STATE POLLUTION CONTROL BOARD- SIKKIM

FOREST & ENVIRONMENT DEPARTMENT

GOVERNMENT OF SIKKIM

DEORALI-GANGTOK

ANNUAL REPORT

2020-2021

CONTENTS

Chapter- 1

INTRODUCTION

The State Government entrusted the implementation of Water (Prevention & Control of Pollution) Act, 1974 through Notification No. 51(7)/Home/88/868 dated 21/07/1988 to Land Use and Environment Board and the Act came into force with effect from 25/02/1989 in the State vide Notification No. 1(4)F/89/214 dated 17/07/1989.

The State Pollution Control Board- Sikkim (SPCB-Sikkim) was created under the provision of Sub-Section (1) of Section 4 of the Water (Prevention & Control of Pollution) Act, 1974 vide Government Notification No. 30/Home/2008 dated 19/03/2008 published in Extraordinary Gazette vide No. 119 dated 10/04/2008.

The main function of SPCB-Sikkim is to act as a regulatory as well as an advisorybody. Under the advisory function, SPCB-Sikkim advises the state government in terms of measures to be taken for prevention, control and abatement of pollution and under the regulatory function, the SPCB- Sikkim is bestowed with the power of implementation of different Acts and Rules pertaining to environment pollution control.

The State Pollution Control Board-Sikkim implements the following Acts and Rules in the State of Sikkim.

i. Water (Prevention & Control of Pollution) Act,1974
ii. Air (Prevention & Control of Pollution) Act,1981
iii. Environment (Protection) Act, 1986
iv. The Public Liability Insurance Act, 1991.
v. Hazardous & Other Wastes(Management & Transboundary Movement) Rules, 2016;
vi. Bio-Medical Waste Management Rules, 2016;
vii. Solid Waste Management Rules, 2016;
viii. Plastic Waste Management Rules, 2016;
ix. E-Waste(Management) Rules, 2016;
x. Construction & Demolition Waste Management Rules, 2016;
xi. The Noise Pollution (Regulation & Control) Rules, 2000.
xii. Batteries (Management & Handling) Amendment Rules, 2000;
xiii. Environmental Impact Assessment Notification, 2006;

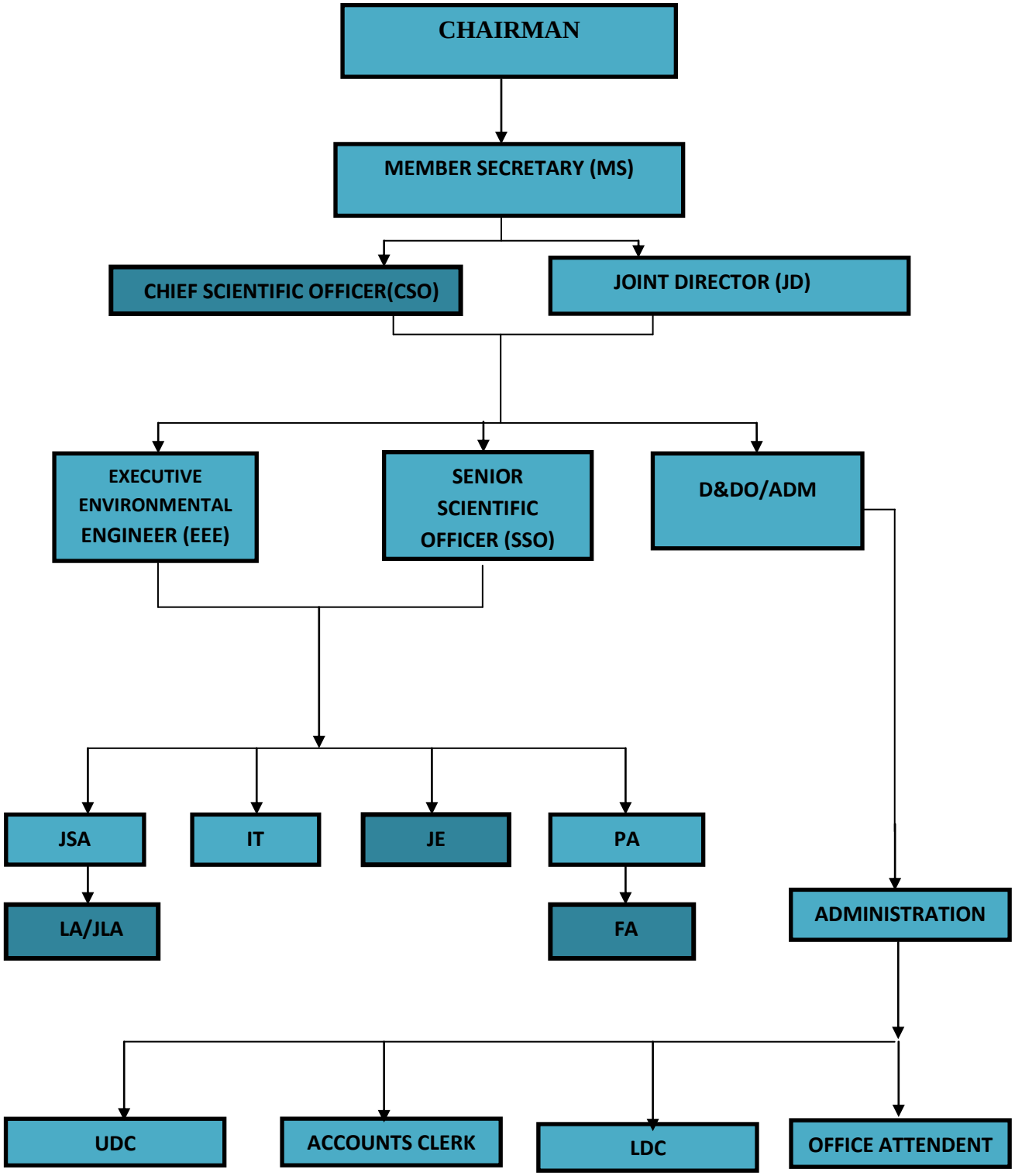
SPCB-Sikkim works under the administrative control of Forest and Environment Department, Government of Sikkim.

With the increase in population pressure, industrialization, urbanization and massive developmental activities, the duties of SPCB have increased manifold and in order to implement the different provisions of the Acts and Rules, SPCB-Sikkim has inducted different scientific and technical manpower to strengthen the functions of SPCB viz., Scientist B, Environmental Engineer, Junior Scientific Assistants, Laboratory Assistants, Project Assistants and Field Attendants.

Chapter-2

ORGANISATIONAL CHART (2020-2021)

STATE POLLUTION CONTROL BOARD-SIKKIM



STRUCTURE OF STATE POLLUTION CONTROL BOARD SIKKIM (2020-2021)

Constitution of State Pollution Control Board Sikkim during 2020-2021:

1. Chairperson
2. PCCF-cum-Principal Secretary Forests and Environment
3. Secretary, Urban Development Department
4. Secretary, Public Health Engineering Department
5. Secretary, Transport Department
6. Deputy Mayor, Gangtok Municipal Corporation
7. Up Adhyakshas - North, South, East and West Districts
8. Principal Director, Health Department-Health Expert
9. Shri. T. Tashi Bhutia- Technocrat
10. Dr. M. P. Thapa- Academician
11. Member Secretary

Manpower deployment under SPCB during 2020-2021

1. Chief Scientific Officer-1
2. Joint Director-1
3. Senior Scientific Officer-1
4. Executive Environmental Engineer-1
5. Drawing and Disbursing Officer-1
6. Assistant Scientific Officer-0
7. Junior Scientific Assistant- 3
8. Laboratory Assistant- 5
9. Project Assistant- 6
10. Field Assistant-10
11. Accounts & Administrative Staff- 16

Chapter-3

OVERVIEW OF MAJOR PROGRAMMES AND ACHIEVEMENTS

A. NATIONAL AIR MONITORING PROGRAMME (NAMP):

With the increase in urbanization and establishment of industrial units in the state mostly the pharmaceutical formulation and its ancillary units and bottling and breweries plants, the SPCB-Sikkim under the National Air Monitoring Programme (NAMP) has established nine (09) Air Quality Monitoring (AQM) stations in order to monitor the air quality in the state. The entire state of Sikkim has been declared as an Air Pollution Control Area under Gazette notification no. 506 dated 08/09/2011. The details of the monitoring stations are as under:

Sl. no	**Name of monitoring station :**	**Latitude^{o}N**	**Longitude^{o}E**
1.	RANGPO	27.1736	88.5305
2.	SINGTAM	27.5144	88.4969
3.	DEORALI	27.3183	88.6063
4.	RAVANGLA	27.3075	88.363
5.	NAMCHI	27.17	88.35
6.	PELLING	27.3028	88.2344
7.	CHUNGTHANG	27.6033	88.6469
8.	MANGAN	27.5025	88.5358

*The 9th station located atTashi View point, Gangtok was damaged due to landslide and currently not in operation.

In order to run these AQM stations the SPCB- Sikkim has inducted 07 Project Assistants and 14 Field Assistants (contractual basis) and the Board has also established 07 laboratories for carrying out analytical work of air quality parameters in the respective locations. The AQM is conducted twice a week. As per the study/finding it is seen that Air Quality Index of the State is good and well within the standards prescribed for PM 10 and other parameters. The data so generated is being forwarded to CPCB for further analysis. The annual report (2020-21) of ambient air quality has been dealt at Chapter-12.

B. NATIONAL WATER MONITORING PROGRAMME (NWMP):

SPCB-Sikkim has established 9 (nine) Water Quality Monitoring Stations in River Teesta basin and 5 (five) Water Quality Monitoring Stations in River Rangit basin under NWMP.

The major objectives of water quality monitoring are:

- To regulate pollution of the discharge or effluents, if any, reaching the water bodies.
- To identify any deficiency in water quality and to implement water pollution control strategies.
- To determine the effect of water quality on human health.
- To determine long term trends in water quality.

The details of the monitoring stations are as under:

Sl. No.	Station Code	Name of Station	Latitude ºN	LongitudeºE
1.	1801	River Teesta after confluence of Rivers Lachenchu and Lachungchu **CHUNGTHANG**, North Sikkim.	27.602	88.649
2.	1802	River Dikchu before confluence with River Teesta near NHPC hydro-electric power project, **DIKCHU**, East Sikkim.	27.40	88.52
3.	1803	River **MANEY KHOLA AT BURTUK** near Army Base Camp 4 km U/s of Gangtok, East Sikkim	27.35	88.61
4.	1804	River Maney Khola after confluence with Ray khola at **ADAMPOOL AFTER MEETING TREATED WASTE WATER of STP**, Gangtok, East Sikkim	27.30	88.58
5.	1805	After confluence of Rani Chu and Rorachu at **RANIPOOL**, East Sikkim	27.29	88.59
6.	1806	Ranichu **before** confluence with River Teesta at **SINGTAM**, East Sikkim	27.22	88.49
7.	1807	River Teesta **after** confluence with River Ranichu at **SINGTAM**, East Sikkim	27.11	88.45
8.	1808	River Teesta after confluence with Rongpochu after meeting the industrial effluents from the town **RANGPO**, East Sikkim.	27.17	88.52
9.	1809	River Teesta at Melli Downstream, **MELLI**, South Sikkim	27.08	88.45
10.	2034	**RANGIT RIVER AT DAM SITE** (NHPC), South Sikkim	27.29	88.29
11.	2035	**RANGIT RIVER AT LEGSHIP**, West Sikkim	27.27	88.27
12.	2036	**RANGIT RIVER AT RESHI**, West Sikkim	27.22	88.30
13.	2037	**RANGIT RIVER AT JORETHANG**, South Sikkim	27.13	88.27

14.	2038	**RANGIT RIVER AT TREVENI**, Melli, South Sikkim	27.08	88.41

The quality of water is regularly monitored by SPCB officials and the data so generated is being forwarded to CPCB, Delhi for further analysis. This is a 100 % central sponsored scheme. As per the analysis of data, the quality of water has been found to be good. A compilation of water quality data collected over the year is at **Annexure-I**.

In order to maintain the quality of water the SPCB-Sikkim has been continuously monitoring the industrial activities and has been ensuring the running of Effluent Treatment Plant (ETP) 24 hours a day. SPCB-Sikkim has made Zero Liquid Discharge (ZLD) mandatory so that the treated water meeting the prescribed standard is recycled and reused for gardening, flushing, cleaning and cooling purposes. Further, Online Continuous Effluent Monitoring Systems(OCEMS) are set up in all the pharmaceutical units established in the State.

C. WATER AND AIR LABORATORY:

The Pollution Control Laboratory located at 'C' Block, Forest Secretariat, Deorali has been specified as the State Water and Air Laboratory vide Gazette no.127 dated 09/09/1996 under sub-section (1) of section 52 of the Water (Prevention and Control of Pollution) Act 1974 and sub-section (1) of section 28 of the Air (Prevention and Control of Pollution) Act 1981 respectively. It deals with day to day analytical work related to both water and air pollution. Samples of air are collected twice in a week and that of water are collected once a month for analysis. The reports are then compiled and submitted to CPCB through online portals respectively.

In conformity with the Hon'ble High Court of Sikkim's order in the matter of discharge of industrial effluent at Singtam by the Pharma Unit dated 06/08/2018 and 29/11/ 2018, the Board's Water Laboratory has been upgraded.

Further, as per the direction of Hon'ble High Court of Sikkim, the treated water samples from outlet of Effluent Treatment Plant (ETP) and water sample from storm water drains of Pharmaceutical industrial units were collected fortnightly and analyzed in the SPCB Lab. The analysis reports were compiled and submitted to the Hon'ble High Court.

During 2020-2021, the Board started the process of getting its laboratories NABL accredited by inviting expert and Lead Assessor Dr. S. K. Tyagi and discussing the pre-requisites for accreditation. It was decided to conduct trainings on quality related matters through an experienced trainer.

D. NOISE MONITORING:

Due to increase in developmental activities there has been a rise in noise pollution in the whole country.

SPCB-Sikkim has been measuring noise pollution during the festival of Deepawali. As per the study conducted by SPCB-Sikkim it has been observed that, the noise level has gone down due to ban imposed by the State Government on manufacture, import, sale and bursting of firecrackers and other illuminating items in the state.

SPCB-Sikkim took the initiative of imposing prohibition on manufacture, sale, import and bursting of all types of Firecrackers including sound emitting and illuminating type through Sikkim Gazette Extraordinary Notification no. 544 dated 19/12/2014. While executing the ban imposed by the State Government awareness among the public has been generated through print and electronic media. In the past street plays, rallies through school students and appeal from the Hon'ble Chief Minister and other Celebrities were also taken up. Further, the Board conducts regular noise pollution monitoring during the festival of Deepawali. Till date, the noise level readings generated are well within the stipulated standards. The State Government has completely banned bursting of fire crackers in the State till further orders owing to Covid-19 situation vide Office Order No. 38/Home/2020 dated 04/11/2020.

During 2020-2021 also posters on ban on bursting of Fire crackers were published and pasted at public places like taxi stands, banks, ATMs, offices, institutions, shops etc. for wide publicity.

E. ESTABLISHMENT OF INDUSTRIAL UNITS:

Under the provision of Section 25 of Water (Prevention & Control of Pollution) Act, 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 no units can be established without the prior consent of the SPCB. Consent to Establish (CTE)/ Consent to Operate (CTO) should be obtained by industrial unit prior to establishment and operation of industrial units.

Industrial units which are of large and medium scale have been granted with Consent to Operate (CTO) under manufacturing sector. Under the service sector consents are being issued to Hotels, Resorts, Health Care Facilities, Garage, Hot mix plant, Wet mix plant, Stone crushers, Sewage Treatment Plant (STP), etc.

Establishment and operation of Diesel Generators (DG set) also require CTE/CTO.

For the issuance of Consent to Establish (CTE)/ Consent to Operate (CTO) inspection of units are carried out by following standard operating procedure.

Renewal of CTO/CTE is done only after inspection of the unit. For strict compliance of standards prescribed in the CTO, the Board is engaged in regular monitoring of industrial activities. Third Party Monitoring by an accredited laboratory has also been made mandatory to all the industrial units as per the ease of doing business policy.

As per the data of 2020-21 available on Online Consent Management and Monitoring System 385 units were granted CTE/ CTO. The list of 385 units are attached at Annexure-II.

SPCB-Sikkim has categorized various industries operating within the state into 04 categories viz., Red, Orange, Green and White as per their pollution potential. CTE and CTO are issued accordingly. This categorization was notified vide no. 112 dated 01/04/2017.The consent fee for each industry is calculated as per the gross fixed capital investment of each unit without depreciation.

