

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL  
EASTERN ZONE, KOLKATA**

**ORIGINAL APPLICATION NO. 154/ 2024**

IN THE MATTER OF:

News item titled "Birbhum - A proposed coal mine in west bengal and the related health hazards" appearing in The Hindu dated 12.05.2024.

.....Applicant(s)

Versus

Central Pollution Control Board.

...Respondent(s)

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Kolkata

Date: 6<sup>th</sup> September, 2024

Through

Respondent No. 3

*Anshika Pandey*

Advocate

06 SEP 2024

-X-

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL  
EASTERN ZONE, KOLKATA**

**ORIGINAL APPLICATION NO. 154/ 2024**

SL. NO. 286 /2024

IN THE MATTER OF:

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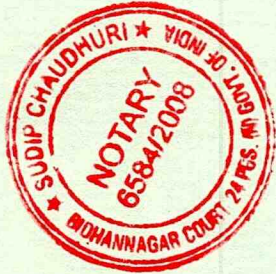
.....Applicant (s)

Versus

Central Pollution Control Board.

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**BEFORE THE NOTARY PUBLIC  
AT BIDHANNAGAR  
DIST.-NORTH 2<sup>d</sup> PARGANAS**



**COUNTER AFFIDAVIT ON BEHALF OF MINISTRY OF ENVIRONMENT,  
FOREST AND CLIMATE CHANGE (RESPONDENT NO. 3)**

I, Dr. Shahida Parvin Quazi, daughter of Late Quazi Sirazul Haque, aged about 46 years, presently working as 'Scientist - E' at the Sub Office Kolkata, Regional office Bhubaneswar under the of Ministry of Environment, Forest and Climate Change having its office at IB-198, Sector - III, Salt Lake City, Kolkata-700 106 do hereby solemnly affirm and state as under:

1. That, I am well acquainted with the facts and circumstances of this case. I have been duly authorized by the Ministry of Environment, Forest and Climate Change, respondent no.3 to swear the instant affidavit and as such I am competent to depose the same.
2. That, the instant suo-motu case is related to news article published in the newspaper stating allegations about pollution and health related problems associated with Stone Crushing Industries and proposed Coal Mining Project in Birbhum, Kendrapada, West Bengal.
3. That the answering Respondent no.3 is engaged in, inter alia, policy formulation for abatement, prevention and control of pollution by

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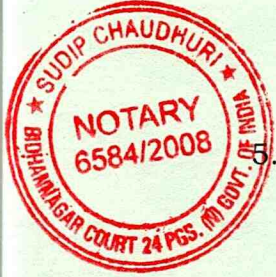
prescribing environmental standards, which are implemented through the Central Pollution Control Board (CPCB) and State Pollution Control Boards (SPCBs)/ Pollution Control Committees (PCCs).

4. Besides, the State Pollution Control Boards/Pollution Control Committees concerned are mandated and empowered to take all such measures as are deemed necessary or expedient for the purpose of protection and improving the quality of environment as well as prevention, control and abatement of environmental pollution.

5. That, the Emission Standards for stone crushers have been notified under the Environment (Protection) Act, 1986 by the MoEF&CC vide Notification No. G.S.R. 742(E) dated 30<sup>th</sup> August, 1990. The Stone crushing units have to comply with emission norms prescribed under the Environment (Protection) Rules, 1986. The copy of notification is marked and annexed as **Annexure- I**.

6. That CPCB issued guidelines for Stone Crushing Units in July 2023 and circulated to all the SPCBs/PCCs for its implementation. The said guidelines stipulate the general and source specific measures required to be taken by stone crushing units to prevent/suppress dust emissions. Para 6.0 of Environmental Guidelines for Stone Crushing Units - July, 2023 is 'Regulatory/Monitoring Mechanism for Stone Crushing Unit', as reproduced below:

- a. Stone crushing unit should obtain necessary permissions regarding Consent to Establish (CTE) and Consent to Operate (CTO) from the concerned SPCBs/PCCs
- b. CCTV/PTZ cameras should be installed at the entrance and all corners of the premises of the unit covering entire area with minimum of 30 days data storage.
- c. Stone crushing unit shall comply with emission norms prescribed under the Environment (Protection) Rules, 1986 and conditions laid down in CTO by concerned SPCB/PCC.
- d. Online/manual ambient air monitoring systems to be installed in crusher zone as per CPCB/SPCB guidelines - in upwind and downwind directions.
- e. Stone crushing unit should develop green belt as per the plan approved by concerned Department of the State/UT.
- f. Local authorities should associate with stone crusher associations for the construction of metaled road in the entire crusher zone.
- g. A District Level Committee should be constituted under chairmanship of District Magistrate/Deputy Commissioner so that



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surprise inspections for surveillance of stone crushing units located under their jurisdiction can be carried out on regular basis.

