

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
STARRED QUESTION NO. 214
TO BE ANSWERED ON 18.12.2023

Dust Pollution by Cement Factories

214*. SHRI HASNAIN MASOODI:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) whether the Government is cognizant of high levels of dust pollution emitting from the cement factories in Khrew area of District Pulwama;
- (b) if so, whether any of the cement factories are functional without a written consent from Pollution Control Board and emitting pollution beyond the required capacity;
- (c) whether the Government has conducted an in-depth study enquiring into the dust emissions from the cement factories to identify the amount of toxic fumes emancipating in air in the country including Khrew, District Pulwama;
- (d) if so, the details thereof;
- (e) whether the Government has appointed a Committee of Experts to assess the dust emissions from cement industries and if so, the details thereof and if not, the reasons therefor; and
- (f) the details of action taken by the Government against the defaulters violating the Air (Prevention and Control of Pollution) Act, 1981?

ANSWER

MINISTER FOR ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI BHUPENDER YADAV)

(a) to (f) : A statement is laid on the table of the House.

STATEMENT REFERRED TO IN REPLY TO PARA (a) TO (f) OF THE LOK SABHA STARRED QUESTION NO. 214 DUE FOR REPLY ON 18.12.2023 REGARDING DUST POLLUTION BY CEMENT FACTORIES RAISED BY SHRI HASNAIN MASOODI, HON'BLE MEMBER OF PARLIAMENT

(a) to (d)

The Central Pollution Control Board (CPCB) has identified 17 categories of highly polluting industries which includes Cement industries. Accordingly, the Cement industries granted consent to operate by the respective State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs) under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981. The consent in these highly polluting industries is given with stringent conditions such as mandatory installation of Online Continuous Emission Monitoring Systems (OCEMS), which is connected to CPCB server for real time monitoring of emissions from these industries.

There are five cement units operational in Khrew area of District Pulwama, J&K and all these units are having valid consents from J&K Pollution Control Committee (JKPCC). A list of Cement units operational in Khrew as on 12.12.2023 is annexed as **Annexure I**:

An Expert Committee constituted by the J&K PCC has conducted an Assessment of carrying capacity of the Khrew Industrial area with respect to dust pollution from industrial activities and associated fugitive emissions. A copy of the report is given as **Annexure II**. Based on the study carried out, the Comprehensive Environmental Pollution Index (CEPI) score for Khrew area indicates that the areas are critically polluted due to dust pollution and fugitive emissions. Accordingly, a moratorium on establishment of air polluting units in the area was imposed in 2021 for a period of two years. J&KPCC monitors the ambient air quality in Khrew area and all the cement industries have installed Online Continuous Emission Monitoring Systems (OCEMS) to monitor the real time source emissions.

Further, the CPCB has published a report on "Assessment of Fugitive Emissions & Development of Environmental Guidelines for Control of Fugitive Emissions in Cement Manufacturing Industries". The published report is available on CPCB website (Link : <https://cpcb.nic.in/openpdffile.php?id=UmVwb3J0RmlsZXMvTmV3SXRlbV8xMzlfcGFja2FnZV9jZW1lbnRfZnVnaXRpdmVfZW1pc3Npb24ucGRm>).

(e) and (f)

A joint team of MoEF&CC and CPCB was constituted to visit the Khrew area of Pulwama district to assess the adequacy of the pollution control measures adopted by the cement units and to verify the compliance status of environmental norms. Based on joint team's report, CPCB has issued direction u/s 18(1) (b) of E(P) A 1986 to J&KPCC for taking actions as per the recommendations of the joint team. A copy of direction is annexed as **Annexure III**

In view of above, J&K PCC issued legal notices to the following seven units with deficiencies : 1. M/s Trumboo Cement Industries (TCI) Max, Zaintrang Khrew, Pulwama. 2. M/s Itfaq Cements, Zaintrang Khrew, Pulwama. 3. M/s Valley Cement Industries, Zaintrang Khrew, Pulwama. 4. M/s Cemtac Cements, Zaintrang Khrew, Pulwama. 5. M/s Dawar Cements Pvt. Ltd; Zaintrang Khrew, Pulwama. 6. M/s Greenland Cement Pvt. Ltd., Zaintrang Khrew, Pulwama. 7. M/s H.K. Cements Industries Zaintrang Khrew, Pulwama.

Annexure I**List of Cement units functional in Khrew as on 12.12.2023**

S. No.	Name of the Unit	Capacity	Consent Validity
1	Itifaq Cements Pvt Ltd. Saturnmarg,	200 TPD	March-2026
2	Cemtac Cements Private Ltd, Sulnar, Saturnmarg,	i.200 TPD ii. 300 TPD	i.May-2025 ii.Feb.2025
3	Trumboo industries Pvt. Ltd.	1000 TPD	June 2026
4	Green Land Cements, wuyan,	100 TPD	October 2024
5	Valley Cements Ltd.,	50 TPD	June2026



Government of Jammu and Kashmir
JK POLLUTION CONTROL BOARD,

May to October
Parivesh Bhawan, Transport Nagar, Narwal
Jammu - 180001 (0191-2472881, 2476927(F))

November to April
Behind Govt. Silk Factory, Raj Bagh
Srinagar-190004 (Tel/Fax : 0194-2313966)

The Member Secretary,
Central Pollution Control Board,
'Parivesh Bhawan', East Arjun Nagar,
Delhi.

No:- PCB/T/CC/Khrew/2020/96/628-32 Dt:- 29.10.2020.

Subject :- Fulfillment of Parliament Assurance – Carrying Capacity study report of Khrew -Khonmoh Area J&K SPCB – reg.

Ref :- i. CPCB letter B-33014/3/2020/IPC-II/28-A, 2020 Dt. 16.07.2020
ii. CPCB email dt. 17th September, 2020.
iii. Director (IA-II) Division, MoEF & CC letter dt. 19th August, 2020

Sir,

With reference to the above cited subject, kindly find enclosed herewith the study report of "Assessment of Carrying Capacity of Khrew Industrial Area", District Pulwama, J&K, prepared by the **Expert Committee** constituted by the J&K Pollution Control Board for undertaking and evaluating the carrying capacity of Khrew area. The report of Carrying Capacity for **Khonmoh Industrial Area**, which is a distinct area from Khrew is also under preparation and same shall be submitted by 20th of November, 2020.

Yours faithfully,

Encl : Copy of the Report (40 Leaves)

E.E.

(B.M.Sharma)
Member Secretary
PCB, J&K, Jammu

Copy with Carrying Capacity Study Report to :-

1. Shri A.K.Aggarwal, Director (IA-II Division), Ministry of Environment, Forest and Climate Change, Government of India, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi – 110003.
2. Shri Sundar Ramanathan, Scientist E, MoEF & CC, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi – 110003
3. Shri P.K.Gupta Divisional Head AQM, CPCB, Delhi. This is in reference to letter no. B-33014/87/NCAP/AQM/2020-21/3469 Dt. July, 28, 2020.
4. PA to Chairman for information of the Chairman, JK PCB, Jammu.

**ASSESSMENT OF CARRYING CAPACITY
OF
KHREW INDUSTRIAL AREA, (DISTRICT PULWAMA)
USING
COMPREHENSIVE ENVIRONMENTAL POLLUTION INDEX (CEPI)**



(September-2020)
Government of Jammu and Kashmir
JK Pollution Control Board
Jammu

**Assessment of Carrying Capacity
of Khrew Industrial Area
Conducted By**

Sh. Rafi Ahmad Bhat, Regional Director, Pollution Control Board, Kashmir.	Er. J.N.Sharma, Environmental Engineer (State Level), Pollution Control Board, Jammu/Kashmir.
--	--

Sh. Mohd. Sultan, Scientist-B (Air Lab)
Pollution Control Board, Kashmir.

Sh. Nisar Ahmad, Divisional Officer,
Pollution Control Board, Pulwama.

Sh. Shabir Ahmad, Scientist-A,
Pollution Control Board, Kashmir



**J&K POLLUTION CONTROL BOARD
JAMMU / KASHMIR**

**Suresh Chugh, IFS
PCCF / CHAIRMAN**

FOREWORD

Industrial Pollution in an eco-sensitive area is a challenge, which needs to be checked for further proliferation and degradation of the ecology of the area. The country as a whole is facing a challenge on this front and thus constant surveillance of environmental parameters is paramount task. The buzz word of “**Sustainable Development**” is only possible if we plan the economic development without damaging the environment and for that, it is imperative to assess the carrying capacity of the area. Carrying capacity gives us an idea of the extent to which the atmosphere is capable of sustaining the pollution load from various emission sources.

Keeping in view the sustainable development of the area, carrying capacity of the Khrew Industrial Area in District Pulwama, Kashmir has been carried out by the J&K PCB using the Comprehensive Environment Pollution Index (CEPI) a tool developed by Central Pollution Control Board for identifying the extent of pollution in the area so that early safeguards and remedial measures can be taken in the area, without affecting critically the ecology of the area and the human health.

As per the **CEPI Score, Khrew Industrial Area** is classified as **Critically Polluted Area**. The cause of pollution in the area is primarily due to the air pollution. In view of the findings of the study, J&K Pollution Control Board shall take further necessary steps to reduce the pollution levels in the area, so that no damage the ecology and human health takes place.

I appreciate the efforts of Shri J.N.Sharma, Environmental Engineer, JK PCB for compiling the report and evaluating the score using CEPI methodology. The team under Regional Director, PCB, Kashmir, Shri Rafi Ahmad Bhat comprising Mr. Mohammad Sultan, Scientist B, Shri Shabir Ahmad, Scientist A and District Officer, PCB, Pulwama, Mr. Nisar Ahmad, who have also made immense efforts for providing field data of the Khrew Industrial Area that has been used in the study.


(Suresh Chugh)



Er. J.N.Sharma, IIT (Bombay)
Environmental Engineer

P R E F A C E

The life of human beings and the natural resources are the gift of Almighty on this planet which needs to be protected. The degradation of environment in one part of the State or country affects the entire universe. The nature needs not to be protected only but reared in a way that it blooms and shower blessings to the mankind. Under the ambit of environment protection, the mandate of Pollution Control Board is to monitor and assess the environmental quality of the region for conservation of its natural resources and assets of the State.

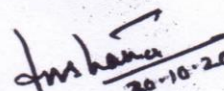
In a pursuit to protect the environment, J&K PCB has initiated a scientific study to ascertain the carrying capacity of one of the industrial area of Kashmir in District Pulwama, **Khrew Industrial Area**, so as to ascertain the pollution load carrying capacity of the area.

The assessment of the carrying capacity of the area has been done quantitatively and qualitatively using **Comprehensive Environmental Pollution Index (CEPI)**. The CEPI used is a rational number to characterize the quantity of the environment at a given location following the algorithm of **Source, Pathway and Receptor**. This methodology is subjectivity on human, flora and fauna due to pollution load in the area and is approved methodology developed by **CPCB and IIT Delhi** in 2010 and further revised in 2016.

As per assessment of empirical data of **air quality, water quality, health statistics** and other source of pollution as well as **vehicular load** using CEPI methodology and weightage parameter of sub index of Air, Water and Land Pollution including Health Statistics of the region the total CEPI score was evaluated and it is found that area is **Critically Polluted** for which an action to abate the pollution is required in a time bound manner.

I am grateful to the Chairman, J&K PCB, Member Secretary, J&K PCB under whose guidance the study has been done in a systematic manner.

I am also thankful to Regional Director, PCB, Kashmir Shri Rafi Ah. Bhat, Sh. Mohammad Sultan, Scientist B, Sh. Shabir Ahmad, Scientist A, District Officer, PCB, Pulwama, Shri Nissar Ahmad and staff of PCB, Pulwama for providing the field data required for the study.


(Er. J.N.Sharma)
20-10-20

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CHAPTER-1

1. INTRODUCTION:-

Carrying capacity is a crucial parameter to know the extent of pollution and load-carrying capacity of an area during various atmospheric and industrial conditions without progressively impairing the bio-producing and ecological integrity of the region. It can also be defined as the maximum amount of pollutant load an area can take without exceeding the specified standards. It varies significantly with respect to changing meteorological conditions, types of pollutions, and stack characteristics. Keeping this in view it was decided by the Board to carry-out the Carrying Capacity study of the Khrew Area which is an eco-fragile area and having air polluting industries falling in the **17 categories** of highly polluting industries viz. primarily **Cement Industries** besides **Stone Crushers** and **Extraction & Mining of lime Stones** etc. Since these activities are going on for the past many years and no such study has been ever done so far, so as to know the health of the area with regard to pollution. In this regard the Board vide order no. **123-SPCB of 2019 dt. 11.06.2019** has constituted **team of experts** for study of **carrying capacity** of the area which submitted the proposal and subsequently board vide letter no. SPCB/T/C/Ind./Cement/Pul/683 dt. **17.10.2019** asked the Regional Director Kashmir and team of experts constituted for the purpose to go ahead with the study which is necessarily required under the present circumstances.

The study is aimed at ascertaining the carrying capacity of the area with regard to pollution of **Air, Water** and **Land**, which is ultimately affecting the fauna & flora of the area and consequent to which the health of the inhabitants of the area is also affected. The study is also necessitated in view of different complaints regarding the Air pollution in the area from Industries and locals. A Public Interest Litigation (**PIL**) invoking the **Article 21** of Constitution was also filed by the **Inhabitants of Khrew Area** in a case titled **Inhabitants of Khrew area** versus State in the Hon'ble High Court seeking the closure of cement plants around the Dachigam National Park. As per the PIL, large amount of emissions from the limesto/One mines and cement plants are seriously endangering the ecology of the area.

1.1 Objective/Scope of the Study

The Objective of the Carrying Capacity study of the Khrew Area is to ascertain the pollution in the area so as to plan the future course of **Action Plan** and remedial measures required if any. Therefore the carrying capacity study is undertaken using well defined methodology based on CEPI developed by **CPCB Govt. of India in 2010** and **revised in 2016**. **The Hon'ble NGT in its order dated 19.08.2019 in OA no. 1038/2018** has also issued circular for implementation of said methodology by the all States for declaring areas as **Polluted, Critically** and **Severely polluted**. The scope of the study is worked out on the lines here as under:-

- Keeping in view the eco-fragile and eco-sensitive nature of the area, specifically the topographical and geo-physical features of the area, it has been observed that the area being cup shaped bounded by natural barrier (mountainous terrain on two sides **NE & SW**) has a limited carrying capacity to dilute and disperse the air emission emanating from the industrial units located in the area. The area is also eco-sensitive as being

contiguous to **Dachigam National Park**. It is felt imperative to have a detailed **Carrying Capacity** study of the area with respect to the existing **Industrial units / Stone**.

Crushers and ongoing **Mining** in the Area to evaluate and to anticipate the potential impacts on the ecology of the area (**Fauna, Flora**) including health of the people.

- To rank the Industrial Area based on CEPI version, 2016 developed by CPCB and IIT Delhi for ranking the area based on pollution potential.
- In order to develop the area on Sustainable development pattern lines,
- The study inturn will also facilitate the authorities to know the carrying capacity of the area so as to recommend further future plan of action based on scientific study of the area.

1.2 Concept and Methodology used for the study.

The concept of Comprehensive Environmental Pollution Index (CEPI) is used in the present study. CEPI is a rational number between 0 to 100 assigned to a given location to characterize the environmental quality following the algorithm of **Source, Pathway and Receptor**. The concept of CEPI was developed by IIT, Delhi and CPCB in 2010 and further revised in 2016.

