

# **Rajasthan State Pollution Control Board**

## **4, Institutional Area, Jhalana Doongri, Jaipur**

### **Guidelines for Abatement of Pollution In Stone Crusher Industry**

(No. F.14 (38)Policy/RPCB/Plg./ 4629-56      Dated: 15 March 2010)

The process involved in the stone crusher industry is such that if appropriate measures are not taken, it may lead to pollute water/air. Therefore, it is mandatory that stone crusher industry must be established only after seeking proper consent under Air (Prevention & Control of Pollution) Act, 1981(Air Act). Likewise, after getting established, the stone crusher industry must be put to operation only after valid consent to operate under the above mentioned laws. Any violation in this regard is a criminal offence.

The State Board has issued detailed guidelines from time to time to facilitate the process of grant of consent to establish/consent to operate and also to suitably guide/advice the stone crushing industry for taking appropriate measures for abatement of pollution. However, some issues have been raised regarding procedural/technical aspects in the guidelines issued vide communication dated 02/02/09 by the State Board.

After careful consideration of socio-economic, technical and environmental aspects associated with the Stone Crushing industry and the suggestions received from various stakeholders on the guidelines issued for establishing stone crushers vide communication dated 02/02/09, the State Board, in supersession of the previous guidelines, hereby issues new comprehensive guidelines for

establishment of new Stone Crushers and for operation of new or exiting stone crushers. It is pertinent to clarify here that:-

- (i) The case where capacity of existing stone crusher is proposed to be enhanced, it will be treated as the case of establishing new crusher.
- (ii) The stone crushing industries will also be required to comply with the conditions laid down in all other laws for the time being in force. The consent to establish / Consent to operate issued under the Air Act does not absolve the project proponent from the other statutory obligations prescribed under any other law or any other instrument.
- (iii) The stone crushers already in operation with the valid consent prior to the issuance of these guidelines will have to conform to the standards/ criteria laid down in Para 2.1 if the capacity of the Stone Crushers is proposed to be enhanced.
- (iv) All the provisions of these guidelines will also apply on Stone Crusher Industry in the mining lease area.

## 1 LAND AREA

Minimum land requirement for a stone crusher shall be as under:-

| <b>Description</b>   | <b>Minimum land</b>   |
|--|---|
| 600 Tones per Day (TPD) or more/Jaw Size > 15"/30" (Red Category Crusher),     | 1.0 hectare<br>(At least 0.50 hectare land Should be set apart for Plant & Machinery) |
| Less than 600 Tones per Day (TPD)/Jaw Size ≤15"/30" (Orange Category Crusher), | 0.5 hectare<br>(At least 0.25 hectare land Should be set apart for Plant & Machinery) |

## 2 LOCATION OF LAND

A Stone Crusher can be established on a land owned by the promoter (this also includes land taken on lease for at least 10 years) provided that:-

The land is not located within a radius of 1.5 Kms. (aerial distance) from Abadi area of any revenue village as defined under the provisions of Land Revenue Act.

Provided that the minimum aerial distance from revenue village will be 500 Mts, in case where the stone crusher already is in operation with valid consent prior to issuance of these guideline and seeks to expand its capacity.

*Explanation – Revenue village is the village of Dhani notified as such by revenue Department of the State Government and the distance is to be verified by concerned revenue officer not below the rank of Tehsildar in the model format enclosed as annexure -1.*

Aerial distance of the nearest point of boundary of the land from the State/ National Highway must be at least 100 meters and from the other roads at least 50 meters.

*Explanation – Distance is to be measured from the boundary of the road, to be verified by concerned revenue officer not below the rank of Tehsildar in the model format enclosed as annexure -1.*

Aerial distance of the nearest point of boundary of proposed crusher site must be at least 500 meters from National Park & Sanctuaries and 25 meters from Reserve Forest/Protected Forest/Unclassified Forest.

*Explanation- in cases where the claimed distance is equal or marginally more than the above limit, the distance is to be verified by the concerned Forest Officer not below the rank of Range Officer.*

Aerial distance of the nearest point of boundary of the proposed stone crusher must be at least 500 meters from any Prominent Public Sensitive places/ Prominent Places of Worship/ School/ Hospital/ Notified Archaeological Monuments.