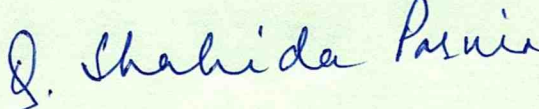
- h. Health survey of workers should be carried out by the stone crusher on half-yearly basis.
- i. New Crushers should be allowed to operate only in dedicated crusher zones as per the siting policies of SPCBs/PCCs.
- j. Stone crusher unit should be operated only during daytime (i.e. 6.00 AM to 10.00 PM) to avoid inconvenience to the nearby residents due to ambient noise.



The copy of CPCB Guidelines is marked and annexed as **Annexure-II**.

7. That the mines are required to take prior environmental clearance to the extent of provision made under Environment Impact Assessment Rules, 2006 (EIA-2006) from MoEF&CC or State Environment Impact Assessment Authority (SEIAA) constituted under Environment (Protection), Act 1986, as the case may be. Any contravention to the provisions of EIA-2006 or non-compliance to the subjected conditions of Environmental Clearances issued by SEIAA / MoEF&CC or Consent to Operate/Established issued by concerned State Pollution Control Boards.
8. That, with regard to the Stone crushing Units, it is humbly submitted that as per the modified directions dated March 07, 2016 issued by CPCB to all the State Pollution Control Board/ Pollution Control Committee under section 18(1)(b) of the Water Act, 1974 and the Air Act, 1981, "Stone Crushers" are categorized under 'Orange' Category and are required to obtain Consent to Establish and Consent to Operate from the concerned SPCB/PCC. The Stone crushing units should operate only after obtaining CTE and CTO from the concerned SPCB/PCC and shall comply with the conditions laid down in CTE and CTO.
9. That it is humbly prayed that the affidavit be taken on record and into consideration and the Hon'ble Tribunal may pass appropriate Order(s), direction(s) as deemed fit and proper under the facts and circumstances of the present case.

  
**S. CHAUDHURI**  
 \* NOTARY \*  
 GOVT. OF INDIA  
 Regn. No.-6584/08  
 Bidhannagar Court  
 Dist.-North 24 Pgs

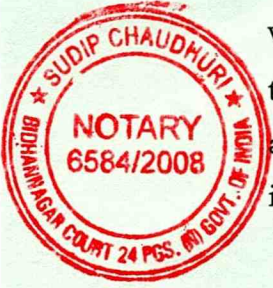


**DEPONENT**

06 SEP 2024

**VERIFICATION:**

Verified at Kolkata on this 6<sup>th</sup> day of September, 2024 that the contents of this reply affidavit based on official record(s) maintained and information available in the office are correct to my knowledge and belief. No part of it is false and nothing has been concealed there from.



