2.5.14	Stand by pump and blowers shall be installed in case of failure of any system
		2.5.15	The treated effluent shall be reused to the maximum extent possible and balance if any shall be discharged into soakpit with concreted bottom, honey combed or perforated ring side wall 70 cm thick 2 mm sand envelop around it.
		2.5.16	Delay ponds shall be provided in storm water drains and shall be maintained properly. Online effluent quality monitoring system shall be provided at the outlets of effluent drains. Automatic pH monitor cum recorder shall be provided at the outlet of storm water drain.
		2.5.17	Record of type, quantity and purpose of consumption of fuel shall be maintained and abstract shall be submitted to the Board along with emission monitoring report.
		2.5.18	The roads inside the premises shall be tarred or concreted. Raw materials and products shall be transported with proper cover. Arrangements for regular wetting and cleaning should be provided
		2.5.19	Continuous monitoring of ambient air quality with respect to PM <sub>2.5</sub> , PM <sub>10</sub> , etc. shall be carried out at 3 locations. The site for the stations shall be so selected that stations are nearly 120 degree apart with due consideration to the proximity to



			residential buildings and other habitations and to predominant wind direction.
		2.5.20	The port hole and platform cum ladder attached to stack shall be maintained to facilitate monitoring of emissions
		2.5.21	The occupier shall at his own cost get the samples of emission collected from all the chimneys and analyzed for the parameters under condition No. 4.1.
		2.5.22	Hazardous wastes shall be handled as per the Hazardous Wastes (Management, Handling and Transboundary) Rules, 2008.
		2.5.23	The guidelines and criteria for handling of hazardous wastes prescribed by the Central Pollution Control Board from time to time shall be followed.
		2.5.24	Ground water monitoring shall be done at least once in a month in at least four stations. Test wells shall also be provided
		2.5.25	The person authorized shall not rent, lend, sell or transfer the hazardous wastes without obtaining prior permission of the Board.
		2.5.26	Any unauthorized change in personnel, equipment and working conditions as mentioned in the application by the person authorized shall constitute a breach of this authorization.
		2.5.27	It is the duty of the authorized person to take prior permission of the Board to close down the facility.
		2.5.28	All the facility personnel must be well informed about the hazardous waste management procedure relevant to the positions in which they are employed. All the facility personnel must be trained to ensure that they are able to respond effectively to emergencies by familiarizing them with the emergency procedures, emergency equipment operations and communication or alarm systems
		2.5.29	Facilities must be established, tested periodically and maintained to minimize the possibility of a fire, explosion or any unplanned sudden or non-sudden release of hazardous waste to air, soil or surface water which could threaten human health or environment.
		2.5.30	The authorizee must develop, implement and maintain and keep upto date, a contingency plan designed to minimize hazard to human health or the environment from fires, explosions or any unplanned sudden release of hazardous waste to air, soil or water.
		2.5.31	Hazardous chemicals are to be safely stored and handled as per Manufacture, Storage and import of Hazardous Chemicals Rule.
		2.5.32	Public Liability Insurance as per Public Liability Insurance shall be obtained.
<b>2.6</b>	<b>Coir</b>		
		2.6.1	The building where machinery is installed shall be enclosed up to roof level on all sides with suitable sound and dust proof material leaving minimum door openings for entry/exit and material handling alone.
		2.6.2	The raw material and wet fibre shall be kept stored under proper roofing with impervious flooring.
		2.6.3	Raw materials and products shall be transported with proper cover and / or after wetting to prevent spreading of dust.
<b>2.6.a</b>	<b>Coir Bleaching &amp; Dyeing (addl.)</b>	2.6.4	Banned dyes shall not be used
		2.6.5	ETP consisting of coagulation, settling and aeration shall be provided.