In this study, the “**Revised Comprehensive Environmental Pollution Index**” version made by CPCB in 2016 has been used by the JKPCB on basis of various Environmental factors. **CPCB** has also used this system of ranking industrial pollution in the industrial area throughout the country since **2009, 2011, 2013** on basis of old **CEPI** assessment system and also issued directions under section 18(1)(b) of the **Water (Prevention and Control of Pollution) Act, 1981** to all the State Boards vide letter no. B-29012/29012/ESS(CPA)/2015-16 **dated 26.04.2016** for implementing the **CEPI** for ranking / declaring the polluted areas as per the score indicated below:-

Table 1.1 Status of Areas as per CEPI scoring

Sr. No.	CEPI SCORE	STATUS
1	Above 70	Critically Polluted Area
2	Between 60 And 70	Severly Polluted Area
3	Below 60	Other Area

1.3 Salient Features of Revised CEPI Criteria

In 2016, CEPI evaluation process was revised by CPCB and accordingly ‘**Revised criteria of CEPI** is based on the following principles:

- The Comprehensive Environmental Pollution Index (CEPI) is developed based on Sources of pollution, real time observed values of the pollutants in the ambient air, surface water and ground water, in & around the industrial cluster and health related statistics.
- For assessment of the environmental quality of the area i.e. CEPI score based on the concept of SNLF i.e. a **surrogate number which represents the level of exposure (a function of percentage sample exceedence & Exceedence Factor)** shall be used.
- Health component to be evaluated based on the health data available from major hospitals in the area.

Environmental Pollution Index (EPI) is a rational number to characterize the environmental quality of ambient Air/Surface Water /Ground Water of an Area.

Air EPI, Surface Water EPI and Ground Water EPI will be calculated separately on a scale of 0-100.

Overall CEPI will be evaluated using the existing formula, i.e., $CEPI = i\text{-max} + [(100 - i\text{-max}) \times (i_2/100) \times (i_3/100)]$

Where, i-max – maximum index (which may be either Air EPI or SW EPI or GW EPI); and i₂, and i₃ are indices for other media.

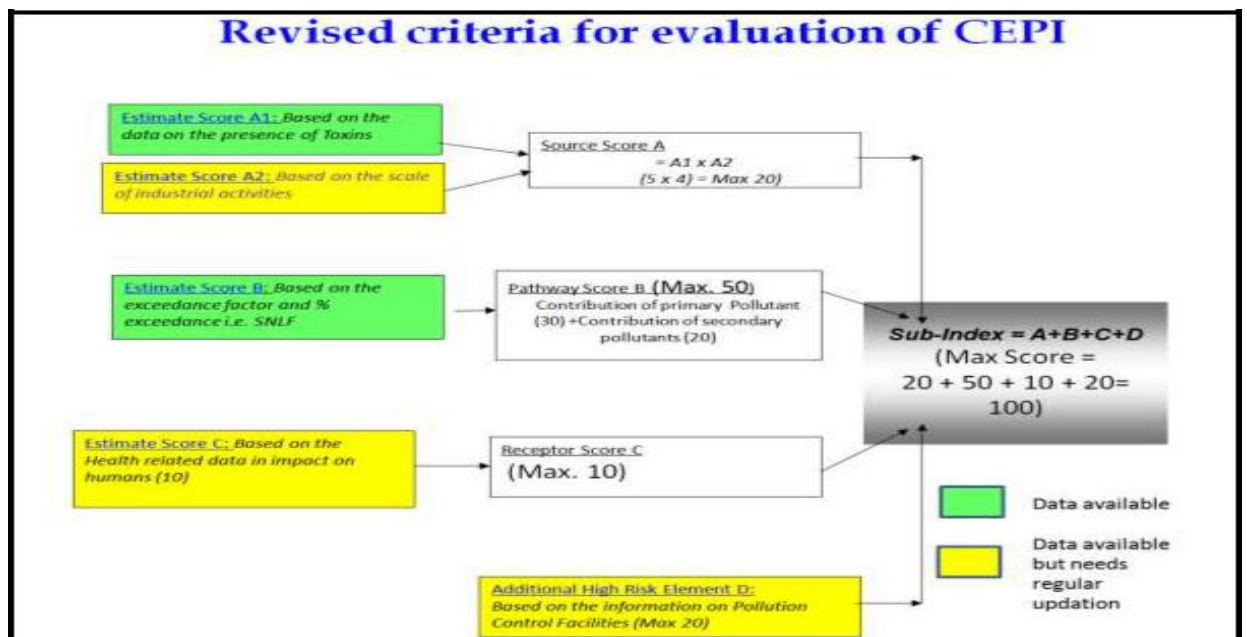
1.4 Revised CEPI Evaluation Methodology

1.4.1 A- Source

Factor #A1 - Presence of Toxin

i. Primary Pollutants

- **Group A** - Pollutants / chemicals that are not assessed as acute or systemic =1
- **Group B** - Organics / Pollutants / chemicals that are probable carcinogens (USEPA Class 2 and 3) or substances with some systemic toxicity. e.g. VOC's, PAHs, PCBs, air pollutants such as PM10 and PM2.5 = 2
- **Group C** - Known carcinogens or chemicals with significant systemic or organ system toxicity. e.g. vinyl chloride, benzene, lead, radionuclide, hexa-chromium, cadmium, organophosphate pesticides. = 3



1.4.2 Selection of criteria pollutants:-

- **Option 1:** 3 pollutants relevant with the Area depending on the nature of industrial activity (preferable option /method)
- **Option 2:** upto 3 most critical pollutants depending on the concentration and exceedance

ii. Secondary Pollutants

Contribution of remaining two secondary pollutants will be based on the nature of the toxins as mentioned below:-

Table 1.2 Contribution Value for each of the pollutant

Group of toxicity of each of the Secondary pollutants	Contribution Value for each of the pollutant
Group A	0.25
Group B	0.5
Group C	1
Max. Contribution of secondary pollutants=2.00	
Max. score of A1=3+2 = 5	

Factor #A2_ - Scale of industrial activities

- ✓ **Large** = 4 (if there are

10 R17 per 10 sq km area or fraction OR

2 R17 + 10 R54 per 10 sq km area or fraction OR

100 R54 per 10 sq km area or fraction

- ✓ **Moderate** = 2.5 (if there are

2 to 10 R17 per 10 sq km area or fraction OR

10-100 R54 per 10 sq km area or fraction

- ✓ **Limited** = 1 (else there is any industry within 10 sq km area or fraction)

SCORE A = A1 x A2 (max score = 5 x 4 = 20)

1.4.3 B: Pathway

Factor B- Level of exposure

A surrogate number which will represent Level of Exposure (SNLF) is calculated using % violation of ambient pollutant concentration, which is calculated as

SNLF = (No. of samples exceeded/ total no. of samples) x (Exceedance factor)

Table 1.3 : Category classification on SNLF basis

Range of SNLF	Category	Value
(For EF > 0.75)	Low	0
7.5 < 0.50	Moderate	15
0.5 to < 1.0	High	22.5
1.0 and above	Critical	30

Source : cpcb.nic.in

Max. Contribution of primary pollutant=30

- Contribution of remaining two secondary pollutants will be based on their category of exceedance as mentioned below:-

Table 1.4 : Category classification on SNLF basis

Range of SNLF	Category	Contribution Value for each of the secondary pollutants
(For EF > 0.75)	Low	2.5
7.5 < 0.50	Moderate	5.0
0.5 to < 1.0	High	7.5
1.0 and above	Critical	10.0

Source : cpcb.nic.in

Max. Contribution of Secondary pollutants = 20

Maximum value of B = 30 + 20 =50

1.4.4 C : Receptor

Component C	
(Impact on Human Health)	
10	
Main - 10	
% increase in cases*	Marks
<5%	0
5-10%	5
>10%	10

- % increase is evaluated based on the total no. of cases recorded during two consecutive years.
- For Air Environment, total no. of cases related to Asthma, Bronchitis, Cancer, Acute respiratory infections etc. are to be considered.
- For surface water / ground water Environment, cases related to Gastroenteritis, Diarrhea, Renal (kidney) malfunction, Cancer etc. are to be considered.
- For the above evaluation, the previous 5 years records of 3-5 major hospitals of the area shall be considered.

1.4.5 D: Additional High Risk Element Factor

- Additional High Risk Element (Inadequacy of pollution control measures for large scale, medium and small scale industries and also due to unorganized sector). It is cumulative of ETPs, CETPs, Air Pollution Control Devices (APCDs) and unorganized waste disposal. Max. Score = 20 If all the industries in the area have adequately designed/ operated and maintained pollution control facilities and also common facilities such as CETP/ FETP/ CHWDF are having adequate capacity and are having state of art technology = 0.
- If all the large industries in the area have adequately designed/ operated and maintained pollution control facilities but small and medium industries are defaulting. Common facilities such as CETP/FETP/CHWDF are having adequate in capacity or operation/ maintenance = 5.
- If all the industries in the area have adequately designed/ operated and maintained pollution control facilities but the common facilities such as CETP/FETP/CHWDF are having inadequate in capacity or operation/ maintenance = 10.
- If all the large industries in the area have adequately designed/ operated and maintained pollution control facilities but small and medium industries are defaulting. Common facilities such as CETP/FETP/CHWDF are having inadequate in capacity or operation/ maintenance = 15.
- Inadequate Facilities of individual as well as common facilities, full penalty = 20.

Table 1.5 : Score for Additional High Risk Element: Factor D

S No.	Large Scale Industries	Small/ Medium Scale Industries	Common Facilities for Pollution Control	Score
1	Adequate	Adequate	Adequate	0
2	Adequate	Inadequate	Adequate	5
3	Adequate	Adequate	Inadequate	10
4	Adequate	Inadequate	Inadequate	15
5	Inadequate	Inadequate	Inadequate	20

Inadequate Facilities: $\geq 10\%$ units deficient in terms of design/ operation and maintenance of pollution control in case of small and medium scale industries

OR

2% units deficiency in terms of design/ operation and maintenance of pollution control in case of Large scale industries or common facilities

The status report (last two years) shall be used for the purpose of deciding the score for adequacy.

1.5 Evaluation of Environmental Parameters

1.5.1 Evaluation of the Ambient Air Index / Surface Water Index / Ground Water Index

After calculating A, B, C and D; calculate the sub index score (Air / Surface Water / Ground Water) as:

Sub-Index Score = (A + B + C + D)

Sub index scores are to be calculated for each of the individual environmental components that is, **Air Environment, Surface Water Environment, and Soil & Ground Water Environment** separately.

Table 1.6 Weightage parameter of CEPI score

Component	Weightage
Scale of industrial activity	20
Scale of exceedance of Environmental Quality (Level of exposure)	50
Health related statistics	10
Compliance status of industries	20
	100

Calculation of the Aggregated CEPI

The aggregated CEPI Score can be calculated as.

$$\text{CEPI} = \text{im} + \{(100 - \text{im}) * (\text{i2}/100) * (\text{i3}/100)\}$$

Where,

im: maximum sub index; and

i2, and i3 are sub indices for other media

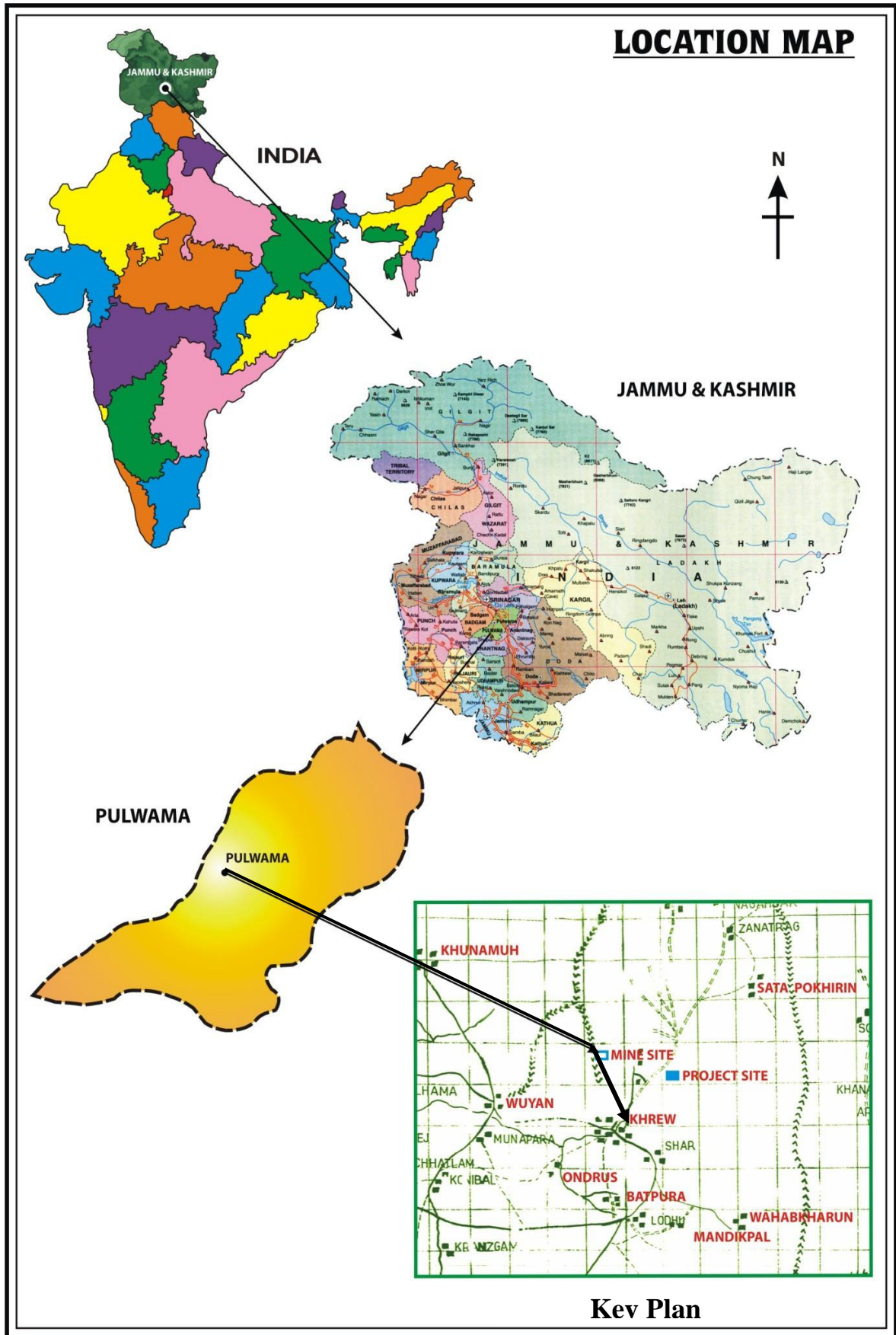
CHAPTER : 2.