*Explanation- To be verified by concerned revenue officer not below the rank of Tehsildar in the model format enclosed as annexure -1.*

If there is any Water Body in the down-stream side of the proposed land, the aerial distance of the nearest point of boundary of the proposed stone crusher must be least 500 meters from the Water Body. Provided that permission to establish stone crusher shall not be granted if the proposed land fall in the catchment of a water body even if the land is located beyond 500 Mts. From such water body.

*Explanation-*

- (i) The distance from water body must be verified by concerned Assistant Engineer, Water Resources Department (Irrigation) in the format enclosed as annexure –II*

(ii) *This condition will not be applicable where the Stone Crusher has been established after obtaining valid consent to establish prior to issuance of these guidelines.*

### **3. LOCATION OF PLANT & MACHINERY**

The location of the stone crushers should be such that the distance of the nearest point of any side of boundary is at least 30 meters in the case of crushers having capacity < 600 Tonnes per day (TPD) and 50 meters in the case of crushers having capacity  $\geq$  600 Tonnes per Day (TPD).

### **4. POLLUTION CONTROL MEASURES REQUIRED**

Following measures must be taken for abatement of pollution:-

#### **4.1 CRUSHING UNITS**

4.1.1 The outlet of all primary stone crushers, and both inlet and outlet of all secondary and tertiary stone crushers, if not installed inside a reasonably dust tight housing, shall be enclosed and ducted to a dust extraction and collection system such as a fabric filter.

4.1.2 Water sprayers shall be installed and operated in strategic locations at the feeding inlet of stone crushers.

4.1.3 Stone Crusher enclosures shall be rigid and be fitted with self-closing doors and close-fitting entrances and exits. Where conveyors pass through the crusher enclosures, flexible covers should be installed at entries and exits of the conveyors to the enclosure.

## **4.2 VIBRATORY SCREENS AND GRIZZLIES UNIT**

- 4.2.1 All vibratory screens shall be totally enclosed in housing. Screen houses shall be rigid and reasonably dust tight. Where conveyors pass through the screen house, flexible covers should be installed at entries and exits of the conveyors to the housing. Where containment of dust within the screen house structure is not successful then a dust extraction and collection system should be provided.
- 4.2.2 All grizzlies shall be enclosed on top and from 3 sides and sufficient water sprayers shall be installed at their feeding and outlet areas.

## **4.3 BELT CONVEYORS**

- 4.3.1 For better environmental protection practices, the energy efficiency and production efficiency must be maximized. For this purpose effective belt scraper such as the pre-cleaner blades made of hard wearing materials and provided with pneumatic tensioner, or equivalent device, should be installed at the head pulley of designated conveyor as required to dislodge fine dust particles that may adhere to the belt surface and to reduce carry-back of fine materials on the return belt. Bottom plates should also be provided for the conveyor unless it has been demonstrated that the corresponding belt scraper is effective and well maintained to prevent falling material from the return belt.
- 4.3.2 Except for those transfer points which are placed within a totally enclosed structure such as a screen house, all transfer points to and from conveyors should be enclosed.

If the dust does not remain confined within the enclosure water spraying system should be installed to ensure that the dust goes out.

4.3.3 Openings for any enclosed structure for the passage of conveyors should be fitted with flexible seals.

#### **4.4 STORAGE PILES AND BINS**

4.4.1 Wherever feasible, free falling transfer points from conveyors to stockpiles should be fitted with flexible curtains or be enclosed with chutes designed to minimize the drop height. Water sprays should also be used to prevent the dust from going into the air.

4.4.2 The surface of all surge piles and stockpiles of blasted rocks or aggregates must be kept sufficiently wet by water spraying.

4.4.3 All open stockpiles for aggregates of size in excess of 5 mm must be kept sufficiently wet by water spraying. The stockpiles of aggregates 5 mm in size or less must be suitably covered to ensure that the same is not carried away (or whipped out) by the wind.