The Board publishes public notices in local newsprint media at regular intervals to inform public to obtain CTE/CTO for any industrial unit being established in the State.

F. PUBLIC HEARING:

Under the provision of Environment Impact Assessment notification, certain development projects are required to obtain Environment Clearance (EC) from the Central Government for category A Projects and from State Environment Impact Assessment Authority for category B projects. Before grant of EC, the projects are subjected to Public Hearings and SPCB-Sikkim has so far conducted 23 public hearings for different types of developmental projects:

G. AWARENESS/SENSITIZATION PROGRAMMES/TRAINING:

Generation of awareness is one of the key factors for prevention of environment pollution. SPCB-Sikkim has been deeply engaged in creating awareness through different types of programs to educate students, general public on conservation and preservation of environment.

Various programs viz., lectures, essay and painting competition, slogan competition are held among the student community. The celebration of World Environment Day and Paryavaran Mahotsav are the regular features of SPCB-Sikkim. SPCB-Sikkim has produced environment film, environment songs, documentaries and also different environment related advertisement, films and material to educate the general masses.

The Urban Local Bodies (ULBs) and Upadhakshyas are also taken on board to create awareness on the subject. SPCB-Sikkim also organized sensitization seminars and workshops to the head of Departments and the heads of all industrial units including Hydroelectric project on the different Acts and Rules related to environment protection. SPCB has been assisting different social groups, NGOs and other registered organizations by providing financial support and related tools and kits for keeping their locality neat and clean.

SPCB has taken steps to provide dustbins to ULBs, religious institutions, tourism destinations, schools and colleges etc. for keeping the locality clean.

SPCB has also taken initiative to organize exposure visits for the students to different types of industrial units to encourage them to opt for career in the industrial sector. The Board is also bringing out appeals to generate awareness through advertisement in print and electronic media.

Special visits to the nearby industrial units are being arranged forschool students and local public through the management of the industry and insisting the industries to maintain transparency in control of pollution and in operating their Corporate Social Responsibility (CSR) to gain the goodwill of the public and maintain the environment.

Sensitization program with respect to Solid Waste Management Rules 2016 and other Rules are carried out involving Additional District Collector (Development), Sub-Divisional Magistrates and Block Development Officers. Similar sensitization program on Bio-medical Waste Management Rules 2016 was organized involving Health Care Facilities. The Government Agencies, Industries, Public Sector Undertakings as well as Banks were given

sensitization on E-Waste (Management) Rules 2016 by SPCB Sikkim in co-ordination with National Institute of Electronics and Information Technology (NIELIT).

Training programmes were also conducted by the Board in collaboration with Health Department and Regional Directorate, CPCB, Shillong on Biomedical Waste Management Rules,2016 for administrative head of new STNM hospital, District Hospitals, CHCs, PHCs, doctors, nurses and officials/staff under Health and Family Welfare Department w.e.f. 18-03-2021 to 24-03-2021.

Online training on data collection and reporting on hazardous and plastic wastes organized by United Nations Environment Programme (UNEP) attended by the Officer and JSA of the Board from 28th January 2021 till 30th January 2021.

Online training on analysis of pesticides and other organic chemicals organized by CSIR Indian Institute of Toxicology Research, Lucknow by JSAs of the Board from 03rd March 2021 till 05th March 2021.

H. Public can avail information on SPCB-Sikkim along with regular updates in the website of the State Pollution Control Board-Sikkim at **www.spcb.sikkim.gov.in.**
The official email address for correspondence with the board is spcbsikkim@gmail.com

I. Progress on initiatives taken up during 2019-2020.

To strengthen the capacity and functions of SPCB-Sikkim various measures were initiated during 2019-2020 and the progress made so far as follows:

i) Sensor based River monitoring system- The proposal was approved by the Board in its meeting and proposed to keep fund provision for its installation.

ii) Setting up of common server platform to have real time online monitoring data on ambient air quality and river water quality – G Lens App was introduced and on boarding of industrial units having OCEMS on this app and Axis Nano Technologies App was reviewed.

iii) Induction of required technical and scientific manpower under SPCB-Sikkim- Proposal was prepared and submitted to the State Government for approval.

iv) NABL (National Accreditation Board for Testing and Calibration Laboratories) accreditation of State Water and Air Laboratory under SPCB-Sikkim – The Board requested Lead Assessor Dr. S. K. Tyagi for guidance and the pre-requisites for accreditation was discussed with him. It was decided to conduct trainings on quality related matters through an experienced trainer.

Chapter -4

11th SPCB-Sikkim Board Meeting

The 11th meeting of the State Pollution Control Board of Sikkim (SPCB) was held on 18.09.2020 in the Sidkeong Tulku Conference Hall of Forest Secretariat, C Block, Deorali. It was presided over by the Chairman SPCB-Sikkim.

Plate No. 1**: 11th Board meeting in progress**

The main items discussed and decided in the meeting are as follows.

Administration section:

1. **Post facto approval for extension of services:**
    a. The extension of contractual services of Junior Scientific Assistants (JSAs) and Lab Assistants (LAs) posted under SPCB was approved by the State Government on 17.12.2019 for a period of one year w.e.f. the date of expiry of their previous contract and since the Board meeting was not held for a long time it could not be brought before it. Hence post facto approval of the Board was sought and obtained.

    b. Detailed discussion was held regarding the extension of the contractual services of the Project Assistants (PAs) and Field Assistants (FAs) engaged under the National Air Quality Monitoring Programme (NAMP), SPCB. whose services expired on 31.03.2020. Hence, after due consideration of the requirement of

their services and the salaries being reimbursed by the Central Pollution Control Board (CPCB) under NAMP, the Board recommended for continued contractual engagement of the Project Assistants and Field Assistants co-terminus with the life of the National Air Quality Monitoring Programme (NAMP) of CPCB.

c. Similarly, the Board also recommended for extension of the Muster Roll services of 2 nos. drivers engaged under SPCB, Shri. Neema Pintso Bhutia and Shri. Hari Gurung for a period of 2 years.

2. Enhancement of salary:

The request made by the JSAs and LAs for enhancement of their salaries was considered by the Board and after discussion on the work load entrusted on the JSAs and LAs, it was agreed by the Board that their salaries may be enhanced. As far as enhancement of salary of Project Assistants and Field Assistants was concerned it was decided to write to Central Pollution Control Board for approval as their salary is being paid by them.

3. Contractual appointments:

a. The proposal sent to Department of Personnel (DoP) for recruitment of 2 Project Assistants and 6 Field Assistants under NAMP along with 2 JSAs, 1 Law Officer and 1 Jr. Environmental Engineer was informed to the Board and post facto approval was accorded.

Accounts Section:

1. Statement of Audit as submitted by the Chartered Accountant of the Board, Das Associates, for the accounts of SPCB for FY 2019-20 was then presented and placed before the Board. It was approved by the Board.
2. The proposal pertaining to the bank accounts under SPCB wherein the requirement of maintaining the account with the State Bank of India, Deorali, for receipts of external credits from Government of India sources and of the ICICI Bank account for online consent fees deposit from industrial units was discussed in view of the directive of the State Government to keep accounts outside government treasury in State Bank of Sikkim. The Board approved retention of the existing two accounts and opening of a new bank account with State Bank of Sikkim wherein the total amount of funds collected for online consent management shall be transferred on a quarterly basis for further expenditure by SPCB office as per yearly Budget approved by the Board.
3. Post facto approval for working budget for 6 months approved by Chairman for establishment expenditure of SPCB (salaries, fuel for vehicles, office expenses etc.) was given. This was due to the Covid situation and lockdowns for the past 6 months.

4. Total budget proposal for FY 2020-21 amounting to Rs. 5,37,66,354/- (Rupees Five Crore Thirty Seven Lakh Sixty Six Thousand Three Hundred and Fifty Four only) was approved by the Board.
5. Purchase of Vehicle: The Board unanimously accorded approval for purchase of a new vehicle for Member Secretary SPCB.

Other points discussed:

a. The website for SPCB has been revived in order to comply with various directives of Hon'ble NGT and Government of India.
b. The proposal placed by Hon'ble Dy. Mayor, GMC and Hon'ble Upadhakshyas (South and West) for increase in the Annual Awareness Grant released by SPCB from Rs. 2.00 Lakh to Rs. 2.50 Lakh was approved by the Board. It was also decided that SPCB office would prepare a guideline for the type of awareness activities to be undertaken under this grant and send along with the grant for clarity in utilization of the funds received.

Technical section

1. Management of Solid Wastes:

The Chairman, Dr. Thomas Chandy, informed the house that a series of meetings were held by SPCB with concerned departments like Urban Development, Public Health Engineering Department, Health Department during the past few months wherein the senior officers of the concerned departments headed by their Secretaries attended the deliberations. It appeared from the deliberations of these meetings that the solid waste processing sites at Sipsu and Martam would not last for more than 5 more years if the waste is managed as it is being done now. He proposed that more scientific waste management approach should be followed and recycling must be optimized to minimize landfilling,

Hence he proposed that every effort should be made to convert 100% of biodegradable wastes to compost and non biodegradable waste be subjected to one of two methods used to manage solid wastes elsewhere i.e. either convert to Refuse Derived Fuel (RDF) and sold to different industries or use Waste to Energy (W2E) technology.

It was also brought to the notice of the Board members that the polypropylene bags being used widely by commercial establishments in Sikkim after the prohibition of plastic carry bags is just as bad for the environment as plastics and should be prohibited keeping in view the green image of the State. However, this should be done over a period of one year or so by when one can expect entrepreneurs from Sikkim to design and develop biodegradable carry bags. Hence, it was resolved that as SPCB had an advisory role it should propose to the Government the following:

(a) Setting up of a Refuse Derived Fuel Plant at Martam and Sipsu to reduce the solid waste load and increase the life of these two sites.

(b) Prohibit the use of Polypropylene bags by commercial establishments in a phased manner. The larger carry bags can be proposed to be prohibited in 3 months as alternative cloth bags are already in use and available in the market. The smaller bags can be prohibited from one year from now by when alternative biodegradable bags could be designed.

2. Service Charge:

In the last Board meeting it was suggested that public hearings conducted by SPCB should be charged from the project proponent. Accordingly, service charge was levied from Madhya Bharat Ltd. The information on service charge levied and collected by the SPCB was accepted by the Board.

3. Environmental Compensation:

During inspection of pharma units for compliance of effluents with the prescribed standards a few industrial units were not found to be compliant and were fined with environmental compensation. Compensation was realized from Alembic Pharmaceuticals, Samardung, South Sikkim, Indchemie Health Specialities, Kumrek, East Sikkim, Regal Healthcare, Bhasmey, East Sikkim and Savi Health Science, Majhitar, East Sikkim. The Board accorded approval for utilization of Environmental Compensation fund for paying the honorarium due to Chairman SLC to the tune of Rs. 4.50 lakhs and carry out the other studies as per the Action Plan submitted to CPCB.

4. Central server for real time information:

Chairman Dr. Thomas Chandy informed the Board that the SPCB was planning to install online continuous water quality monitoring stations for real time river water quality data generation so that it is possible to pinpoint the pollution source in the following locations on rivers Teesta and Rangit

1. Upstream of Singtam
2. Downstream of Singtam.
3. Rangpo river at/near Rorathang.
4. Melli.

5. COVID-19 Waste:

The SPCB has been very active during the Covid pandemic to enforce the guidelines issued by CPCB and the various directions of Hon'ble Courts. SPCB has authorized captive incinerators at 6 government hospitals and CRH Manipal for treatment of covid waste and these facilities were inspected by the officials of the SPCB including the Chairman and Member Secretary. Further five rounds of formal meetings were conducted with the UDD and Health Department officials and GMC officials to explain the guidelines and facilitate and coordinate action for biomedical

waste disposal. SPCB also conducted trainings of waste handlers through Health dept and undertook awareness generation through social media in conjunction with UDD and IPR departments.

12th SPCB – Sikkim Board Meeting

The 11th meeting of the State Pollution Control Board of Sikkim (SPCB) was held on 18.09.2020 in the Sidkeong Tulku Conference Hall of Forest Secretariat, C Block, Deorali. It was presided over by the Chairman SPCB-Sikkim.

The discussion and decision taken in the meeting are as follows.

A. MoM of the Board Meeting held on 18th September 2020 was confirmed by the Board.

B. It was suggested that the quorum to hold the Board meeting for SPCB needs to be modified and notified through the Forests & Environment Department.

The issue pertaining to transfer of Bank account from State Bank of India to State Bank of Sikkim as per decision of the Board in the last Board meeting is to be reviewed, in view of the exceptions granted by Finance Department to other Boards.

Plate No. 2: 12th Board meeting – release of inaugural issue of SPCB-Sikkim newsletter

Administration section & Accounts Section:

1. Extension of services:
    a. The proposal for extension of Contractual services of two Jr. Scientific Assistants and four Lab Assistants engaged under SPCB was approved by the Board along with release of salary till 31st March 2021, as per Government orders.
    b. Extension of the Contractual services of 06 nos. Project Assistants and 10 nos. Field Assistants engaged under the NAMP, SPCB was approved by the Board along with release of salary till 31st March 2021, as per Government orders.
    c. The Board was informed regarding the extension of Services of 2 nos. drivers engaged under SPCB, as per recommendation of the Board.
2. Proposal for contractual appointments:
    a. Matter pertaining to recruitment of staff under various posts and deployment of staff having engineering background for SPCB was discussed. Forest & Environment Department was to pursue the matter pertaining to recruitment of staff with DoP.
3. Guidelines for utilization of the Grant in Aid released for awareness purposes under SPCB was presented to the Board members for adherence by all Officials/Organisers receiving the Grant.

Technical Section

a. ***Bio-medical Waste Disposal Lacuna:***

The Health Department officials were apprised about the non-compliance of BMW disposal guidelines and the Chairman-SPCB informed the Board that after various meetings with the Bio-medical Waste Management division, the Health Department has failed to resolve the issues.

b. ***Annual Reports submitted to Central Pollution Control Board for the year 2019-2020:***
The Board was informed that various annual reports that were needed to be submitted to the CPCB and further information regarding Construction & Demolition waste was sought from UD&HD which was still awaited.

c. ***Fee for issue of Authorization for Hazardous Waste Management***:

The Chairman requested the Department of Forest and Environment to notify the change of authorization fee and taking legal opinion from Forest counsel and the fee was fixed for Rs. 1000 annually.

d. ***Detailed Action Plan for Environmental Compensation (EC) fund utilization:***

The Board members were apprised about the expenses made from the EC fund as per NGT guidelines.

e. The Board approved the Annual Report to be submitted to Government for 2019-20.

f. ***Any other issues:***

A. It was decided to write to Commerce and Industries Department regarding the procedure of conducting Public Hearing & explaining to the Department regarding the implementation of Public Hearing guidelines as per EIA notification 2006.

B. Solid waste disposal at Martam.
The Municipal Solid Waste being brought from other places needed to be stopped and sub-committee to be formed headed by Upadakshya to bring out awareness on;

I. Waste segregation and Management.

II. Segregated waste to be sold to recyclers directly.
The Chairman requested the Upadakshya to identify 16 model towns & identify forest land for RRC in these towns & then the SPCB shall write to the District collectors regarding the matter. District Waste Management sub-committee under the Upadakshya to be formed.

C. Expert Members:
Water Quality Monitoring of Rivers Rani and its tributaries needs to be carried out with the formation of committee & sub-committee. The committee to be headed by Dr. M.P. Thapa and Shri T. Tashi (Expert Members).

Chapter-5

During the financial year 2020-2021 the total expenditure on the functioning of the State Pollution Control Board-Sikkim was Rs. 1,88,59921.0. Bulk of this expenditure, more than Rs. 1.50 crores, was made on establishment cost, mainly, salaries of officials and staff including contractual staff, travel expenses, office establishment etc. During the covid out break in the state the officials and staff undertook monitoring of health care facilities and air and river water quality in the State. The travel expenses amounted to Rs. 8.81 lakhs.

The State Water and Air Laboratories located in the Board's building in 'C' Block of Forest Secretariat, Deorali, Gangtok were open during the partial lockdowns to undertake pollution measurements. The expenditure on laboratory chemicals and equipments were about Rs. 19 lakhs.

Special awareness programmes, cleanliness drives and air pollution monitoring during festival periods were also taken up during the year to contribute to environmental pollution control. The balance of the budget was expended for these items.

Chapter-6

Solid Waste Management

1. Introduction

The Ministry of Environment, Forest & Climate Change has notified the Solid Waste Management Rules, 2016 in exercise of the powers conferred by sections 3, 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986) and in supersession of the Municipal Solid Waste (Management and Handling) Rules, 2000, (which covered only Urban Local Body) for the management of Solid Wastes which came into effect on 08.04.2016.

