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CONSENT ORDER NO. 1905118099048 DATED: 28/03/2019.

PROCEEDINGS NO.F.2086HSR/RS/DEE/TNPCB/HSR/W/2019 DATED: 28/03/2019

SUB: Tamil Nadu Pollution Control Board -CONSENT TO OPERATE - DIRECT -M/s. M VENKATRAMAN ROUGH STONE QUARRY , S.F.No. 399/1 (Part-A), KALLUGURIKKI village Krishnagiri Taluk and Krishnagiri District - Consent for the operation of the plant and discharge of sewage and/or trade effluent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act 6 of 1974) - Issued- Reg.

Ref: 1. Unit's OCMMS application No. 18099048/dt. 12-03-2019 for CTO / Air & Water / direct.
2. IR.No : F.2086HSR/RS/AEE/HSR/2019 dated 26/03/2019
3. Minutes of the 182 Th District Consent Clearance Committee Meeting held on 28.03.2019 (Item No.HSR182-13)

CONSENT TO OPERATE is hereby granted under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act, 6 of 1974) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Proprietor,
M/s. M VENKATRAMAN ROUGH STONE QUARRY
S.F No.399/1 (Part-A),
KALLUGURIKKI Village,
Krishnagiri Taluk,
Krishnagiri District.

Authorising the occupier to make discharge of sewage and /or trade effluent.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This CONSENT is valid for the period ending March 31, 2020

S. PALANISAMY
Digitally signed by S. PALANISAMY
Date: 2019.03.28 21:44:50 +05'30'
District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

To
The Proprietor.
M/s. M VENKATRAMAN ROUGH STONE QUARRY,
Kallukurukki Village, Krishnagiri Taluk, Krishnagiri District,
Pin: 635001

Copy to:

1. The Commissioner, KRISHNAGIRI Panchayat Union, Krishnagiri Taluk, Krishnagiri District .
2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
3. Copy submitted to the JCEE-Monitoring, Tamil Nadu Pollution Control Board, Vellore for favour of kind information.
4. File

SPECIAL CONDITIONS

1. This consent to operate is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
Product Details			
1.	Rough Stone Quarrying over an extent of 5.00.0 Hects, in Government Land S.F.No.399/1 (Part-A) of Kallukuruki Village of Krishnagiri Taluk & district	1226973	Cu.M/2year & 9 Months
2.	Top Soil	47632	Cu.M/2year & 9 Months

2. This consent to operate is valid for operating the facility with the below mentioned permitted outlets for the discharge of sewage/trade effluent. Any change in the outlets and the quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Outlet No.	Description of Outlet	Maximum daily discharge in KLD	Point of disposal
Effluent Type : Sewage			
1.	Sewage	2.5	On Industrys own land
Effluent Type : Trade Effluent			

3. The effluent discharge shall not contain constituents in excess of the tolerance Limits as laid down hereunder.

Sl. No.	Parameters	Unit	TOLERANCE LIMITS - OUTLETS -Nos				
			Sewage		Trade Effluent		
			01				
1.	pH		5.5 to 9				
2.	Temperature	oC	-				
3.	Particle size of Suspended solids	-	-				
4.	Total Suspended Solids	mg/l	30				
5.	Total Dissolved solids (inorganic)	mg/l	-				
6.	Oil & Grease	mg/l	-				
7.	Biochemical Oxygen Demand (3 days at 27oC)	mg/l	20				
8.	Chemical Oxygen Demand	mg/l	-				
9.	Chloride (as Cl)	mg/l	-				
10.	Sulphates (as SO4)	mg/l	-				
11.	Total Residual Chlorine	mg/l	-				
12.	Ammonical Nitrogen (as N)	mg/l	-				
13.	Total Kjeldahl Nitrogen (as N)	mg/l	-				
14.	Free Ammonia (as NH3)	mg/l	-				
15.	Arsenic (as As)	mg/l	-				
16.	Mercury (as Hg)	mg/l	-				
17.	Lead (as Pb)	mg/l	-				
18.	Cadmium(as Cd)	mg/l	-				
19.	Hexavalent Chromium (as Cr+6)	mg/l	-				
20.	Total Chromium (as Cr)	mg/l	-				
21.	Copper (as Cu)	mg/l	-				
22.	Zinc (as Zn)	mg/l	-				
23.	Selenium (as Se)	mg/l	-				
24.	Nickel (as Ni)	mg/l	-				
25.	Boron (as B)	mg/l	-				
26.	Percent Sodium	%	-				
27.	Residual Sodium Carbonate	mg/l	-				
28.	Cyanide (as CN)	mg/l	-				
29.	Fluoride (as F)	mg/l	-				
30.	Dissolved Phosphates(as P)	mg/l	-				
31.	Sulphide (as S)	mg/l	-				
32.	Pesticides	mg/l	-				
33.	Phenolic Compounds (as C6H5OH)	mg/l	-				
34.	Radioactive materials a) Alpha emitters	micro curie/ml	-				
35.	Radioactive materials b). Beta emitters	micro curie/ml	-				
36.	Fecal Coliform	MPN/100ml	-				