4.4.4 Scattered piles gathered beneath belt conveyors, inside and around enclosures must be cleared regularly.

#### **4.5 MATERIAL TRANSPORTATION**

4.5.1 The approach road to site of stone crusher (including the storage site if it is at a different place) from the nearest metalled public road for the transportation of raw material/ final products must be paved or hard surfaced (e.g. Water Bound Macadam or metalled).

- 4.5.2 Active haul roads inside the works should be adequately wetted with water.
- 4.5.3 Exhausts of trucks for transportation of rock materials within the site should be directed upward.
- 4.5.4 Wheel cleaning facilities should be provided for delivery trucks leaving the works for the removal of mud.
- 4.5.5 Trucks carrying crushed and screened products must have their loads covered with tarpaulin sheets before leaving the premises.
- 4.5.6 The handling and storage of the dust collected by the dust collection system must be carried out without fugitive particulate emissions.

#### **4.6 ROCK DRILLING EQUIPMENT**

Appropriate dust control equipment such as wet drilling or dust extraction and collection system must be used during rock drilling activities where mining activity is carried out along with the stone crushing.

#### **4.7 OPERATION AND MAINTENANCE**

- 4.7.1 Wetting agents should preferably be added in the water used in the spraying systems so that water consumption is reduced.
- 4.7.2 All spraying systems used for dust suppression must be maintained in good condition and shall be used regularly. The spraying system must be able to cover the areas of emission points concerned.
- 4.7.3 Water storage facility (minimum 3000 liters) must be provided at the stone crusher site.



- 4.7.4 The dust extraction and collection system must be regularly inspected and maintained in good condition and shall be used as required.
- 4.7.5 A high standard of housekeeping should be maintained. Any piles of materials accumulated on or around the relevant plant shall be cleaned up regularly.
- 4.7.6 Malfunctioning or breakdown of equipment leading to abnormal emissions should be dealt with promptly. In case of the abnormal emission due to equipment failure the process must be stopped.
- 4.7.7 The premises of the stone crushing industry must be clearly demarcated by barbed Wire fencing/dry stone wall/stone wall boundary of adequate height.

## **5 PLANTATION FOR ENVIRONMENTAL CARE**

Minimum 33% of the area for the stone crusher industry should be covered by plantation and at least two rows of tall trees of suitable species to be planted within and along the boundary of the premises to develop a green belt. The plantation must be as per guideline issued by the Board vide its circular dated 15.07.04 (Annexure-III).

Provided that where the land on which the stone crusher industry is proposed to be established/ has been established, is such that the soil is not fit for survival of plant, the industry will make for alternate arrangement of compensatory plantation for environment care. Such plantation can be done through Industrial Association or Gram Panchayat on public land with the approval of competent authority.

## **6 GENERAL CONDITIONS**

- 6.1 A Sign Board showing the name, address and capacity of the stone crusher industry should be displayed at the entrance of the site.
- 6.2 Stone crusher industry must have valid source for raw material either in self ownership or with proper legal arrangement, namely, contract with the owner of valid source of the raw material.
- 6.3 In case stone crusher industry intending to use ground water more than 25 Kilolitres/ Day, the industry must obtain prior permission from the competent authority (CGWA) for withdrawal of ground water.
- 6.4 The application for consent and reply to notices etc. must be furnished by owner (including lawfully empowered attorney for such purpose) of the crusher Industry. Where the Owner of the Stone Crusher Industry is a Juristic person (Company, Firm, Association etc.), the applications must be filed/information must be furnished under the seal and signature of a person authorized for such purpose and the document confirming the authorization must be attached.

## **7 PROCEDURE TO APPLY FOR CONSENT TO ESTABLISH**

The application in the prescribed form must be filed and following documents must be submitted while applying for consent to establish:-

- 7.1 Requisite consent fee

- 7.2 Requisite Declaration on Rs. 10/- non judicial stamp paper duly attested by notary public (As per annexure IV).
- 7.3 Certificate regarding distance issued by Tehsildar/ SDO in the prescribed format (As per 2.1 of LOCATION OF LAND Annexure I).
- 7.4 Ownership document for land/ lease deed.
- 7.5 Details of valid source of raw material (enclose copy of agreement with lease owner in case stone is to be purchased).
- 7.6 Details of various sources of air pollution and proposal for pollution control measures (enclose feasibility report).
- 7.7 Copy of Partnership deed/ MOU & Article of Association as the case may be.
- 7.8 Site layout plan of plant & machinery (civil & mechanical).
- 7.9 Location plan of proposed site.
- 7.10 Project report of proposed stone crusher duly attested by Chartered Accountant.