Description of the Khrew Industrial Area

Table 2.1 Salient Features of the Khrew Industrial Area

S.No.	Particulars	Details	
1	Location		
	A. Town (NAC)	Khrew	
	B. Tehsil	Pampore	
	C. District	Pulwama	
	D. State	Jammu & Kashmir	
2	Latitude	34°01'12'' N	
3.	Longitude	74°59'24''E	
4.	Toposheet No.	43 N/4 (Restricted)	
5.	Elevation above sea level	1705 m to 2100 m above MSL	
6	Climatic Condition		
	A. Temperature	Max. 36.6 °C, Min. -5°C	
	B. Relative Humidity	Max. 92% , Min. 24%	
	C. Average Annual Rainfall	730 mm	
7	National Highway	National Highway No. 44A (Srinagar to Jammu) is about 14 km away from the site.	
8.	Ecological Sensitive Areas (Wild Life Sanctuaries)	National Park/ Sanctuary	Direction & approx. distance from KHREW
		Dachigam National Park	N, 7 - 8 km
		Sanctuary	NE, 15 km
		Overa Aru Wildlife Sanctuary	NE, 30 km
9.	Nearest Town / City	Srinagar (24 km)	
10	Soil Type	Sandy loam	

Fig 2.1 Location Map of the Area



2.2 General Description of the Khrew Industrial Area:-

- The Khrew is a Town and notified area committee located in Pampore Tehsil of district Pulwama in the Jammu and Kashmir Union territory *and is 14 km from the National Highway (NHIA-44)*. It is located at a distance of 24 km's from Srinagar city with geographical co-ordinates of 34°1'12" N, 74°59'24" E and at an average elevation of 1607 meters amsl. The area is famous for Jwala Ji Mandir, which is a prominent place of worship for Kashmiri Pandits. The area is eco-sensitive being adjacent to Dachigam National Park and forms a corridor between Dachigam and the Aru Wildlife Sanctuary area.
- The Khrew area is a heart shaped Valley with mountains surrounding on its three sides (Fig. 1) and holding an area and perimeter of about 40 km² and 26 km respectively. Pertinently, the famous Dachigam National Park is in close proximity to this area and lies on its northern fringeside. Moreover, the eminent glaciers of the Kashmir Valley such as Kolhai and Thajwasare positioned on north eastern side of the Khrew. Whilst, the south and western sides of area sprawls into Pampore and Khonmouh zones respectively.

2.3 Topography of the area

- The topography of the area is rugged mountainous terrain. The main drainage in the surrounding area is Bajnar nallah with a number of tributaries at its catchment area. The drainage course is seasonal. Cultivated fields are located towards foot hills where cultivation of paddy , maize is being carried out besides having field of saffron at the lower foot hills. The area is eco-sensitive due to its Geo-Physical, topographical, agricultural features and rich in bio-diversity and fauna and flora being adjacent to Dachigam National Park from Khanmoh side. Thae area is also declared in the past as a Wild Life Conservation reserve as per data available.

2.4 Resources in the Area

- The area has a vast quantity of high grade Lime Stone reserve and therefore declared as a LIME STONE RESERVE area (especially the Khrew_Sulnar- Shalteng area) by a Notification issued in Oct, 2002. Due to the availability of raw material (limestone), the area has attracted number of cement industrial units to setup cement plants in the area besides carrying out indiscriminate mining at several locations in the area for extraction of lime stone. Zaffron fields are also located the adjacent to the area.

2.5 Climatic Condition of the Area

- Temperature of the area varies considerably from month to month. The minimum air temperature drops below 0°C, at times, it can go down to -5 to -7°C. Ground frost is a common phenomenon during mid-winter. The rise in temperature is gradual when the air has high moisture content with the sky remaining overcast; the rise is however steep when the sky is clear and there is less moisture content in the air. The maximum air temperature goes up to 32°C during summers. In the study area, annual minimum and maximum temperature range (of extreme variation) is **-5 to 32°C**.

2.6 Habitation of the Area

- The population of municipality area of Khrew has been registered as 9851, of which 4965 are males and 4886 are females (Census, 2011). Some of the prominent villages nearby to the area comprises of Sathpokhrin, Batyan, Zentrag and Nagandar. One government administered Primary health center is also established in the area for providing basic health facilities to the residents.

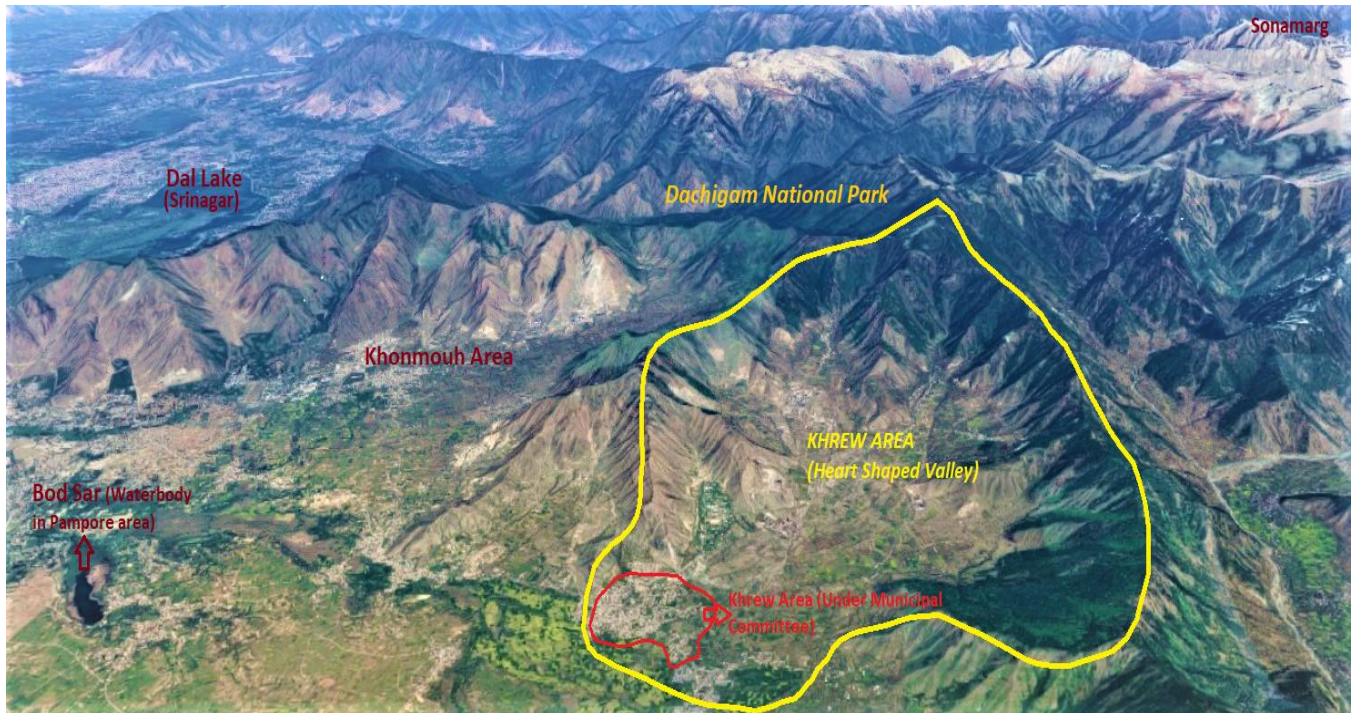


Fig.2. Aerial view of Khrew heart shaped Valley showing adjacent areas and various surrounding geographical features

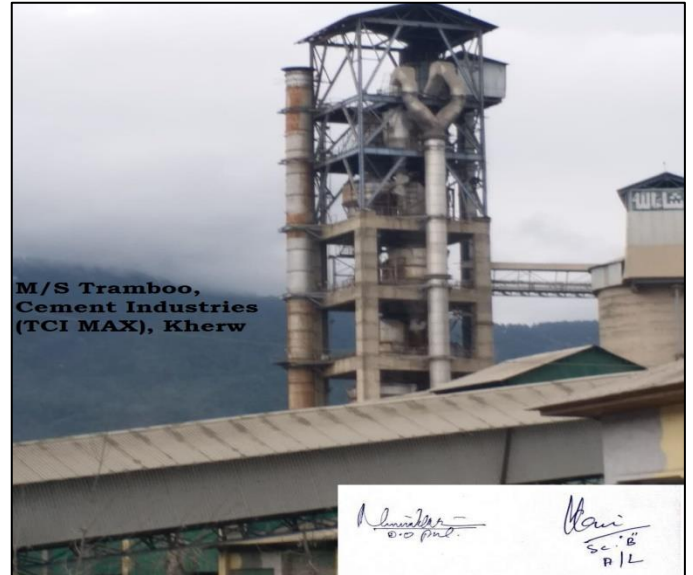
CHAPTER: 3

3.1 Field inspection of the Area and observation

- During the field visit, it has been observed that there are total nine (**12 nos**) of Cement units. In addition, there are seven (**07 no.**) of Mining sites of lime stones reserve in the area used for the captive consumption by the cement units located in the area.
- It has also been observed during the inspection that there is a mushroom growth of cluster of Stone crushers **30** in numbers located along the foothills from the area. Most of these Stone Crushers are in operation. The Stone Crushers are crushing the stones from the stones drawn from the Stone quarries along the foot hills in the area which is also a source of pollution .
- The List of details of Cement Plants, Stone Crushers in the area is shown here as under:-

Table 3.1 Status of Cement Plants in Khrew and Wuyan area (operational and under establishment)

S. No.	Name of Cement Plant	Capacity	PCD's/OCEMS	EC / Consent Status
1	M/s Trumboo Industries Pvt. Ltd.	1000 TPD	Bag houses in kiln, RPJS in each section, ESP preheater	EC issued by MOEF dt. 16.09.2009 and consent is valid upto April-2021
2	M/s H.K Cements Industries Pvt. Ltd.	300 TPD	Bag houses in kiln, RPJS in each section, ESP preheater	EC issued by MoEF dt. 26.09.2012 and consent is valid upto Oct.2020
3	M/s Cemtac cements Pvt. Ltd.	300 TPD	Wet scrubber in kilns, RPJS in each section	Unit is old one and Consent is valid upto Feb.2021
4	M/s Itifaq Cement Pvt. Ltd.	200 TPD	Wet scrubber in kilns, RPJS in each section	Unit is old one and Consent is valid upto March-2021
5	M/s Valley Cement Industries	50 TPD	Wet scrubber in kilns, RPJS in each section	Not required EC and Consent is valid upto July-2020
6	M/s J and K Cements	600 TPD (old) (600 TPD exp.)	RPJS in each section, ESP preheater and kiln	Yes, not operational since last 2 years
7	M/s Dawar Cements Pvt. Ltd.	200 TPD	Wet scrubber in kilns, RPJS in each section	
		(200 TPD)		
8	M/s Jhelum Cements (proposed)	600 TPD	-	EC granted Not established
9	M/s Green Land Cement, Wuyan	100 TPD		Not established
10	M/s Kashmir Cement Industries	1200 TPD	-	Public hearing conducted by PCB
11	South Kashmir Cement	75 TPD		Not established
12	M/s Mehboo Cement Industries Ltd.	600 TPD		ToR issued by MoEF and Not established



Pictures showing some of the Cement plants in the Area

Table 3.2 :- List of Stone crushers in Khrew area

S. No.	Name of the Unit
1	M/s Evergreen Stone Crusher
2	M/s Hitech Stone Crusher
3	M/s Gousia Stone Crusher
4	M/s Pride Foam Industry
5	M/s Vovan Sacks
6	New Lucky Stone Crusher
7	M/s Kashmir Stone Crusher
8	M/s Mashoor Stone Crusher
9	M/s Zabarwan Stone Crusher
10	M/s Zaffron Stone Crusher
11	M/s Nesheen Stone Crusher
12	M/s Shah Stone Crusher
13	M/s Modern Stone Crusher
14	M/s Ultra Stron Hollow Blocks
15	M/s Hollow Blocks
16	M/s Friends Stone Crusher
17	M/s Mir Stone Crusher
18	M/s Valley Stone Crusher
19	M/s Green Valley Stone Crusher
20	M/s Red Star Stone Crusher
21	M/s Skinder Road Construction (HMP)
22	M/s Kong Posh Stone Crusher
23	M/s M.N Stone Crusher
24	M/s Dar Stone Crusher
25	M/s Bhat Stone Crusher
26	M/s MRJ Stone Crusher
27	M/s Seven Star Stone Crusher
28	M/s Wani Stone Crusher
29	M/s Muntaqi Stone Crusher
30	M/s Sultania Stone Crusher

3.1.1 STATUS OF MINING ACTIVITY IN THE AREA

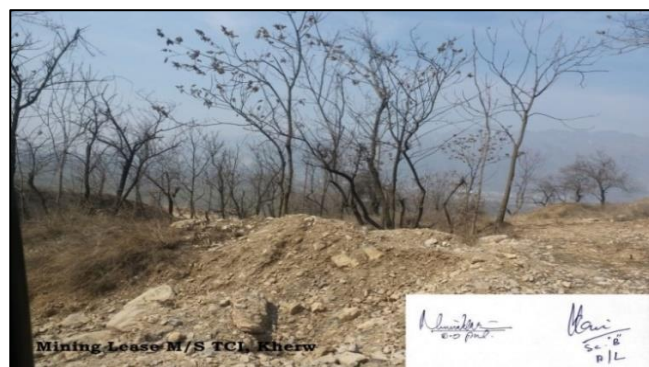
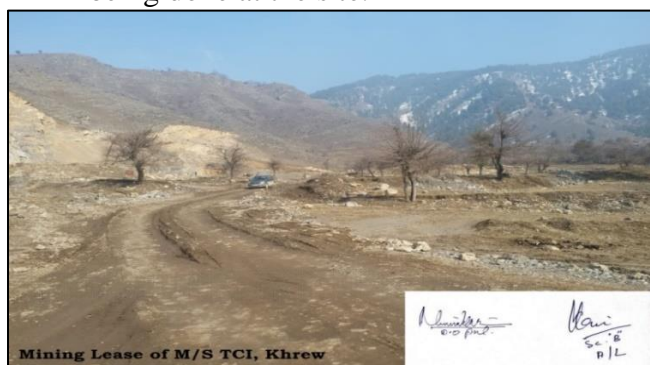
- Further it has been observed that indiscriminate Mining of the Lime Stone at various places for the captive use of the cement units and for the Stone Crusher activity is going on in the Khrew area. The mined limestone contains substantial quantity of fine particulates. Beyond that, additional fine matter gets generated due to the breaking of stones and by impact during free fall of lime stones. Due to this, during unloading operations significant quantity of fugitive emissions gets generated. The dust gets airborne and spreads in the vicinity in the form of a cloud. Therefore, Green belts around periphery of the units should be more strengthened.

- It has been observed that opencast mining is being carried out presently and is not being done in a Scientific manner (in benches with moderate slopes) following Mining norms for extraction of Mines & Minerals. The generation of dust is from various mining activities i.e. drilling, blasting, loading and crushing operations. Dust arising from unpaved and unmettled roads is also effecting the surrounding environment.