<b>2.6.b</b>	Coir defibring (addl.)	2.6.7	Full enclosure shall be provided to prevent spreading of dust.
		2.6.8	Coir pith shall be removed daily.
<b>2.6.c</b>	Coir Latex Backing(addl.)	2.6.9	The unit shall function in an enclosed building provided with exhaust fan and water scrubbing system.
		2.6.10	Chimney of height 15m above ground level shall be provided for making emission from heater/boiler.
<b>2.6.d</b>	Coir PVC Tufted Coir Mats & Mattings(addl.)	2.6.11	The unit shall function in an enclosed building provided with exhaust fan and water scrubbing system.
		2.6.12	Chimney of height 15m above ground level shall be provided for making emission from heater/boiler.
<b>2.6.e</b>	Coir Ginning including retting(addl.)	2.6.13	The ginning mill operations shall be carried out within properly enclosed building in order to control Air pollution.
		2.6.14	The raw material and wet fibre shall be stored under proper roofing with impervious flooring.
		2.6.15	Aeration shall also be included in the ETP consisting of coagulation & settling.
		2.6.16	The pith shall be removed within 2 days.
<b>2.6.f</b>	Coir Shearing(addl.)	2.6.17	Solid waste generated shall be reused
<b>2.6.g</b>	Coir Stenciling(addl.)	2.6.18	ETP consisting of coagulation, settling and aeration shall be provided.
		2.6.19	The unit shall function in an enclosed building provided with exhaust fan and water scrubbing system.
<b>2.6.h</b>	Coir Tufting(addl.)	2.6.20	Chimney of height 20m above ground level making emission from boiler.
		2.6.21	Solid waste including cutting waste shall be reused as far as possible
		2.6.22	The unit to function in an enclosed building.
<b>2.7</b>	<b>Crusher</b>		
	Consent to establish	2.7.1	In order to prevent and control air pollution the following control measures shall be provided in the crusher industry. a) Crushers, classifiers, screens and other noise and / or dust producing units shall be housed in buildings with solid wall (not hollow bricks) of minimum 40 cm thickness and false roofing shall be provided. b)Dust suppression system with water sprays and sprinklers provided shall be operated satisfactorily. c)Dust extraction and collection system provided at crushers, transfer points, screens etc., shall be operated. Additional dust extraction system shall be provided.
		2.7.2	Water storage facility of at least 2 days capacity provided shall be provided.
		2.7.3	Facility provided for regular cleaning and wetting of ground shall be provided.
		2.7.4	Air pollution control devices shall be provided at the time of operation of the crusher.
		2.7.5	The roads around the crusher premises shall be tarred or concreted
		2.7.6	Delay ponds shall be provided at suitable locations to prevent the escape of

			aggregate/clay to nearby drain and property.
	Consent to operate	2.7.7	In order to prevent and control air pollution the following control measures shall be in operation during the operation of the crusher industry. a) Crushers, classifiers, screens and other noise and / or dust producing units shall be housed in buildings with solid wall (not hollow bricks) of minimum 40 cm thickness and false roofing shall be provided. b) Dust suppression system with water sprays and sprinklers provided shall be operated satisfactorily. c) Dust extraction and collection system provided at crushers, transfer points, screens etc., shall be operated. Additional dust extraction system shall be provided.
		2.7.8	Water storage facility of at least 2 days capacity provided shall be maintained.
		2.7.9	The raw materials & products shall be transported with proper cover or with adequate measures to prevent spreading of dust during transportation.
		2.7.10	All operations likely to produce dust, or noise shall be carried out within closed premises.
		2.7.11	Facility shall be provided for regular cleaning and wetting of ground shall be maintained.
		2.7.12	Air pollution control devices shall be operational at the time of operation of the crusher.
		2.7.13	The roads around the crusher premises shall be tarred or concreted and maintained properly
		2.7.14	Trees of suitable species should be planted to develop a green belt within and along the boundary of the premises.
		2.7.15	The crusher shall not be operated between 6.00 pm and 6 am.
		2.7.16	Delay ponds shall be maintained at suitable locations to prevent the escape of aggregate/clay to nearby drain and property.
		2.7.17	The particulate matter (PM <sub>10</sub> ) in ambient air at the boundary of the premises and at the nearest residence shall not exceed 100 µg /m <sup>3</sup> .
		2.7.18	The sound level (Leq) at 1 m outside the boundary of the site shall not exceed the standard applicable to adjoining area.
		2.7.19	Sound level and PM <sub>10</sub> shall be monitored within 2 months and report shall be submitted to the Board. If parameters are not within limit additional pollution control measures shall be provided. Monitoring of the above parameters shall be done in every two months and report shall be furnished to the Board.
		2.7.20	Arrangements for safe storage of waste / used oil shall be provided and disposal of the same shall be by transfer to recyclers / re-refiners possessing authorization and registration from the SPCB.
<b>2.8</b>	<b>Engineering</b>		
		2.8.1	All operations likely to produce dust, noise or smell shall be carried out within closed premises.
		2.8.2	The work shed shall be enclosed upto roof level with solid brick wall on all sides leaving an access for loading and unloading.
		2.8.3	Spray painting shall not be carried out in the unit.
		2.8.4	If spray painting is to be carried out in the unit, it shall be done in a painting booth