## **8 PROCEDURE TO APPLY FOR FIRST CONSENT TO OPERATE**

The application in the prescribed form must be filed and following documents must be submitted while applying for consent to operate:-

- 8.1 Requisite consent fee.
- 8.2 Requisite Declaration on Rs. 10/- non judicial stamp paper (as per annexure IV).
- 8.3 Report of compliance of conditions of consent to establish.

- 8.4 Copy of requisite documents required with consent to establish as per Para 7, if not submitted earlier.
- 8.5 Action plan for green belt development.

## **9 PROCEDURES TO APPLY FOR RENEWAL OF CONSENT TO OPERATE**

The application in the prescribed form must be filed and following documents must be submitted while applying for renewal of consent to operate:-

- 9.1 Requisite consent fee.
- 9.2 Requisite Declaration on Rs. 10/- non judicial stamp paper (as per annexure IV).
- 9.3 Report of Compliance of conditions of consent to operate.
- 9.4 Copy of periodical reports submitted (As per Para 10).

## **10 PERIODICAL REPORTS REQUIRED TO BE SUBMITTED TO THE STATE BOARD**

Following periodical reports must be submitted to the Board

- 10.1 Quarterly compliance report of consent conditions to Regional Office & Head Office both.
- 10.2 Quarterly Ambient Air Quality Monitoring Report to Regional Office & Head Office both.
- 10.3 Annual Environment Statement to Regional Office & Head Office both.
- 10.4 Production & dispatch details to Regional Office & Head Office both.
- 10.5 Environment Audit Report from the certified Environmental Auditor once in every three years.

10.6 Annual production details are to be submitted in following format:-

| Month | Production<br>(Tons) | Quantity of Raw Material<br>Procured from (Tons) |          |          |
|-------|----------------------|--|----------|----------|
|       |                      | Source 1   | Source 2 | Source 3 |
|       |                      |  |          |          |

## **11 CONSEQUENCE OF DEFAULTING COMPLIANCE OF GUIDELINES**

If any non-compliance is observed during the operations, notice U/s 31(A) of the Air Act, 1981 will be issued and proponent will be directed to rectify the non-compliance within specified period. If non compliances are found to be continuing even after show cause notice, the consent will be revoked/ refused and closure directions will be issued forthwith. The owner will also be liable for criminal prosecution.

## **12 CONDITIONS FOR REVOCATION OF CONSENT**

The consent granted will be revoked if it is found that:-

- 12.1 It has been obtained by misrepresentation of facts.
- 12.2 The industry defaults in Pollution Control Measures.
- 12.3 If found that the raw material is procured from illegal sources.
- 12.4 The industry defaults in furnishing of annual information even after expiry of 30 days from the prescribed period.

The annexure referred in the Guideline are enclosed.

**All concerned are directed to ensure strict compliance of the Guidelines while dealing the issues related with Stone Crusher Industry.**

This bears the approval of the competent authority

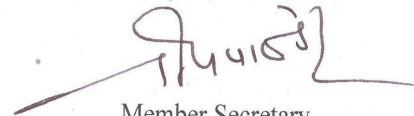


Member Secretary

No.F.14 (38)Policy/RPCB/Plg./ 4629-56 Dated : 15-3-2010

Copy to following for information and necessary action:-

1. P.S. to Chairperson, Rajasthan Pollution Control Board, Jaipur.
2. Senior P.A. to Member Secretary, RPCB, Jaipur.
3. Group Incharge (I/ II/ III/ Plg. /Cess /SWMC/ Mines), RPCB, Jaipur.
4. Law Officer (A/P), RPCB, Jaipur.
5. Supdt. Scientific Officer, RPCB, Jaipur.
6. R.O., RPCB, Alwar /Bikaner/ Bhiwadi/Bhilwara/Jaipur(North /South),Jodhpur/Kota/Pali /Udaipur /Sikar/Balotra/ Kishangarh. | Chittorgarh/Bhanupur
7. Analyst cum Programmer, RPCB, Jaipur, with the direction to put it on the web site of the Board (www.rpcb.nic.in).