**S. CHAUDHURI**  
★ NOTARY ★  
GOVT. OF INDIA  
Regn. No.-6584/08  
Bidhannagar Court  
Dist.-North 24 Pgs

*S. Shahida Parvin*

**DEPONENT**

**06 SEP 2024**



## Annexure-1

Sr. No.	Industry	Parameter	Standards
1	2	3	4
	<b>Note :</b>	1. Water Consumption for the Jute processing industry will be 1.5 Cum/Ton of product from January, 1992.	
		2. At the present no limit for colour is given for liquid effluent. However, as far as possible colour should be removed.	
		* Stack emissions from boiler house shall conform to the standards already prescribed under Environment (Protection) Act, 1986, vide Notification No. GSR 742(E), dated 30.08.90.	
53.	<b>LARGE PULP &amp; PAPER NEWS PRINT/ RAYON GRADE PLANTS OF <sup>1</sup>[CAPACITY ABOVE 24000 MT PER ANNUM]</b>	<b>EFFLUENTS</b>	Concentration in mg/l except pH and TOCL
		pH	7.0 – 8.5
		BOD <sup>2</sup> [3 days at 27°C]	30
		COD	350
		Suspended Solids	500
		<sup>3</sup> [Absorbable Organic Halogens (AOX) in effluent discharge	1.5 kg/ton of product with effect from the date of publication of this notification. 1.0 kg/ton of product with effect from the 1 <sup>st</sup> day of March, 2008.]
		Flow (Total Waste Water Discharge)	
		** (i) Large Pulp & Paper	200 Cum/Ton of Paper produced
		(ii) Large Rayon Grade Newsprint	150 Cum/Ton of Paper produced.
54.	<b>SMALL PULP AND PAPER Paper Plant of Capacity upto 24000 MT/Annum :</b>	<b>EFFLUENT</b>	
	Category :		
	A. *Agrobased	Total waste water discharge	200 cum/Ton of paper produced
	B. **Waste paper based	Total waste water discharge	75 cum/Ton of paper produced

<sup>1</sup> Substituted by Rule 2(ii) (a) of the Environment (Protection) Third Amendments Rules, 2005 notified vide Notification No.G.S.R.546(E), dated 30.8.2005.

<sup>2</sup> Substituted by Rule 2 of the Environment (Protection) Amendment Rules, 1996 notified by G.S.R.176(E), dated 2.4.1996 may be read as BOD (3 days at 27°C) wherever BOD 5 days 20°C occurred

<sup>3</sup> Substituted by Rule 2(ii) (b) of the Environment (Protection) Third Amendments Rules, 2005 notified vide Notification No.G.S.R.546(E), dated 30.8.2005

\*\* The Standards with respect of total wastewater discharge for the large pulp and paper mills be established from 1992, will meet the standards of 100 cum/Ton of paper produced.

**Environmental Guidelines  
for  
Stone Crushing Units**



**Central Pollution Control Board**

**Ministry of Environment, Forest and Climate Change**

**Parivesh Bhawan, East Arjun Nagar**

**Delhi-110032**

**(July, 2023)**



## 1.0 Introduction

Stone crushing sector is an important industrial sector engaged in producing crushed stone of various sizes (40 mm.20 mm.10 mm. crushed sand, stone dust etc) depending upon the requirement which acts as raw material for various construction activities.

Stone crushing operation releases a substantial amount of fugitive dust, which not only pollute the environment, but also pose a health hazards to the workers and the surrounding population. The growth in infrastructure is leading to increase in demand of raw materials, thereby resulting in the need to set up new stone crushing units or increase production from existing units. This poses a challenge to maintain the ambient air quality, which is possible if environmental guidelines predetermined by the industry concerned are followed.

Inventory and information about stone crushing units gathered from 27 SPCBs/PCCs (Arunachal Pradesh, Andaman & Nicobar island, Assam, Bihar, Chandigarh, Chhattisgarh, Daman, Dadra & Nagar Haveli, Goa, Gujarat, Haryana, Himanchal Pradesh, Jharkhand, J&K, Karnataka, Kerala, Madhya Pradesh Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Punjab, Sikkim, Tripura, Uttarakhand), and the data received indicates that there are about 16,931 stone crushing units with capacity ranges between 0.1 TPH to 1,400 TPH.

## 2.0 Classification of Stone Crushing Units

Based on the information received from SPCBs/PCCs, stone crushers may be classified into small, medium and large-scale in terms of production capacity.

S.No.	Category	Production capacity (TPH)
1.	Small Scale	Up to 25
2.	Medium Scale	26 to 100
3.	Large Scale	100 above



### 3.0 Stone Crushing Process

The stone crushing process can be broadly divided in following stages:

**3.1 Transportation of raw material:** Stones extracted from various sources are transported to stone-crushing units by means of trucks, trailers or automatic dumpers.

**3.2 Primary crushing:** Mined stones are fed directly into the primary crusher through stone feeders. The primary crusher breaks large stones and boulders into 100-140 mm size stones. Crushed stones are sent to secondary crusher for further reduction into smaller sizes. Various types of crushers are used in stone crushing industry. Jaw crushers are widely used as primary crushers.