			provided with water scrubbing and exhaust shall be raised 1.5m above roof level of the building
		2.8.5	No industrial activities shall be carried out during night time (6pm to 6am).
<b>2.9</b>	<b>Fisheries</b>		
		2.9.1	Deodorants/Disinfectants shall be applied in the premises regularly for reducing foul smell from the unit. Log book shall be kept for recording the application of the same.
		2.9.2	The fish carrying vehicles shall be provided with trays to hold the fish and shall be refrigerated or adequately insulated with built in collection system for effluent generated from the trays.
		2.9.3	Good housekeeping shall be observed in the unit and its premises.
<b>2.10</b>	<b>Flour mill&amp;Expeller</b>		
		2.10.1	All operations likely to produce dust or noise shall be carried out within sufficiently closed and insulated premises.
		2.10.2	The pulverizer unit shall be fully enclosed.
		2.10.3	The footings of the mill, extruder etc. Shall be separated from the main footing to reduce vibrational nuisance.
		2.10.4	Dust collectors attached to the pulverizer shall be maintained properly.
		2.10.5	Chilly,coriander shall not be carried out unless dust collector system is proposed and if there are residences within 100mradius.
		2.10.6	The unit shall not be operated during night time(6pm-6am) (if residences close by)
		2.10.7	Wash water shall be disposed via. soak pit of adequate capacity Treated effluent shall be disposed via. septic tank as per IS 2470 (Part I)-soak pit arrangement
		2.10.8	There shall not be any discharge of trade effluent.
		2.10.9	The concentration of PM <sub>10</sub> at the boundary shall not exceed 200 µg/m <sup>3</sup>
<b>2.11</b>	<b>Furniture</b>		
		2.11.1	Three sides of the factory shed shall be constructed with brick and metal sheet up to roof level.
		2.11.2	Polishing work if any shall be done in a separately enclosed room.
		2.11.3	The premises shall be made as impervious for storing timber logs.
		2.11.4	Saw dust shall be collected securely in storage tanks with proper lids.
		2.11.5	Water sprinklers shall be provided to suppress spreading of dust.
<b>2.12</b>	<b>High rise buildings including hotels</b>		
	Consent to establish	2.12.1	For sewage upto, 10 cubic metre per day, septic tank as per IS 2470 (Part I) shall be provided. Sullage shall be separately treated in screen and oil and grease trap. Combined effluent shall be treated in anaerobic filter, pressure sand filter, disinfection unit and activated carbon filter.
		2.12.2	For sewage more than 10cu.m. per day, sewage shall be treated in septic tank as per IS 2470 (Part I); sullage in screen, oil and grease trap. The combined effluent shall be treated in equalization tank (aerobic suspension), aeration tank(ASP, EA,