4. All units of the sewage and Trade effluent treatment plants shall be operated efficiently and continuously so as to achieve the standards prescribed in SI No.3 above or to achieve the zero liquid discharge of effluent as applicable.

5. The occupier shall maintain the Electro Magnetic Flow Meters/water Meters installed at the inlet of the water supply connection for each of the purposes mentioned below for assessing the quantity of water used and ensuring that such meters are easily accessible for inspection and maintenance and for other purposes of the Act.
 - a. Industrial Cooling, Spraying in mine pits or boiler feed.
 - b. Domestic purpose.
 - c. Process.
6. The occupier shall maintain the Electro Magnetic Flow Meters with computer recording arrangement for measuring the quantity of effluent generated and treated for the monitoring purposes of the Act.
7. Log book for each of the unit operations of ETP have to be maintained to reflect the working condition of ETP along with the readings of the Electro Magnetic Flow Meters installed to assess effluent quantity and the same shall be furnished for verification of the Board officials during inspection.
8. The occupier shall at his own cost get the samples of effluent/surface water/ground water collected in and around the unit by Board officials and analyzed by the TNPC Board Laboratory periodically.
9. Any upset condition in any of the plants of the factory which is, likely to result in increased effluent discharge and result in violation of the standards mentioned in Sl. No.3 above shall be reported to the Member Secretary / Joint Chief Environmental Engineer-Monitoring and the concerned District/Assistant Environmental Engineer of the Board by e-mail immediately and subsequently by Post with full details of such upset condition.
10. The occupier shall always comply and carryout the order/directions issued by the Board in this Consent Order and from time to time without any negligence. The occupier shall be liable for action as per provisions of the Act in case of non compliance of any order/directions issued.
11. The occupier shall develop adequate width of green belt at the rate of 400 numbers of trees per Hectare.
12. The occupier shall provide and maintain rain water harvesting facilities.
13. The occupier shall ensure that there shall not be any discharge of effluent either treated or untreated into storm water drain at any point of time.
14. In the case of zero liquid discharge of effluent units, the occupier shall adhere the following conditions as laid under.
 - i). The occupier shall ensure zero liquid discharge of effluent, thereby no discharge of untreated / treated effluent on land or into any water bodies either inside or outside the premises at any point of time.
 - ii) The occupier shall operate and maintain the Zero liquid discharge treatment components comprising of Primary, Secondary and tertiary treatment systems at all times and ensure that the RO permeate/Evaporator condensate shall be recycled in the process and the final RO reject shall be disposed off with the reject management system ensuring zero liquid discharge of effluents in the premises.
 - iii) The occupier shall operate and maintain the reject management system effectively and recover the salt from the system which shall be reused in the process if reusable or shall be disposed off as ETP sludge.
 - iv) In case of failure to achieve zero discharge of effluents for any reason, the occupier shall stop its production and operations forthwith and shall be reported to the Member Secretary/Joint Chief Environmental Engineer-Monitoring and the concerned District/Assistant Environmental Engineer of the Board by e-mail immediately and subsequently by Post with full details of such upset condition.
 - v) The occupier shall restart the production only after ascertaining that the Zero discharge treatment system can perform effectively for achieving zero discharge of effluents.