**3.3 Secondary crushing:** After primary crushing, crushed stones are fed to secondary crushers through conveyor belts. In this stage, stones are further crushed to a size of 40-60 mm to 10 mm or even smaller. Stone crushing units use different types of crushers for secondary crushing. Granulator or cone crusher is usually used for secondary crushing.

**3.4 Screening:** From secondary crusher, crushed stones are transferred for screening through a conveyor belt. Screening is the process for segregating products of various sizes. Different mesh size screens are aligned one below the other and each screen is connected to a separate conveyor belt for discharging different size products. Mass that remains on the screen is called 'oversize' and material that passes through screen is called 'under size'. Oversize is returned to secondary crushers for further crushing and then again to screen. Under size is discharged through a 'telescopic chute' and screened products of various sizes are conveyed to stockpiles by belt conveyors. Different types of screens are used such as; grizzly-type screen, vibrating screen and rotary screen. Vibrating screens are most commonly used.



**3.5 Tertiary crushing:** Tertiary crushing is carried out in units that produce stone dust as their primary product. Dust is usually a by-product of stone crushing process. Units that produce dust, install a separate machine, usually roller crushers. Stones of size 10-20 mm are sent to roller crushers for grinding into fine dust.

**3.6 Product storage and loading:** After crushing and screening, final product is transferred to a conveyor belt which distributes the product into different stockpiles, depending on size of the product. The product/fines are either stored as stockpiles or directly loaded into trucks & dumpers and transported.

#### **4.0 Environmental issues associated with Stone Crushing Units**

The major environmental issue due to operation of a stone crushing unit is fugitive dust emissions which is contributed by the following processes:

- **Primary crushing:** Primary crushers breaks large boulders into smaller sizes. Crushing process as well as unloading of stones generate a substantial amount of fugitive dust. Mechanism for water sprinkling is provided to reduce fugitive dust. Some primary crushing areas are partially or completely covered with a shed as a measure to further prevent the fugitive dust emissions to surroundings, however at some places partial coverings provided which do not appear to be sufficient to such emissions.
- **Secondary crushing:** Compared to primary crushing, fugitive dust emitted at secondary crushing is relatively higher. Generally, insufficient covered shed provided in the process results in fugitive emissions.
- **Screening:** Screening process is also a source of fugitive dust emissions. As the material is conveyed to screen from secondary crusher, screen vibrates and thus, separates the material of different sizes resulting into huge amount of fugitive dust emissions. Generally, units provide covered shed and water sprinklers to combat



dust emissions however, improper design and operation of sprinklers and improper covering is an issue.

- **Tertiary crushing:** Fugitive emissions are generated during grinding of stones into fine dust.
- **Conveyor Belt:** Conveyor belts are primary means of transferring raw materials and products from one end to the other. Movement of products on the conveyor belts is a potential source of fugitive dust emissions. To reduce dust emissions, water sprinkling arrangement is provided on each belt. Some units cover conveyor belts either with sheets or thick cloth to reduce dust emissions.
- **Product release and storage:** Fugitive emissions generated during transfer of material through telescopic chutes is lower than that generating during direct disposal of product on stockpile. Material, such as stone dust, stored in open areas is are also a potential source of fugitive dust emissions.
- Although no process waste water is generated from stone crushing units, however, water is used for sprinkling, conveyed to settling tanks of appropriate size which is recycled and reused in process.

## 5.0 Environmental Guidelines for Stone Crushing Units

The stone crushing units should adopt following environmental guidelines to prevent/suppress fugitive dust emissions from their operation:

Source of emission	Measures to be Taken
Unloading of raw material for storage	Water sprinkling with adequately designed nozzle which produce tiny droplets of water should be provided during raw materials unloading .
Unloading of raw material into hopper	<ul style="list-style-type: none"> <li>• Three sides and top should be covered and one side may be kept open for vehicular movement.</li> <li>• Water sprinklers should be provided on approach roads.</li> </ul>



