

**GUIDELINES FOR ABATEMENT &
CONTROL OF POLLUTION IN
“MINERAL GRINDING INDUSTRY”**



2020

RAJASTHAN STATE POLLUTION CONTROL BOARD

4, INST. AREA, JHALANA DOONGARI, JAIPUR-302004

Rajasthan State Pollution Control Board

4, Institutional Area, Jhalana Doongri, Jaipur.

Guidelines for Abatement and Control of Pollution in Mineral Grinding Industry

No. F14 (38)Policy/RPCB/PLG/ 4430-4462 Date: 21-7-2020

After examining representation received from various stakeholders about prevailing guidelines for establishment of mineral grinding units and for installation of pollution control measures by new & existing mineral grinding units, issued vide no. F.14(38)Policy/RPCB/Plg./SCMG(Gen-18)/654 dated 16/07/2014, the Rajasthan State Pollution Control Board, in supersession of previous guidelines and subsequent related office orders, hereby issues fresh guidelines for establishment of new mineral grinding units and required pollution control measures with new as well as existing mineral grinding units.

1. GENERAL

- i) New mineral grinding unit may be established on a piece of land or khatedari land "duly converted, for the purpose of establishment of mineral grinding unit", under relevant provisions of Rajasthan Land Revenue (Conversion of agricultural land for non-agricultural purposes in rural areas) Rules, 2007 and subsequent amendment rules, 2016 or on piece of land allotted by competent authority of State Government for establishment of mineral grinding unit.
- ii) Mineral grinding units may also be established and operated within a valid mining lease area issued by the Department of Mines & Geology Govt. of Rajasthan. The Project Proponent will be required to apply separately for consent to establish / consent to operate for the mineral grinding unit. However, Consent to Operate to such mineral grinding units will be coterminous with the validity of mining lease deed.
- iii) Renewal of consent to operate to existing mineral grinding unit on land converted/allotted for industrial use or on own *Khatedari*

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land up to an area not exceeding one acre (for which conversion is not required under Rule 6 of the Rajasthan Land Revenue Rules, 2007 and subsequent Notification of Revenue (Group-6) Department, Government of Rajasthan dated 06/10/2016) shall be considered for establishment and operation of mineral grinding unit subject to adequacy of Pollution Control Measures.

- iv) In case the land is located within the industrial estate developed and maintained by RIICO, District Industries Centers and Industrial Areas developed by other agencies with the approval of competent authority (SEZ etc.) the project proponent shall submit a copy of certificate issued by the concern authority (RIICO, DIC, other developers) that the land has been allotted for setting up a mineral grinding industry on it or the land allotment letter must have a specific mention to this effect.
- v) Mineral Grinding Industries can also be established on a land taken on rent or lease agreement. Such land should meet out the criteria as mentioned at point no. i or iii or iv above, as the case may be.
- vi) In cases where capacity of existing mineral grinding unit is proposed to be enhanced by installing additional plant and machinery or otherwise (except replacement), it will be treated as the case for establishment of new mineral grinding unit. The matters of consent to establish for expansion shall be considered in following manner:-
 - (a) The application for expansion of existing mineral grinding unit operating on land converted or allotted for industrial use shall be considered subject to adequacy of Pollution Control Measures.
 - (b) The application for expansion of existing mineral grinding unit operating within a valid mining lease shall be considered subject to adequacy of Pollution Control Measures.

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- vii) The mineral grinding unit shall also be required to comply with provisions laid down in all other related laws in force. The Consent to Establish/Consent to Operate issued under the Air Act and Water Act is limited to control of pollution and statutory provisions contained in these acts and does not absolve project proponent from other statutory obligations prescribed under any other law or instrument.
- viii) If competent authority for land conversion, on the basis of distance or any other issue, cancels prevailing land conversion and intimates to the Board about cancellation of land conversion, then consent to establish or operate, as the case may be, shall be revoked and/or refused in accordance with the laws by the Board and the competent authority for land conversion shall be solely responsible to take necessary action for removal of the mineral grinding unit.
- ix) Similarly, in case of cancellation of mining lease, consent to establish or consent to operate, as the case may be, issued under provisions of Air Act, 1981 and/or Water Act, 1974 for adequacy of pollution control measures shall be revoked/refused in accordance with the laws by the State Board after receipt of information from Mining department. The Department of Mines & Geology shall be solely responsible for removal of mineral grinding unit from such mining lease.