Solid Waste Management Rules, 2016 apply to every urban local body, outgrowths in urban agglomerations, census towns as declared by the Registrar General and Census Commissioner of India, notified areas, notified industrial townships, areas under the control of Indian Railways, airports, airbases, Ports and harbors, defense establishments, special economic zones, State and Central government organizations, places of pilgrimage, religious and historical importance as may be notified by respective State government from time to time and to every domestic, institutional, commercial and any other non-residential solid waste generator situated in these areas.

2. Status of Solid Waste generation and disposal in the State:

Waste Generation

Numbers of ULBs: **7** viz., Gangtok Municipal Corporation, Singtam Nagar Panchayat, Rangpo Nagar Panchayat, Namchi Municipal Council, Nayabazar- Jorethang Nagar Panchayat, Gyalshing Nagar Panchayat, Mangan Nagar Panchayat
Total waste generation (TPD): **71.9**
Quantity of MSW collected (TPD): **71.9**
Quantity of MSW treated (TPD): **20.35**
Quantity of MSW disposed in secured land fill site (TPD):**51.55**

Waste Treatment Capacity.

Gangtok Municipal Corporation (GMC) has installed a 1 tonne per day (TPD) composting unit at Khangchendzonga vegetable market in Gangtok and 50 TPD composting plant at Martam solid waste processing and landfill site, to convert vegetable waste to compost. The composting capacity in the State therefore exceeds the generation which is estimated to be around 35 TPD.

3. Role of Local Bodies In Respect Of Solid Waste Management:

Door to door collection of waste is being currently practiced in most of the ULBs of Sikkim through garbage collection vehicle. The level of household segregation under GMC area is reported to be 100% and the collection of segregated solid wastes with respect to generation is reported to be 80% under Gangtok Municipal Corporation. Under GMC most of the Wards are provided with segregation bins for Wet & Dry waste.

The segregated solid wastes are processed at Martam processing facility. The biodegradable waste is converted into compost and part of the non-biodegradable waste is recycled by recyclers and disposed off mostly outside the State. The inert and some other materials that are non-recyclable are subjected to land fill. Waste cloth from furnishing shops have been converted into different item for sale e.g. handbags, pillow cover, etc. by GMC. The Secretary–in-charge, Urban Development and Rural Development Department in the State have prepared a state policy on solid waste management in their respective jurisdiction.

At present, only Martam Landfill, East Sikkim is being used for disposal of Solid Waste generated in the East District. South and West districts are utilizing the facility at Sipsu dumping site and Ringdham in Dzongu, has been identified for establishment of sanitary landfill facility for North District.

Role of State Pollution Control Board-Sikkim In Respect Of Solid Waste Management:

1. Awareness programmes are being regularly conducted by the Board.
2. SPCB has increased annual grant from Rs. 2.00 lakh to Rs.2.50 to Zilla Upadhakshya of all the four districts for conducting awareness program on waste management in their respective jurisdictions. Guidelines have been prepared and provided for such awareness programmes also.
3. SPCB in collaboration with other agencies regularly conducts Cleanliness drives in the State. The Board has distributed garbage bins to educational institutions, religious places, tourist spots and other organizations for waste collection at public places.
4. Regular meeting with the stakeholders for implementation of the Rules.
5. Facilitated preparation of Solid Waste Management policy.
6. Facilitated preparation of Solid Waste Management Bye laws.
7. SPCB has also provided bins for domestic hazardous waste to encourage its segregation and collection.

SPCB inspects Solid Waste Management site in East Sikkim

A team of the State Pollution Control Board - Sikkim headed by the Chairman, Dr. Thomas Chandy and Member Secretary, Dr. Gopal Pradhan visited several waste management sites in East Sikkim on 27.11.2020 to make on the spot assessments of the efficiency of their functioning. The solid waste management site at Martam under Gangtok Municipal Corporation was inspected. Commissioner, GMC and other officers were present to explain the functions to the SPCB team.

Plate No. 3: SPCB team inspecting the solid waste management site at Martam, East Sikkim

The team inspected the segregation of wastes and also the landfill. The segregation of plastic cans of varying sizes and other synthetic material was found to be satisfactory. The team interacted with the group which was concerned with transporting these segregated wastes out of the State. The issues faced by the GMC in properly managing the wastes were discussed by the officials of GMC. It was brought to light that the landfill is being used to dump solid wastes originating in several townships in East Sikkim apart from the nearby municipalities such as Singtam and Rangpo. This is leading to rapid filling up of the landfill which may not last its expected lifetime. Lack of segregation from these sources was also a problem. The solutions being considered by GMC were also discussed. The composting unit was found to be dysfunctional which had to be set right.

Plate No. 4: Chairman SPCB-Sikkim with officials of Naya Bazar-Jorethang Nagar Panchayat at Sipsu solid waste processing facility, West Sikkim

SPCB-Sikkim also conducted inspection of solid waste processing facilities located at Sipsu in West Sikkim to check the status of compliance as per Solid Waste Management Rules, 2016. New landfill construction site was discussed with engineers, MEO and contractors.

Meeting with Rural Development Department on rural solid waste management

A coordination meeting was held on 10/02/2021 with a team of officials and Panchayat members from the Rural Development Department headed by Principal Secretary, Shri C.S. Rao in the Sidkeong Tulku Conference Hall of Forest and Environment Department.

Plate No. 5- Interactive meeting with RDD on SWM

The meeting discussed details on the following points.

(i) Status of Solid Waste Management in 16 model and other GPUs in terms of segregation and recycling of non-biodegradable wastes.
(ii) Status of community compost pits in 32 blocks.
(iii) Capacity building/ awareness generation regarding solid waste management as per SWM Rules, 2016.
(iv) Setting up of Material Recovery Facility in the GPU areas to reduce load of Martam and Sipsu solid waste processing sites.
(v) Formulation of byelaws for SWM on the lines of the one for urban areas.
(vi) Constitution of State Level Monitoring and campaign committee.
(vii) Status of compliances made in various NGT matters.
(viii) Submission of Annual Reports.

4. Legal framework.

1. State SWM policy and strategy:

The State solid waste management policy and strategy were notified by the Urban Development Department vide Gazette notification of Government of Sikkim 183 dated 29.04.2019. It emphasizes waste reduction, at source segregation, decentralized solid waste management, resource recovery, processing of biodegradable waste through bio-methanation, compositing and of non-biodegradable waste through recycling and landfill.

2. Bye-laws:

Bye-laws for regulation of solid waste were notified by the Urban Development Department on 29/04/2019 vide Government notification no.5/UD&HD and published in Extraordinary Gazette vide No. 185 dated 29/04/2019. These bye-laws provide for regulatory action of Government & municipal authorities as well as penal provision for various acts like littering.

5. Submission of report on gaps in waste management to Government:

SPCB – Sikkim has prepared and submitted a report on gaps in waste management to the Government. The section on solid waste management points out the lack of segregation at the waste generator level, absence of intermediate sorting facilities such as Material Recovery Facility and also the need to set up a Refuse Derived Fuel plant each at the two solid waste processing sites. Gaps in institutional mechanism to tackle the problem associated with solid waste management have also been highlighted in the report. The report also mentions the need for rural areas to have their own Material Recovery Facilities/Centers and disposal mechanism instead of depending on the urban local bodies' facilities.

Chapter-7

Plastic Waste Management

1. Introduction

The Plastic Waste (Management and Handling) Rules, 2011 published vide notification number S.O 249 (E), dated 4th February, 2011 by the Government of India in the erstwhile Ministry of Environment and Forests, as amended from time to time, provided a regulatory frame work for management of plastic waste generated in the country. Subsequently the Central Government reviewed these rules in order to implement these rules more effectively and to give thrust on plastic waste minimization, source segregation, recycling, involving waste pickers, recyclers and waste processors in collection of plastic waste fraction either from households or any other source of its generation or intermediate material recovery facility and adopt polluter pays principle for the sustainability of the waste management system. This led to the notification of the plastic waste rules of 2016

2. Status of plastic waste management in the State.

Sikkim has seven urban local bodies which are listed as follows.

1. Gangtok Municipal Corporation
2. Singtam Nagar Panchayat
3. Rangpo Nagar Panchayat
4. Naya Bazar- Jorethang Nagar Panchayat
5. Gyalsing Nagar Panchayat
6. Namchi Municipal Council
7. Mangan Nagar Panchayat

These urban local bodies play an important role in collection and segregation by involving waste pickers, packet collectors and scrap vendors.

The State Government Sikkim has taken the following initiatives.

- The Govt. of Sikkim vide notification number 25/Home/2016 dated 19.05.2016 directed that the packaged drinking water bottles may not be used in any Govt. meetings/functions in order to reduce plastic waste.
- The Govt. of Sikkim vide notification number 26/Home/2016 dated 19.05.2016 announced the ban on sale and use of disposable items made from Styrofoam throughout the State keeping in view its various ill effects to environment and human health. Trade license Rule 2011 states that no one should use plastic wrapping for goods being sold in the market.
- Banned the burning of agriculture wastes.

- The State Government for the effective implementation and monitoring of these rules has constituted a State Level Advisory Committee on 14.11.2017 vide notification no. SBM (U/UD&HD/GOS/1/6/57/18). After constitution of the committee by the state government dated 14/11/2017, Gazette notification vide No. 551dated 15/11/17 under the provision of the PWM Rules 2016 was brought out. SLAC held its first meeting on 20th March 2018.
- Under the direction of the Hon'ble National Green Tribunal (NGT) passed on 1st May 2019, the following gram Panchayat units (GPUs) under Rural Management Development Department were notified as model village/ GPUs

The model Gram Panchayats Units are:

Sl.no	District	Block	Gram Panchayat units
1	Gangtok East	Martam	Samlik Marchak
2	Gangtok East	Martam	Martam Nazitam
3	Pakyong East	Reghu	Lingtam Phadamchen
4	Pakyong East	Pakyong	AhoYangtam
5	Chungthang North	Chungthang	Chungthang
6	Chungthang North	Chungthang	Shipgyer
7	Mangan North	Mangan	Ringhim Nampatam
8	Mangan North	KabiTingda	Navey Shotak
9	Gyalshing West	Dentam	Dentam
10	Gyalshing West	Gyalshing	DarapNambu
11	Soreng West	Mangalbarey	Suldung Kamling
12	Soreng West	Soreng	Buriakhop
13	Namchi South	Namthang	ChubaPhong
14	Namchi South	Sumbuk	Mellidara Paiyong
15	Ravangla South	Sikkip	Wok Omchu
16	Ravangla South	Yangang	Yangang Rangang

3. Role of SPCB-Sikkim in Plastic Waste management

Annual Report on Plastic Waste Management Rules, 2016 is submitted to SPCB-Sikkim by Urban Development Department, Government of Sikkim from 7 Urban Local Bodies which is then compiled and forwarded to Central Pollution Control Board, New Delhi by the Board.

a. The report is uploaded on CPCB web portal E-Sanyojan annually.

b. No producer, recyclers and manufacturing units are there in the state of Sikkim.
c. Annual Report for the year 2020-2021 has been uploaded on E-Sanyojan and the total plastic waste generated is **82.75** tons /annum.
d. Awareness programmes are being regularly conducted by the Board.

TALLY OF THE AMOUNT OF PLASTIC WASTE GENERATED BY 07 URBAN LOCAL BODIES OF SIKKIM FOR THE YEAR 2020-2021 AS REPORTED IN THEIR ANNUAL REPORT SUBMITTED TO SPCB-SIKKIM*

Sl. No	**Name of ULB**	**Population**	**Plastic waste generated (TPA) 2020-2021**	**Plastic waste collected (TPA) 2020-2021**	**Plastic waste Channelized /Recycled(TPA) 2020-2021**
1.	Gangtok Municipal corporation (GMC)	100280	36.5	NA	NA
2.	Gyalshing Nagar Panchayat (GNP)	6185	5.5	NA	NA
3.	Mangan Nagar Panchayat (MNP)	7000	3.6	NA	NA
4.	Namchi Municipal Council (NMC)	13538	14.6	NA	NA
5.	Rangpo Nagar Panchayat (RNP)	16500	20.25	NA	NA

6.	Singtam Nagar Panchayat (SNP)	7579	0.8	NA	NA
7.	Jorethang Nagar Panchayat (JNP)	16580	1.5	NA	NA
Total		1,67,662	82.75	NA	NA

***As reported by UDD, Government of Sikkim.**

4. Submission of report on gaps in waste management to Government:

SPCB – Sikkim has prepared and submitted a report on gaps in waste management to the Government. The section on plastic waste management points out the lack of segregation at the waste generator level as the main problem with obtaining accurate information on the quantity of plastic waste generated. The possibility of Extender Producer Responsibility being implemented in the State has also been emphasized. The absence of Producers/Manufacturers of plastic packaging proves a major hurdle in implementation of EPR. As most manufacturing facilities of various brand owners of different commodities including food, electrical appliances etc. are located outside the state and utilize packaging material manufactured outside the state. In order to ensure implementation of EPRs, all licensing authorities such as ULBs should inventorize various registered brand distributors in the state in order to set up mechanism. Local Food manufacturing, milk union, bakeries are also to be included in the EPR on a local level. Utilization of packaging material used by online shopping site is also proving to be a major challenge and should be monitored. Awareness programme on segregation at source and reduction of plastic use should be conducted on a regular basis.

Chapter-8

Bio-Medical Waste Management

A. Introduction

The Bio-medical Waste Management Rules 2016 was notified on 28th March, 2016 by the Ministry of Environment and Forest, Government of India, in supersession of the earlier rules, the Bio-medical Waste (Management and Handling) Rules, 1998 to provide the regulatory frame work for management of bio-medical wastes (BIO MEDICAL WASTE) generated in the country.

Bio-medical Waste Management Rules 2016 defines bio-medical waste as any waste, which is generated during the diagnosis, treatment or immunization of human beings or animals or research activities pertaining thereto or in the production or testing of biological or in health camps, including the categories mentioned in Schedule I of BIO MEDICAL WASTE Management Rules, 2016.

Bio-medical Waste is categorized into four types of wastes viz. Yellow, Red, Blue and White category and they have different disposal methods e.g. incineration or deep burial pit including further recycling through authorized recycler.

B. Status of Health Care Facilities in the State

a. There are total 178 nos. of Health Care Facilities (HCF) under Health and Family Welfare Department, which includes one 1000 bedded New STNM Hospital, four (04) district Hospitals, 2 nos. of CHCs, 24 nos. of PHCs and 147 nos. of PHSC which are located in rural areas.

b. Under private sector there are three hospitals viz.
   i) 550 bedded CRH, Manipal, Gangtok,
   ii) 25 bedded NHPC Hospital, Balutar, Singtam
   iii) 10 bedded NHPC Hospital, Rangit.

In addition few numbers of Private diagnostic centers and Clinics are operating in the state.

c. The Animal Husbandry and Veterinary Services have 22 nos. of Veterinary Institutions in the state.

C. Role of State Pollution Control Board (SPCB)

a. As per the Bio Medical Waste Management Rules, 2016 the State Pollution Control Board is the Prescribed Authority for implementation of the provisions of these rules. Further, the SPCB also regulates Health Care Facilities under consent management regime as such units also require to obtain Consent as stipulated under the Acts i.e. the Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act 1981.

b. The Board grants one time authorization to non-bedded Health Care Facilities.

The SPCB-Sikkim has launched online portal for processing of application for Consent and all HCFs are required to apply for consent under Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 through the portal viz. http://www.skocmms.nic.in.

At present, all the applicants are required to submit form-II to SPCB-Sikkim for Authorization under the Bio Medical Waste Management Rules, 2016, which may be downloaded from sikenvis.nic.in. However, the Online Consent Management Monitoring System is being finalized in coordination with NIC Delhi, to extend the online facility for inclusion of online processing facility for granting of Authorization. The HCFs are required to pay Consent Fee as prescribed in the statutes which is charged on the total capital investment of Health Care Facilities. However, no fee is applicable for granting of Authorization as per the rule.

c. The SPCB-Sikkim compiles annual report received from HCFs in the state and consolidated reports along with the inventory of HCFs dealing in Bio Medical Waste management is submitted to CPCB before 31st July of every year and the same is also uploaded in e-sanyojan portal of the Central Pollution Control Board. As per the Annual Report received from Health Care Facilities the quantity of Bio Medical Waste generation is approximately **477.564 kg /d**ay during 2020-2021.

d. The Board conducted training on BMW Management for administrative head of new STNM hospital, CHCs, PHCs, doctors, nurses, and waste handlers of all districts in collaboration with Health Department and CPCB, Shillong w.e.f. 18th March 2021 till 24th March 2021.