Table 3.3 Operational Lime stone mines in Khrew Area

Sr. No.	Description of Mines	Area	Status of consent and EC
1	M/s Cemtac Cements Khrew in favour of M/s Riyaz Ahmad Panjra	29.414 hac.	Consent is valid upto Feb. 2023 and EC issued by MoEF dt. 19.5-2016
2	M/s J and K Cements Ltd.	88.10 hac	J&K Govt. under taking unit
	M/s Trumboo Industries-1 in favour of Mohd. Shafi Trambo	4.92 hac.	April-2019 and EC not required
4	M/s Trumboo Industries-2 in favour of Mustaq Ahmad Trambo	44 Hac.	March-2021 and EC issued by MoEF dt. 16.09.2009
5	M/s Trumboo Industries-3 in favour of Umar Shafi Trambo	48 Hac.	March-2021 and EC issued by MoEF dt. 09.12.2009
6	M/s Itifaq Cements in favour of Sh. Waqar Asif, Dalkhan Banjar, Khrew	4.98 hac.	CTE(F) is valid upto Jan.2020
7	M/s H.K. Cements Khrew, in favour of:- i. Sh. Haji Gh. Hassan Mir. Sultan Mir ii. Sh. Mohd. Sultan Mir	4.460 Hac. 4.420 Hac.	Principle Approval granted by the Board

- Moreover, reclamation / eco-restoration of the mined area is not being done as envisaged and approved in the Environmental Management Plan(EMP) by Indian Bureau of Mines, and Department of Geology and Mining, J&K Govt. (Some of the photographs taken on spot are enclosed with the report showing unscientific way of extraction of Lime stone being done at the site.





**M/S HK Cement,
Kherw**

Nimish
01.01.2017

Kavi
Sc: B
A/L



Mining Lease M/S TCL, Kherw

Nimish
01.01.2017

Kavi
Sc: B
A/L

- The Committee also visited the **PCB AIRMONITORING STATION** at different location of Khrew, and it has been observed that the values of PM10 & PM2.5 levels of the ambient air concentration is exceeding the permissible limits.
- On line monitoring system installed by the industry is also inspected.

3.2 Status of PCD's and OCEMS Online Emission Monitoring System in the industrial units

It is observed by the field team that Pollution Control Devices (PCD's) by the individual Cement units have been installed. The efficiency of the PCDs cannot be attributed to 100% due to the lack of proper operation and maintenance and depreciation value of the PCDs. The failure of electricity is also a factor. However, online monitoring system (OCEMS) for recording real time data of pollutants is also installed by **six** Cement units, among which the **OCEMS** of two units (Dawar cements and Cemtac cements) are facing some technical fault. One industry (JK cements) is not operational from last two years, while the remaining **three** units (TCI Max cements, HK cements and Itifaq cements) are furnishing the on-line data which is observed and taken, as a secondary data (Sox) for the study.



Fig. 3. Rough sketch of the Khrew area depicting industrial units (the corresponding units shown by numbers is enclosed in Annexure-H)

3.3 Dust Pollution in the Area

During the visit it has been observed that there is a lot of dust pollution in the area due to the movement of vehicles carrying industrial raw material and finished products which is a source of ground level pollution. The road condition are also not so good in the area, which is also adding to the problem of Air pollution.

CHAPTER-4

DATA OF ENVIRONMENTAL PARAMETERS

In order to assess the environmental conditions of the study area, the Ambient Air Quality and Ground Water quality data has been monitored and is shown here as under:-

4.1 Air Environment

The JKPCB Air Lab is collecting two samples consistently in a week as per the CPCB guidelines from permanent Air Quality monitoring Station set by the PCB in the area. The Gravimetric method is used to determine the particulate matter concentration. The datasets procured since 2013 up to 2020 (seven years) for PM10 revealed that annual average always remained much higher than permissible limits of $60 \mu\text{g}/\text{m}^3$ for industrial area.

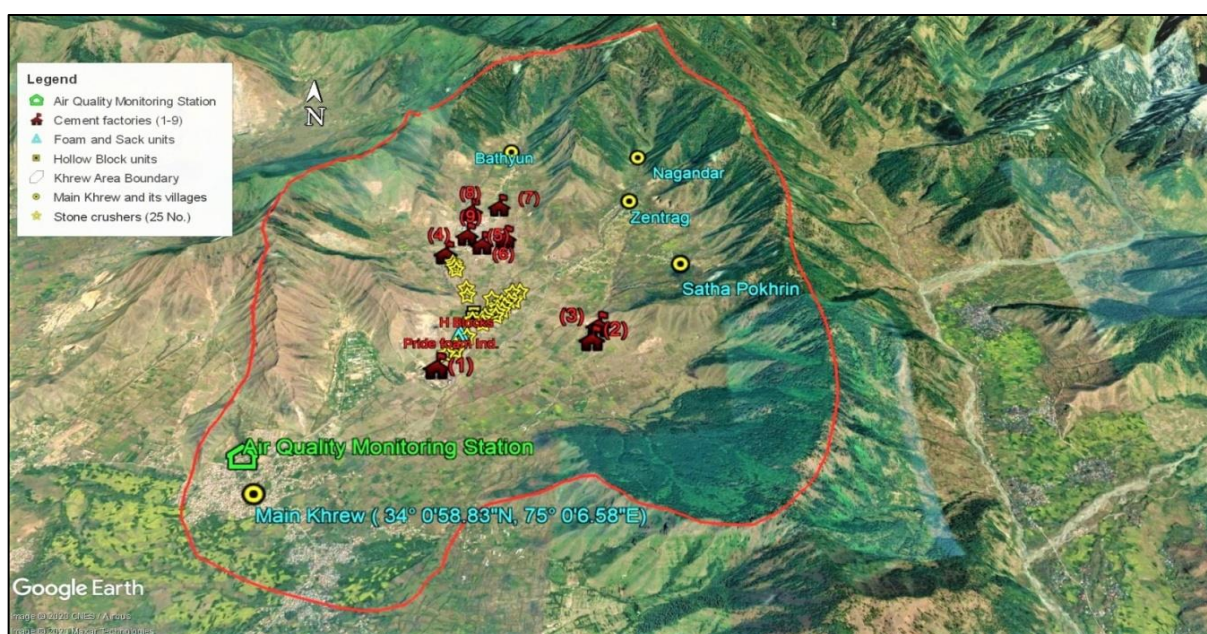


Fig.3. Map showing main Khrew Area and its prominent villages, Air Quality Monitoring Station and various industrial units.

4.1.1 Ambient Air Quality Data

The Air quality data monitored by Air Lab of JKPCB of Khrew area for (PM10 and PM2.5) in the permanent stations and at three different locations is also shown here.

The both the values of PM10 & PM2.5 are much higher than the permissible limit

Table-4.1 Ambient Air quality Data of Particulate matter (PM10) (Khrew Area)

Month	Khrew	Khrew	Khrew	Khrew	Khrew	Khrew	Khrew
	PM10 2013-14	PM10 2014-15	PM10 2015-16	PM10 2016-17	PM10 2017-18	PM10 2018-19	PM10 2019-20
April	113.77	91.29	67.00	97.84	160.76	101.92	96.05
May	103.27	91.93	78.66	110.35	130.18	115.25	95.22

June	109.71	108.02	98.39	111.67	119.59	104.68	179.38
July	101.05	98.05	121.47	56.93	120.48	68.56	126.94
August	84.93	94.17	54.07	34.83	170.88	88.23	-
September	100.30	N.A due to flood.	84.79	48.96	141.14	81.73	62.78
October	129.34	-do-	114.33	93.77	204.55	112.53	82.55
November	129.87	-do-	118	136.95	190.25	144.40	93.23
December	157.78	-do-	145.33	160.82	136.34	162.53	216.62
January	95.35	-do-	127.60	125.40	113.88	136.05	153.36
February	81.96	85.10	116.39	109.44	158.21	117.12	103.56
March	111.14	56.99	87.9	90.87	98.68	76.50	104.68
Yearly Average	109.87	89.36	101.16	98.15	145.41	109.12	119.48

Table-4.2 Ambient Air Quality Data (PM10 and PM2.5) of Khrew Area

S.NO	Name of Site	Date of Monitoring	Parameter Analysed	Result
1.	North Top institute Sheikh Mohalla Khrew	9-1-2020	PM10	170.11
		10-1-2020		163.77
		11-1-2020		173.24
		Average		169.04
2.	Near Hospital Khrew.	9-1-2020	PM2.5	120.00
		10-1-2020		108.55
		11-1-2020		117.36
		Average		115.30
3.	Permanent Ambient Air Quality Monitoring Station Khrew.	9-1-2020	PM10	128.58
		10-1-2020		158.09
		11-1-2020		167.82
		Average		151.49

Note:

- All values are in $\mu\text{g}/\text{m}^3$.
- The permissible limit of PM10 for 24 hours= $100 \mu\text{g}/\text{m}^3$ and for the year = $60\mu\text{g}/\text{m}^3$.
- The permissible limit of PM2.5 for 24 hours= $60 \mu\text{g}/\text{m}^3$ and for the year = $40\mu\text{g}/\text{m}^3$.

4.2 Water Environment**4.2.1 Water Quality Data:**

A survey of Khrew area was undertaken on **03/12/2019** to collect the water samples from different spots. During the survey eight different locations were identified wherefrom water samples were collected. The description of these sampling locations is as under:

4.2.1.1 Surface Water Quality Data

- a) **Spring near main market:** This site is close to main market near sumo taxi stand and is in close proximity of human habitation and commercial establishments. Many springs ooze out at this site. This site has been embanked by the authorities so as to prevent contamination of water.

4.3 Land Environment

The status of land environment is primarily assessed by Ground water monitoring of different tube Wells in the area.

4.3.1 Ground Water Data

- a) **Tube well station Khrew (Water supply Scheme):** This site is the water supply scheme for Khrew Area.
- b) **Itifaq Cements and constructions:** Bore well of this industrial unit is located outside the premises and ground water is being pumped into the premises by means of suction pumps.
- c) **Bore well of Valley Cement industries.**
- d) **Bore well of M/S Dawar cement**
- e) **Bore well of HK Cement Industries**
- f) **Bore well of M/S Trumboo Industries Pvt. Ltd.**
- g) **Bore well of Cemtac cement Pvt. Ltd.**

The area under study is devoid of any water body and no other sampling spot except the aforementioned sampling spots were located to collect water samples, so sample collection remain restrained only to the above eight locations. Other than site 1(Spring near main market), the source of all water samples is ground water, which is drawn out from ground by using suction pumps. This ground water is used either during the process of manufacturing of cement or for human consumption. The samples collected from all the locations were analysed for various Physio Chemical Parameters and test report are show here under:-

Table 4.3 Data of Physico-chemical Characteristics of Ground water samples collected from Khrew Pulwama.

S.No	Parameter	Spring near main Market	Bore well PHE	Bore well Itifaq cement	Bore well Valley cement	Bore well Dawar cement	Bore well HK cement	Bore well Trumboo cement	Bore well Cemtac cement	Indian Standards for Drinking water ISI0500 (2012)		Tolerance limit for Class A (CPCB)
										Desirable limit	Maximum limit	
1	Approx. Depth of Bore Well (in feet)		120.0	275.0	650.0	400.0	650.0	600.0	450.0			
2	Air Temp. °C	5.0	6.7	6.3	5.0	6.7	6.0	5.1	8.3			
3	Water Temp. °C	14.1	14.2	12.0	14.1	14.2	13.0	13.9	11.5			
4	pH	7.10	7.26	7.35	7.41	7.32	7.92	7.42	7.45	6.5- 8.5	No Relaxation	6.5-8.5
5	Conductivity µs/cm	315.0	298.0	279.0	293.0	298.0	249.0	284.0	262.0	-	-	
6	T.D.S	226.0	216.0	203.0	213.0	198.0	181.0	207.0	191.0	500	2000	500
7	D.O	6.3	6.0	7.4	7.6	7.0	5.0	7.6	5.5	-	-	6mg/l or more
8	C.O.D	8.30	4.9	BDL	BDL	3.20	4.90	3.20	3.20	-		
9	B.O.D	0.20	0.2	BDL	BDL	0.5	0.5	0.10	0.30	-	-	2mg/l or less
10	Phosphate	0.051	0.054	0.043	0.103	0.058	0.076	0.030	0.047	-	-	-
11	Ammonical Nitrogen	0.553	0.563	0.589	0.506	0.558	0.626	0.475	0.516	0.5	No Relaxation	-
12	Sulphate	17.87	13.180	13.18	11.51	10.150	9.54	30.15	14.08	200	400	400
13	Hardness	204.0	220.00	202.0	194.0	160.0	192.0	188.0	120.0	200	600	300
14	Calcium	68.13	60.1	65.73	66.53	62.52	48.09	64.12	41.68	75	200	200
15	Magnesium	8.26	17.01	9.23	6.8	5.83	17.49	6.8	3.88	30	100	100
16	Total Alkalinity	130.0	130.0	133.0	157.0	145.0	112.0	123.0	137.0	200	600	
17	Chloride	23.0	18.0	18.0	18.0	15.0	13.0	15.0	14.0	250	1000	250
18	Sodium	7.0	5.0	4.0	5.0	5.0	6.0	3.0	2.0	-	-	
19	Potassium	1.0	1.0	BDL	1.0	1.0	1.0	BDL	BDL	-	-	
20	Turbidity NTU	5.0	1.0	1.0	1.0	1.0	3.0	1.0	1.0	1	5	-

Date of Sampling: 12/3/2019

4.3.2 Analysis of Samples collected for surface / Ground Water Quality

The Primary water quality criteria of these ground water samples must conform to Class A status as per designated best use criteria, which is Drinking water source without conventional treatment but after disinfection. The brief account of results is as below:-

- **pH:** pH is the negative logarithm of hydrogen ion concentration. It determines the acidic or basic nature of solvents. Value of pH of all the samples analysed ranged from 7.10 to 7.92, thus showing slightly alkaline nature of water and meeting the Indian Standards for Drinking water ISIO500(2012).
- **Total dissolved Solids: TDS** of all the samples analysed were found to have value of less than 500 mg/L. Its range in the collected samples was observed from 181 to 226 mg/L thus indicating its freshness and good portability.
- **Biochemical Oxygen Demand: BOD** is an important parameter in determining the water quality and is an indicator of organic pollution. The value of this parameter in all the samples was found to be less than 1 mg/L of oxygen or zero thus indicating that there is no organic pollution
- **Ammonical Nitrogen:** Concentration of Ammonical Nitrogen in the samples analysed ranged from 0.475 to 0.626 mg/L and was slightly more than the desirable category of Indian Standards for Drinking water ISIO500(2012) except at Trumboo Cement site.
- **Hardness: Hardness** of water is caused by presence of carbonates and bicarbonates of calcium and magnesium. As per Indian Standards for Drinking water ISIO500(2012), 200 and 600 mg/L is the desirable and maximum limit respectively for drinking water purpose. The analysis results of the samples collected, reveal that the values of hardness fall in this range and thus indicating their good portability so far as this parameter is concerned.
- **Chloride:** The value of this parameter in the samples analysed range from 13 to 23 mg/L
- Similarly the value of turbidity and metallic parameters viz., sodium and potassium analysed in the lab were found within satisfactory range.