2. POLLUTION CONTROL MEASURES REQUIRED TO BE PROVIDED BY MINERAL GRINDING UNIT

List of measures to be adopted is as under:-

- All jaw crushers, pulverisers, granulators must be installed inside enclosures.
- The enclosures around jaw crushers, pulverisers and granulators must be rigid and fitted with self-closing doors and close-fitting entrances and exits.

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- Where conveyors pass through the enclosures, flexible covers must be installed at entries and exits of the conveyors to the enclosure.
- Outlets of pulverisers must be attached to pulse jet type fabric bag filters.
- All rotary screens must be fully enclosed in housing. Screen houses must be rigid and reasonably dust tight.
- Where containment of dust within the screen house structure is not successful, then a dust extraction and collection system, attached to pulse jet type fabric bag filters must be provided.
- 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.
- Except for those transfer points which are placed within a fully enclosed structure such as a screen house, all transfer points to and from conveyors must be attached to bag filters or other pollution control equipment.
- Openings for any enclosed structure for the passage of conveyors should be fitted with flexible seal.
- Suitable storage silos of adequate capacity must be constructed for collection and storage of the mineral powder so as to prevent fugitive emissions due to material fall from conveyer belts and during material handling.

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- 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.
- All open stockpiles for mineral aggregates of size in excess of 5 mm must be kept sufficiently wet by spraying water (preferably recycled water). The stockpiles of mineral 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.
- Scattered piles gathered beneath belt conveyors, inside and around enclosures must be cleared regularly.
- The mineral powder during process within the plant must be transferred pneumatically through chutes.
- The handling and storage of the dust collected by the dust collection system should not cause any fugitive particulate emissions.
- Trucks carrying finished material bags must be covered with tarpaulin.
- A high standard of housekeeping should be maintained. Any piles of materials accumulated on or around the relevant plant shall be cleaned up regularly and disposed off appropriately.
- The ground within the premises must be cleaned and wetted regularly.

Following parameter shall be complied with the mineral grinding units :-

Parameter	Standards
Suspended Particulate Matter (SPM)	Quantitative standards of SPM : The suspended particulate matter measured between 3 meters and 10 meters from any process equipment of a mineral grinding unit shall not exceed 600 $\mu\text{g}/\text{m}^3$.

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Quartz grinding units shall comply with the orders passed by Hon'ble Supreme Court in the matter of Writ Petition No. 110 of 2006, People's Rights & Social Res. Centre & Ors. V/s Union of India & Others. Quartz grinding units shall install additional pollution control measures as per the recommendations of CPCB. (Annex. I)

3. PLANTATION FOR ENVIRONMENTAL CARE

For conserving environment from adverse effect of emissions, the industry must ensure that:-

- Minimum 33% of the land on which industry is established or proposed to be established is covered by plantation.
- At least two rows of tall trees and shrubs of suitable species are planted along the boundary on all the sides. The two rows of plants will also have lower canopy of shrubs and upper canopy of trees.
- The plantation is carried out as per guidelines issued by the Board vide circular dated 15.7.04 (Annexure-II). A typical lay out of the plantation is at Annexure III.

4. GENERAL CONDITIONS

- A Sign Board showing the name, address and capacity of the industry as well as validity of the consents should be displayed at the entrance of the unit.

5. PROCEDURE TO APPLY FOR CONSENT TO ESTABLISH

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The application for consent to establish before establishing a new plant or expansion of an existing plant must be preferred in prescribed form alongwith following documents:-

- Application for Consent to Establish shall be submitted on line through RPCB MIS <http://rpcbmis.environment.rajasthan.gov.in> alongwith prescribed documents and consent fees.
- All the documents as per the checklist available at the RPCB MIS <http://rpcbmis.environment.rajasthan.gov.in> should be attached with the applications for consent to establish.
- RPCB MIS is accessed through SSO login.

6. PROCEDURE TO APPLY FOR FIRST CONSENT TO OPERATE

The application for Consent to Operate must be filed after establishing the plant and atleast four months before the date of expiry of period of consent to establish whichever is earlier, failing which additional consent fees will be payable as per provisions of the rules.

- Application for Consent to Operate shall be submitted on line through RPCB MIS <http://rpcbmis.environment.rajasthan.gov.in> alongwith prescribed documents and consent fees.
- All the documents as per the checklispt available at the RPCB MIS <http://rpcbmis.environment.rajasthan.gov.in> should be attached with the application for consent to operate.
- RPCB MIS is accessed through SSO login connected with the unit only.

7. PROCEDURE TO APPLY FOR RENEWAL OF CONSENT TO OPERATE

The application for renewal of consent to operate must be filed atleast four months before the date of expiry of period of consent to operate

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failing which additional consent fees will be payable as per provisions of the rules.