Member Secretary

9c

**ekky iek.k i=**

LVksu dskj bdkb; ka dh vkcknh , oe vU; {ks=ka l s njh dks l R; kfir djus gsrqokãNr  
iek.k i=

- 1- ; g l R; kfir fd; k tkrk gSfd eS l Z----- LVksu dskj xte----- rgl hy ----- ftyk----- tks fd [kl jk uej ----- ea iLrkfor gS ds LFky l s 1-5 fdykehVj dh ifjf/k ea vkus okys jktLo xte@vkokl h; {ks= ds uke] mudh vkcknh , oam | kx LFky l s l h/kh njh dk fooj.k fuEu izdkj g&

|       |                                |  |
|-------|--------------------------------|--|
| dzl a | jktLo xte@vkokl h; {ks= dk uke | jktLo xte@vkcknh {ks= l s LVksu dskj dh l h/kh njh |
|       |                                |  |

- 2- LVksu dskj dh iLrkfor bdkbz dh fudVre l hek l s jk"Vh; @jkt; mPp ekxZ dh l hek (Boundary) l snjh ----- ehVj@fdykehVj g&
- 3- LVksu dskj dh iLrkfor bdkbz dh fudVre l hek l s vU; ekxZ vekxZ dk izdkj½ dh l hek (Boundary) l snjh ----- ehVj@fdykehVj g&
- 4- LVksu dskj dh iLrkfor bdkbz l s 500 ehVj dh ifjf/k ea 0; kid tufgr ds l LFku %pfdRI ky; @Ldhy@/kfeZ LFky@ty L=kr½ ds uke o njhA
- 5- LVksu dskj dh iLrkfor bdkbz l s 500 ehVj dh ifjf/k ea l Fkr vU; dskj bdkbz dk uke o njhA
- 6- LVksu dskj dh iLrkfor bdkbz l s 25 ehVj dh ifjf/k ea l Fkr ou {ks= dk uke o njhA
- 7- iLrkfor bdkbz dh ckmUMh l s 500 ehVj dh ifjf/k ea l Fkr ou vE; kj.k@jk"Vh; ikdZ dk uke o njhA

; g iek.k i= vkt fnukd ----- dks ejs gLrk{kj , oa l hy l s tkjh fd; k x; kA

rgl hynkj@mi [k.M vf/kdkjh  
gLrk{kj e; l hy

uks/%

- 1- mijkdR iek.k i= uohure tux.kuk@dk; ky; vfhky{ka ds vk/kkj ij tkjh fd; k tkoA
- 2- iek.k i= l h/kh njh vidr dj tkjh fd; k tk; } ftl ea yxHkx 'kCn dk iz, kx u fd; k tkoA
- 3- ; g iek.k i= rgl hynkj@mi [k.M vf/kdkjh l s uhps ds vf/kdkjh }kj tkjh ugha fd; k tkoA
- 4- ; g iek.k i= ey : i ea gh l e/kr {ks=h; vf/kdkjh} jktLFku jkT; inkk.k fu; æ.k e.My dks i s"kr@iLr fd; k tkoA
- 5- l h/kh njh jktLo xte@vkcknh {ks= dh l hek l sukih tkoA
- 6- mijkdR ik: i ea gh iek.k i= tkjh fd; k tkoA

**To whomsoever it may concern**

This is to certify that there is no water body within 500 meters on the downstream of the proposed site for the stone crusher (Khasra No....., Village.....). This is also certified that the proposed site does not adversely affect the catchments area of any water body.