Conclusion: Analysis of the samples revealed that the ground water at Khrew, at the depth mentioned in the analysis report of each site is, potable (so far as physio-chemical characteristics are concerned) and meets the Standards for Drinking water ISIO500(2012) and also retains class A primary water quality criteria i.e., Drinking water source without conventional treatment but after disinfection

CHAPTER-5

Health Statistics

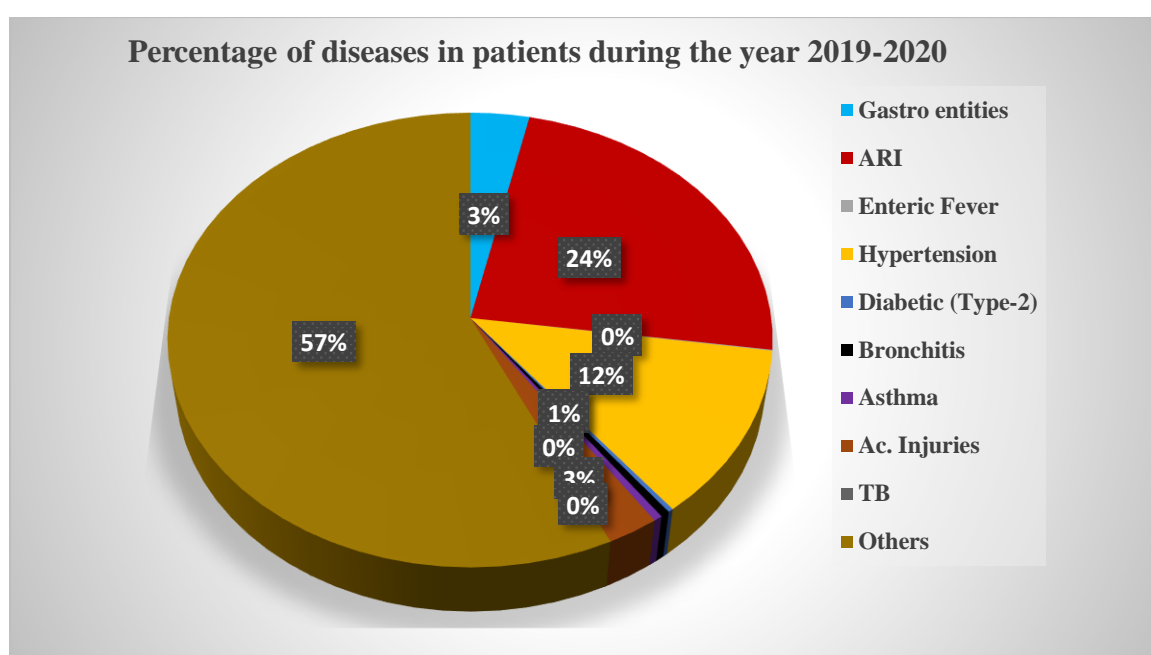
5.1 Health Statistics

The data furnished by the medical officer PHC, Khrew for the past three years vis-à-vis the total number of patients attended and the diseases observed for the year 2019-20 is shown here as under:-

Table 5.1 Data of Health related diseases in the nearby areas

S. No	Disease	Number of Cases
1	Gastro enteritis	1380
2	ARI	9544
3	Enteric Fever	27
4	Hypertension	4840
5	Diabetic (Type-2)	103
6	Bronchitis	184
7	Asthma	172
8	Ac. Injuries	1015
9	TB	2
10	Others	22861
Total		40128

Moreover, percentages of the above health issues found in patients is estimated below in the form a pie chart:

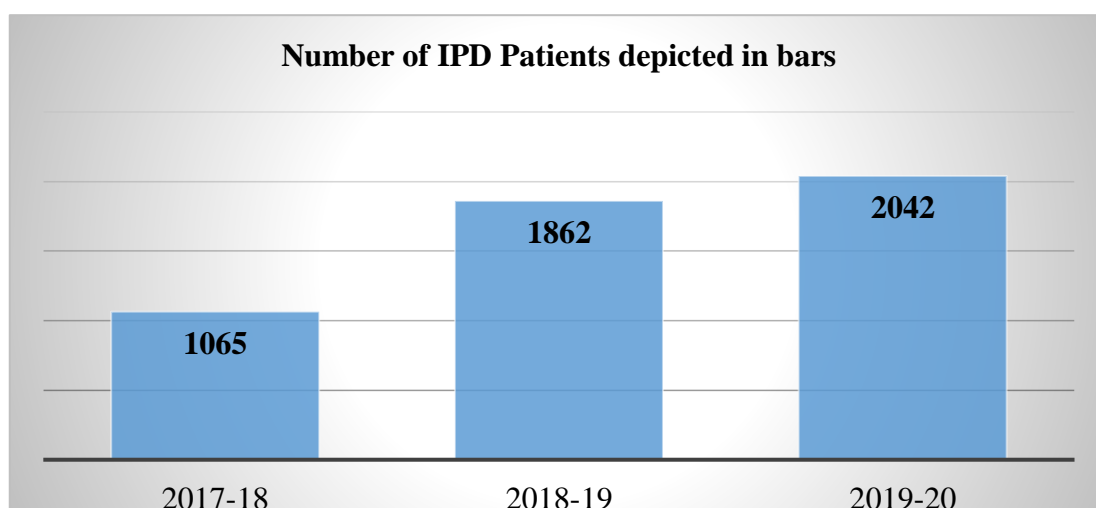
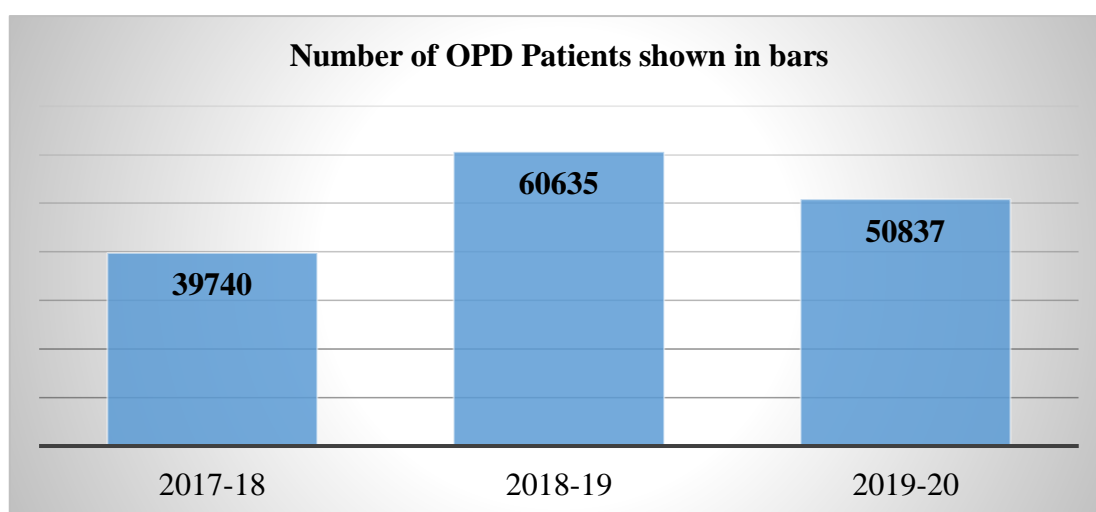


5.2 Data of health related for the last three years

PHC Khrew has also submitted data of the post three years (2017-2020) regarding diagnostic illness of patients with respect to OPD and IPD services which is shown shown below in tabulated as well as graphical forms:-

Table 5.2 Incremental increase in Health related diseases (in%)

Nature of services provided	2017-18	2018-19	2019-20 (July)
OPD	39740	60635	50837
% increase		52.57	
IPD	1065	1862	2042
% increase		74.83	



CHAPTER-6

Vehicular Pollution

6.1 Vehicular load and Pollution in the Area

Air pollution from the vehicles in the area has emerged as one of the major problems. Generally, Air constitute **80 % of man's daily intake of material** by weight. We breathe **22,000** times a day on the average, in-haling **10kg** of air / each day, which is nearly **12-15 times** higher than the food we take. This is why the small concentration of pollutant in the area become more significant.

Emission generated by vehicles in Khrew area is also of great concern. Since these are ground level sources and thus have the maximum impact on the general population of the area. Vehicle pollution contributes significantly to the total air pollution load in the area. The emission such as **CO₂ (98.4%), CO (70-80%), NO_x (40-60%), CH₄, SO₂, PM & HC** are released from the heavy transport plying on the road inside the area. As per the data available, there are about **1000-1200 loaded trucks** that are plying on the roads to carry the final cement products. These vehicles are travelling with a schedule of two days a week in three seasons viz., spring, summer and autumn. Although, in winter season there is schedule of one day per week.

In order to carry the raw material from mining areas to factories, there are about 250 tippers moving continuously on the roads.

CHAPTER - 7

CARRYING CAPACITY ASSESSMENT BASED ON CEPI SCORE

7.1 CEPI calculation of Khrew Industrial Area.

7.2 AIR ENVIRONMENT

7.2.1 CEPI score of Air sub index (Source)

- **Score-A**

For Ambient air quality analysis in Khrew Industrial Area, **Primary Pollutants and Secondary Pollutants** are considered viz **PM₁₀, PM_{2.5} and SO₂**. **PM₁₀** is exceeding the Ambient Air standard of **PM₁₀ (60µg/m³)** for the yearly average) prescribed by CPCB in all samples Air samples analyzed at the *Ambient Air Quality Monitoring* locations. In similar fashion **PM_{2.5}** is also exceeding the standard of **PM_{2.5} (40µg/m³)** prescribed by CPCB in all **10** samples out of **10** ambient air samples.

The **PM₁₀** categorized as Group B pollutant i.e., Probable carcinogen and thus scored **2** points in industrial activity calculation and **PM_{2.5}** being Secondary critical pollutant and categorized as Group B pollutant thus scored **0.5**.

Since, there are more than ten **R17 category** industries in Khrew Area per **10 KM²** area. Scale of Industrial activity score is **4**. Total score A worked out is **14**

- **Score-B (Pathway-level of exposure)**

This score is calculated on the basis of **Surrogate Number Level Factor (SNLF)** which is a function of **Exceedance Factor (EF)** and ratio of no. of Samples exceeding the standard to total no. of samples analyzed. It is calculated as described in methodology giving **B** score as **40** with **PM₁₀** scored **30** as primary critical pollutants and **PM_{2.5}** scored **10** as secondary critical pollutant **SNLF is > 1** and **SO₂** being secondary critical pollutant with **SNLF** is below **0.9** and is low hence score **2**.

- **Score-C (Receptor)**

It corresponds to the health data received from Primary Health Centre (PHC) situated in Khrew Area for the past consecutive three years. For Air **EPI** calculation, annual percent increment in the patients suffering from air Borne diseases like Asthma and Bronchitis, Gastroenteritis, T.B. received from PHC is also considered. The annual no. of patients is **40128**. Percentage increase of

OPD patients is **52.57 %** and percentage increase of IPD patients is **74 %**. Hence the **Receptor** score is given as **10**.

• **Score-D (Additional High Risk Elements)**

For Khrew Industrial Area, waste management facilities are not complying as per MSW Rules,2016. Road conditions in the area is very bad creating adverse conditions for dust pollution in the area. The assessment of score is based on assessment of inadequate Common Facility for Pollution, Air Pollution Control Devices and unorganized waste disposal. **A I I factor** is consider for scoring and hence score is **15** .

Table 7.1 Estimation of Air Index score A (Source)

Pollutants	Group	A1	A2	
PM ₁₀	B	2	large	A (A1xA2)
PM _{2.5}	B	0.5		
SO ₂	C	1		
		3.5	4	14

Table 7.2 Estimation of score Air Index B, C & D (Pathway and Receptor)

Pollutants	Avg (1) µg/m ³	Std (2)	Exceeders factor EF [(3)	No of samples Exceeding	Total no. of samples	SNLF Value [(6)]	SNLF Score (B)	
PM10 (Avg. of 5 yrs)	110.32	60	1.83	96	96	1.83	C	30
	160.26		2.67					
PM2.5	115.3	60	1.92	10	10	2.88	C	10
SO2	33.13	50	0.66	20	20	0.66	L	0
B Score = (B1+B2+B3)							B	40
C			> 10%					10
D			A-I-I					15
AIR EPI			(A+B+C+D)	14	40	10	15	79

7.3 Water Environment

7.3.1 CEPI score of Water sub index

Out of total 20 parameters tested for spring water samples collected from the main market, three most **critical parameters** are selected for the study (this is taken as water being used by the public).

- **For A score:** three parameters *viz* Hardness, TDS & Chlorides are taken and score worked out is **07 (Source)**
- **For B score:** calculation, SNLF calculated is 0 as none of the parameters exceeds in any sample collected (**Pathway-level of exposure**). Hence no exposure, score is **0**.
- **For C score:** Impact on the health of the people in the area is considered and score is **10** since the increase in health related diseases due to water is much more than **10 % (Receptor)**
- **For D score:** The criteria taken is **AII** as already explained and score is **15**. (**Additional High Risk element**)

Table 7.3 Estimation of Water Index score A (Source)

Pollutants	Group	A1	A2	A
Hardness	A	1	large	
TDS	A	1		A (A1xA2)
Chlorides	B	0.25		
		2.25	4	9

Table 7.4 Estimation of Water Index score B, C & D (Pathway and Receptor)

Pollutants	Avg (1)	Std-2	EF B[(3)= 1/2]	No of samples Exceeding -4	Total no. of samples -5	SNLF Value [(6) = 4/5x3]	SNLF Score	
TDS	226	2000	0.113	0	0	0	L	0
Hardness	204	600	0.34	0	0	0	L	0
Chlorides	23.0	1000	0.023	0	0	0	L	0
B value = (B1+B2+B3)								0
C		> 10%						10
D	0	A II						15
WATER EPI		(A+B+C+D)						34

7.4 Land Environment

7.4.1 CEPI score of Land sub index

Out of total **20** parameters tested for **groundwater** sample collected from **07** bore wells locations in the Industry Area, three most **critical parameters** are selected for evaluation of score *viz.* **Hardness, TDS and Chlorides**.

- **For A score:** score of three parameters *viz* **Hardness, TDS & Chlorides** are taken and score work out is **07 (Source)**.
- **For B score:** calculation, SNLF value calculated is **0** as none of the parameters exceeds in any sample collected (**Pathway-level of exposure**)
- **For C score:** Impact on the health of the people in the area is considered and score is **10** since the increase in health related diseases is much more than **10 % (Receptor)**
- **For D score:** the criteria taken is **AII** and score is **15 (Additional High Risk Element)**.

Table 7.5 Estimation of Land Index score A (Source)

Pollutants	Group	A1	A2	A
Hardness	A	1	large	
TDS	A	1		A (A1xA2)
Chlorides	B	0.25		
		2.25	4	9

Table 7.6 Estimation of Land Index score B,C & D (Pathway and Receptor)

Pollutants	Avg (1)	Std-2	EF B[(3)= 1/2]	No of samples Exceeding	Total no. of samples	SNLF Value [(6) =]	SNLF Score		
TDS	216	2000	0.108	0	0	0	L	0	
Hardness	220	600	0.36	0	0	0	L	0	
Chlorides	23	1000	0.02	0	0	0	L	0	
B value = (B1+B2+B3)	0								
C		> 10%							10
D	0	A I I							15
WATER EPI		(A+B+C+D)							34

7.5 CEPI Score Calculation (Air/Water/Land-2020)

Table 7.7 Score of different Environmental Parameters

Air Environment	79
Water Environment	34
Land Environment	34
CEPI score	81.43

**7.5.1 Total CEPI
Score of the
Khrew Industrial
Area**

$$\begin{aligned}\text{CEPI} &= i_{\max} + \{(100 - i_{\max}) \times (i_2/100) \times (i_3/100)\} \\ &= 79.0 + 21.0 (34.0/100) \times (34.0/100) \\ &= 79.0 + 21(0.1156) \\ &= 79 + 2.427 \\ &= 81.43\end{aligned}$$

Total CEPI Score= 81.43

The total CEPI score of Khrew Industrial Area has come 81.43, thus the Khrew Industrial Area is categorized as *Critically Polluted Area (CEPI Score >70)*

7.5.2 Finding and Analysis of CEPI Score of the Khrew Industrial Area

The CEPI is a tool which can give early warning of environmental degradation and deterioration in an area due to pollution load if it exceeds the carrying capacity / assimilative capacity of the area.