Additional Conditions:

- 1.The unit shall maintain the Septic Tank, Soak Pit arrangement provided for the treatment and disposal of sewage.
- 2.The Unit shall comply with the conditions imposed by District Level Environment impact Assessment Authority, Tamilnadu in the Environmental Clearance issued to the unit vide Letter No.03/DEIAA-GK1/EC No.32/2018/dt.27.08.2018
- 3.The unit shall comply with the conditions stipulated in the quarry lease deed of The District Collector, Krishnagiri District dt.11.06.2010.
- 4.Quarrying operation should be carried out in systematic, scientific and eco-friendly manner and in accordance with the approved mining plan.
- 5.The unit shall ensure that there shall not be any adverse impacts due to quarrying operation to the environment.
- 6.The consents do not absolve from obtaining permission/clearance from other authorities or other statutes as applicable.
- 7.The consents issued are subject to the final outcome of NGT(SZ)-165/2013

GENERAL CONDITIONS

1. The occupier shall make an application along with the prescribed consent fee for grant of renewal of consent at least 60 days before the date of expiry of this Consent Order along with all the required particulars ensuring that there is no change in Production quantity and change in sewage/Trade effluent.
2. This Consent is issued by the Board in consideration of the particulars given in the application. Any change or alteration or deviation made in actual practice from the particulars furnished in the application will also be ground for review/variation/revocation of the Consent Order under Section 27 of the Act and to make such variation as deemed fit for the purpose of the Act.
3. The consent conditions imposed in this order shall continue in force until revoked under Section 27(2) of the Act.
4. After the issue of this order, all the 'Consent to Operate' orders issued previously under Water (Prevention and Control of Pollution) Act, 1974 as amended stands defunct.
5. The occupier shall maintain an Inspection Register in the factory so that the inspecting officer shall record the details of the observations and instructions issued to the unit at the time of inspection for adherence.
6. The occupier shall provide and maintain an alternate power supply along with separate energy meter for the Effluent Treatment Plant sufficient to ensure continuous operation of all pollution control equipments to maintain compliance.
7. The occupier shall provide all facilities to the Board officials for inspection and collection of samples in and around the factory at any time.
8. The occupier shall display the flow diagram of the sources of effluent generation and pollution control systems provided at the ETP site.
9. The solid waste such as sweepings, wastage, package, empty containers, residues, sludge including that from air pollution control equipments collected within the premises of the industrial plant shall be collected in an earmarked area and shall be disposed off properly.
10. The occupier shall collect, treat the solid wastes like food waste, green waste generated from the canteen and convert into organic compost.
11. The occupier shall segregate the Hazardous waste from other solid wastes and comply in accordance with Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.
12. The occupier shall maintain good house-keeping within the factory premises.
13. All pipes, valves, sewers and drains shall be leak proof. Floor washings shall be admitted into the trade effluent collection system only and shall not be allowed to find their way in storm drains or open areas.
14. The occupier shall ensure that there shall not be any diversion or by-pass of trade effluent on land or into any water sources.
15. The occupier shall ensure that solar Evaporation pans shall be constructed in such a way that the bottom of the solar pan is at least 1 m above the Ground level (if applicable).
16. The occupier shall furnish the following returns in the prescribed formats to the concerned District office regularly.
 - a) Monthly water consumption returns of each of the purposes with water meter readings in Form-I on or before 5th of every month.
 - b) Yearly return on Hazardous wastes generated and accumulated for the period from 1st April to 31st March in Form-4 before the end of the subsequent 30th June of every year (if applicable).
 - c) Yearly Environmental Statement for the period from 1st April to 31st March in Form -V before the end of the subsequent 30th September of every year(if applicable).
17. If applicable, the occupier has to comply with the provisions of Public Liability Insurance Act, 1991 to provide immediate relief in the event of any hazard to human beings, other living creatures/plants and properties while handling and storage of hazardous substances.
18. The issuance of this consent does not authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any natural watercourse or in Government Poromboke lands.
19. The issuance of this Consent does not convey any property right in either real personal property or any exclusive privileges, nor does it authorize any injury to private property or Government property or any invasion of personal rights nor any infringement of Central, State laws or regulation.