			MBBR, fixed film or any other advanced technology), secondary settling, pressure sand filter, disinfection tank, activated carbon filter, ultra filtration and soak pit/treated water tank.				
		2.12.3	Facility like Biogas plant/High rate bio reactor, Bio bins/potable bio bins, Centralized masonry bio tanks, Aerobic Ferro cement bins, Organic waste converting machine (mechanical composting) shall be provided for the treatment of biodegradable garbage. The generated biogas, slurry and manure shall be used effectively.				
	Consent to operate	2.12.4	Arrangements shall be provided for rain water harvesting and for utilization of harvested rain water. The rain water harvest system shall be at least 20 m away from the soak pit.				
		2.12.5	Natural drainage of the area shall be protected.				
		2.12.6	Lighting arrangements shall be provided in the effluent treatment and recycling area.				
		2.12.7	TOD type energy meter shall be installed exclusively for the effluent treatment system and shall be maintained properly.				
		2.12.8	The disinfection tank shall provide a minimum contact time of 1 hour.				
		2.12.9	Stand by pump and blowers shall be installed in case of failure of any system				
		2.12.10	Twin Air blower shall be provided instead of ordinary air blower				
		2.12.11	The STP shall not be constructed in the set back area. The STP units shall be ear marked with capacity of each unit.				
		2.12.12	There shall be easy access to each and every effluent treatment unit and recycling area for inspection.				
		2.12.13	The treated effluent shall be reused to the maximum extent possible and balance if any shall be discharged into soak pit with concreted bottom, honey combed or perforated ring side wall 70 cm thick 2 mm sand envelop around it.				
		2.12.14	There shall not be any fugitive emission from the premises.				
		2.12.15	Non-biodegradable wastes namely plastic shall be collected with due segregation and disposed off safely to genuine recyclers				
<b>2.13</b>	<b>Hospital</b>						
		2.13.1	The operation of the hospital shall be in accordance with the Biomedical Waste (Management and Handling) Rules, 1998 and amendments thereon.				
		2.13.2	Periodical monitoring reports comprising of effluent analysis reports, flow measurements and such other information applicable, shall be submitted to the concerned District Office of the Board as detailed below:				
			<table border="1"> <thead> <tr> <th>Statutes</th> <th>Details</th> <th>Periodicity</th> <th>Form No.</th> </tr> </thead> </table>	Statutes	Details	Periodicity	Form No.
Statutes	Details	Periodicity	Form No.				

		Analysis	Submission	
Water (Prevention and Control of Pollution) Act 1974	Effluent analysis report and flow details	Once in .....	10 <sup>th</sup> of the every .....month	-
Water (Prevention and Control of Pollution) Cess Act 1977	Monthly Water consumption returns	Monthly consumption for various uses	5 <sup>th</sup> of the next month	Form no.1 of Water Cess Rules (form attached)
Air (Prevention and Control of Pollution) Act 1981	Emission analysis report and flow measurement	Once in .....	10 <sup>th</sup> of .....month	-
Bio-medical Waste (Management and handling) Rules, 1998	Annual report	Once in a year	Annually by 31 <sup>st</sup> January every year	Form no.II of Biomedical waste (Management and Handling) Rules ( Form No. II attached)
Batteries (management and Handling) Rules, 2001	Submission of returns		Half yearly return by June and December	Form no. 8 of Batteries (Management Handling Rules) Form 8 attached

2.13.3 Records of effluent and emission monitoring shall be maintained and should be made available to the inspecting officers of the Board whenever called for.

2.13.4 The periodicity of submission of reports as per Water and Air Act based on bed strength is as follows:

<50 beds – Once in a year  
 50- <100 – Once in six months  
 100 -<200 Once in three months  
 200 and above Once in a month

2.13.5 Monthly records on the category wise generation, storage and disposal of the bio medical wastes through IMAGE shall be maintained in the following format and the same shall be made available to the inspecting officers of the Board whenever

called for.

Date	Category wise waste generation quantity										Mode of disposal	Date & time of disposal
	1	3	4	5	6	7	8	9	10			

## 2.14 Houseboat

- 2.14.1 Effluent Treatment Plant consisting of treatment units namely biotank and disinfection facility shall be provided.
- 2.14.2 The final discharge shall be into the common ETP operated by DTPC.
- 2.14.3 Not less than 4 discharges shall be made into the common ETP operated by DTPC per year.
- 2.14.4 The receipts/letter from DTPC shall be produced along with the application for renewal of consent
- 2.14.5 The final discharge shall be disinfected using U.V rays and the disinfected water let out into the lake.
- 2.14.6 All the discharges including that from toilets & kitchen shall be collected in collection tanks of 1000 litres capacity per bed room and at the end of the day it shall be discharged in the dry land disposal facility.
- 2.14.7 The solid waste shall be disposed as per Municipal Solid Waste (Management and Handling) Rules 2000.
- 2.14.8 Separate bins shall be provided for the collection of bio-degradable and non- bio-degradable solid wastes and these waste shall be disposed scientifically.
- 2.14.9 Plastic carry bags below 40 micron size are prohibited in the house boat
- 2.14.10 Bulk containers for storing potable water should be practiced instead of pet bottles.
- 2.14.11 Use eco friendly bags and container (plates, glass) in the house boat.
- 2.14.12 Dry land facilities for disposal of solid waste shall be provided
- 2.14.12 Maintenance of engine shall be conducted only in dry dock.
- 2.14.13 A copy of the consent shall be displayed at the main entrance.