It helps to categorize the industrial areas into Critically polluted area, Severely polluted Area and other polluted area, with respect to one or more environmental component on the basis of weightage parameters score.

The areas having aggregated CEPI scores of 70 and above are considered as **Critically polluted industrial areas**, whereas the areas having CEPI between 60-70 are considered as **Severely polluted Areas** and they are kept under strict surveillance along with implementation of Pollution Control Measures. In case of Critically Polluted industrial areas further detailed investigations in terms of the extent of damage and a formulation of appropriate remedial **Action Plan** is needed.

In this case, Khrew Industrial area is categorized as Critically Polluted Area on the basis of CEPI score having score of **81.43** which is more than 70, and hence priority is needed to control the pollution by way of drawing appropriate **Action Plan** as a Remedial measures.

CHAPTER - 8

8.1 Recommendations:-

As per the study report the area is declared as Critically polluted due to problem of Air pollution and its impact on fauna and flora and health of the people in the area. The major cause of deterioration of air quality of Khrew area is due to the industrial activities particularly cement factories, stone crushers, consumption of substantial amount of wood in Hamams for heating purpose in domestic as well as religious places during winters. The burning of agricultural waste products, twigs and leaves of trees for charcoal formation required by the people in winters to keep themselves warm from biting cold, are also responsible for causing air pollution. Rapid increase of air pollutants originated from vehicular emissions is also a cause of concern. The Agriculture Activity of Zaffron fields is also a matter of concern and hence require *Sustainable development approach*.

The specific recommendations are as under:-

- In view of the Khrew Industrial Area being declared as critically polluted, it is necessary to adopt and apply the principle of 'Sustainable Development' for the development of Area. The ill effects of the Air Pollution on the health of the people cannot be ignored and thus it is required to bring the pollution level within norms by formulating and implementing a time bound **Action Plan** with short term and long term measures which needs to be reviewed periodically.
- The setting up of new units/stone crushers in the area should be prohibited for the time till the carrying capacity of the area is able to take the additional burden of new pollution load due to new industries. This is required for the conservation of the eco-sensitive area of Khrew.
- Robust forestry activity is also recommended to diminish the impact of pollution in the area. It is advised that each industries shall plant 2000 trees per year in the area as per the suitable identified locations for the containment of Air Pollution for successive five the years.
- Effective fugitive emission control measures should be taken by the industries. Two Water Tankers should be dedicatedly kept by each industries for water sprinkling in an around the area for the suppression of dust.
- All the industries should organize Medical camps for the local public in the area after every three months and submit data to the PCB after duly authenticated by the Panchyat Sarpanch.
- The Industries in Association shall install **Online Continuous Monitoring Station** in the area for regular monitoring of **Real Time Data of Ambient Air Quality Data**
- The carrying capacity study should be revised after every two years to know the improvement in the area with regard to environmental parameters.
- The specific standard of discharge of Air, Water pollution in the Cement industry, Stone Crusher as per the **EPA Act, 1986** shall be reinforced strictly and monitoring mechanism of such units be regulated.
- To encourage the cleaner fuel in the industry process.
- Water sprinkling on roads should be done more frequently so that dust load is reduced.
- Regular monitoring of water resources is recommended to safeguard the health of residents and a timely protection in the eventuality of any environmental pollution could be framed.
- CAAQMS be installed in the area cost of which along with maintenance be done by the local polluting industry in the area.

Table Data of Cement unit i.e So₂ (mg/m³)

Sr. no.	So₂mg/m³	Value
01	M/s Trumboo Industries Pvt. Ltd.	32.32
		35.13
		35.36
		36.61
		36.61
		36.78
		36.61
		37.53
		38.92



SPEED POST

B-33014/7/2023/IPC-II

Date -29.05.2023

To,

The Chairman

J&K Pollution Control Committee

Shiekh-ul-Alam Campus,

Behind Govt. Silk Factory,

Raj Bagh, Srinagar(J&K)-19008

Sub: Directions under Section 18(1)(b) of the Air (Prevention and Control of Pollution) Act, 1981 in case of 9 Cement units in Pulwama and Anantnag districts, J&K

WHEREAS, amongst others, under section 17 of the Air (Prevention and Control of Pollution) Act, 1981, one of the functions of the J&K Pollution Control Committee constituted under Water (Prevention and Control of Pollution) Act, 1974, is to plan a comprehensive program for prevention, control and abatement of air pollution in Jammu & Kashmir (J&K); and

WHEREAS, an OM no. H-11015/05/2022-CPA dated 30.06.2022 was received through e-mail on 01.07.2022 from MoEF&CC forwarding the OM dated 21.03.2022 of Lok Sabha Secretariat regarding the matter raised in Zero Hour on 16.03.2022 that an independent and impartial study/enquiry by a group of experts from a National Institute or an NGO may be directed into the background in which CTO was granted to each one of the cement factories operating in Khrew area of Pulwama district, the pollution control devices installed and operational, permitted production TPD and actual production on date; and

WHEREAS, in view of above, a letter dated 04.07.2022 was sent to J&K Pollution Control Committee for necessary action and another letter dated 26.07.2022 was sent to J&K Pollution Control Committee to provide environmental compliance status of all cement plants in Anantnag parliamentary constituency, and reminder letters dated 11.08.2022, 02.09.2022, 26.09.2022 and 10.10.2022 were sent to J&K Pollution Control Committee; and

WHEREAS, vide letter dated 10.10.2022, 03.11.2022 and 18.11.2022, J&K PCC provided the status of nine cement plants located in Anantnag Parliamentary Constituency to MoEF&CC and CPCB furnishing the status of pollution control measures in these plants, validity of consent (CTO), status of online monitoring system etc.; and

WHEREAS, a letter dated 12.12.2022 was received from the Hon'ble M.P. with comments on the status report of cement plants in Khrew-Pulwama area of Anantnag constituency provided by J&K PCC, highlighting the adverse impact of cement plants operation and limestone mining activities in the area and suggesting to carry out an independent and impartial study/ enquiry by a group of experts. Hon'ble M.P. also raised the matter of impact of dust pollution by cement plants and lime stone mining in the areas around Shrinagar on human health in Zero Hour on 19.12.2022; and

WHEREAS, CPCB, vide letter dated 02.01.2023, requested MoEF&CC to nominate an officer for constituting a joint team of MoEF&CC and CPCB to visit the area and provide the first report in the matter as suggested by Shri Hasnain Masoodi, Hon'ble M.P; and

WHEREAS, in view of the above, MoEF&CC vide letters dated 05.01.2023 and 03.02.2023 constituted a joint team of MoEF&CC and CPCB officers to visit the site and provide first report on the matter; and

WHEREAS, the joint team of MoEF&CC and CPCB officers visited all cement plants located in Pulwama and Anantnag districts in Anantnag parliamentary constituency during 13.03.2023 to 16.03.2023 and submitted its report to MoEF&CC vide letter dated **24.04.2023 (copy enclosed)** wherein plant wise shortcomings have been reported in respect of - not obtaining environmental clearance under violations of EIA notifications of 1994 and 2006, inadequacies in emission control systems (ECS) and fugitive emission control measures, wrong calibration/setting in continuous emission monitoring systems (CEMS), not obtaining necessary clearance of National Board of Wild Life (NBWL), not obtaining NOC of CGWA for ground water extraction (**summary enclosed**); and

WHEREAS, in addition to the plant wise shortcoming, the general observations reported by the Joint Team are as under:

- i. The productions by operational units were within the limits as specified in CTO granted by J&K PCC.
- ii. None of the cement plants and mines was found to be having green belt as per guidelines.
- iii. The plantations around the cement plants were observed to be covered with dust at all the locations, indicating that APCDs were either inadequate or not operated efficiently.
- iv. Apart from the cement industry, there are around 30 stone crushers operating in the area without any dust control measures, which are also major source of dust emissions.
- v. Illegal mining was observed/suspected in most of the mining sites. Most of the mines are closed since 2017-2018, but still all the cement plants are operational with almost full capacity. Geology and Mining Department has granted permission

to lease owner to collect the loose limestone accumulated due to weathering, however no loose material was observed in these mines during the site visit indicating PPs are extracting the limestone illegally using machines without Environmental Clearance.

WHEREAS, the joint committee has made recommendations in the report as under:

- i. In view of the fact that all the Cement plants under reference and associated Mines have been found to be non-compliant for one or more points, necessary directions may be issued by CPCB directly to the Units or J&K PCC for taking necessary action and ensuring compliance of EIA Notification, 2006 and conditions of Environmental Clearance granted by MoEF&CC and Consent to Operate (CTO) granted by J&K PCC.
- ii. It is recommended to get the technical and environmental audit of the Cement Plants done and stone crushers of the area, to assess the adequacy and efficiency of the APCD installed by the industries, to ensure upgradation and compliance of norms.
- iii. An audit from independent agency/third party is also recommended to address the issue of illegal mining in the name of loose limestone accumulated due to weathering, in view of the fact that cement plants have been operating for the last many years with loose material, without mining permission.
- iv. Apart from the Cement Plants and the mining activities, stone crushers and movement of heavy vehicles were observed as (other) major sources of emissions in the area, it is recommended that a comprehensive source apportionment study and carrying capacity study of the ambient air is conducted through IIT Jammu, Central University of Jammu, NIT Kashmir or any such institutes of repute, so as to take necessary action for monitoring and control of air pollution by regulating and/or restricting such air polluting activities within the available assimilative and/or supportive carrying capacity.

Now, therefore, in view of the above and in exercise of the powers conferred under section 18(1)(b) of the Air (Prevention and Control of Pollution) Act, 1981, J&K PCC is hereby directed to:

- i. Ensure compliance of EIA Notifications 1994 and 2006 by all cement plants in Pulwama and Anantnag districts by checking applicability of these notifications and taking immediate necessary action against such cement plants which are operating in violations of these EIA Notifications 1994 and 2006.
- ii. Ensure that cement plants in Pulwama and Anantnag districts do not become abettors of illegal limestone mining by obtaining information from them about their sources of limestone and the permitted capacity of those sources, cross verifying the informed capacity of lime stone sources/mines from the Department of Geology and Mining and restricting the permitted production in the Consent commensurate to the legally available limestone.
- iii. Ensure compliance of the conditions of Environmental Clearance granted by MoEF&CC and the Consent to Operate (CTO) granted - by J&K PCC by all cement plants in Pulwama and Anantnag districts by directing all cement plants to rectify the shortcomings noticed by the joint team in respect of - operation of emission control systems and their interlocking with production process, material storage and process dust control measure, monitoring facilities at main stacks for manual emission testing, maintenance and calibration of OCEMs, development of green

- belt and through periodic surprise inspections to check the adequacy and performance of the emission control and process dust control measures and necessary follow up action if non-compliances are observed.
- iv. Ensure compliance of the conditions of the Consent to Operate (CTO) granted by J&K PCC by all stone crushers in Pulwama and Anantnag districts through periodic surprise inspections to check the adequacy and performance of the emission control and process dust control measures and necessary follow up action if non-compliances are observed.
 - v. Conduct a comprehensive study for assessment of air environment carrying capacity assessment and assessment of the impact on native / traditional agricultural practices due to start of lime stone mining and establishment of cement plants in the area through Central University/ IIT/NIT or any other reputed institute of Jammu & Kashmir.
 - vi. Ensure that other statutory permissions related to environment/ecology - clearance of NBWL, if applicable, and NOC of CGWA are obtained by all cement plants in Pulwama and Anantnag districts.
 - vii. Take other actions as deemed necessary to address the environmental and ecological concerns raised in the above mentioned representations.

Action taken shall be submitted to Central Pollution Control Board within one month from the date of issue of this direction.

(Prashant Gargava)

Member Secretary

Copy to:

- 1 Director (CP Division)
Ministry of Environment & Forests & Climate Change
Indira Paryavaran Bhawan
Prithvi Wing, 2nd Floor, Room No.216
Aliganj, Jor Bagh,
New Delhi-1 10003
- 2 Additional Director (IA-Non coal mining)
Ministry of Environment & Forests & Climate Change
Indira Paryavaran Bhawan
Prithvi Wing, 2nd Floor, Room No.216
Aliganj, Jor Bagh,
New Delhi-1 10003
- 3 Department of Geology and Mining
J&K
- 4 The Regional Directorate,
Central Pollution Control Board, Chandigarh
- 5 The Divisional Head, IPC-VI CPCB, Delhi

With request to take necessary steps to check illegal mining of lime stone and other minor minerals in respect of mining from area beyond leases and quantity of minerals more than the estimated and permitted quantities


(Prashant Gargava)
Member Secretary





सत्यमेव जयते



भारत 2023
भारत कृषिद्वयम्
ONE EARTH - ONE FAMILY - ONE FUTURE



INTERNATIONAL YEAR OF
MILLETS 2023

भारत सरकार

GOVERNMENT OF INDIA

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

एकीकृत क्षेत्रीय कार्यालय, जम्मू / Integrated Regional Office, Jammu



LIFE
Lifestyle for
Environment



आजादी का
अमृत महोत्सव



File No. 100-01/2022-IRO Jammu (E)/

Dated: 24.04.2023

To,

Sh. Pankaj Verma
Additional Director
IA Division (Non-Coal Mining)
Ministry of Environment, Forest and Climate Change
Indira Paryavaran Bhawan,
Jorbagh Road, Aliganj,
New Delhi- 110003
Email: Pankaj.verma@nic.in

Subject: First Report of the Joint Committee on the representation received from Justice Hasnain Masoodi, Hon'ble Member of Parliament (Lok Sabha)-reg.

Sir,

The report of the Joint team of the MoEF&CC & CPCB on the above cited subject is enclosed herewith. It is requested that the report may be placed before the higher authority for the further necessary action.

Your faithfully

Signed by Raja Ram Singh

Date: 24-04-2023 14:35:25

Dr. Raja Ram Singh

DIGF Central/

Regional Officer, IRO, Jammu

Copy to: -

1. Shri. Nazimuddin, Divisional Head-PIC-II, Central Pollution Control Board, New Delhi. (Email: nazim.cpcb@nic.in).
2. Regional Director- Chandigarh, CPCB, BSNL Telephone Exchange Sector-49 C, Chandigarh-160047 (Email: gurnamsingh.cpcb@nic.in).