20. The occupier shall forth with keep the Board informed of any accident of unforeseen act or event of any poisonous, noxious or polluting matter or emissions are being discharged into stream or well or air as a result of such discharge, water or air is being polluted.
21. If due to any technological improvements or otherwise the Board is of opinion that all or any of the conditions referred to above requires variation (including the change of any treatment system, either in whole or in part) the Board shall, after giving the applicant an opportunity of being heard, vary all or any of such conditions and thereupon the applicant shall be bound to comply with the conditions as so varied.
22. In case there is any change in the constitution of the management, the occupier of the new management shall file fresh application under Water (Prevention and Control of Pollution) Act, 1974, as amended in Form-II alongwith relevant documents of change of management immediately and get the necessary amendment with renewal of consent order.
23. In case there is any change in the name of the company alone, the occupier shall inform the same with relevant documents immediately and get the necessary amendments for the change of name from the Board.
24. The occupier shall display this consent order granted to him in a prominent place for perusal of the inspecting Officers of this Board.

S. PALANISAMY Digitally signed by S.
PALANISAMY
Date: 2019.03.28 21:46:11 +05'30'
**District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR**

Copy of :-

TAMILNADU POLLUTION CONTROL BOARD

NORMS FOR THE LOCATION OF STONE CRUSHING INDUSTRIES IN VIEW OF THE ORDERS OF THE APPELLATE AUTHORITY CONSTITUTED UNDER WATER/AIR ACTS.

B.P.MS.No.4

Dated : 02.07.2004

Read :

1. B.P.Ms.No.142, dated 10.10.1985.
2. B.P.Ms.No.609, dated 9.12.2002.
3. B.P.Ms.No.48, dated 9.9.1990.
4. Board's Resolution No.204-1-25, dated 22.6.2004.

ORDER

Tamil Nadu Pollution Control Board, in its proceedings B.P.Ms.No.142, dated 10.10.1986 fixed norms for location of stone crushing units based on studies conducted by the Central Pollution Control Board and subsequently fixed revised norms for location of stone crushing units in its proceedings, B.P.Ms.No.609, dated 9.12.1992 based on the report of the Committee constituted by the Tamil Nadu Pollution control Board, dated 3.7.1991 under the orders of the High Court of Madras, dated 30.11.1990 as follows :

1. No stone crushers units should be located within 500 M from any NH or SH or primary residential area or mixed residential area of places of public and religious importance.
2. The minimum distance between two stone crushers should be 1 K.M to avoid dust pollutional influence of one over the other.

Subsequently, the Board received representations from various Associations of stone crushing units in Tamil Nadu to consider relaxation in the above norms as the units have installed air pollution control measures. Hence, the Board entrusted a study to the National Environmental Engineering Research Institute (NEERI), Nagpur to assess the performance of the air pollution control measures provided by the stone crushing units, to assess the dust emission from the industry and to arrive at the optimum distance from the National / State highways and from the residential areas. The NEERI conducted the study during September and October 1997 and April and May 1998 and submitted a report with recommendations.

The Board in its Proceedings, B.P.Ms.No.48, dated 9.9.1998 decided to accept the recommendations of the NEERI and decided to adopt the norms except those for residential area. The Board decided that in respect of residential area, no stone crushing industries are to be allowed to operate within 500 metres from residential area as per the orders of Hon'ble Supreme Court of India, dated 25.4.1995 in the Civil Appeal No.10732/1995.

Subsequently, in the order, dated 10.5.1999 in SLP(C) No.13564/1998, the Hon'ble Supreme Court of India issue directions that the existing stone-crushers, who have valid licenses, are permitted to carry out their work subject to the complying with the conditions of the NEERI's Report. In another order dated 8.8.2000 in SLP(C) No.13564/1998, the Hon'ble Supreme Court of India has clarified that the earlier decision of the Supreme Court is confined to the facts of that case and will not stand in the way of the pollution control Board / State Government reconsidering amendment of Notification and or Resolution or Rule as the case may be and option is given to take into consideration the earlier expert committee report, dated 3.7.1991 and also the NEERI Report for framing appropriate Rule. No.13564/1998, the Hon'ble Supreme Court of India has clarified that the earlier decision of the Supreme Court is confined to the facts of that case and will not stand in the way of the pollution control Board / State Government reconsidering amendment of Notification and or Resolution or Rule as the case may be and option is given to take into consideration the earlier expert committee report, dated 3.7.1991 and also the NEERI Report for framing appropriate Rule.

The subject of revision of norms for the location of stone crushing units was placed before the Board at its meeting held on 22.12.2000. The Board in its Resolution No.102-3-9, dated 22.12.2000 decided to adopt the NEERI recommendations in case of existing stone crushing industries and in case of new stone crushing industries, it should be located atleast 500 metres away from habitations as per recommendations of the Expert Committee.