<p>Primary Crushing/ Jaw Crusher</p>	<ul style="list-style-type: none"> <li>• Crusher should be completely enclosed by G/MS sheets on top and at least three sides completely from the ground level. One side should have provision of movable sheet/door for movement/maintenance.</li> <li>• Primary crushers/jaw crushers should be covered with tarpaulin/cotton cloth/suitable materials to contain fugitive dust emissions (<b>Figure-1</b>)</li> <li>• Water sprinkler system with adequately designed nozzle which produce tiny droplets of water should be provided at primary crusher/jaw crusher so that fugitive emissions are contained and amount of water sprayed should be optimized.</li> </ul>
<p>Secondary Crushing</p>	<ul style="list-style-type: none"> <li>• Crusher should be completely enclosed by G/MS sheets on top and at least three sides completely from the ground level. One side should have provision of movable sheet/door for movement/maintenance.</li> <li>• Dry extraction cum bag filter followed by cyclone to be provided for control of emissions.</li> </ul>
<p>Screening</p>	<ul style="list-style-type: none"> <li>• Crusher should be completely enclosed by G/MS sheets on top and at least three sides completely from the ground level. One side should have provision of movable sheet/door for movement/maintenance. Door to be kept closed during operation.</li> <li>• Flexible covers where conveyors pass through the screen house should be installed at entries and exits of conveyors to screen house.</li> <li>• Dust extraction system connected with bag filter to be provided.</li> <li>• Provision of water mist sprinkling systems with adequately designed nozzle which produce tiny droplets of water should be made at inlet/outlet of screens.</li> </ul>
<p>Tertiary Crushing</p>	<ul style="list-style-type: none"> <li>• Crusher should be completely enclosed by G/MS sheets on top and at least three sides completely from the ground level. One side should have provision of movable sheet/door for movement/maintenance. Dust extraction system connected with bag filter to be provided.</li> <li>• Provision of water mist sprinkling system should be made with adequately designed nozzle which produce tiny droplets of water.</li> </ul>



Conveyor Belts	Conveyor belts should be properly covered from node to node with a thick sheet of suitable material along with water sprinkling system with adequately designed nozzle which produce tiny droplets of water.
Discharge points	Flexible Telescopic chute from top of discharge point to the ground level should be provided ( <b>Figure-2 &amp; Figure-2(a)</b> ).
Product storage	<ul style="list-style-type: none"> <li>• Properly designed telescopic chute of adequate length of suitable material should be provided at ends of conveyor so that dust generated from this section is contained at source.</li> <li>• All open stockpiles for aggregates of size above 5 mm should be kept sufficiently wet by water spraying.</li> <li>• Stockpiles of aggregates of 5 mm size or less should be covered to ensure that same is not carried away (or whipped out) by wind.</li> </ul>

### 5.1 General Measures

- i. Wind breaking wall: GI/MS/brick wall should be provided along the periphery of crusher. Height of the wall should be 3-ft more than the highest node of the crusher.
- ii. Roads: Metaled/concrete roads should be provided within the premises. Ramps and the entire ground area inside the premises should also be metaled.
- iii. Housekeeping: To curb the air pollution in the crusher premises, arrangement of rotating water sprinkling system/fogger/Anti-smog gun should be provided. Water sprinklers should have adequately designed nozzle which produce tiny droplets of water, as such system is more effective in dust control with significant reduction in consumption of water. Fine dust accumulated and bag filters in the crushing area should be cleaned at regular intervals and the collected dust should be stored in sacks for further sale or disposal.
- iv. Plantation: 2-3 rows of tall trees should be planted around the periphery of crusher.
- v. Housing should be open for movement of mechanical drivers, conveyor belts, etc. should be sealed properly with flexible rubber flaps.



- vi. Name of the unit, contact details of the owner and address of the unit, plant capacity and date of issue of CTE/CTO from SPCBs/PCCs should be displayed on the display board at the entrance.
- vii. Transportation: Vehicles carrying any kind of material should be completely covered.
- viii. Regular wetting of roads should be done to suppress dust within the premises to control dust emission re-suspension.
- ix. Water consumption and handling: Unit should provide settling tanks of appropriate size and recycle & reuse of the water in process. Crusher should provide a water storage tank with adequate capacity. In case of use of groundwater, stone crushing unit should obtain permission to extract groundwater from the Central Ground Water Authority (CGWA)/Ground Water Department (GWD) of the State/UT. Unit should maintain proper log book of consumption of fresh water. Depending on availability, efforts may be made to use STP treated water instead groundwater to control emissions from process activities.