## 2.15 Laterite quarry

- 2.15.1 Boundary of the quarry shall be permanently fenced using garden net/mesh before commencing operation

**2.16** Livestock farm 2.16.1 Livestock farms shall be operated as per Kerala Panchayat Raj (Licensing of Livestock Farms) Rules, 2012.

a) Classification of livestock farms

Class	Cattle	Goat	Pigs	Rabbits	Poultry
I	6-20	21-50	6-15	26-50	101-250
II	21-50	51-100	16-50	51-100	251-500
III	51-100	101-200	51-100	101-200	501-1000
IV	101-200	201-500	101-200	201-400	1001-5000
V	201-400	501-750	201-400	401-500	5001-10000
VI	More than 400	More than 750	More than 400	More than 500	More than 10000

b) Waste management facility

Class of Farm	Facilities to be installed for the disposal of farm wastes				
	Cattle Farm	Goat Farm	Pig Farm	Rabbit Farm	Poultry Farm
I	Dung pit Urine/wash water pit Compost pit, Biogas plant	Dung pit Urine/wash water pit	Dung pit Urine/wash water pit Compost pit, Biogas plant	Dung pit	Manure pit
II	Dung pit Urine/wash water pit Compost pit, Biogas plant	Dung pit Urine/wash water pit	Dung pit Urine/wash water pit Compost pit, Biogas plant	Dung pit	Manure pit
III	Dung pit Urine/wash water pit Compost pit, Biogas plant	Dung pit Urine/wash water pit	Dung pit Urine/wash water pit Compost pit, Biogas plant	Dung pit	Manure pit
IV	Dung pit Urine/wash water pit Compost pit, Biogas plant	Dung pit Urine/wash water pit	Dung pit Urine/wash water pit Compost pit, Biogas plant	Dung pit	Manure pit
V	Dung pit Urine/wash water pit Compost pit, Biogas plant	Dung pit Urine/wash water pit	Dung pit Urine/wash water pit Compost pit, Biogas plant	Dung pit	Manure pit Carcass pit
VI	Dung pit	Dung pit	Dung pit	Dung	Manure



				Urine/wash water pit Compost pit, Biogas plant	Urine/wash water pit	Urine/wash water pit Compost pit, Biogas plant	pit	pit Carcass pit
<b>2.17</b>	<b>Match splints</b>							
		2.17.1	All operations likely to produce dust or noise shall be carried out within closed premises.					
		2.17.2	Three sides of the factory shed shall be constructed with brick and metal sheet up to roof level.					
		2.17.3	The loading & unloading area should be made with hard surface.					
<b>2.18</b>	<b>M-Sand unit</b>							
		2.18.1	Arrangements for reuse of entire quantity of wash water.					
		2.18.2	Provision of rainwater harvesting for an adequate capacity shall be provided before commissioning the unit					
<b>2.19</b>	<b>Peeling shed/sea food unit</b>							
		2.19.1	The solid wastes shall be disposed off in a scientific manner and the plans for the same shall be got approved by the Board.					
		2.19.2	Storm water shall not be mixed with process effluent.					
		2.19.3	Necessary clearance as per the Coastal Zone Regulation shall be obtained before commissioning the Unit.					
<b>2.20</b>	<b>Petroleum storage</b>							
		2.20.1	Oil separators shall be provided to remove oil from the storm water.					
<b>2.21</b>	<b>Plywood industries</b>							
		2.21.1	All operations likely to produce dust or noise shall be carried out within closed premises.					
		2.21.2	Three sides of the factory shed shall be constructed with brick and metal sheet up to roof level.					
		2.21.3	The premises shall be made as impervious for storing timber logs.					
		2.21.4	Saw dust shall be collected securely in storage tanks with proper lids.					
		2.21.5	All stacks shall have minimum height as specified below and shall have port hole and platform cum ladder to facilitate monitoring of emissions.					
		2.21.6	The Boiler/Thermic Fluid Heater shall be provided with scientifically designed dust collector and water scrubber.					
		2.21.7	Control measures with 30 m height chimney shall be provided					
		2.21.8	Hood system with dust collector for sanding machine shall be provided.					
		2.21.9	The trimming waste shall not be used in the boiler or thermic fluid heater and shall be used only for manufacturing block board.					
		2.21.10	Arrangements shall be provided to reuse the glue wash water and the solid glue shall be disposed through the Common Hazardous Solid Waste Disposal facility at Ambalamedu after solidifying the glue with cement and ash.					
		2.21.11	Proper agreement shall be placed for the disposal of dried glue sludge to CTSDF at					