The details as furnished in the Agenda for the Board meeting held on 22.12.2000 and the decision taken by the Board have been filed before the Hon'ble Supreme Court of India as an Affidavit dated 3.1.2001 by the Board in SLP (Civil) No.13564 of 1990 in which the Hon'ble Supreme Court of India issued final order, dated 25.9.2000. Regarding the final order, the Advocate on Record has clarified that the order of the Supreme Court is not strictly applicable to stone crushing units and the norms for existing and new stone crushers can be enforced as notified by the Board and as submitted by it in its affidavit, dated 3.1.2001.

: 3 :

The Board has been adopting the norms for new stone crushing units as per B.P.Ms.No.609, dated 9.12.92, and for existing stone crushing units, the norms stipulated in B.P.Ms.No.48, dated 9.9.90, considering the fact that the above B.P. dated 9.9.98 is issued based on the studies on the existing stone crushing units who have represented to relax norms stipulated in B.P.Ms.No.609, dated 9.12.92. Regarding new stone crushing units the B.P.Ms.No.48, dated 9.9.98 has strictly ordered that no stone crushign industries are to be allowed to operate within 500 metres from residential area. But BP was silent on the distance criteria for new stone crushing units from NH/SH and hence the distance criteria for new stone crushing units fixed in B.P.Ms.No.609, dated 9.12.92 continued to be adopted by the Board in practice.

However, the Appellate Authority in its order, dated 3.3.04 in the appeal filed by M/s.JVM Blue Metals, Thiruvannamalai has ordered as follows.

“It is clear from the proceedings that new norms was fixed for existing and proposed or new units and it was never the intention to maintain 1992 proceedings for any purpose. It is clear from para 3 of the proceedings”. Appellate Authority has set aside the Board’s rejection order and directed the Board to consider the application on the basis of B.P. dated 9.9.98. In this case the Board had rejected the issue of consent to a stone crushing units since it is located within 65 m from State highways thus violating the distance criteria of 500 m from state highways fixed in B.P.Ms.No.609, dated 9.12.92.

The ambiguity in B.P.Ms.No.48, dated 9.9.98 by which it was not clearly specified that this relaxation is applicable to existing stone crushing units only has resulted in this situation by allowing the mushrooming of new stone crushing units near the NH/SH. This will affect the travelling public in the NH/SH due to deep penetration of dust from stone crushing units into their eyes / lungs due to high vehicular speed and the dust will affect the visibility of motorists also.

In order to remove the lack of clarify the matter is again brought to the Board to clearly fix the norms for existing and new / proposed stone crushers and the air pollution control measures without ambiguity.

1.0 CRITERIA FOR EXISTING STONE CRUSHING UNITS : (AS RECOMMENDED BY NEERI)

1.1 Distance Criteria

Sl. No.	Type of clusters	Distance between crusher / cluster of crushers and habitations / NN or SH	Green belt area at the periphery
1.	Single crusher	50 mts.	10 mts.
2.	10 crushers	150 mts.	30 mts.
3.	25 crushers	250 mts.	50 mts.
4.	50 crushers	300 mts.	100 mts.

Note :-

- (a) For single crusher, the distance is to be measured from crusher boundary.
 - (b) In the case of cluster of crushers the distance is to be measured from the last crusher boundary.
 - (c) The crusher boundary implies the line joining all the emission sources in the crushing unit such as jaw crusher, conveyer belt, head, rotary screen etc.
- 1.2 If the distance between two existing crushers is more than 100 metres, it will be considered as a single crusher. If the distance between the existing crusher boundaries is less than 100 metres, it will be considered as a cluster.
 - 1.3 Existing crushers, which are near the National or State highways and not meeting the distance criteria should provide a 15 to 20 feet wall on all the three sides (parallel to National / State highways and both sides) and upto the length to be stipulated on the alignment of road and boundary of the crusher in addition to the air pollution control measures.

Explanation

Existing stone crushing units are those which have valid licenses on the date of Supreme Court order namely 10.05.1999.

: 5 :

2.0 CRITERIA FOR NEW / PROPOSED STONE CRUSHING UNITS

- 2.1 No new / proposed stone crushers should be located within 500 metres from any National highways or State highways or 'inhabited site' or places of public and religious importance.