## 6.0 Regulatory/Monitoring Mechanism for Stone Crushing Unit

- i. Stone crushing unit should obtain Consent to Establish (CTE) and Consent to Operate (CTO) from the concerned SPCBs/PCCs.
- ii. Unit while applying for CTO/renewal of consent, should upload the duly filled checklist attached at **Annexure-1** along with digitally tagged photographs and videos of the crushing unit to ensure compliance of the conditions mentioned in the guidelines. SPCBs/PCCs should digitally verify the said conditions before issuance of CTE/CTO/renewal of consent.
- iii. CCTV/PTZ cameras should be installed at the entrance and all corners of the premises of the unit covering entire area with minimum of 30 days data storage.
- iii. Stone crushing unit shall comply with emission norms prescribed under the Environment (Protection) Rules, 1986 and conditions laid down in CTO by concerned SPCB/PCC.



- v. Online/manual ambient air monitoring systems to be installed in crusher zone as per CPCB/SPCB guidelines – in upwind and downwind directions.
- vi. Stone crushing unit should develop green belt as per the plan approved by concerned Department of the State/UT.
- vii. Local authorities should associate with stone crusher associations for the construction of metalled road in the entire crusher zone.
- viii. A District Level Committee should be constituted under chairmanship of District Magistrate/Deputy Commissioner so that surprise inspections for surveillance of stone crushing units located under their jurisdiction can be carried out on regular basis.
- ix. Health survey of workers should be carried out by the stone crusher on half-yearly basis.
- x. New Crushers should be allowed to operate only in dedicated crusher zones as per the siting policies of SPCBs/PCCs.
- xi. Stone crusher unit should be operated only during day time (i.e. 6.00 AM to 10.00 PM) to avoid inconvenience to the nearby residents due to ambient noise.



**Figure-1:** Covering of Primary/Jaw crusher



**Figure-2:** Chute from top of discharge point



**Figure-2(a):** Chute from top of discharge point

## Annexure-1

## Format/Checklist for SPCBs/PCCs before issuance of CTE &amp; CTO

S. No.	Fugitive Emission Source Locations	Checklist for compliance of conditions of Environmental guidelines	Yes/No
1.	Unloading area of raw material, primary crusher, Screener, conveyors belts and transfer points	Water sprinklers installed with adequate designed nozzles (Upload photo/videos).	
2.	Primary crushers, Secondary crushers, Screeners and tertiary crushers	Enclosures by GI/MS sheets on top and at least three sides completely from the ground level (Upload photo/videos).	
3.	Secondary, Tertiary crushers and Screener	Dry extraction cum bag filter followed by cyclone. (Upload photo).	
4.	Covering of Conveyor belts from node to node with a thick sheet of suitable material	Covering of Conveyor belts (Upload photo).	
4	At discharge points	Flexible Telescopic chute from top of discharge point to the ground level (Upload photo).	
5	GI/MS/brick wind breaking wall of 3-ft more than the highest node of the crusher along the periphery of crusher	Wind breaking wall (Upload photo)	
<b>General</b>			
6.	Wind breaking wall	GI/MS/brick wind breaking wall of 3-ft more than the highest node of the crusher along the periphery of crusher (Upload photo)	
7.	Roads	Metalled/concrete roads within the premises. Ramps and the entire ground area inside the premises should also be metalled	



8.	Suppression of dust within the premises	Arrangement of rotating water sprinkling system/fogger/Anti-smog gun in the premises to suppress dust within the premises to control dust emission re suspension	
9.	Green belt	Plantation of 2-3 rows of tall trees around the periphery of crusher	
9.	Display board	Display board at the entrance, having name of unit, contact details of owner and address of unit, plant capacity and date of issue of CTE/CTO from SPCB/PCC	
10	Covering of vehicles	Covering of vehicles carrying any kind of material .	
11	CCTV/PTZ camera	CCTV/PTZ cameras installed at the entrance and all corners of the premises of the unit covering entire area with minimum of 30 days data storage	
12	Photos/videos	Upload photographs/videos ensuring compliance of all conditions as mentioned in the guidelines while applying CTE/CTO/ Renewal	

\*\*\*\*