{To be certified by AEN (Water Resources Department)}



**CIRCULAR**

Entry no. 37 of schedule-I of Environment (Protection) Rules 1986 has stipulated that in respect of stone crushing units, the concerned unit would be required to grow a green belt along the periphery. The Board has also incorporated a condition of 33% of the unit's area as being required to be covered by plantation, while granting consent to these units to operate under the Air (Prevention & Control of Pollution) Act' 1981. However the numbers of trees, species etc. and the manner of their plantation have not been specified by either the Board or the Environment (Protection) Rules, 1986. In view of the difficulty being experienced in implementing this requirement, following clarification is hereby issued:-

1. Trees shall necessarily be planted along the periphery of the area in rows. The unit may also take up additional plantation in other available open areas such as along the road, on unused land etc.
2. The computation of the area under plantation shall be done on the basis of the following norms:-
  - i) Tree species like Neem, Pipal, Jamun, Gulmohar etc. shall be deemed to cover 25 M<sup>2</sup> areas on maturity.
  - ii) Shrubs like Guava, Pomegranate, Jungle Jalebi etc. shall be deemed to cover an area of 9 M<sup>2</sup> on maturity.

The area likely to be covered by the plants mentioned above shall be computed accordingly. The herbs which require continuous watering for their maintenance shall not be counted to meet the norms though they can be planted by the management as per their need.

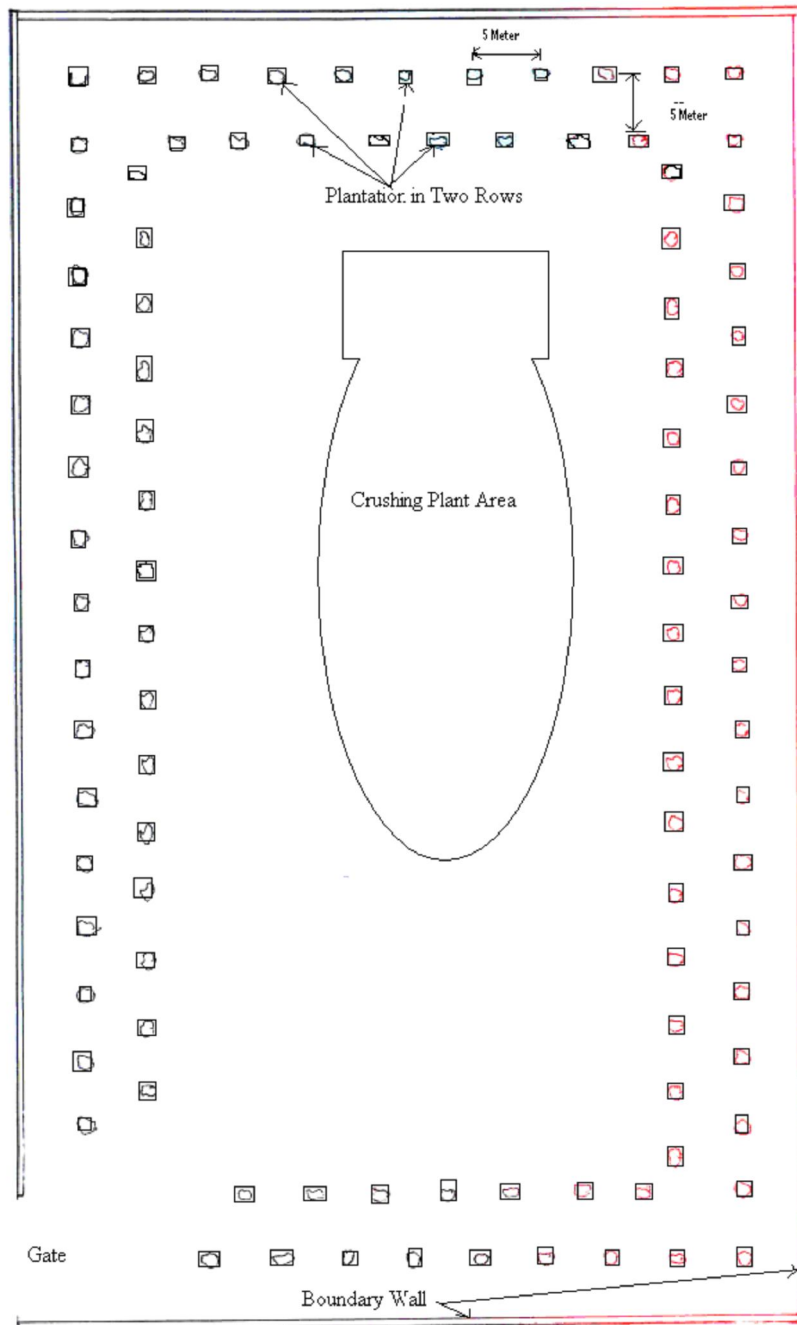
**Illustration: In case of 10 no. of trees like Sehtoot, Siris, Shisham, Babool; 5 no. of**