D. Committee Constituted under the Bio-Medical Waste Management Rules

Under rule 11 (1) every State Government or Union Territory Administration shall constitute an advisory committee for the respective state or union territory under the chairmanship of the respective Secretary, Health to oversee the implementation of the rules. The Advisory committee has been formed in Sikkim vide notification no. 49/HC,HS&FW dated 26.09.2016.**(Annexure-III)**

Under rule 12 (4) every State Government or Union Territory Administration shall constitute District Level Monitoring Committees in the districts under the chairmanship of District Collector or District Magistrate or Deputy Commissioner or Additional District Magistrate to monitor the compliance of the provisions of these rules in the health care facilities generating bio-medical waste: The district level monitoring committee in the districts has been formed vide notification no. 101/HC,HS&FW dated 25.09.2018. **(Annexure-IV)**

E. Bio-medical waste treatment and disposal

As the State of Sikkim does not have Common Bio-Medical Waste Treatment Facility major hospitals are allowed to install captive Bio-Medical Waste treatment facility i.e. incinerator, autoclave, shredder, microwave etc. Hence, all the major HCFs of Sikkim are equipped with captive treatment facility. Also disposal by deep burial pit is permitted only in rural or remote areas where there is no access to Common Bio Medical Waste Treatment Facility and in compliance to Bio-Medical Waste (BMW) Management Rules, 2016. The HCFs in Sikkim have installed their own Bio-medical Waste treatment equipment's accordingly.

The Health and Family Welfare Department have three (03) ETP plants constructed in the New STNM Hospital and one (01) ETP plant established at CRH Manipal, 5th Mile, Tadong, East Sikkim for treatment of liquid waste. District Hospitals and smaller bedded hospital under Department of Health & Family Welfare are yet to install ETP. However, the provision for installation of ETP is included in the Action Plan prepared by the Department and the liquid wastes generated by the district hospitals discharged through drains connected to hospital soak pit after treatment.

State Pollution Control Board has issued authorization to Scrap/ Waste collector for collection of red and blue categories of Bio-medical Waste for transporting it outside the state for recycling purposes.

F. <u>Covid Waste Management activities of SPCB-Sikkim.</u>

During the year 2020 after the outbreak of the COVID-19 pandemic the Central Pollution Control Board, New Delhi notified a series of Guidelines for Handling, Treatment and Disposal of waste generated during Treatment/Diagnosis/ Quarantine of COVID-19 Patients which was accordingly forwarded to all the concerned Departments for strict compliance to prevent further spread of the pandemic due to improper handling and disposal of the Covid waste

The CPCB in order to track the daily generation of COVID-19 waste and its treatment and disposal developed covid-19 Bio Medical Waste App and further directed all the Health Care units dealing with COVID-19 patients to upload the Covid waste generated and disposed off on daily basis on the App. The SPCB Sikkim accordingly directed the HCFs to register in the Covid app and to upload the information in the said app on daily basis. The SPCB-Sikkim has been conducting field visits to all the quarantine camps and Covid hospitals in all the districts and held a series of meetings with officials of Health Department, GMC, UDD, District Collectors and Tourist operators etc. to bring to light the provisions of the guidelines and its compliance.

Pursuant to the order of the Hon'ble National Green Tribunal in O.A. No. 710 of 2017 on bio medical waste management and O.A. No. 72 of 2020 regarding safe and scientific management of Covid waste in particular, the Central Pollution Control Board issued guidelines for Covid

waste management. These guidelines imposed responsibilities to health care facilities, urban local bodies, PCBs, quarantine centers, sample collection centers, laboratories etc. These guidelines required that health care facilities needed to follow strict protocol as mentioned in the Biomedical Waste Management Rules, 2016 for biomedical waste management. Accordingly, the SPCB teams visited all the districts to check the working of segregation, storage, incineration, effluent treatment and related facilities. Reports were filed based on the findings and corrective measures were suggested to the management of these centers.

Plate No. 6: Chairman and Member Secretary inspecting bio-medical waste management facility at STNM Hospital Socheygang, East Sikkim

Plate No. 7: SPCB officials inspecting the incinerator at Singtam Hospital, East Sikkim

Plate No. 8: SPCB officials visit Covid Care Centre to check Covid waste management

Officials also inspected and met the management of Covid Care Centers in the State and discussed waste management and the need to segregate the wastes and the protocol for handling these wastes by workers in the covid care centers as well as the local body workers who are required to transport it to the authorized BMW management site.

SPCB also conducted trainings on handling and management of covid wastes and general wastes and the use of protective gear by all who handled these wastes. Training was also organized on the use of the Covid App on which covid waste details had to be uploaded on daily basis.

Plate No. 9: SPCB, CPCB and Health Department conducted training of health care workers in all districts of the State

Plate No.10: SPCB officials inspect deep burial pits in South Sikkim

In rural and far flung areas where incineration of covid waste was not possible the guidelines allowed health care facilities to make deep burial pits with the specifications as prescribed in the Bio Medical Waste Management Rules, 2016. The SPCB teams inspected such deep burial pits in all the districts and reported the shortcomings to the concerned authorities for instituting corrective measures.

SPCB also met with important stakeholders such as tour and travel operators association to educate them about the guidelines and the stipulation for covid appropriate behavior for tourists visiting the State.

Plate No. 11: Interaction with important stakeholders like PTDA for covid appropriate behaviours for visiting tourists.

The Total COVID-19 waste generated in the State from June 2020 to July 2021 amounts to **46051 Kgs**. The activities and steps taken up by SPCB in chronological order are as follows:

Activities taken up by SPCB-Sikkim during COVID-19 pandemic from April 2020 to March 2021

Sl. No.	Date	Specific Response action taken
1.	02-04-2020	Intimation to Health Department, Urban Development Department and Central Referral Hospital (CRH), Manipal with respect to COVID19-related Bio-medical waste management guidelines.
2.	10-04-2020	As per the direction of CPCB vide letter no. RDNE/384/NWMP- Genl/2020-21/10 dated 10.04.2020, river water samples from three stations were collected for further analysis.
3.	20-04 2020	Report on ambient air monitoring at eight stations to check the impact of lockdown on ambient air quality.
4.	21-04-2020	Hon'ble NGT order dated 21/04/2020 in the matter of O.A. No. 72/2020 - Scientific Disposal of bio medical waste arising out of COVID-19 treatment- Compliance of Bio Medical Waste Rules, 2016.
		Intimation of Revised guidelines (Revision 2) to Health Department, STNM Hospital, Socheygang, Animal Husbandry & Veterinary Services Department, CRH, Tadong, Urban Development Department and Urban Local Bodies
5.	23-04-2020	Notice for extension of validity of Consent and also authorization for handling of hazardous wastes to pharmaceutical units in the State.
6.	02-05-2020	Intimation to Health Department of format for submission of COVID-19 related data on bio medical waste.
	03-05-2020	Impact of lockdown on air quality of Sikkim and status of bio medical waste in relation to COVID-19 & Press Release on Air Quality Index; Monitoring of river water and COVID-19 related bio medical waste Management.

7.	04-05-2020	Meeting with Municipal Commissioner (GMC) and Municipal Executive Officers regarding waste collection from quarantine centres as per revised guidelines for COVID-19 bio medical waste dated 18th April 2020.
8.	05-05-2020	Issuance of guidelines for handling, treatment and disposal of waste generated during treatment/diagnosis/quarantine of COVID-19 patients to all four District Magistrates in the State .
		Identification and authorization of STNM Multi-Speciality hospital Socheygang, Gangtok, CRH-Tadong and four District Hospitals for utilization of their captive facilities for treatment and disposal of COVID-19 and other bio medical waste in absence of Common Bio-Medical Waste Treatment Facility (CBWTF) in the state.
		Issuance of guidelines for handling, treatment and disposal of waste generated during treatment/ diagnosis /quarantine of COVID-19 patients to DG-cum-Secretary, Health Deptt.
		Issuance of guidelines for handling, treatment and disposal of waste generated during t reatment/diagnosis /quarantine of COVID-19 patients to the Secretary, Rural Development Deptt.
9.	06.05.2020	Video Conference on Biomedical Waste Management mobile App.
		Meeting with GMC and Health Department on duties and responsibilities of ULBs, local authorities and Health Department with respect to bio medical waste management. Nodal Officers (SPCB-Sikkim) for each district appointed.
10.	06.05.2020	Specific Guidelines issued to all Officers-in-charge of quarantine centers for COVID-19 related bio medical waste collection and disposal along with a format of daily report on waste generation and standards for deep burial.
11.	07-05-2020	Training of GMC waste handlers on use of PPEs by Health Department in co-ordination with SPCB-Sikkim and GMC.

12.	08-05-2020	Inspection has been conducted by chairman, Member Secretary and other officials to all the Districts.
13.	18-05-2020	Installation of contact less hand sanitizer machine.
		Designated Nodal Officer for covid-19 mobile app regular updating.
14.	24-05-2020	Handing over of 30 sets of PPEs , hand sanitizers and 15set of hand gloves to Supervisor, GMC.
15.	26-05-2020	Video Conference with Chairman, CPCB and other states w.r.t. management of COVID-19 and other bio medical waste wherein Chairman SPCB Sikkim presented the status of the State.
16.	27-05-2020	Meeting with representatives from Health Department, GMC, CRH, Tadong.
	11-06-2020	Interaction of Chairman and Member Secretary with the media personal about the management of COVID-29 related bio medical waste management
	21-07-2020	Guidelines for Handling Treatment and Disposal of Waste generated during Treatment/ Diagnosis/ Quarantine of COVID-19 patients (Revision-V)
17.	30-07-2020	Supreme Court order writ petition(s) (Civil) No. 13029/1985 dated 30/07/2020
18.	01-08-2020	Meeting chaired by Shri Karma Loday Bhutia, Hon'ble Minister, Forest and Environment Department with representatives from various Department.
19.	11/08/2020	Vide letter no. SPCB/681 dated 11/08/2020 sent to Health and Family Welfare Department permission has been granted to construct deep burial pit at SICUN, Assam Lingzey.
20.	01/09/2020	Inspection was conducted by team led by SPCB-Sikkim comprising other departments for identification of site for setting up of Deep Burial pit for disposal of COVID-19 waste (bio medical waste) and the same has been circulated to NHPC, Teesta Stage-IV, Balutar vide letter no. SPCB/983 dated 01/09/2020 & GMC, Health Department, Singtam and Rangpo Nagar Panchayat vide letter no. SPCB/984 to 994 dated 01/09/2020.

21.	04-09-2020	Meeting with representatives from Health Department, GMC, UDD
	09-09-20	Posting of Pictorial Guide on Covid bio medical waste management on SPCB website on 09-09-20
22.	24/09/2020	Vide letter no. 1023/SPCB/1149 to 1150 reminder was sent to Health and Family Welfare Department regarding follow-up action on Hon'ble NGT order dated 20.07.2020 in the matter of O.A. No. 72 of 2020
23.	8/10/2020	Letter no. 1023/SPCB/1226 to 1230 sent to Health and Family Welfare Department regarding registration of Himalayan Pharmacy Boys hostel and SICUN Centre in the covid-19 app which was not being registered till date.
24.	12/10/2020 to 16/10/2020	In compliance to the CPCB letter vide no. B- 31011/BIO MEDICAL WASTE (42.59)/ 2020/WMD-I dated 17/09/2021, the Board conducted inspection for verification of captive treatment facilities from 12 Oct. to 16 Oct. in all the districts and in the authorized Health Care Facilities (HCFs)
25.	21/11/2020 & 23/11/2020	As various non-compliances were observed during these visits, hence the Board issued show cause notice to the in-charge of Himalayan Pharmacy Boys hostel vide show cause notice no. SPCB/1411 dated 21/11/2020, and SICB, Karfectar vide show cause notice no. SPCB/1412 dated 23/11/2020, and Direction under Section 5 of the Environment Protection Act 1986 to the Health and Family Welfare Department addressed to Principal Secretary vide direction no. SPCB/1413 dated 23/11/2020.
26.	24/11/2020	Vide letter no. 1023/SPCB/1425 to 1426 dated 24/11/2020 compliance status of HCFs dedicated to isolation of COVID-19 patients was sent to CPCB regarding
27.	14-12-2020 (I)	Letter was sent to UDD & ULBs vide letter no. 1023/SPCB/1515-1523 dated 14-12-2020 regarding follow-up action on Hon'ble NGT order dated 20.07.2020 in the matter of O.A. No. 72 of 2020. Reminder ref. letter no.1023/SPCB/1149 to 1150 was sent to Health and Family Welfare Department vide letter no. 1023/SPCB/1512-1514 dated 14-12-2020 regarding follow-up action on Hon'ble NGT order dated 20.07.2020 in the matter of O.A. No. 72 of 2020

28.	22/12/2020	Vide letter no. 1023/SPCB/1564 & 1565 dated 22/12/2020 report has been submitted to CPCB on follow up action in compliance of order of the Hon'ble NGT order dated 20.07.2020 in the matter of O.A. No. 72 of 2020 regarding COVID-19 bio medical waste management.
29.	06-01-2021	Reply of direction vide no. SPCB/1413 dated 23/11/2020 regarding the same was received from Health Department vide letter no. 87/H &FW Dept dated 06/01/2021.
30.	11/01/2021	Letter no. 1023/SPCB/1587 dated 11/01/2021 sent to Office of the Chief Secretary, Government of Sikkim informing Government that the Board has already submitted report on follow up action in compliance with the order of the Hon'ble NGT order dated 20.07.2020 in the matter of O.A. No. 72 of 2020 regarding COVID-19 bio medical waste to CPCB.
31.	12/01/2021	Reply received from Namchi Municipal Corporation vide letter no. 138/NMC/11 dated 12/01/2021 against vide letter no. 1023/SPCB/1515-1523 dated 14-12-2020 to UDD & ULBs
32.	13/01/2021	Vide letter no. nil dated 13/01/2021received from Office of the District Collector, Namchi South Sikkim regarding reply of Direction issued by the Board vide letter no. SPCB/1413 dated 23/11/2020
33.	15-02-2021	The Board has sent letter vide no. SPCB/1725 to 1727 dated 15/2/2021 for giving two weeks' time for implementation of the Bio Medical Waste Management Rules, 2016.
34.	04-03-2021 **(I)**	The letter vide no. 1835 to 1838 dated 4.03.2021with segregation of duties sent to **Health and Family Welfare Department** regarding scientific disposal of bio medical waste arising out of Covid-19 treatment-compliance of Bio Medical Waste Management Rules, 2016 in the matter of O.A. No. 72/2020 dated 18.01.2021.
	(II)	Vide letter no.1839 & 1840 dated 04.03.2021 same matter was sent to **PHE Department**
	(III)	vide letter no.1841 to 1849 dated 04/03/2021 same matter was sent to **UDD and ULBs**
35.	18/03/2021 to 24/03/2021	Training on bio medical waste management given to Doctors, Nurses and Waste Handlers of all districts by Health Department in coordination with SPCB-Sikkim and CPCB, Regional Directorate, Shillong.

G. Submission of report on gaps in waste management to Government:

SPCB – Sikkim has prepared and submitted a report on gaps in waste management to the Government. The section on biomedical waste management points out the lack of a common biomedical waste treatment facility as being a disadvantage to the Health Department which has to expend its time and energy in managing biomedical wastes. A common facility has the advantage of catering to several hospitals and other health care facilities (HCFs) at the same time. A common treatment facility will be able to take a huge load of waste treatment, such as when there is an epidemic, hence reducing the burden of waste treatment in hospitals which will be stressed in such situations. In the absence of such common treatment facility it is imperative to have efficient, standard integrated and effective captive treatment facilities in the hospitals and other health care centers of the State. The current COVID situation has exposed the lacunae in the existing captive treatment facilities of all hospitals including the new STNM hospital.

Chapter-9

Status of Implementation of the E-Waste Management Rules, 2016

1. Introduction

E-waste means electrical and electronic equipment (EEE), whole or in part discarded as waste by the consumer or bulk consumer as well as rejects from manufacturing, refurbishment and repair processes In exercise of the powers conferred by sections 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), and in supersession of the E-waste (Management and Handling) Rules, 2011, the E-waste Management Rules, 2016 came into force on 23rd March, 2016. The rules shall apply to every manufacturer, producer, consumer, bulk consumer, collection centres, dealers, e-retailer, refurbisher, dismantler and recycler involved in manufacture, sale, transfer, purchase, collection, storage and processing of e-waste or electrical and electronic equipment.