- Application for renewal of Consent to Operate shall be submitted on line through RPCB MIS <http://rpcbmis.environment.rajasthan.gov.in> alongwith prescribed documents and consent fees.
- All the documents as per the checklist available at the RPCB MIS <http://rpcbmis.environment.rajasthan.gov.in> should be attached with the application for renewal of consent to operate.
- RPCB MIS is accessed through SSO login connected with the unit only.

All concerned are directed to ensure strict compliance of the guidelines while dealing with the issues related with the mineral grinding industry.

These guidelines are being issued in supersession to all previous guidelines.

This bears approval of the competent authority.


Member Secretary

No. F.14 (38)Policy/RPCB/Plg./ 4430-4462

Dated : 21-7-2020

Copy to following for information and necessary action:-

1. P.S. to Chairperson, Rajasthan State Pollution Control Board, Jaipur.
2. Addl. P.S. to Member Secretary, Rajasthan State Pollution Control Board, Jaipur.
3. Chief Environmental Engineer, Rajasthan State Pollution Control Board, Jaipur.
4. Chief Scientific Officer, Rajasthan State Pollution Control Board, Jaipur.
5. Group Incharge, Policy & Planning/BMW, E-Waste, MSW & ECC/ Textile/ CPP/HOGM/MUID/SCMG & DS/Mines/Hazardous Waste/


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PDF & Projects/Liquid Waste & Plastic Waste/IT/CD, Rajasthan State Pollution Control Board, Jaipur.

6. Regional Officer, Regional Office, Rajasthan State Pollution Control Board, Alwar/Balotra/Bharatpur/ Bhilwara/Bhiwadi/Bikaner/ Chittorgarh/ Jaipur(North/South)/Jodhpur/Kishangarh/Kota/Pali/Sikar /Udaipur.

7. Group In-charge, IT, Rajasthan State Pollution Control Board, Jaipur with request to display on web site.


Member Secretary

CPCB Recommendation for control of emission from Quartz Grinding unit

- i. Adequate provision of dust extraction system shall be made at potential sources such as jaw crusher hopper, transfer points of materials from conveyer belt, disintegrator, transfer points of materials from bucket elevators to other plant equipment, rotary screens, magnetic separators, vibratory screens etc. The dust extraction system of such potential sources shall be routed through Air Pollution Control Device (APCD). Stacks attached to APCDs are to be equipped with adequate monitoring facility as per CPCB Emission Regulation, Part-III.
- ii. The height of stack shall be maintained minimum 2 meter above the roof level
- iii. Sheds provided for plant process machineries shall be closed properly and provision of Closed Circuit Television (CCTV) camera shall be made rather than keeping small openings in shed for frequent observations.
- iv. The internal roads shall be made of bitumen / concrete to reduce the fugitive emission by vehicular movement with proper cleaning and wetting mechanism.
- v. Provision of green belt shall be made along the periphery of the individual unit.
- vi. Provision shall be made for systematic water sprinkling at places of dust generation to reduce the fugitive emission and records of water utilization shall be maintained.
- vii. The telescopic chute / any other system shall be adopted to reduce the fugitive emission while loading the products into trucks / fine dust in the bags.
- viii. Provision of Personal Protective Equipment (dust mask, helmet, safety shoes, goggles, ear plugs) and utilization by all the workers during operation of the plant shall be ensured.
- ix. The units shall ensure environmental monitoring and submission of reports to SPCB at regular intervals.
- x. The house keeping shall be improved.

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Annexure-II

No F. 14 (40) RPCB/Plg/Policy/5804 to 5825

Date: 15/07/2004

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 M² areas on maturity.
 - ii. Shrubs like Guava, Pomegranate, Jungle Jalebi etc. shall be deemed to cover an area of 9 M² on maturity.

The area likely to be covered by the plants mentioned above shall be computed accordingly. The herbs which require continuous watering for

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their maintenance shall not be counted to meet the norms though the 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 Nos. of Herbs like Rose, Mehandi, Duranta, Merigold are planted the total area under plantation shall be computed as follows:

$$\text{Area covered by trees} = 10 \times 25 = 250 \text{ m}^2$$

$$\text{Area covered by shrubs} = 05 \times 09 = 045 \text{ m}^2$$

$$\text{Area covered by herbs} = 20 \times 00 = 000 \text{ m}^2$$

$$\text{Total Area } 295 \text{ m}^2$$

-Sd-

Member Secretary

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Annexure III

Typical Layout for Two Row Plantation