First Report of the Joint Committee on the representation received from Justice Hasnain Masoodi, Hon'ble Member of Parliament (Lok Sabha)

1. Background:

The Hon'ble Member of Parliament (Lok Sabha) Shri Justice Hasnain Masoodi while expressing dissatisfaction over the reply and the report provided earlier (**Annexure-1**) to him, wherein all the cement plants had been reported as compliant, in response to the matter of air pollution due to Cement factories in Anantnag Constituency raised by him during Zero hour in the Lok Sabha on 16/3/2023, had suggested that:

- i. *An independent and impartial study/enquiry by a group of experts from a National Institute or an NGO may be directed into the background in which CTO was granted to each one of the Cement factories operating in Khew area, the pollution control devices installed and operational, permitted production TPD and actual production on date.*
- ii. *In such of the cement factories where CTO is to come to an end within next one year, the CTO be not renewed unless outcome of study/enquiry is available in absence of EIA and pulling hearing.*
- iii. *The expert study must also find the extent of loss caused by dust pollution and emissions from cement factories and limestone mining to agriculture. Horticulture, livestock and other sources of livelihood, quantify the loss suffered by the local population and recommend the measures like "polluter to pay" principle, public law action or any other local tool, to recover the loss from the cement industry making huge profit at the cost of the livelihood and health of local population and pay compensation to the affected population.*
- iv. *An exercise be made independent of wildlife department, to unravel true facts about limestone mining, and clay/gravel mining in the wildlife conservation area as also the government land leased out to the cement factories and the area actually in their possession and whether any part of the leased out/in possession land, is grazing land, transfer whereof is prohibited under law.*
- v. *The proposed auction of JKCL be put on hold as the setting up one more cement factory in the area and emissions made would be beyond carrying capacity of the local ambience and further deteriorate the AQI of the area.*

108230/2023/IPC-II-HO

As a follow up of the representation received from Hon'ble Member of Parliament, it was decided to send a Joint Team of Officers of MoEF&CC and CPCB, RD, Chandigarh to visit the area and provide first report about:

- a. General assessment of pollution caused by Cement Plants and Mining activities in the area;
- b. Pollution control measures being implemented;
- c. The extent of existing industrial and mining activities in the area, which was once famous for important agriculture produce, almonds and saffron, encroachment etc.;
- d. To give recommendation about the immediate preventive measures to be implemented and;
- e. Further studies to be undertaken (along with scope) about impact, carrying capacity and encroachment beyond lease area.

Accordingly, a Joint Team comprising of the following Officials of MoEf&CC and CPCB was constituted:

- Dr. Raja Ram Singh, DIGF/Regional Officer IRO, Jammu (Nominated by MoEF&CC);
- Dr. Narender Sharma, Scientist 'E', CPCB Regional Directorate, Chandigarh (Nominated by CPCB);
- Dr. Khursid Alam Khan, Scientist 'C', MoEF&CC, IRO, Jammu (Nominated by MoEF&CC, IRO, Jammu)

2. First report of the Joint Committee:

The Joint Team visited 08 Nos. operational Cement Plants and their associated mining area located in Distt. Anantnag and Pulwama of Anantnag Constituency from 13/3/2023 to 16/3/2023.

Out of total 09 plants located in the Anantnag Constituency; 08 plants are located in the Distt. Pulwama (Khrew Area) and 01 plant is located in Distt. Anantnag. Out of 08 cement plants located in Distt. Pulwama, 07 plants are operational, while 01 plant namely M/s JK Cement Ltd. having capacity of 1200 MT/day is closed since 2018. The details of 08 operational plants located in Distt. Pulwama and Distt. Anantnag are summarized in **Table 1**:

Table 1: Operational Cement Plants and Associated Mines, located in Distt. Pulwama and Distt. Anantnag

S.No.	Name of the Cement Plant	Capacity as per CTO, TPD	Operational Status at the time of visit	Mining (Y/N)
Distt. Pulwama				
1	M/s. H.K. Cements Industries	300	Operational	Yes
2	M/s Trumboo Cement Industries (TCI)	1000	Operational	Yes
3	M/s Cemtac Cements	200	Operational	Yes
4	M/s Dawar Cements	400	Operational	Yes
5	M/s Itfaq Cements	200	Operational	Yes
6	M/s Valley Cement Industries	50	Not Operational during site visit.	No
7	M/s Greenland Cements Pvt. Ltd.	100	Operational	No
Distt. Anantnag				
8	M/s Illahi Cement Industries	50	Not Operational during site visit.	Yes

The location details of the Cement Plants located in Distt. Pulwama and Distt. Anantnag are shown in Fig. 1 and Fig. 2 respectively.



Figure 1. Map of cement plants located in Khrew area, Pulwama District.



Figure 2. Map of cement plant located in Anantnag Industrial Area.

2. Findings/First Report of the Joint Team:

The findings of the Joint Team with regard to environmental compliance by the individual Cement Plants and associated Mines are as follows:

2.1. M/s H.K. Cements Industries, Zaintrag, Khrew, Pulwama:

- i. The plant (Rotary Kiln) is operational @ 300 MT Portland Cement/day, for which Environmental Clearance has been obtained in 2012 and CTO has been obtained vide No. PCB/digital/22063143889 of 2022 with validity upto October, 2023.
- ii. Clearance from National Board for Wild Life (NBWL) has also been obtained in 2018, since the plant is located within 10 Km from Dachigan National Park.
- iii. Electrostatic Precipitator (ESP) and Bag house were found to be installed as Air Pollution Control Devices (APCDs).
- iv. Online Continuous Emission Monitoring System (OCEMS) was found to be installed with Stack connected to ESP and also connected to CPCB/SPCC server.
- v. Project Proponent obtained two Environmental Clearance (SEIAA/15/2016/121-29 & SEIAA/16/2016/112-20 dated 27.12.2016) for Limestone Mining in 4.420 and 4.460 ha area from JKSEIAA with that condition that limestone will be used for building material and not as a raw material in cement plant.

The following violations/shortcomings were observed by the Joint Team:

- a) OCEMS was found to be installed *but appeared to be mastered/calibrated wrongly to give an impression that emissions are well within the limits*. Particulate Matter (PM) values in the OCEMS remained same and decreased drastically, *when the Air Pollution Control Device (APCD) was stopped, indicating that either OCENS is not calibrated or mastered.*
- b) *Interlocking of the process with APCD has not been implemented.*
- c) *No monitoring facilities provided with Stacks of bag houses*. Further bag houses installed with Silos were found to be ineffective, *since lot of dust/cement was observing to be escaping from the top of Silo and depositing on nearby areas including plantation (Photo 1 of Annexure-2)*

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- d) Dust control measures *not implemented for preventing dust from raw material storage and unmetalled roads.*
- e) As per EC issued for mining by JKSEIAA, *limestone will be used for building material and not as a raw material in cement plant. However, limestone is being used for cement manufacturing.* According to the proponent, the mining lease has been taken only for use in its cement plant. **A clarification is required from JKSEIAA in this regard.**
- f) *The mining activities were observed without valid consent to operate from the J&KPCC.*
- g) *Permission/NOC to abstract ground water has not been obtained* by the project proponent.

2.2. M/s Trumboo Cement Industries (TCI) Max:

- i. The cement plant (Rotary Kiln) located at Sulnar, Saturnmarg Khrew is operational @ 1000 MT with valid consent to operate No. PCC/digital/22062773946 of 2022 with Validity upto June 2026.
- ii. PP has recently obtained the Wildlife Clearance from National Board for Wildlife File No. 6-132/2021-WL dated 02.05.2022.
- iii. The PP has obtained the NOC from Executive Engineer ground water division in 2007 and renewed it thereafter.
- iv. The PP has obtained the Environmental Clearance for the Mining in the favour of Shri Umar Shafi Trumboo in Village Bajnar Khrew which is located around 1.5 km far from the cement plant.
- v. The Electrostatic Precipitator and bag filters were operational and all the bag filters were connected to the stack.
- vi. The OCEMS were installed at stacks and connected to CPCB/SPCC server. The SPM values displayed on OCEMS were found to be complying with the prescribed limits.

The following violations/shortcomings were observed by the Joint Team:

- a) *The project proponent is not complying with the condition of EC granted for Lime stone mining that "Regular Monitoring of water quality upstream and downstream of the Bajnar Nallah shall be carried out and record of monitored data should be maintained and*

submitted to the MoEF&CC, its regional Office, Chandigarh, CGWA, Regional Director, CGWB, CPCB and CPCB”

- b) *The project proponent is not complying with the condition of EC granted for Lime stone mining that “Regular Monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing bore-wells and installing new piezometers during the mining operation.....” The project proponent has not installed any piezometers in compliance of the condition of EC granted by MoEF&CC.*
- c) *The project proponent has not installed four ambient air quality monitoring stations in the core zone as well as in the buffer zone for PM₁₀ and PM_{2.5}, as per conditions of EC granted for lime stone mining,*
- d) *Although, attempt has been made to develop Green belt, but, it has not been developed as per Conditions of Environmental Clearance granted for Lime Stone mining.*
- e) *The plant obtained Consent to establish (NOC) in 2004 and subsequently got it renewed in 2006 and 2007 and accorded Consent to Operate in 2008. As per circular of MoEF&CC No. J-11013/41/2006/IA-II(I) dated November 21, 2006 (Annexure-3), “the applications received for NOC by the State Pollution Control Boards before September 14, 2006 may be considered as per provisions of the said Acts. However, they will have to obtain the environmental clearance from the relevant Authority by 30th June 2007, if the category requires EIA Clearance as per the new Notification. In such cases, the unit can meanwhile carry on with the commencement of their project activities. Projects not seeking clearance under EIA Notification, 2006 by 30th June 2007 will be treated as violation cases under Section 15 of Environment (Protection) Act, 1986.” Since the plant got the CTE renewed in 2007 (After the release of EIA Notification, 2006), a clarification in this regard, is required from the policy division of MoEF&CC that whether the EC is required in this case, where CTE was issued prior to EIA Notification, but the plant was not established and CTE was renewed subsequently in 2007 after issuance of the EIA notification.*

2.3. M/s Cemtac Industries:

- i. M/s Cemtac Cement Pvt. Ltd. located at Sulnar, Saturnmarg, Khrew area has i) three vertical Shaft Kilns (75+75+100 TPD), attached with one stack and ii) three (75+75+100 TPD) attached to another stack, totalling to 500 TPD capacity.

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- ii. The Project Proponent has also obtained the Environmental Clearance for production of 200 TPD to 2500 TPD in phase manner. Currently the project is operational with 500 TPD production Capacity.
- iii. PP has obtained two CTO from PCC Under Consent No. PCB/digital/23062337856 of 2023 which is valid till February 2025 for production of 300 TPD and Consent No. PCB/digital/22063155350 of 2022 which is valid till May 2025 for production of 200 TPD.
- iv. Wet scrubber and filter bag have been installed as Air Pollution Control Devices.

The following violations/shortcomings were observed by the Joint Team:

- a) OCEMS was found to be installed *but appeared to be mastered/calibrated wrongly to give an impression that emissions are well within the limits*. Particulate Matter (PM) values in the OCEMS decreased drastically to *Zero level, when the Air Pollution Control Device (APCD) i.e wet scrubber, was stopped, indicating that either OCENS is not calibrated or mastered.*
- b) *No monitoring facilities provided with Stacks of bag houses.*
- c) *The primary crusher has been installed outside the plant premises in the land acquired by the project proponent near the habitation, without requisite permission from the J&KPCC.*
- d) *Dust control measures not implemented for preventing dust from raw material stored in open.*
- e) *NOC/Permission for abstraction of ground water is not obtained.*
- f) *Interlocking of the process with APCD has not been implemented.*
- g) *The plant is located within 10 km from the Dachigam National Park, but the clearance from the NBWL is not obtained.*
- h) *The Project Proponent had applied for the Environmental Clearance for Mining in 29.4151 ha area and obtained TOR under File No. J 11015/25/2016 IA II. J&K PCB had accorded Consent to Operate under consent No. SPCB/digital/20061317549 of 2020 dated 21/01/2020 for extraction of 75000MT/Annum limestone with validity up to February 2023, without obtaining Environmental Clearance. The Project Proponent had applied for fresh TOR under violation category and accorded TOR under File No. 23-228/2018-*

IA.III(V) dated 08.07.2021. *Therefore, the mine was operational without Environmental Clearance till February, 2023.* However, it was not operational during the site visit.

2.4. M/s Dawar Cements Pvt. Ltd.

- i. M/s Dawar Cement Pvt. Ltd. located at the Sulnar, Saturnmarg is having 04 Vertical Shaft Kilns and is currently operating @ 400 MT Cement/day.
- ii. PP has obtained two CTO from PCC Under Consent No. SPCB/digital/1806542646 of 2018 which was valid till June 2020 for production of 200 TPD (**Annexure-4**) and Consent No. SPCB/digital/1805553544 of 2018 which was valid till December 2019 for production of 200 TPD (**Annexure-5**). *As per documents shared by the Project Proponent, currently, the Unit doesn't have valid CTO as on date.*
- iii. Wet scrubber and bag houses were found to be installed as APCDs.
- iv. PP had applied for the Environmental Clearance for Mining in in 21.106 ha area under violation category. MoEFCC had accorded TOR under File No. J-11015/324/2013 for the limestone mining with capacity of 50000 TPA on 22.01.2016. However, PP had not appeared in the EAC meeting because they have not deposited the cost of illegally mined mineral (during 2008-2013) to geology and mining department Jammu & Kashmir prior to Environmental clearance and as informed by the PP, they are in process to deposit it.

The following violations/shortcomings were observed by the Joint Team:

- a) The Plant obtained CTE for manufacturing of 100 TPD cement on dated 10.06.2003 and further expansion from 100 TPD to 400 TPD on 30.09.2006. PP had again applied for the renewal of old CTE, which was accorded by PCB vide Consent No. 116 of 2016 dated 21.04.2016. As per circular of MoEF&CC No. J-11013/41/2006/IA-II(I) dated November 21, 2006 (**Annexure-3**), *“the applications received for NOC by the State Pollution Control Boards before September 14, 2006 may be considered as per provisions of the said Acts. However, they will have to obtain the environmental clearance from the relevant Authority by 30th June 2007, if the category requires EIA Clearance as per the new Notification. In such cases, the unit can meanwhile carry on with the commencement of their project activities. Projects not seeking clearance under EIA Notification, 2006 by 30th June 2007 will be treated as violation cases under Section 15 of Environment (Protection) Act, 1986.”*

- b) *In view of the above (Section 2.4. a), the Unit is established in violation of EIA Notification, 2006.*
- c) *As per documents shared by the Project Proponent, the Unit doesn't have valid CTO as on date.*
- d) *NOC/Permission for abstraction of ground water is not obtained.*
- e) *The plant is located within 10 km from the Dachigam National Park, but the clearance from the Standing Committee of the NBWL is not obtained.*
- f) *OCEMS was found to be installed but appeared to be mastered/calibrated wrongly to give an impression that emissions are well within the limits. Particulate Matter (PM) values in the OCEMS decreased drastically to Zero level, when the Air Pollution Control Device (APCD) i.e wet scrubber, was stopped, indicating that either OCEMS is not calibrated properly or mastered.*
- g) *No monitoring facilities provided with Stacks of bag houses.*
- h) *The mining site was earlier monitored by the IRO, Jammu dated 12.10.2021 and that time no mining work was observed (Photo 2 & 2a of Annexure-2). However, it was observed by the Joint Team that a lot of illegal extraction has been carried out thereafter (Photo 3 & 3a of Annexure-2). Two rock breakers and other machinery was observed lying at Site during the visit of Joint Team (Photo-4 of Annexure-2)*
- i) *Dust control measures not implemented for preventing dust from raw material stored in open.*

2.5. M/s Itfaq Cement:

- i. *M/s Itfaq Cement Pvt. Ltd. located at Sulnar, Saturnmarg, Khrew, District Pulwama, is having two vertical shaft kilns (VSK) with production capacity of 200 TPD.*
- ii. *PP obtained CTE for manufacturing of 200 TPD cement on dated 16.02.2006 and subsequently got it renewed it in 2007 and 2009.*
- iii. *The first CTO was accorded by PCB on 26.03.2009 for the production of 200 TPD Cement. The current CTO No. PCC/digital/123063404486 of 2023 which is valid till March 2026.*

- iv. Environmental Clearance was accorded to the Itfaq Cement under name and style of Sh. Waqar Asif for Mining in in 4.98 ha area for the production of 60000 TPA limestone on lease area 4.98 ha located at Village Daikhan Banjar, Khrew. It was informed by the PP that the mine is not operational since November 2019, however the evidence of recent mining was observed during the site visit.