2. Role of State Pollution Control Board (SPCB)

i. Inventorisation of e-waste;
ii. Grant and renewal of authorisation to manufacturers, dismantlers, recyclers and refurbishers;
iii. Monitoring and compliance of Extended Producer Responsibility(EPR) - Authorisation as directed by Central Pollution Control Board and that of dismantlers, recyclers and refurbishers authorisation;
iv. Conduct random inspections of dismantler or recycler or refurbisher;
v. Maintain online information regarding authorisation granted to manufacturers, dismantlers, recyclers and refurbishers;
vi. Implementation of programmes to encourage environmentally sound recycling;
vii. Action against violations of the E-waste Management Rules, 2016;
viii. Any other function delegated by the Ministry under the E-waste Management Rules, 2016.

3. Status of E-waste in Sikkim:

i. The state has no producer, e-retailer of electronic equipments and re-furbisher, dismantler and recycler of the e-wastes;
ii. Collection centres have been set up in Gangtok Municipal Corporation, Namchi Municipal Council and Geyzing Nagar Panchayat due to the absence of collection centres that is to be set up by Producers under the EPR provisions of the Rules;
iii. Application has been received by the SPCB from M/s RLG Logistics India Pvt. Ltd. for setting up of collection centre in East Sikkim as a Producer's Responsibility Organization (PRO). The Board is currently verifying the EPR authorizations of the Producers under which the PRO is setting up the collection centre.
iv. In the matter before the Hon'ble Nation Green Tribunal O.A. 512/2018 Shailesh Singh Vs. State of U.P. and Ors., the SPCB has prepared and submitted action plan to the CPCB;
v. IEC plan is currently being prepared by Information Technology Department, Govt. of Sikkim.

vi. There are no informal sector for dismantling & recycling of E-waste in the state;
vii. Public grievance/complaints have not been received in the year 2020-21 with regard to E-waste;
viii. As per the annual returns/report on E-waste for the year 2020-21, the quantity of E-waste generated is 6646 nos. of EEE under Schedule I of the Rules and 1315 nos. of LED lights/bulbs.

4. Awareness programme:

i. A public notice was published on the daily newspaper stating about the newly revised rules and its application to various stakeholders.
ii. E-Waste Management and Disposal training for industrial units was conducted by National Institute of Electronics & IT Department (NIELIT), Gangtok training arm of the Ministry of Electronics and IT (Meit Y) in collaboration with the State Pollution Control Board –Sikkim to various stakeholders, Government Departments, Banks, PSUs & industries;
iii. E-waste Management Awareness Programme was conducted by SPCB in coordination with Krishi Vigyan Kendra for public awareness at Namthang Block, South SIkkim

5. Disposal of e-waste

J.S Pigments Pvt. Ltd. of Kolkata, West Bengal has been authorized for collection, transportation and recycling of E-Waste from the State of Sikkim.

Chapter - 10

Hazardous and Other Waste Management

A. Introduction:

Hazardous waste (HW) means any waste which by reason of characteristics such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive causes danger or is likely to cause danger to health or environment, whether alone or in contact with other wastes or substances.

In exercise of the powers conferred by sections 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), and in supersession of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008, the Hazardous and Other waste (Management, Handling & Transboundary Movement) Rules, 2016 came into force on the 04th April, 2016.

B. Duties/Responsibilities of State Pollution Control Board as per the rules:

a) Inventorisation of hazardous and other wastes and submission of annual reports;
b) Grant and renewal of authorization;
c) Monitoring of compliance of various provisions and conditions of permission including conditions of permission issued by Ministry of Environment, Forest and Climate Change for exports and imports;
d) Examining the applications for imports submitted by the importers and forwarding the same to Ministry of Environment, Forest and Climate Change;
e) Implementation of programmes to prevent or reduce or minimize the generation of hazardous and other wastes;
f) Action against violations of these rules;
g) Any other function under these Rules assigned by Ministry of Environment, Forest and Climate Change from time to time.

The Hon'ble National Green Tribunal in the case O.A. 804 of 2017 Rajiv Narayan and Anr. Vs Union of India gave several directions to the States and Pollution Control Boards to implement the Hazardous and Other Wastes (Management, Handling and Transboundary Movement) Rules 2016 (HOWM Rules) strictly. Also, in the same case the following recommendations of a monitoring committee set up by Central Pollution Control Board on the directions of Hon'ble NGT were accepted by it.

- It is necessary that the Hon'ble NGT orders dated 30/07/2018 with regard to setting up of TSDF be complied and take immediate actions against erring units by the concerned State/UT Government and SPCBs/PCCs.

- SPCBs/PCCs and CPCB needs capacity building in terms of qualified and experienced manpower and also, tools and techniques for effective governance. Committee is informed about steps being taken by SPCBs and would review the same in detail.
- There is need to sensitize State/UT Govts. about duties required to be performed by the concerned department/agency as stipulated under Rule 5(1), 5(2), 5(3) and Schedule VII of the HOWM Rules, 2016. Hon'ble NGT may issue appropriate directions in this regard.

C. Hazardous waste generation:

The state of Sikkim currently has 43 nos. of HW generating units. M/s SICPA Ltd. and M/s CKIM Pharma Pvt. Ltd. have closed down its operation in the state. The categories of hazardous waste generated in the state are as follows:

a) ETP Sludge
b) Process waste
c) Cleaning Residue
d) Contaminated waste
e) Spent Solvent
f) Off Specification Products
g) Evaporation residue
h) Date expired products
i) Filter Medium
j) Used/Spent Oil

During the year 2020-21 the quantity of HW generated is **1915.19 MT of incinerable waste and 26.98 KL of recyclable waste.**

D. Hazardous Waste Disposal:

The responsibilities of the State Pollution Control Board increases many folds as there is no Common Treatment Storage and Disposal Facility(TSDF) for hazardous wastes in the State and untreated wastes are to be transported through hilly terrain outside the State. Since the time the pharmaceutical units were established in the State about 15 years ago, the hazardous wastes generated by them have been sent to M/s West Bengal Waste Management Ltd. Haldia, West Bengal, a common facility set up in West Bengal mainly for industries in West Bengal. The SPCB Sikkim enters into agreement with the SPCB West Bengal to allow authorization and transportation of wastes from Sikkim to Haldia by road. As hazardous wastes are being subjected to incineration in this facility it was proposed to explore possibility of co-processing of these wastes for use as fuel in place of coal in cement factories in Assam and Meghalaya. SPCB –Sikkim started negotiating with Hills Cement Company, Mynkree, Meghalaya and Calcom Cement India Ltd. (CCIL), Umrangso, Dima Hasa District, Assam. Spent oil is being dispatched to two oil refineries one at Haryana and the other at West Bengal for recycling.

Plate No. 12: Hazardous wastes being loaded for transportation to Umrangso, Assam

During the year 2020-21, the quantity of HW transported to facilities for disposal, co-processing & recycling is:

Sl. No.	Name, Type & Address of the Facility	Quantity
1.	M/s West Bengal Waste Management Ltd., (TSDF) Haldia, West Bengal	1394.494 MT
2.	M/s Calcom Cement India Ltd., (Cement Plant) Umrangso, Dima Hasao District, Assam	645.721 MT
3.	a) M/s M.K. Industries Ltd., (Oil Refinery) Haryana. b) M/s Kund Refinery Works, (Oil Refinery) Hoogly, West Bengal	26.98 KL

E. Authorization for granting hazardous waste:

As per the provisions of the Hazardous and Other waste (Management, Handling & Transboundary Movement) Rules, 2016 it is mandatory for all industrial units generating hazardous or involved in handling HW to obtain Authorization from SPCB/PCCs. As per the Directives of the MoEF&CC, Central Pollution Control Board and Hon'ble National Green Tribunal, the SPCB-Sikkim grants authorization to such industrial units after insection and verifying the guidelines for safety precautions for handling hazardous wastes are complied with.

F. Contaminated Sites:

The SPCB-Sikkim has not received any complaint/information or observed during the inspections any hazardous waste contaminated sites in the state. Till date no accidents have also been reported during transportation of Hazardous waste.

G. List of industries in Sikkim generating hazardous wastes:

Sl. No.	Name of the Industry	Address of the Industry	Incinerable waste Generation in the year 2020-21 in MT
1.	Aristo Pharmaceuticals	Baghey khola, East Sikkim	40.58
2.	Savi Health Science	Majhitar, East Sikkim	0.12
3.	SBL	Majhitar, East Sikkim	0.245
4.	Torrent Pharmaceuticals Unit-I	32 No., Middle camp, East Sikkim	120.417
5.	Torrent Pharmaceuticals Unit-II	32 No., Middle camp, East Sikkim	57.918
6.	Sun Pharma, Unit I	Setipool, East Sikkim	85.26
7.	Sun Pharma, Unit II	Namli Block, Gidang Marchak, East Sikkim	294.075
8.	Lupin	4th mile Bhasmey, East Sikkim	115.87
9.	Cipla Unit I,	Kumrek, East Sikkim	44.492
10.	Cipla Unit II	Rorathang East Sikkim	44.512
11.	Intas Pharmaceutical Unit I	Bhagey khola East Sikkim	10.514
12.	Zydus Healthcare Unit I	Bhageykhola East Sikkim	44.043
13.	Zydus Healthcare Unit II	Kumrek, East Sikkim	174.054
14.	Golden Cross Pharmaceuticals	Tarpin Block, Rorathang East Sikkim	87.912
15.	Alkem Laboratories Unit I	Kumrek, East Sikkim	5.04
16.	Swiss Garnier Genexiaa Science Unit II	Tarpin Block, East Sikkim	11.84

Sl. No.	Name of the Industry	Address of the Industry	Incinerable waste Generation in the year 2020-21 in MT
17.	Zuventus Healthcare	Bhasmey, East Sikkim	15.899
18.	PTS Packers and Providers	Sangkhola, East Sikkim	3.07
19.	STP Pharmaceuticals	Sangkhola, East Sikkim	0.88
20.	Glenmark Pharmaceuticals	Samlik Marchak East Sikkim	35.687
21.	HeBa Pharmaceuticals,	Marchak East Sikkim	2.01
22.	Ideal Cures	Pacheykhani, Est Sikkim	0.0495
23.	Macleods Pharmaceuticals	Aho-Yangtam, East Sikkim	308.0
24.	Indchemie Health Specialities I	Kumrek, East Sikkim	2.88
25.	Indchemie Health Specialities II	Kumrek, East Sikkim	5.87
26.	Regal Healthcare	Bhasmey, East Sikkim	0.4369
27.	Shangrila Industries	Mining, Rangpo East Sikkim	2.25
28.	Torrent Pharmaceuticals Unit III	Bagheykhola, East Sikkim	30.172
29.	Alembic Pharmaceuticals	Samardung, South Sikkim	45.85
30.	Alkem Health Science I	Samardung, South Sikkim	12.02
31.	Alkem Health Science II	Samardung, South Sikkim	23.637
32.	Alkem Health Science III	Samardung, South Sikkim	19.686
33.	Alkem Laboratories V	Samardung, South Sikkim	10.34
34.	Intas Phamaceuticals II	Samardung, South Sikkim	20.663
35.	Aishwarya Pharmaceuticals	Samardung, South Sikkim	2.2
36.	Marc Life Sciences	Samardung, South Sikkim	0.4839
37.	Salas Pharmaceuticals	Samardung South Sikkim	1.22
38.	Zydus Wellness Products I	Namthang Elaka, South Sikkim	31.264
39.	Zydus Wellness Products I	Namthang Elaka, South Sikkim	13.885
40.	Swiss Garnier Genexiaa Sciences I	Mamring, South Sikkim	6.5
41	Microlabs	Mamring South Sikkim	94.89
42.	Godrej Consumer Products	Mamring South Sikkim	3.2
43.	Mankind Pharma	Daring Block, South Sikkim	54.084

Sl. No.	Name of the Industry	Address of the Industry	Incinerable waste Generation in the year 2020-21 in MT
44.	Curetec Pharmaceuticals	Daring Block, South Sikkim	Not Operational
45.	IPCA Laboratories I	Bharikhola, South Sikkim	22.52
46.	IPCA Laboratories II	Bharikhola, South Sikkim	6.40
47.	Trophic Wellness	Manpur, South Sikkim	2.63
48.	Aurochem Laboratories	Manpur,South Sikkim	0.056
49.	Lividus Pharmaceuticals	Samrdung, South Sikkim	Not Operational

Chapter – 11

Battery Waste Management 2020-2021

A. Manufactures

Number of Manufactures	Number of Manufactures submitted returns	Quality of battery Sold		Quantity of used batteries send to Authorized Recyclers'		No of collection centers	No of dealer	No of registered Dealers
		Nos	Weight (Kg)	Nos	Weight (Kg)			
Nil	nil	nil	nil	nil	Nil	nil	7	7

B. Assemblers

Number of Assemblers	Number of Assemblers Submitted returns	Quantity of batteries Assemblers and sold		Quantity of used batteries send to Authorized Recyclers	
		Nos	Weight(Kg)	Nos	Weight(Kg)
Nil	nil	nil	nil	nil	nil

C. Importers

Number of Importers	Number of Importers Submitted	Quantity of batteries Sold		Quantity of used batteries send to Authorized Recyclers	
		Nos	Weight(Kg)	Nos	Weight(Kg)

D. Bulk Consumers

Number of Bulk Consumers	Number of Bulk Consumers Submitted returns	Quality Quantity of batteries Sold		Quantity of used batteries send to Authorized Recyclers	
		Nos	Weight(Kg)	Nos	Weight(Kg)
8	8	1006	20002 kg	nil	nil

E. Auctioneers

Number of Auctioneers	Number of Auctioneers Submitted returns	Quantity of batteries Sold		Quantity of used batteries send to Authorized Recyclers	
Nil	nil	nil	nil	nil	nil

F. Recyclers

Numbers of Recyclers	Capacity of Recyclers in MT/Year	Number of recyclers submitted returns	Weight of used batteries received from and recycled						
			Manufactures	Assemblers	Dealers	Importer	Bulk consumers	Auctioneer	Self-importers
nil	Nil	nil	nil	nil	7	nil	17063 kg	nil	nil

Note: - Out of 29 nos of Pharmaceutical unit who submitted Annual returns. The following 8 no.s of pharmaceutical fall under bulk consumer as per the information provided by the units.

Sl.no	Name of Pharmaceutical	Battery Purchase In Year 2020/21
1	Golden Cross Pharma Pvt. Ltd	142
2	Torrent Pharma Unit II	138
3	Lupin	150
4	Cipla II	102
5	Glenmark	109
6	Sun Pharma II	125
7	Micro Labs Ltd	102
8	Torrent	138

Chapter-12

Construction & Demolition Waste Management Rules, 2016

The following actions were taken during the year:

- Formulating of Draft policy on Construction & Demolition Waste Management by UDD has been completed and is under process for approval of the Government.
- Initiatives have been taken by Urban Development Department, Government of Sikkim, for identification of site for processing facility.
- Gangtok Municipal corporation (GMC), East Sikkim has initiated through appeal to the waste generator for disposal of C&D waste at the area designated for C&D waste beside landfill site without levying of tipping fee, subject to obtaining of permission from GMC.
- Meetings have been conducted with all the concerned line departments regarding the implementation of provisions under C&D Waste Management Rules, 2016.
- Sensitization programmes have been conducted by SPCB-Sikkim on C&D Waste Management Rules, 2016 for the executing officials at the block and district level.

Chapter - 13

Annual Report on National Ambient Monitoring Programme for the Period 2020-2021.

1. Introduction

Environmental pollution is one of the emerging challenges faced by the world as pollutants are the by-products of man's own actions. The rapid growth of urbanization has led to steep rise in the urban population which has adversely affected the environment in many ways including deterioration of Air Quality.

Air pollution refers to the release of pollutants into the air and the environment. There are many factors that influence the spread of Air pollutants in a given location including wind and atmospheric stability, as well as the local terrain.

Industrialization and Urbanization have resulted in a profound deterioration of Air Quality. In order to take stock of the ambient air quality in the Country and carry out timely intervention by framing of necessary policy for remedial measures, the Central Pollution Control Board (CPCB) under the Ministry of Forest, Environment and Climate Change, Govt. Of India has started a Nationwide Programme known as National Air Monitoring Programme (NAMP) . There are total 804 operational NAMP stations in the country.

2. The objectives of air quality monitoring programmes

The main objective of air quality monitoring is to collect data that can be used to make informed decisions to best manage and improve the environment. Air quality monitoring is highly essential in order to make informed policy decision and chalking out well defined strategy for mitigation measures.