Note :-

'Inhabited site' shall mean a village site or town site or a house site as referred to in the revenue records or a house site or layout approved by a Local Body or Town or Country or Metropolitan Planning Authority, where the said Body or Authority is created under a statute and empowered to approve such an area as a house site or layout area (as desired in Rule 35 of Tamilnadu Minor Minerals Concession Rules, 1959).

- 2.2 The minimum distance between new / proposed stone crushers should be 1 km to avoid dust pollutional influence of one over the other.

- 2.3 Green belt development :

The stone – crushing unit shall provide adequate green belt cover around the periphery as suggested by the Board depending on site and meteorological conditions.

3.0 AIR POLLUTION CONTROL MEASURES

- 3.1 The existing and new / proposed stone crushing units should provide dust containment and dust suppression systems suggested by National Productivity Council as furnished in Annexure – I and should also adhere to the recommendations furnished in NEERI Report (vide Annexure – II).

The above consolidated proposal of earlier B.P.Ms.No.609, dated 9.12.1992 and B.P.Ms.No.48, dated 9.9.98 is contemplated to make clear the decisions of the Board regarding the siting criteria of the existing and new / proposed stone crushing units and hence this proposal may take effect from 10.5.1999, the date of Supreme Court order defining existing stone crushing units.

: 6 :

The above proposal was placed before the Board at its meeting held on 22.6.2004. The Board in its Resolution No.204-1-25, dated 22.6.2004 decided to approve the siting criteria of the existing and new proposed stone crushing units with date of effect from 10.5.99, the date of the Hon'ble Supreme Court order, defining the existing stone crushing units.

Sd/-
For Member Secretary

To

Joint Chief Environmental Engineers
District Environmental Engineers and
Assistant Environmental Engineers in District Offices

Copy to :

Additional Chief Environmental Engineer I
Additional Chief Environmental Engineer II
Financial Advisor
Joint Chief Environmental Engineer (P&D)
Joint Chief Environmental Engineer (Tech)
Joint Chief Environmental Engineer (BMW)
Joint Chief Environmental Engineer (HWM)
Director (ETI)
Law Officer
Manager (P&A)
Manager (AWC)
Deputy Director (IA)
Deputy Director (LAB) – I
Deputy Director (LAB) – II
Manager (Lab)
Environmental Engineers (BMS)
Environmental Engineers (HWM)
Environmental Engineers (GIS)
Deputy Manager (Tech), and
Assistant Engineers in Head Office
PC to Chairperson and
PC to Member Secretary
BP File – 2 Nos
Stoke file, Spare copy
P2 in perosnnel branch and
File No.P&D I / 24358 / 97

ANNEXURE – I

RECOMMENDED DUST CONTAINMENT AND DUST SUPPRESSION SYSTEM BY NATIONAL PRODUCTIVITY COUNCIL

DUST CONTAINMENT SYSTEM

Dust containment system comprise of building enclosures over the major dust emission sources so as to contain the dust emission sources so as to contain the dust within the housing. Only rotary screen is considered for dust containment enclosures. It is not recommended to enclose the jaw crusher as frequent manual intervention and attention is required.

SALIENT FEATURES OF DUST CONTAINMENT SYSTEM

- Enclosures to be constructed of G.I. sheets (1.66 mm and 1.25 mm thick) and supported on angle structures so that it can withstand strong wind.
- Roof to be given a gradual slope / curvature so as to prevent accumulation of water.
- Material transfer point such as hopper bottom / product unloading conveyor to be covered suitably to prevent dust release into the atmosphere.
- Locations where complete enclosures are not possible such as openings in jaw crushers side and bottom, are to be covered suitably (GI sheets / rubber flap or any other material) to prevent dust release into the atmosphere.
- Telescopic chutes are to be provided at product unloading conveyor to prevent dust release into the atmosphere during free fall off material from height. These chutes can be adjusted in length according to size of the heap.
- Openings in the enclosures over shafter motor driver conveyor belts etc., are to be covered with rubber flaps (wherever possible) to prevent release of dust.
- Openings fitted with doors are to be provided for inspection and access in the enclosures.

DUST SUPPRESSION SYSTEM

Effective housing at location such as material transfer points cannot be constructed because of resultant obstruction to material flow. Since dust generation from these points are quite substantial, dust suppression system, comprising of spraying of fine water mist through special nozzles, should be carried out over the dust generation sources to suppress the dust cloud.