The following violations/shortcomings were observed by the Joint Team:

- a) The Project Proponent obtained CTE for manufacturing of 200 TPD cement on dated 16.02.2006 i.e prior to issuance of EIA Notification, 2006 and subsequently got it renewed it in 2007 and 2009. As per circular of MoEF&CC No. J-11013/41/2006/IA-II(I) dated November 21, 2006 (**Annexure-3**), *“the applications received for NOC by the State Pollution Control Boards before September 14, 2006 may be considered as per provisions of the said Acts. However, they will have to obtain the environmental clearance from the relevant Authority by 30th June 2007, if the category requires EIA Clearance as per the new Notification. In such cases, the unit can meanwhile carry on with the commencement of their project activities. Projects not seeking clearance under EIA Notification, 2006 by 30th June 2007 will be treated as violation cases under Section 15 of Environment (Protection) Act, 1986.”* **In view of the fact that CTE issued before issuance of EIA Notification, 2006, was renewed in 2007 and then 2009, the provisions of EIA Notification should be applicable to this case. However, the Unit has not obtained Environmental Clearance. A clarification in this regard, is required from the policy division of MoEF&CC that whether the EC is required in this case.**
- b) *The plant was found to be poorly maintained mechanically with lot of safety issues.*
- c) *NOC/Permission for abstraction of ground water is not obtained.*
- d) The plant is located within 10 km from the Dachigam National Park, **but the clearance from the Standing Committee of the NBWL is not obtained.**
- e) OCEMS was found to be installed **but appeared to be mastered/calibrated wrongly to give an impression that emissions are well within the limits.** Particulate Matter (PM) values in the OCEMS decreased drastically to Zero level, **when the Air Pollution Control Device (APCD) i.e wet scrubber, was stopped, indicating that either OCENS is not calibrated or mastered.**

- f) *No monitoring facilities provided with Stacks of bag houses.*
- g) Dust control measures *not implemented for preventing dust from raw material stored in open.*

2.6. M/s Valley Cement Industries:

- i. M/s valley Cement Industry is a small cement plant (Vertical Shaft Kiln) having production capacity of 50 TPD located at Kutmarg Khrew.
- ii. The consent to Establish was granted by JKPCB on 19.08.2006 for the production of 50 TPD portable cement. The ownership of plant was transferred from M/s Valley Cement Industry to the M/s valley Cement Industries in 2017. The plant doesn't require Environmental Clearance.
- iii. Plant was not operational at the time of site visit. However, maintenance of the plant and the packaging was going on during the visit.
- iv. CTO issued by J&K PCC vide Consent No. PCB/digital/21061535922 of 2021 is valid till July 2023.

The following violations/shortcomings were observed by the Joint Team:

- a) The packaging area was open without any provision for dust collection, leading to emissions.
- b) Dust control measures *not implemented for preventing dust from raw material storage and unmetalled roads.*

The plant was not operational at the time of inspection and hence no further observations could be made w.r.t. efficacy of APCDs and dust control measures.

2.7. M/s Greenland Cements Pvt. Ltd.:

- i. M/s Greenland Cement Pvt. Ltd. is located at Wuyan Khrew, District Pulwama having production capacity of 100 TPD (Vertical Shaft Kiln).

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- ii. PP has informed that the first CTE obtained in year 2001 and submitted the CTE renewal on under consent No. 176 of 2002 dated 28.11.2002 issued by JKPCB. The plant doesn't require Environmental Clearance.
- iii. Consent to Operate (CTO) issued by J&K PCC vide No. PCC/digital/22062202869 of 2022 is valid upto October 2024.

The following violations/shortcomings were observed by the Joint Team:

- a) APCDs were not found to be working properly. Smoke and solid particles from the stack could be observed with naked eye (**Photo 5 of Annexure-2**).
- b) No monitoring facilities provided in Stacks (**Photo 5 of Annexure-2**).
- c) The crusher was installed in open place with no dust control measures, leading to fugitive emissions.
- d) *NOC/Permission for abstraction of ground water is not obtained.*
- e) The plant is located within 10 km from the Dachigam National Park, *but the clearance from the NBWL is not obtained.*
- f) No Green belt developed so far as per the CPCB norms.

2.8. M/s Illahi Cements:

- i. M/s Illahi Cement Industry is a mini/small cement plant (Vertical Shaft Kiln) having production capacity of 50 TPD located at Anchidora Industrial Area, District Anantnag.
- ii. The plant was established in 1983 and got first CTO in the year 2000. The Unit doesn't require Environmental Clearance.
- iii. Plant was not operational during the site visit and was under maintenance.
- iv. Consent to Operate issued by J&K PCC vide PCC/digital/23063245437 of 2023 is valid till October 2025.
- v. The mining area is located in Mattan, Anantnag district. It was informed by the project proponent that the lease was granted in 1985 and started extraction in 2000 and was

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functional till 2017, in an area of 112 ha. The Joint Team could not reach at the Mining Site due to bad condition of the approach road.

The following violations/shortcomings were observed by the Joint Team:

- a) *No monitoring facilities provided with Stacks of bag houses.*
- b) *No Green belt developed so far as per the CPCB norms.*

The plant was not operational at the time of inspection and hence no further observations could be made w.r.t. efficacy of APCDs and dust control measures.

3. Other observations made by the Joint Team:

- i. As per their records shared by the operational Units, the production is within the limits specified in CTO granted by J&K PCC.
- ii. In general, none of the cement plants and mines were found to be having green belt as per guidelines and hence is inadequate.
- iii. The plantations around the cement plants were observed to be covered with dust at all the locations, indicating that APCDs are either inadequate or not operated efficiently (**Photo 6 & 7 of Annexure-2**)
- iv. Apart from the Cement Industry, there are **around 30 stone crushers** operating in the area without any dust control measures, which are also major source of dust emissions (**Photo 8, 9 & 10 of Annexure-2**)
- v. Illegal mining was observed in most of the mining sites. Most of the mines are closed since 2017-2018, but still all the cement plants are operational with almost full capacity. Further, Geology and Mining Department has granted permission to lease owner to collect the loose limestone accumulated due to weathering, however no loose material was observed in these mines during the site visit and PPs are extracting the limestone illegally using machines without Environmental Clearance on the basis of this order (**Annexure-6**).

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4. Recommendations:

1. In view of the fact that, all the Cement plants under reference and associated Mines have been found be non-complaint for one or more points, necessary directions may be issued by CPCB directly to the Units or J&K PCC for taking necessary action and ensuring compliance of EIA Notification, 2006 and conditions of Environmental Clearance granted by MoEF&CC & Consent to Operate (CTO) granted by J&K PCC.
2. It is recommended to get the technical and environmental audit of the Cement Plants done and stone crushers of the area, to assess the adequacy & efficiency of the APCD installed by the industries, so as to ensure upgradation and compliance of norms.
3. An audit from independent agency/third party is also recommended to address the issue of illegal mining in the name of loose lime stone accumulated due to weathering, in view of the fact that cement plants have been operating for the last many years with loose material, without mining permission.
4. Apart from the Cement Plants and the mining activities, store crushers and movement of heavy vehicles were observed as major source of emissions in the area, it is recommended, a comprehensive source apportionment study and carrying capacity study of the ambient air environment is conducted through IIT Jammu, Central University of Jammu, NIT Kashmir or any such institutes of repute, so as take necessary action for monitoring and control of air pollution by regulating and/or restricting the such air polluting activities within the available assimilative and/or Supportive Carrying Capacity.

KSK
20/04/23

RS
20/4/23

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Dr. Raja Ram Singh
20/4/2023
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IRO, MoEF&CC, Chandigarh

Dated : April 20, 2023

Summary of report of the joint team.

S. No.	Name & address of Cement plant	Capacity as per CTO/CTE and Operational status at the time of visit	Date of commissioning of cement plant and status of EC and Consent	National Board for wildlife (NBWL) clearance	Emission control system (ECS) and monitoring facility	OCEMS for emission and its data connectivity	Captive limestone mining and status of EC	Violations/shortcomings observed by Joint Team
	<u>PULWAMA DISTRICT</u>							
1.	M/s H.K.Cements Industries, Zaintrag, Khrew, Pulwama	300 TPD (Rotary kiln) Operational	Date of commissioning not mentioned EC obtained in 2012 CTO valid up to Oct-2023	NBWL clearance obtained in 2018 (located within 10 Km from Dachigan National Park) NOC of CGWA for ground water not obtained.	ESP and Bag Filters ECS and production process not interlocked Monitoring facility not provided at main stacks	Installed & connected to CPCB/J&KP CC server OCEMS wrongly calibrated	Unit informed that EC for its mining area in 4.42 ha and 4.46 ha issued by SEIAA on 27.12.2016. But it is for lime stone to be used as building material CTO not obtained for mining	<ul style="list-style-type: none"> • Bag house installed with silo were ineffective as dust/cement observed deposited on nearby areas including plantation. • Dust control measures not implemented for raw material storage area & unmatted roads.
2.	M/s Trumboo Cement Industries (TCI), Sulnar, Saturnmarg Khrew	1000 TPD (Rotary kiln) Operational	Date of commissioning not mentioned. (CTE was issued in 2004 and renewed in 2006 and 2007) EC not obtained CTO valid up to June-2026	NBWL clearance obtained on 02.05.2022 (located within 10 Km from Dachigan National Park) NOC of CGWA for ground water obtained-2007 and renewed thereafter	ESP and Bag Filters	Installed & connected to CPCB/J&KP CC server	Unit informed that EC for its mining area issued in favour of Umar Shafi Trumboo located 1.5 km from the cement plant EC conditions about AAQM, Water & GW monitoring not being complied.	<ul style="list-style-type: none"> • Green belt not developed as per EC conditions for mining

3.	M/s Cemtac Cement Pvt. Ltd. Sulnar, Saturnmarg, Khrew	500 VSK(6) (75+75+100 TPD and 75+75+100 TPD) Operational	Date of commissioning not mentioned EC obtained for 200 TPD to 2500 TPD in phased manner CTO valid up to Feb-2025 (300 TPD) and up to May-2025 (200 TPD)	NBWL clearance not obtained (located within 10 Km from Dachigan National Park) NOC of CGWA for ground water not obtained	Wet scrubber and Bag Filters ECS and production process not interlocked Monitoring facility not provided at main stacks	OCEMS was found to be installed OCEMS wrongly calibrated	Applied for EC for mining area under EIA violation category. ToR was issued. Applied for fresh ToR on 08.07.2021 CTO issued for mining on 21.01.2020 with validity up to Feb-2023 Mine was operational without EC till Feb-2023. Mining was not operational during the visit	<ul style="list-style-type: none"> The primary crusher installed outside the plant without consent. Dust control measures not implemented for raw material storage area
4.	M/s Dawar Cement Pvt.Ltd,Sulnar,Saturnmarg	400 TPD (VSK 4x100) Operational	Date of commissioning not mentioned. (CTE for 100 TPD was issued on 10.06.2003 and for expansion to 400 TPD on 30.09.2006, and CTE was renewed 21.04.2016) EC not obtained CTO for 200TPD each expired in Dec-2019 and June-2020. Plant does not have valid CTO	NBWL clearance not obtained (located within 10 Km from Dachigan National Park) NOC of CGWA for ground water not obtained	Wet scrubber and Bag Filters Monitoring facility not provided at main stacks	OCEMS was found to be installed OCEMS wrongly calibrated	Applied for EC for mining under EIA violation category. ToR was issued on 22.01.2016. PP did not attend EAC meeting as the cost of illegally mined minerals during (2008-2013) has not been deposited yet. The site was last inspected by IRO on 12.10.2021 and no mining was observed then. Lot of mining has taken place in the meanwhile. Rock breaker and other machinery found at site during the site	<ul style="list-style-type: none"> Dust control measures not implemented for preventing dust from raw material stored

							visit.	
5.	M/s Itfaq Cement Pvt. Ltd., Sulnar, Saturnmarg, Khrew, District Pulwama	200 TPD (VSK-2) Operational	Date of commissioning not mentioned. (CTE for 200 TPD was issued on 10.06.2006 and CTE was renewed in 2007 and 2009) EC not obtained CTO valid up to March-2026	NBWL clearance not obtained (located within 10 Km from Dachigan National Park) EC – obtained. CTE obtained in -2006 CTO-March, 2026 NOC of CGWA for ground water not obtained	Wet scrubber and Bag Filters Monitoring facility not provided at main stacks	OCEMS was found to be installed OCEMS wrongly calibrated	Unit informed that EC for its mining area in 4.98 ha for 60000 TPA issued in favour of Waqar Asif for located at Daikhan Banjar village	-Dust control measures not implemented for preventing dust from raw material stored - Plant and machinery not maintained properly from safety angle
6.	M/s Valley Cement Industry, Kutmarg Khrew	50 TPD (VSK) Not in operation during the site	Date of commissioning not mentioned. (CTE was issued on 19.08.2006) EC not obtained or might not be applicable (to be checked in respect of EIA notifications 1994 and 2006) CTO valid up to July-2023					The packaging area was open without any provision for dust collection, leading to emissions. -Dust control measures not implemented for preventing dust from raw material storage and unmetalled roads.
7.	M/s Greenland Cement Pvt. Ltd, WuyanKhrew, District Pulwama	100 TPD (VSK) Operational	Date of commissioning not mentioned. (CTE was issued	NBWL clearance not obtained (located within	ECS were not found to be working properly			<ul style="list-style-type: none"> • ECS were not found to be working properly • The crusher was

			in 2001 and renewed in 2002) EC not obtained or might not be applicable (to be checked in respect of EIA notifications 1994 and 2006) CTO valid up to Oct-2024	10 Km from Dachigan National Park) NOC of CGWA for ground water not obtained	Monitoring facility not provided at main stacks			installed in open place with no dust control measures, leading to fugitive emissions • No Green belt developed so far as per the CPCB norms
8.	M/s J.K. Cement Ltd, Khrew, District Pulwama	1200 TPD Closed since 2018						
	<u>ANANTNAG DISTRICT</u>							
9.	M/s Illahi Cement Industries, Anchidora Industrial Area, District Anantnag	50 TPD (VSK) Not in operation during the site. Under maintenance	Date of commissioning reported as 1983. (first CTE was issued in 2000) EC might not be applicable (to be checked in respect of EIA notifications 1994 and 2006) CTO valid up to Oct-2025		Monitoring facility not provided at main stacks		Unit informed that its mining area of 112 ha is located in Mattan, Anantnag district. Lease was granted in 1985 and started mining in 2000 and it was operational till 2017 in	• No Green belt developed so far as per the CPCB norms