In Sikkim, 09 stations have been established under the NAMP and out of which 08 stations are currently functional. One of the stations located at Tashi View Point, Gangtok was removed after the site was damaged by minor landslide. A network with 08 ambient air quality monitoring station covering all districts has been put in place in the State of Sikkim to assess the air quality.

National Ambient Air Quality Monitoring Programme (NAMP) in the state is operated under complete financial assistance of Central Pollution Control Board (CPCB). Monitoring is carried out in 104 days and on 24 hours basis in a year as per the frequency stipulated by CPCB guidelines. The data obtained from these stations is being submitted to CPCB through online portal. SPCB-Sikkim has monitoring criteria of pollutants only in 08 stations viz. Respirable Suspended Particulate Matter (PM10), Sulphur Dioxide (SO_2), and Oxides of Nitrogen (NO_2). Out of sanctioned 21 posts, the stations are presently being manned by 16 scientific personnel only.

TABLE 1. Station wise Ambient Air Quality Monitoring Data (Annual Average) for the Year 2020-2021

Sl. No.	STATION CODE	LATITUDE/ LONGITUDE	STATION NAME	TYPE	RSPM (PM10) µg/m^3	SO_2 µg/m^3	NO_2 µg/m^3
01.	521	i. 27.3183˚N ii. 88.6063˚E	**Gangtok**	Residential	**45.66**	**5.73**	**9.09**
02.	896	i. 27.1736˚N ii. 88.5305˚E	**Rangpo**	Residential	**53.87**	**7.16**	**7.85**
03.	897	i. 27.5144˚N ii. 88.4969˚E	**Singtam**	Residential	**39.72**	**6.33**	**7.39**
04.	898	i. 27.3028˚N ii. 88.2344˚E	**Pelling**	Residential	**22.58**	**4.63**	**2.7**
05.	899	i. 27.3075˚N ii. 88.363˚E	**Ravangla**	Residential	**19.79**	**4.01**	**3.38**
06.	900	i. 27.17˚N ii. 88.35˚E	**Namchi**	Residential	**26.98**	**4.27**	**4.94**
07.	901	i. 27.6033˚N ii. 88.6469˚E	**Chungthang**	Residential	**19.17**	**4.75**	**4.94**
08.	902	i. 27.5025˚N ii. 88.5358˚E	**Mangan**	Residential	**25.90**	**4.17**	**1.97**

(This data is based on the monitoring carried out at the 08 NAMP Stations for the year 2020-21)

3. Monitoring of PM_{10}

PM stands for particulate matter and PM_{10} are minute particles present in the air with a diameter of 10 micrometers. PM_{10} can originate from a variety of sources both indoor and outdoor. The main sources of PM_{10} includes dust from construction sites, landfills and agriculture, wildfires and wastes burning , industrial sources , windblown dust from open lands, pollen etc.

PM_{10} trend during the period April 2020- March 2021 is depicted in **Figure-1** and the findings were as follows:

As per the findings of the Ambient Air Quality monitoring under NAMP value of PM10 at all Stations were within the national annual average standard of 60µg/m^3. As Gangtok(East Sikkim) being the capital and Rangpo (East Sikkim) being the main corridor to the state, lots of variation in the level of Particulate matter was observed at two stations whereas other stations did not show much variation.

After the onset of winter season the level of PM10 increased gradually peaking in the month of March, however, in contrast PM10 at Rangpo remained significantly high even during monsoon season.

The highest monthly average value of PM10 in the entire state was observed at Rangpo station in the month of March i.e 76.75µg/m^3 which can be seen in Fig 1.

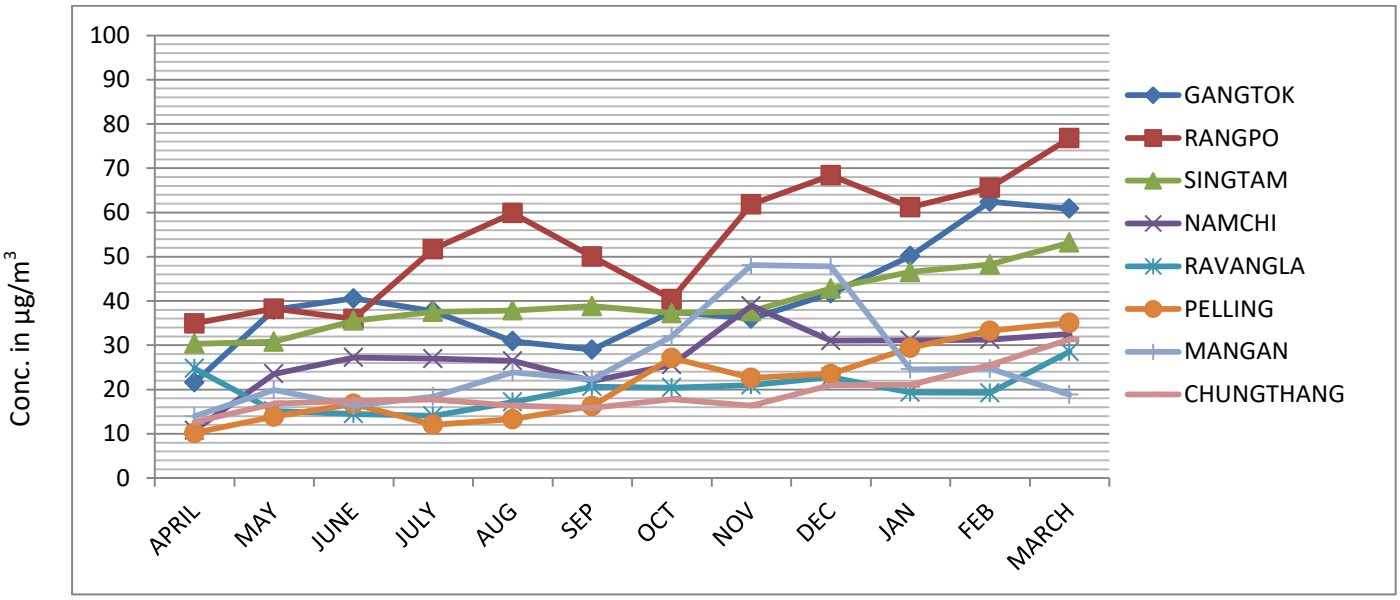


Figure 1: Monthly average values of PM10 during the year 2020-21.

3.2. MONITORING OF SO_2

SO_2 trend during the period April 2019- March 2020 is shown in Figure 2 and following Observations were made :

As per the findings of the Ambient Air Quality monitoring under NAMP, values of SO_2 were within the 24hourly average standard i.e 80 µg/m^3 and also within the annual average standard of 50 µg/m^3. The value of SO_2 in Rangpo station was higher than the other stations as the station is situated along the National highway and it also happens to be the main entry point to Sikkim. There are many industries situated in and around Rangpo and also the area witnesses high numbers of vehicular movement and emission from such vehicles are major contributor of the Air pollutants.

The level of SO2 remained between 2µg/m^3 to 10µg/m^3 throughout the year without much significant variations. However, during the month of October, the values reduced to some extent which may be related to Dusshera holidays as the vehicular movement gets reduced to a large extent during the festival season. Thereafter, during the month of November, few stations such as Rangpo, Singtam and Gangtok recorded slight increase in the values of SO_2.

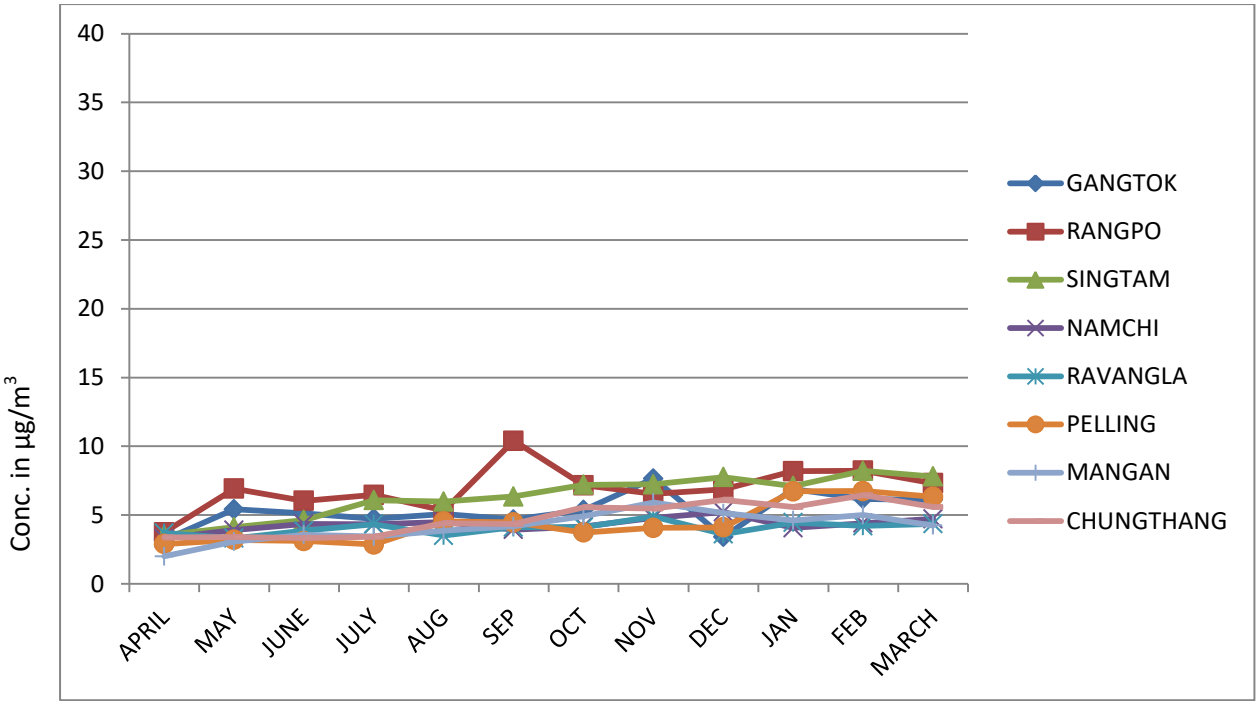


Figure 2.Monthly average values of SO_2 for the year 2020-21.

3.3. MONITORING OF NO_2

NO_2 trend during April2019- March2020 is shown in Figure 3. As per the findings of the Ambient Air Quality monitoring under NAMP, value of NO_2 are well within the 24hourly standard of 80µg/m^3 and similarly, the values were within the national annual average standard of 40µg/m^3. In case of Gangtok, the level of NO_2 were slightly higher than rest of the stations, it may be due to the fact that Gangtok being the capital has highest population and vehicular density in the State and also one of the most prominent tourist hub. Hotels and allied businesses are lately mushrooming in the city in an unprecedented rate coupled with tremendous increase in floating population due to various developmental activities. Although no industrial units are located in the Gangtok town. The level of NO_2 are same as compared to other areas surrounded by industrial belts such as Rangpo and Singtam.

Gangtok station recorded significantly higher level of monthly average values of NO_2 between November to January and highest level was observed during the month of December, thereafter it decreased significantly but remained higher than the rest of the stations.

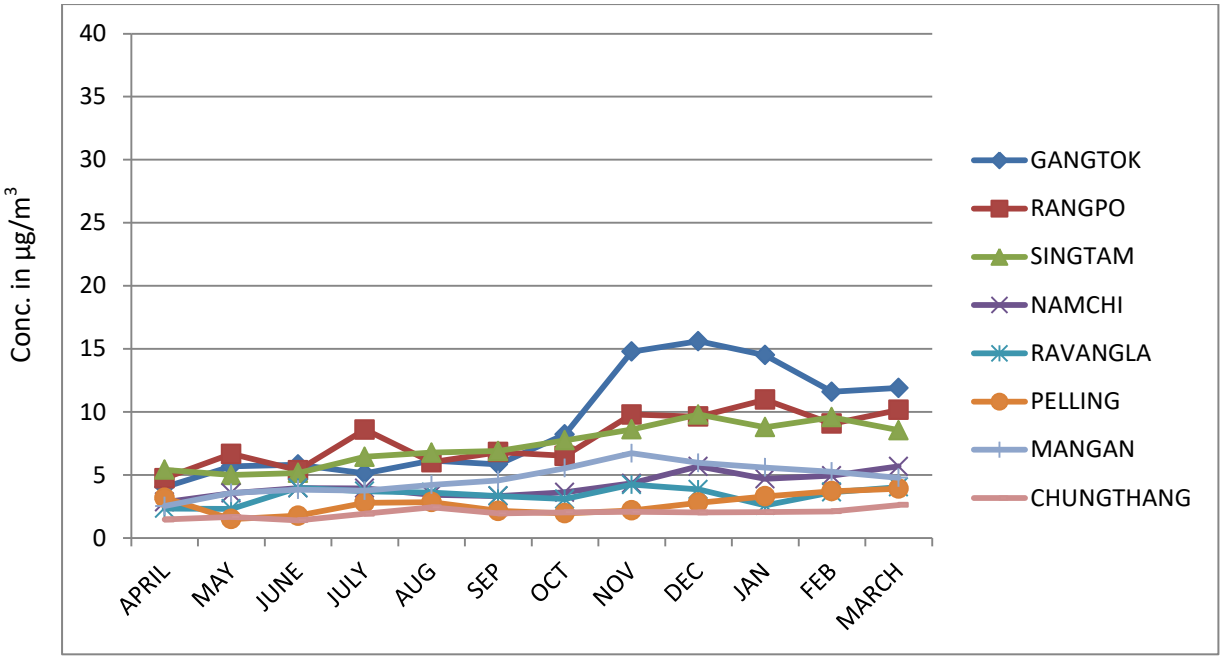


Figure 3. Monthly average values of NO_2 during the year 2020-21.

4. Air Quality Index

a. The Air Quality Index (AQI) is a scale designed to help understand the impact of air quality on health.

b. Air Quality Index is a tool for effective communication of air quality status to people in terms, which are easy to understand. It transforms complex air quality data of various pollutants into a single number (Index Value), nomenclature and colour.

c. There are Six AQI categories, namely Good, Satisfactory, Moderately Polluted, Poor, Very Poor and Severe. Each of these categories is decided based on ambient concentration values of air pollutants and their likely health impacts (Known as health break points).

d. AQ sub –index and health break points are evolved for eight pollutants (PM 10, PM 2.5, NO_2, SO_2, CO, O_3, NH_3, and Pb) and calculation of AQI using spreadsheet excel is done using 07 parameters except Pb.

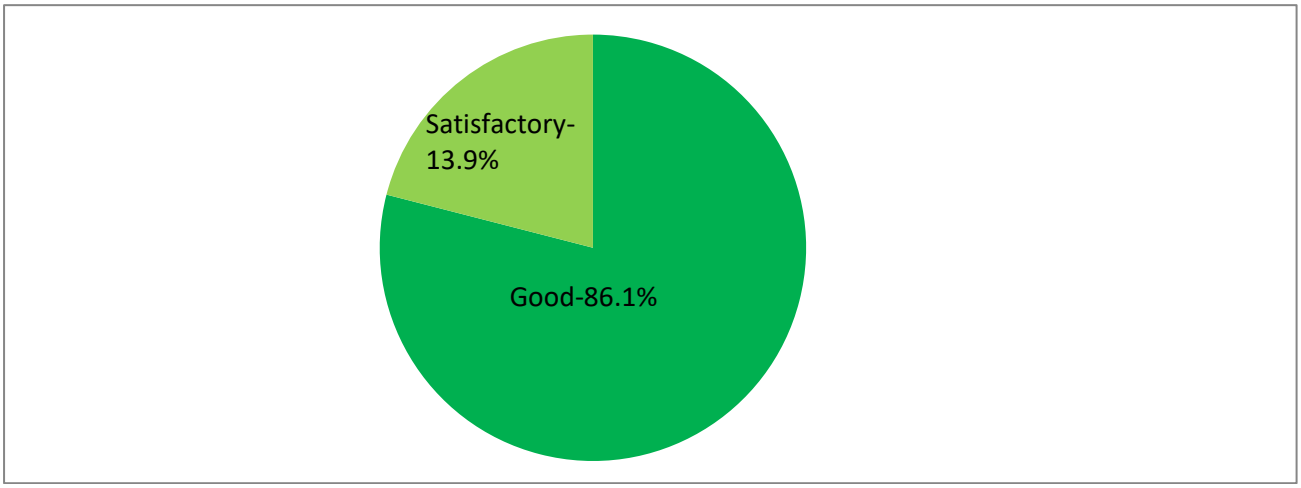
e. However, minimum there criteria pollutants are required for calculating the AQI as per the guideline. In case of our State only three criteria pollutants are being monitored i.e PM10, SO_2 , NO_2 and the same are used for calculating the Air Quality Index.