			Ambalamedu						
<b>2.22</b>	<b>Quarry</b>								
		2.22.1	Boundary shall be fenced before operation of quarrying activities.						
		2.22.2	Only exposed rock is permitted for quarrying.						
		2.22.3	After exaction at the site is completed, the land may be used for rain water harvesting with protective barriers/any other suitable approved purpose or may be reclaimed.						
		2.22.4	Suspended particulate matter level at boundary of the land owned with different adjoining areas excluding roads in residential and commercial areas is 200 microgram/cubic metre and in industrial area is 500 microgram per cubic metre.						
		2.22.5	Respirable suspended particulate matter level at boundary of the land owned with different adjoining area, excluding roads in residential and commercial areas is 100 microgram per cubic metre and 150 microgram per cubic metre in industrial area.						
<b>2.23</b>	<b>Rice mill</b>								
		2.23.1	30M chimney with scrubber to remove ash						
		2.23.2	Cyclone / dust collector shall be provided for de-husking and cleaning section and the residues shall be collected in an enclosed chamber. The residues shall be disposed along with ash from the boiler.						
		2.23.3	Ash from the boiler shall be removed periodically.						
		2.23.4	Solid waste including plastic shall be segregated and disposed properly						
		2.23.4	Storage facility shall be provided for boiler ash and the stored ash shall be disposed properly						
<b>2.24</b>	<b>Rubber</b>								
<b>2.24.a</b>	Rubber (Rubber band unit)	2.24.1	De-ammoniation area shall be enclosed and shall be provided with exhaust fan facility.						
		2.24.2	Chimney of 12m shall be provided for the vulcanization tank						
		2.24.3	Concentration of ammonia at the boundary shall not exceed 400 $\mu\text{g}/\text{m}^3$						
<b>2.24.b</b>	Rubber-Centrifuged Latex Units	2.24.4	The concentration of ammonia at the boundary of the premises shall not exceed 360 $\mu\text{g}/\text{m}^3$ .						
		2.24.5	Open burning shall not be done for barrel reconditioning.						
		2.24.6	Whole serum shall be processed in the plant and serum shall not be sold as by product.						
<b>2.24.c</b>	Rubber-Crepe	2.24.7	Only dry scrap rubber shall be used in the process.						
		2.24.8	There shall not be any tarry residue / effluent discharge from the gassifier plant in operation at the plant.						
		2.24.9	<table border="1"> <thead> <tr> <th>Description of Chimney</th> <th>Parameter</th> <th>standards [<math>\text{mg}/\text{Nm}^3</math>]</th> </tr> </thead> <tbody> <tr> <td>MS Chimney of height 15 m above ground level making emissions from Dryer furnace</td> <td>Particulate matter</td> <td>150</td> </tr> </tbody> </table>	Description of Chimney	Parameter	standards [ $\text{mg}/\text{Nm}^3$ ]	MS Chimney of height 15 m above ground level making emissions from Dryer furnace	Particulate matter	150
Description of Chimney	Parameter	standards [ $\text{mg}/\text{Nm}^3$ ]							
MS Chimney of height 15 m above ground level making emissions from Dryer furnace	Particulate matter	150							