There are two types of water spray systems (a) water spray on the generated dust cloud and (b) water spray directly on the material. The quantity of water spray should be sufficient to suppress dust without affecting the quality of the product. Too much water spray on the material will wetten dust completely and result in zero emission but the wet material is difficult to screen and has not market acceptance.

A water pump is required to spray the water at a minimum pressure of 2 to 4 kg/cm². The water consumption depends on type of nozzle chosen for application.

The various application points are :

- At raw stones unloading site (optional)
- At feed point of raw stones into jaw crusher
- At discharge of the screened stone fractions from rotary screens into respective conveyor belief.
- Stone dust discharge from conveyor on stock pile (optional).

ANNEXURE – II

RECOMMENDATIONS IN NERRI'S FINAL REPORT ON "ASSESSMENT OF DUST EMISSION FROM STONE CRUSHING INDUSTRY" IN JUNE 1998

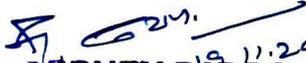
1. Periodical cleaning of water spray nozzles should be carried out to avoid choking.
2. Fine dust accumulated in the crushing area should be periodically cleaned and the dumps should be covered with tarpaulins to arrest erosion by wind.
3. The drop height of the processed material should be kept at a minimum during loading and unloading.
4. Conveyor chutes should be provided at the discharge points.
5. There should be bilane road system to approach the crushers.
6. The approach road should be properly laid with tar and concrete and should be sprayed with water. Similarly, the approach roads to individual crusher should be made in good condition and watered.
7. Within the crusher, a minimum distance of 20 metres should be made for roads.
8. The green belt will restrict the spread of particulate matter and trees should be evergreen high foliage type like neem, tarmarind, gold mohar, fire of the forest and any other local varieties are recommended. Cash crops like cashewnut, mango, lemon and sapota may be encouraged to get back financial benefits.
9. If two or more crushers are located within 100 metres, they may be considered to have a common green belt if they are border cases. The graph prepared from NEERI Reports if furnished in Annexure – III to fix the distance and green belt for any number of crushers in a cluster, limited to a maximum of 50 (Ex. For 5 crushers in a cluster, total area 100 m, green belt 20 m).
10. Ornamental trees like Asoka along the roads on both sides leading to crushing area should be encouraged to improve the aesthetics of the working environment.
11. As an occupational safety, all the workers should be provided with nose masks.

கிருஷ்ணகிரி மாவட்டம் மற்றும் வட்டம், கொத்தபேட்டா கிராமம், ஆசாத் நகர், க.எண்.3/245, பெங்களூரு ரோடு, கிருஷ்ணகிரி என்ற முகவரியை சேர்ந்த திரு.வெங்கட்ராமன் த/பெ.முனியப்பன் என்பவர் அளித்த வாக்குமூலம்.

அய்யா,

நான் மேற்கண்ட முகவரியில் வசித்து வருகிறேன். நான் கிருஷ்ணகிரி வட்டம், கல்லுகுறுக்கி கிராம புல எண்.399/1 (பகுதி-அ) விஸ்தீர்ணம் 5.00.0 ஹெக்டேர் பரப்பளவில் உள்ள சாதாரண கல்குவாரியை பொது ஏலம் / டெண்டர் மூலம் குவாரி குத்தகை உரிமம் பெற்றுள்ளேன். மேற்படி குவாரி மீது பசுமை தீர்ப்பாயம் வழக்கு எண்.175/2021-ன்படி வருவாய் கோட்டாட்சியர், கிருஷ்ணகிரி, துணை இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை (கனிமம்) கிருஷ்ணகிரி, உதவி புவியியலார் (கனிமம்), நில அளவர் (கனிமம்) மற்றும் கிராம நிர்வாக அலுவலர், கல்லுகுறுக்கி ஆகியோருடன் 19.10.2021-இன்று மேற்படி குவாரியை சுற்றியும் அளவு செய்து மற்றும் குவாரியில் வெட்டியெடுக்கப்பட்ட கனிமங்களை என்முன்னால் அளவீடு செய்ப்பட்டது என்பதை பணிவுடன் தெரிவித்துக்கொள்கிறேன்.

/என் முன்னால்/


DEPUTY DIRECTOR
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/படித்து பார்த்தேன் சரி/


19.11.2021