4.1 Overall Summary of AQI

i. The air quality monitoring was done across 8 stations in different districts of the state in the year 2020-2021 in which a total of 712 values are taken.

ii. AQIs in all stations are within Good and Satisfactory range which goes to show that the air quality in the state is much better than the rest of the States in India.

iii. About 86.1% (613 observations) falls in the Good Category as shown in Figure 4.. Similarly, 13.9 % (99 observations) are in the Satisfactory category.



Legend for reading AQI

AQI	0-50	51-100	101-200	201-300	301-400	401-500
Remarks	Good	Satisfactory	Moderate	Poor	Very Poor	Severe

Figure 4. AQI values observed in the monitoring sites (April 2020-March2021)

Air Lab at Gangtok Head Office

Air Lab at Baghekhola

Air Lab at Namchi

Air Lab at Pelling

Air Lab at Baghekhola

Monitoring Site at Gangtok

Monitoring site at Singtam

Monitoring Site at Chungthang

Monitoring Site at Mangan

Monitoring Site at Rangpo

Monitoring Site at Gangtok

Monitoring Site at Pelling

5. CONCLUSION

The Air quality monitoring was conducted throughout the year in all the 8 stations of the state and as per the findings the level of Air pollutants remained significantly low in all stations.

During monsoon season, the observable values of all pollutants came down significantly and after the change in the season (onset of winter season) the level of pollutants gradually increased throughout the winter.

However, all the values of PM10, SO_2 & NO_2 in 08 stations were found to be within the national annual average standard of 60µg/m^3**,** 50µg/m^3 & 40µg/m^3 respectively.

Chapter-14

NATIONAL WATER MONITORING PROGRAMME (NWMP)

I. Introduction:

Water is the fundamental basis of life. Water pollution as a whole not only has immediate affliction on health of living beings, financial burden on administration for mitigation and agricultural, industrial & domestic utilization but also has future repercussions. Eutrophic water bodies render water useless for domestic use, agriculture, drinking or pisciculture. Biomagnification causes major health issues in higher/apex levels of the food chain. Therefore continuous monitoring of water bodies is highly imperative in order to lead a healthy way of life.

The Government of India enacted the Water (Prevention and Control of Pollution) Act 1974 to maintain wholesomeness of aquatic resources. The act prescribes various functions for the Central Pollution Control Board (CPCB) at the apex level and State Pollution Control Boards at the state level. Under this Act the SPCB-Sikkim has the following duties and functions:

1) To plan a comprehensive programme for prevention, control and abatement of water pollution and to secure the execution thereof
2) To advise the State Government on any matter concerning prevention, control and abatement of water pollution.
3) To collect and disseminate information related to water pollution.
4) To collaborate with Central Pollution Control Board in programme related to prevention, control and abatement of water pollution.
5) To inspect air pollution control areas, assess quality of water and to take steps for prevention, control and abatement of water pollution in such areas.
6) To perform the above functions, CPCB needs continuous monitoring of water quality of aquatic resources in the country. CPCB has established a network of water quality monitoring to fulfill the following objectives:
    a) Rational planning of pollution control strategies and their prioritization;
    b) To assess nature and extent of pollution control needed in different water bodies or their part;
    c) To evaluate effectiveness of pollution control measures already in existence;
    d) To evaluate water quality trend over a period of time;
    e) To assess assimilative capacity of a water body thereby reducing cost on pollution control;
    f) To understand the environmental fate of different pollutants.
    g) To assess the fitness of water for different uses.

II. Objectives of Nation Water Monitoring Programme:

The Central Pollution Control Board (CPCB) in collaboration with State Pollution Control Boards (SPCBs) in the States and Pollution Control Committees (PCCs) in Union Territories has established a National Water Quality Monitoring Network (NWMP) in order to assess status of water quality and to facilitate for prevention and control of pollution in water bodies. Present water quality monitoring network under NWMP comprises 4111 stations on surface and groundwater in 28 States and 8 Union Territories. Monitoring is carried out with a frequency on monthly, quarterly, half yearly and yearly basis. Under this programme 14 Water Monitoring Stations have been set up in the state of Sikkim. A State Water Laboratory for the purpose of the NWMP has been setup in Gangtok, Sikkim. Water Quality Monitoring and Analysis is conducted by 7 scientific personnel trained by Regional Director and Scientist D of Central Pollution Control Board, Regional Directorate, Shillong on a monthly basis and data is submitted to CPCB via Environmental Water Quality Data Entry System (EWQDES). The 14 water monitoring stations are stated below:

Table1: List of surface water monitoring station in the state of Sikkim

Sl. No.	Name of the Station	Station code	Latitude ºN	Longtitude ºE
1.	Chungthang	1801	27.60	88.64
2.	Dikchu	1802	27.40	88.52
3.	Burtuk	1803	27.35	88.61
4.	Adampool	1804	27.30	88.58
5.	Ranipool	1805	27.29	88.59
6.	Singtam - Ranichu	1806	27.22	88.49
7.	Singtam - Teesta	1807	27.11	88.45
8.	Rangpo	1808	27.17	88.52
9.	Melli	1809	27.08	88.45
10.	Rangeet river at NHPC dam Site	2034	27.29	88.29
11.	Rangeet river at Legship	2035	27.27	88.27
12.	Rangeet river at Reshi	2036	27.22	88.30
13.	Rangeet river at Jorethang	2037	27.13	88.27
14.	Rangeet river at Triveni	2038	27.08	88.41

III. Parameters:

Water samples are analyzed for 9 core, 19 general parameters, 9 trace metals and set of pesticides as per the Guidelines on Water Quality Monitoring , 2017 issued by Ministry of Environment, Forest and Climate Change (MoEF&CC). Analyzed water quality parameters are compared with the designated best use water quality criteria recommended by CPCB or primary water quality criteria for outdoor bathing notified under Environment (Protection) Rules, 1986 or BIS Drinking Water Specifications i.e. IS:10500-2012 or water quality standards for coastal water depending on the use of water bodies. As per the Guidelines on Water Quality Monitoring, 2017 the following parameters are analyzed in the SPCB-Sikkim Laboratory:

A. Pre – monsoon:

a) General – Colour, Odour, Temperature, pH, Conductivity, Dissolved Oxygen, Total Dissolved Solids, Turbidity.
b) Nutrients – Ammonical Nitrogen (NH_4-N), Nitrite & Nitrate Nitrogen (NO_2 + NO_3), Total Phosphate (P)
c) Demand Parameters – Biochemical Oxygen Demand (BOD) & Chemical Oxygen Demand (COD)
d) Major Ions – Sodium(NA^+), Potassium(K^+), Calcium (Ca^{++}), Magnesium (Mg^{++}) Carbonate (CO_3^-), Bicarbonate(HCO_3), Chloride (Cl^-), Sulphate (SO_4^{--})
e) Other inorganic – Fluoride (F), Boron (B) and any other location specific parameter
f) Microbiological – Total Coliform & Fecal Coliform

B. Rest of the year

Parameters - Colour, Odour, Temperature, pH, Dissolved Oxygen, Total Dissolved Solids, NO_2^-, NO_3^-, BOD, Total Coliform & Fecal Coliform.

Chapter-15

Laboratories under SPCB – Sikkim

Water laboratory

Plate No. 13: Bacteriological investigation in Water Laboratory SPCB-Sikkim, Gangtok

Laboratories under SPCB-Sikkim

State Water Laboratory (including bacteriological) at SPCB-Sikkim

Description and no. of equipment's:

1. Refrigerator – 1 no.
2. Deep refrigerator – 1nos.
3. Hot Plate – 3 nos.
4. ph meter – 1
5. Turbidity meter – 2 nos.
6. Conductivity meter – 1
7. TDS meter – 1 no.
8. Dissolved Oxygen Meter – 5 nos.
9. Double Distillation unit – 1 no.
10. Filtration motor – 1 no.
11. Water bath – 1 no.
12. COD digester 3 nos.
13. BOD incubator – 2 nos.
14. Autoclave – 3 nos.
15. Microscope 4 nos.
16. Digital Water & Soil Analysis Kit – 2 nos.
17. Laminar air flow – 1no

18. Hot air over – 2 nos.
19. Digital Oven – 2 nos.
20. Rotary Shaker – 1 no.
21. Muffle Furnace – 1no.
22. Digital Flame photometer
23. UV Spectrophotometer – 1 no.
24. Analytical balance 2 nos.
25. Compressor – 1 no.
26. Electrical Suction machine – 1 no.
27. Spindle Stirrer – 1 no
28. Fume hood – 1no.
29. Digital Colony Counter – 1 no.
30. Incubator – 2 nos.
31. Centrifuge – 1no.

Plate No. 14: Water Laboratory, SPCB-Sikkim, Gangtok

Type and number of tests conducted for Water Quality:

Sl. No.	**Parameters**	**No. of tests conducted**
1.	Ph	163
2.	Conductivity 63 mhos/cm	157
3.	NO_3-N mg/l	157
4.	D.O. mg/l	163
5.	B.O.D. mg/l	163
6.	T. Coliform MPN/100ml	157
7.	F. Coliform MPN/100ml	157
8.	Turbidity NTU	28

9.	Alkalinity mg/l	28
10.	PO_4 mg/l	28
11.	SO_4 mg/l	28
12.	Cl mg/l	28
13.	Hardness mg/l	28
14.	Ca++ mg/l	28
15.	NO_2-N mg/l	28
16.	Flouride mg/l	28
17.	TSS mg/l	6
18.	C.O.D. mg/l	6
19.	Oil & Grease mg/l	6

State Air Laboratory:

Plate No. 15: Air Laboratory at SPCB-Sikkim, Gangtok

State Air Laboratory at SPCB -SIKKIM

Description and no. of equipment's:

1. Respirable Dust Sampler PM 10 – 5 nos.
2. PM 2.5 sampler – 3 nos.
3. UV-VIS Double Beam Spectrophotometer – 1 nos.
4. Refrigerator – 1 no.
5. Weighing balance – 2 nos.
6. Hot Air Oven – 1 no.
7. Fuming Chamber -1 no.
8. Sound Level Meter – 4 nos.

National Air Monitoring Programme Laboratories:

Description and no. of equipment's:

1. Spectrophotometer – 5 nos.
2. Weighing balance – 6 nos.
3. Distillation unit – 6 nos.
4. Respirable Dust Sampler PM 10 – 7 nos.
5. Dehumidifier – 2 nos.
6. Inverter – 2 nos.
7. Hot Air oven – 6 nos.
8. Refrigerator – 6 nos.
9. Weather Monitoring System – 3 nos.

Type and periodicity of tests conducted:

Sl. No	Type of test	Periodicity
1.	Particulate Matter 2.5	Twice a week
2.	Particulate Matter 10	Twice a week
3.	Sulphur Dioxide	Twice a week
4.	Nitrogen Dioxide	Twice a week

Chapter - 16

Regulatory status of Large (ORANGE CATEGORY) Industries

Sl. No.	Name of Industry	Location	Current Valid Consent	Current Authorization for HW, BMW etc	ETP/STP installed	ETP/STP Functional	Effluent status*
1.	Aristo Pharmaceuticals	Baghey khola, East Sikkim	Yes	Yes	Yes	Yes	C
2.	Savi Health Science	Majhitar, East Sikkim	Yes	Yes	Yes	Yes	C
3.	SBL	Majhitar, East Sikkim	Yes	Yes	Yes	Yes	C
4.	Torrent Pharmaceuticals Unit-I	32 No., Middle camp, East Sikkim	Yes	Yes	Yes	Yes	C
5.	Torrent Pharmaceuticals Unit-II	32 No., Middle camp, East Sikkim	Yes	Yes	Yes	Yes	C
6.	Sun Pharma, Unit I	Setipool, East Sikkim	Yes	Yes	Yes	Yes	C
7.	Sun Pharma, Unit II	Namli Block, Gidang Marchak, East Sikkim	Yes	Yes	Yes	Yes	C
8.	Lupin	4th mile Bhasmey, East Sikkim	Yes	Yes	Yes	Yes	C
9.	Cipla Unit I,	Kumrek, East Sikkim	Yes	Yes	Yes	Yes	C
10.	Cipla Unit II	Rorathang East Sikkim	Yes	Yes	Yes	Yes	C
11.	Intas Pharmaceutical Unit I	Bhagey khola East Sikkim	Yes	Yes	Yes	Yes	C
12.	Zydus Healthcare Unit I	Bhageykhola East Sikkim	Yes	Yes	Yes	Yes	C
13.	Zydus Healthcare Unit II	Kumrek, East Sikkim	Yes	Yes	Yes	Yes	C
14.	Golden Cross Pharmaceuticals	Tarpin Block, Rorathang East Sikkim	Yes	Yes	Yes	Yes	C
15.	Alkem Laboratories Unit I	Kumrek, East Sikkim	Yes	Yes	Yes	Yes	C

- *C stands for compliant in all parameters
- **Name of month stands for the month of non-compliance and the no. stands for the no. of non-compliant parameters

Sl. No.	Name of Industry	Location	Current Valid Consent	Current Authorization for HW, BMW etc	ETP/STP installed	ETP/STP Functional	Effluent status*
16.	Swiss Garnier Genexiaa Science Unit II	Tarpin Block, East Sikkim	Yes	Yes	Yes	Yes	C*
17	Zuventus Healthcare	Bhasmey, East Sikkim	Yes	Yes	Yes	Yes	C
18	PTS Packers and Providers	Sangkhola, East Sikkim	Yes	Yes	Yes	Yes	C
19	STP Pharmaceuticals	Sangkhola, East Sikkim	Yes	Yes	Yes	Yes	C
20	Glenmark Pharmaceuticals	Samlik Marchak East Sikkim	Yes	Yes	Yes	Yes	C
21	HeBa Pharmaceuticals,	Marchak East Sikkim	Yes	Yes	Yes	Yes	C
22	Ideal Cures	Pacheykhani, Est Sikkim	Yes	Yes	Yes	Yes	C
23	Macleods Pharmaceuticals	Aho-Yangtam, East Sikkim	Yes	Yes	Yes	Yes	C
24	Indchemie Health Specialities I	Kumrek, East Sikkim	Yes	Yes	Yes	Yes	C
25	Indchemie Health Specialities II	Kumrek, East Sikkim	Yes	Yes	Yes	Yes	C
26	Regal Healthcare	Bhasmey, East Sikkim	Yes	Yes	Yes	Yes	C
27	Shangrila Industries	Mining, Rangpo East Sikkim	Yes	Yes	Yes	Yes	C
28	Torrent Pharmaceuticals Unit III	Bagheykhola, East Sikkim	Yes	Yes	Yes	Yes	C
29	Alembic Pharmaceuticals	Samardung, South Sikkim	Yes	Yes	Yes	Yes	C
30	Alkem Health Science I	Samardung, South Sikkim	Yes	Yes	Yes	Yes	C

- *C stands for compliant in all parameters
- **Name of month stands for the month of non-compliance and the no. stands for the no. of non-compliant parameters

Sl. No.	Name of Industry	Location	Current Valid Consent	Current Authorization for HW, BMW etc	ETP/STP installed	ETP/STP Functional	Effluent status*
31.	Alkem Health Science II	Samardung, South Sikkim	Yes	Yes	Yes	Yes	C
32	Alkem Health Science III	Samardung, South Sikkim	Yes	Yes	Yes	Yes	December 2020. 1(one)**
33	Alkem Laboratories V	Samardung, South Sikkim	Yes	Yes	Yes	Yes	C
34	Intas Phamaceuticals II	Samardung, South Sikkim	Yes	Yes	Yes	Yes	C
35	Aishwarya Pharmaceuticals	Samardung, South Sikkim	Yes	Yes	Yes	Yes	C
36	Marc Life Sciences	Samardung, South Sikkim	Yes	Yes	Yes	Yes	C
37	Salas Pharmaceuticals	Samardung South Sikkim	Yes	Yes	Yes	Yes	C
38	Zydus Wellness Products I	Namthang Elaka, South Sikkim	Yes	Yes	Yes	Yes	C
39	Zydus Wellness Products I	Namthang Elaka, South Sikkim	Yes	Yes	Yes	Yes	C
40	Swiss Garnier Genexiaa Sciences I	Mamring, South Sikkim	Yes	Yes	Yes	Yes	C
41	Microlabs	Mamring South Sikkim	Yes	Yes	Yes	Yes	C
42	Godrej Consumer Products	Mamring South Sikkim	Yes	Yes	Yes	Yes	C
43	Mankind Pharma	Daring Block, South Sikkim	Yes	Yes	Yes	Yes	C
44	Curetec Pharmaceuticals	Daring Block, South Sikkim	Yes. Not Operation	Not in operation for 2020-21	Yes	Yes	Not in operation for 2020-21
45	IPCA Laboratories I	Bharikhola, South Sikkim	Yes	Yes	Yes	Yes	C