			MS Chimney of height of 15 m from ground level making emissions from Fire wood gasifeir	PM SO <sub>2</sub>	250 1200
<b>2.24.d</b>	Rubber(grinding unit)	2.24.10	Dust collector and water scrubbing system of adequate capacity and shall be provided and maintained properly grinding areas.		
		2.24.11	The suspended particulate matter at the boundary of the premises shall not exceed 200 microgram per cubic metre.		
		2.24.12	Noise creating equipments shall not be operated during night time.		
<b>2.24.e</b>	Rubber mixing(tread,etc.)	2.24.13	Carbon mixing shall be done only in enclosed room		
<b>2.24.f</b>	Rubber sheet	2.24.14	Effluent Treatment Plant consisting of treatment units listed below shall be functional at all times during operation of the facility: For small scale units 1. Biogas plant                      2. Septic tank as per IS 2470 (Part I),    3. Soak pit For bigger units – as the case of cenex or creaming unit		
		2.24.15	Discharge of effluent shall be made only through the soak pit system.		
		2.24.16	The concentration of PM <sub>10</sub> at the boundary shall not exceed 200 µg/m <sup>3</sup>		
<b>2.25</b>	<b>Saw mill and packing case</b>				
		2.25.1	All operations likely to produce dust or noise shall be carried out within closed premises.		
		2.25.2	Three sides of the factory shed shall be constructed with brick and metal sheet up to roof level		
		2.25.3	Drier shall not be installed in the unit.		
		2.25.4	The premises shall be made as impervious for storing timber logs.		
		2.25.5	Saw dust shall be collected securely in storage tanks with proper lids.		
		2.25.6	The loading & unloading area should be made with hard surface.		
<b>2.26</b>	<b>Soft drinks and packaged water</b>				
		2.26.1	Raw water used shall have drinking water quality		
		2.26.2	Intake well shall be properly protected with side walls and nets		
		2.26.3	Raw water filtration facility shall be provided so as to attain zero bacterial contamination.		
		2.26.4	Clean bottles and new caps with own identification marks/label shall be utilised for filling product.		
		2.26.5	Wash water shall be discharged through settling tank & soak pit facilities only.		
		2.26.6	Soak pit shall be at least 10 m away from the intake well/nearby wells.		
		2.26.7	It shall maintain hygienic condition and practice good housekeeping.		
<b>2.27</b>	<b>Steel</b>				
		2.27.1	Only clean scrap and/or sponge iron shall be brought to the factory and used for the process.		
		2.27.2	The scrub water from the ventury scrubber shall be passed through settling tank and sand filter and collected in a tank and then be recirculated to scrubber		

		2.27.3	Cooling water shall be recirculated.
		2.27.4	On-line digital monitor-cum-recorder for the measurement of particulate matter emission from the stack provided shall be maintained
		2.27.5	TOD meter shall be provided to record energy consumption of the pollution control devices
		2.27.6	Area shall be earmarked for slag and ash storage with proper care to guard the same from rain water
		2.27.7	Slag and ash shall be given as raw material to cement mills or shall be utilized properly.
<b>2.28</b>	<b>Textile</b>		
		2.28.1	If cabinet dyeing is carried out reverse osmosis shall be provided.
		2.28.2	Water meter shall be fixed at the inlet of effluent treatment plant and at the outlet of reverse Osmosis plant.
		2.28.3	Rejects from Reverse Osmosis plant shall be subjected to multistage evaporation
		2.28.4	The residue left shall be transported along with ETP sludge to CTSD of KEIL at Ambalamugal, Kochi
<b>2.29</b>	<b>Waste oil reprocessing</b>		
		2.29.1	No waste oil, oil sludge or oil emulsion shall be reprocessed or used without authorization as per the Hazardous Waste (Management & Handling) Rules
<b>2.30</b>	<b>Wood processing except furniture</b>		
		2.30.1	Necessary clearance from the Forest Dept. shall be obtained before commissioning the Unit
		2.30.2	All the operation shall be done in an enclosed room for reducing fugitive emission.
		2.30.3	Saw dust shall be shall be collected securely in storage tanks with proper lids
		2.30.4	The concentration of PM <sub>10</sub> at the boundary shall not exceed 200 µg/m <sup>3</sup> .
		2.30.5	The unit shall not be operated during night time(6pm-6am) (if residences are close by)