**Shrubs like Eucalyptus, Ashok, Ber Kair and 20 no of Herbs like Rose, Mehandi, Duranta, Merigold are planted the total area under plantation shall be computed as follows:**

**Area covered by trees = 10 x 25 = 250 m<sup>2</sup>**  
**Area covered by shrubs = 05 x 09 = 045 m<sup>2</sup>**  
**Area covered by herbs = 20 x 00 = 000 m<sup>2</sup>**  
**Total Area 295 m<sup>2</sup>**

-Sd-  
Member Secretary

## Typical Layout for Two Row Plantation



**PERFORMA AFFIDAVIT FOR CTE/CTO**

**AFFIDAVIT**

I, \_\_\_\_\_ (with name and designation) S/o Shri \_\_\_\_\_  
Resident of \_\_\_\_\_ do solemnly affirm and declare as under:-

1. That I am responsible for establishing/operating the unit named M/s. \_\_\_\_\_ (Name & address of the unit).
2. That I, \_\_\_\_\_ (with name and designation) am authorised to sign the consent application form and other enclosures with the application.
3. That the plot area of the unit is \_\_\_\_\_ Sq. Meters.
4. That the number of workers to carry out various activities in the unit is \_\_\_\_\_.
5. That the total number of employees proposed in the unit is \_\_\_\_\_.
6. That the total capital investment on the project is Rs. \_\_\_\_\_.
7. That this Consent to Establish/Operate is being obtained for manufacturing of/providing service for \_\_\_\_\_ up to \_\_\_\_\_ per year. In case of any increase/change in capacity or addition/modification/alteration or change in process or raw material or project or discharge points, we will obtain fresh Consent to Establish.
8. That the quantity of trade/domestic effluent shall not exceed \_\_\_\_\_ KLD. The mode of disposal shall be \_\_\_\_\_. In case of any increase in quantity of effluent or alteration in outlet or mode of disposal, we shall obtain prior consent from the Board.

OR

That there will no effluent discharge from the premises (applicable only in the case of dry units).

9. That the industry is a small/medium/large scale unit with SSI Registration No. /DGTD Registration No. /Letter of Intent No. \_\_\_\_\_.
10. That all adequate measures for control and treatment of water/air pollution from the various processes/activities shall be taken to meet the prescribed standards as per the Environment (Protection) Rules, 1986 as amended to date.

11. That the adequate pollution control measures (if required) shall be prescribed to meet the prescribed standards.
12. That the adequate Emission Control System (ECS) (if required) shall be provided to meet the prescribed standards.
13. That the adequate pollution control measures shall be taken to meet the prescribed ambient noise standards.
14. That if Diesel Generator Sets(of capacity 5 KVA or more) shall be installed it will be Eco-Friendly or with inbuilt acoustic enclosures to meet the prescribed norms w.r.t. noise as per the Gazette Notification of Ministry of Environment & Forests, Government of India dated 2.1.1999. Adequate stack height with D.G. Set(s) shall also be provided and maintained and shall submit noise monitoring report.
15. That all orders and directions issued by the Board from time to time shall be complied with.
16. That the name and addresses of Managing Director or other working Directors or Partner shall be given \_\_\_\_\_ under. Any change there of shall be intimation immediately to the State Board.

DEPONENT

**VERIFICATION**

Verified at \_\_\_\_\_ on this \_\_\_\_\_(day, month and year) that the above contents of this affidavit are true and correct to the best of my knowledge and belief and nothing has been concealed there from.

DEPONENT

Note: The aforementioned Affidavit must be duly signed by the Deponent and duly attested by the Notary Public thereof.

Note: Please omit whatever is not applicable.