- *C stands for compliant in all parameters
- **Name of month stands for the month of non-compliance and the no. stands for the no. of non-compliant parameters

Sl. No.	Name of Industry	Location	Current Valid Consent	Current Authorization for HW, BMW etc	ETP/STP installed	ETP/STP Functional	Effluent status*
46.	IPCA Laboratories II	Bharikhola, South Sikkim	Yes	Yes	Yes	Yes	C
47.	Trophic Wellness	Manpur, South Sikkim	Yes	Yes	Yes	Yes	C
48	Aurochem Laboratories	Manpur, South Sikkim	Yes	Not in operation	Yes	Yes	C
49	Lividus Pharmaceuticals	Samardung, South Sikkim	Yes. CTE	Under establishment	Yes	Yes	Under establishment
50	CKIM Pharma	Mapur South Sikkim	Not Operational	Not Operational	Yes	Yes	Not Operational
51	Lahag Spirits	Manpur, South Sikkim	Not Operational	Not Operational	Yes	Yes	Not Operational
52	Sikkim Distilleries (Blending & Bottling)	Rangpo, East SIkkim	Yes	Not required	Yes	Yes	C
53	Mount Distilleries (Blending & Bottling)	Majhitar, East Sikkim	Yes	Not required	Yes	Yes	C
54	Kanchendzonga Distilleries (Blending & Bottling)	Manpur South Sikkim	Yes	Not required	Yes	Yes	C
55	Mayell & Fraser (Blending & Bottling)	Majhitar, East Sikkim	Yes	Not required	Yes	Yes	C
56	Yuksom Breweries	Melli South Sikkim	Yes	Not required	Yes	Yes	C
57	Denzong Albrew	Mulukey, East Sikkim	Yes	Not required	Yes	Yes	C
58	Sikkim Milk Union	5th Mile, Gangtok, East Sikkim	Yes	No	Yes	Yes	C
59	C.G. Foods	Mining Ground, Rangpo East Sikkim	Yes	No	Yes	Yes	C
60	Huhtamaki India	Majhitar, East Sikkim	Yes	Yes	Yes	Yes	C

- *C stands for compliant in all parameters
- **Name of month stands for the month of non-compliance and the no. stands for the no. of non-compliant parameters

CONSENT STATUS DURING THE YEAR 2020-2021

Particulars	Consent granted	Operating	Closed
Industries:			
Red	9	9	Nil
Orange	126	126	Nil
Green	68	68	Nil
White			
Hotels	104	104	Nil
Health Care Facilities	155	155	Nil
Stone crushers	122	122	Nil
DG sets	254	254	Nil
Hot/Wet mix plants	43	43	Nil
Batching plants	15	15	Nil
Automobiles garage	39	39	Nil
Hydro Electric Power projects	7	7	Nil

STATE POLLUTION CONTROL BOARD-SIKKIM
NATIONAL WATER QUALITY MONITORING PROGRAMME (NWMP) DURING LOCKDOWN

Core Parameters

Month: April Year: 2020

Station Code	Type	Sampling Date	Water Temp. (^oC)	pH	Cond. (µmhos/ cm)	NO_3-N (mg/l)	D.O. (mg/l)	B.O.D. (mg/l)	Total Coliform (MPN/100ml)	Fecal Coliform (MPN/100/ml)
1804	R	13/04/2020	21	7.0	125	1.7	5.8	0.62	100	20
1805	R	13/04/2020	22	7.0	108	1.4	6.2	0.36	85	16
1807	R	13/04/2020	24	7.0	120	1.1	7.0	0.09	70	13

R: River

General Parameters

STATE POLLUTION CONTROL BOARD-SIKKIM
NATIONAL WATER QUALITY MONITORING PROGRAMME (NWMP) DURING LOCKDOWN

Month: April Year: 2020

Station Code	Type	Sampling Date	Turb. (NTU)	TDSs (mg/l)	Alkalinity (mg/l)	PO_4 (mg/l)	SO_4 (mg/l)	Cl - (mg/l)	COD (mg/l)	Total Hardness (mg/l)	Ca++ (mg/l)	NO_2-N (mg/l)	Fluoride (mg/l)
1804	R	13/04/2020	2.5	2.2	40	NT	18	20	56.2	25	23	1.0	NT
1805	R	13/04/2020	2.2	1.0	32	NT	15	17	35.5	22	20	0.8	NT
1807	R	13/04/2020	2.0	0.98	27	NT	12	15	18	21	18	0.7	NT

NT: Not Traceable R: River

STATE POLLUTION CONTROL BOARD-SIKKIM
MONITORING OF INDIAN NATIONAL AQUATIC RESOURCES

General Parameters to be analyzed regularly

Month: May Year: 2020

Station Code	Type	Sampling Date	pH	Cond. µmhos/ cm	NO_3-N mg/l	D.O mg/l	B.O.D mg/l	T. Coliform MPN/100ml	Faecal Coliform 100/ml
1801	R	02/05/2020	7.0	265	1.1	10.0	1.3	80	35
1802	R	04/05/2020	7.0	250	1.3	10.0	1.5	95	45
1803	R	06/05/2020	6.5	210	1.8	09.0	1.7	110	65
1804	R	06/05/2020	6.0	170	2.0	07.0	2.5	180	80
1805	R	11/05/2020	6.5	190	1.7	07.0	1.2	130	55
1806	R	11/05/2020	6.5	220	1.9	08.0	1.3	170	60
1807	R	11/05/2020	6.5	240	1.7	08.0	1.5	160	55
1808	R	13/05/2020	6.0	230	1.8	09.0	1.6	150	55
1809	R	13/05/2020	6.5	260	2.0	08.0	1.8	170	65
2034	R	18/05/2020	7.0	250	1.2	9.5	1.1	70	20
2035	R	18/05/2020	7.0	210	1.2	9.0	1.4	85	25
2036	R	18/05/2020	6.5	200	1.3	8.0	1.1	90	40
2037	R	20/05/2020	7.0	240	1.5	7.5	1.3	110	50
2038	R	20/05/2020	6.5	260	1.8	08.0	1.5	120	55

STATE POLLUTION CONTROL BOARD- SIKKIM
MONITORING OF INDIAN NATIONAL AQUATIC RESOURCES

General Parameters to be analyzed regularly

Month: June Year: 2020

Station Code	Type	Sampling Date	pH	Cond. µmhos/ cm	NO_3-N mg/l	D.O mg/l	B.O.D mg/l	T. Coliform MPN/100ml	Faecal Coliform 100/ml
1801	R	01/06/2020	7.0	260	1.0	10.0	2.0	80	35
1802	R	03/06/2020	7.0	230	1.2	10.0	2.2	100	45
1803	R	04/06/2020	6.5	200	1.4	08.0	2.4	120	50
1804	R	04/06/2020	6.6	190	1.9	07.0	2.6	200	80
1805	R	06/06/2020	6.8	180	1.8	08.0	2.5	190	70
1806	R	06/06/2020	6.5	185	1.6	08.0	2.2	180	65
1807	R	08/06/2020	6.8	190	1.7	09.0	2.0	180	70
1808	R	08/06/2020	6.7	200	1.5	09.0	2.0	170	65
1809	R	10/06/2020	6.6	215	1.9	08.0	2.3	195	70
2034	R	12/06/2020	7.2	250	1.1	10.0	2.0	100	40
2035	R	12/06/2020	7.0	220	1.3	09.0	2.0	110	45
2036	R	15/06/2020	6.5	200	1.5	08.0	2.2	110	50
2037	R	15/06/2020	6.5	210	2.0	08.0	2.0	120	55
2038	R	17/06/2020	6.5	230	2.0	09.0	2.2	150	60

R: River

STATE POLLUTION CONTROL BOARD- SIKKIM
MONITORING OF INDIAN NATIONAL AQUATIC RESOURCES

General Parameters to be analyzed regularly

Month: June Year: 2020

Station Code	Type	Sampling Date	Turb. NTU	Alk.mg/l	PO_4 mg/l	SO_4 mg/l	Cl mg/l	Hardness mg/l	Ca++ mg/l	NO_2-N mg/l	Fluoride mg/l
1801	R	01/06/2020	2.0	35	NT	20	25	35	32	1.0	NT
1802	R	03/06/2020	2.2	40	NT	22	30	38	30	1.3	NT
1803	R	04/06/2020	2.1	45	NT	23	25	35	30	1.8	NT
1804	R	04/06/2020	2.8	55	NT	25	30	40	25	2.2	NT
1805	R	06/06/2020	2.5	50	NT	23	25	35	30	2.0	NT
1806	R	06/06/2020	2.1	55	NT	25	28	35	32	2.1	NT
1807	R	08/06/2020	2.3	50	NT	22	36	38	33	2.0	NT
1808	R	08/06/2020	2.4	55	NT	24	28	35	30	2.1	NT
1809	R	10/06/2020	2.8	50	NT	25	25	39	35	2.2	NT
2034	R	12/06/2020	1.8	30	NT	22	22	30	30	1.0	NT
2035	R	12/06/2020	1.8	35	NT	20	23	35	25	1.1	NT
2036	R	15/06/2020	1.5	40	NT	24	22	30	25	1.1	NT
2037	R	15/06/2020	1.9	50	NT	23	20	35	24	1.3	NT
2038	R	17/06/2020	1.5	45	NT	25	25	37	28	1.8	NT

NT: Not Traceable R: River

STATE POLLUTION CONTROL BOARD- SIKKIM
MONITORING OF INDIAN NATIONAL AQUATIC RESOURCES

General Parameters to be analyzed regularly

Month: July Year: 2020

Station Code	Type	Sampling Date	pH	Cond. µmhos/ cm	NO_3-N mg/l	D.O mg/l	B.O.D mg/l	T. Coliform MPN/100ml	Faecal Coliform 100/ml
1801	R	02/07/20	7.0	260	1.8	10.0	2.1	110	45
1802	R	05/07/20	7.0	230	2.0	09.0	2.0	130	50
1803	R	08/07/20	6.5	200	2.2	8.5.0	2.5	180	70
1804	R	10/07/20	6.6	190	2.7	7.0.0	2.0	220	100
1805	R	10/07/20	6.8	180	2.5	09.0	2.5	210	95
1806	R	12/07/20	6.5	185	2.3	10.0	2.2	190	85
1807	R	12/07/20	6.8	190	2.2	10.0	2.0	180	70
1808	R	15/07/20	6.7	200	2.1	09.0	2.0	170	65
1809	R	15/07/20	6.6	215	2.2	10.0	2.5	190	70
2034	R	17/07/20	7.2	250	2.0	10.5	2.0	100	45
2035	R	17/07/20	7.0	220	2.0	10.0	2.0	110	45
2036	R	19/07/20	6.5	200	2.2	10.0	2.5	110	50
2037	R	22/07/20	6.5	210	2.1	10.0	2.0	120	55
2038	R	22/07/20	6.5	230	2.0	10.0	2.4	110	40

R: River

STATE POLLUTION CONTROL BOARD- SIKKIM
MONITORING OF INDIAN NATIONAL AQUATIC RESOURCES

General Parameters to be analyzed regularly

Month: July Year: 2

Station Code	Type	Sampling Date	Turb. NTU	Alk.mg/l	PO_4 mg/l	SO_4 mg/l	Cl mg/l	Hardness mg/l	Ca++ mg/l	NO_2-N mg/l	Fluoride mg/l
1801	R	02/07/20	2.7	35	NT	20	25	35	32	1.0	NT
1802	R	04/07/20	2.8	40	NT	22	30	38	30	1.8	NT
1803	R	06/07/20	3.1	50	NT	23	25	35	30	2.0	NT
1804	R	06/07/20	3.5	65	NT	25	30	28	25	2.5	NT
1805	R	06/07/20	3.0	60	NT	23	25	35	30	2.4	NT
1806	R	08/07/20	3.1	55	NT	25	28	35	32	2.2	NT
1807	R	08/07/20	2.8	50	NT	22	36	38	33	2.2	NT
1808	R	10/07/20	2.9	55	NT	24	28	35	30	2.1	NT
1809	R	10/07/20	3.0	50	NT	25	25	45	35	2.4	NT
2034	R	14/07/20	2.5	30	NT	22	22	30	30	1.2	NT
2035	R	14/07/20	2.8	35	NT	20	23	35	25	2.0	NT
2036	R	16/07/20	2.8	40	NT	24	22	30	25	2.1	NT
2037	R	16/07/20	2.9	50	NT	23	20	35	24	2.0	NT
2038	R	18/07/20	3.0	45	NT	25	25	37	28	2.0	NT

NT: Not Traceable R: River

STATE POLLUTION CONTROL BOARD- SIKKIM
MONITORING OF INDIAN NATIONAL AQUATIC RESOURCES

General Parameters to be analyzed regularly

Month: August Year: 2020

Station Code	Type	Sampling Date	pH	Cond. µmhos/ cm	NO_3-N mg/l	D.O mg/l	B.O.D mg/l	T. Coliform MPN/100ml	Faecal Coliform 100/ml
1801	R	01/08/20	7.0	260	1.8	10.5	2.1	120	50
1802	R	03/08/20	6.5	230	2.0	09.5	2.0	130	55
1803	R	05/08/20	6.5	200	2.2	08.5	2.5	170	60
1804	R	07/08/20	6.5	195	2.5	07.5	2.2	210	100
1805	R	07/08/20	6.6	180	2.5	09.0	2.3	210	105
1806	R	10/08/20	6.5	185	2.3	10.0	2.2	180	80
1807	R	10/08/20	6.8	190	2.2	10.0	2.0	185	85
1808	R	13/08/20	6.7	200	2.1	09.0	2.0	170	70
1809	R	13/08/20	6.6	215	2.2	10.0	2.4	190	75
2034	R	17/08/20	7.0	260	2.0	10.0	2.2	110	50
2035	R	17/08/20	7.0	220	2.2	09.5	2.0	120	55
2036	R	19/08/20	6.5	210	2.2	09.0	2.4	110	50
2037	R	22/08/20	6.5	210	2.1	10.0	2.2	120	60
2038	R	22/08/20	6.5	240	2.0	09.5	2.4	150	70

R: River

STATE POLLUTION CONTROL BOARD- SIKKIM
MONITORING OF INDIAN NATIONAL AQUATIC RESOURCES

General Parameters to be analyzed regularly

Month: September Year: 2020

Station Code	Type	Sampling Date	pH	Cond. µmhos/ cm	NO_3-N mg/l	D.O mg/l	B.O.D mg/l	T. Coliform MPN/100ml	Faecal Coliform 100/ml
1801	R	01/09/20	7.5	260	1.2	10.5	2.1	100	40
1802	R	03/09/20	7.0	240	2.0	09.5	2.0	130	55
1803	R	05/09/20	6.5	210	2.2	08.5	2.5	160	60
1804	R	07/09/20	6.5	200	2.2	07.5	2.2	230	110
1805	R	07/09/20	6.5	190	2.5	09.0	2.3	210	105
1806	R	09/09/20	6.5	180	2.3	09.5	2.2	190	80
1807	R	09/09/20	6.7	190	2.2	10.0	2.0	185	85
1808	R	11/09/20	6.7	200	2.1	09.0	2.0	170	75
1809	R	11/09/20	6.6	210	2.2	10.0	2.4	180	75
2034	R	14/09/20	7.0	260	2.0	10.0	2.2	110	55
2035	R	14/09/20	7.0	220	2.1	09.5	2.0	120	55
2036	R	16/09/20	6.5	210	2.2	09.0	2.4	120	50
2037	R	18/09/20	6.5	220	2.0	09.5	2.2	120	60
2038	R	18/09/20	7.0	250	2.1	10.0	2.4	160	65

R: River

STATE POLLUTION CONTROL BOARD- SIKKIM
MONITORING OF INDIAN NATIONAL AQUATIC RESOURCES

General Parameters to be analyzed regularly

Month: October Year: 2020

Station Code	Type	Sampling Date	pH	Cond. µmhos/ Cm	NO_3-N mg/l	D.O mg/l	B.O.D mg/l	T. Coliform MPN/100ml	Faecal Coliform 100/ml
1801	R	01/10/20	7.0	255	1.2	10.0	2.1	110	45
1802	R	06/10/20	7.0	245	1.5	09.5	2.0	135	55
1803	R	08/10/20	6.5	200	2.2	08.5	2.2	165	65
1804	R	08/10/20	6.4	180	2.3	08.0	2.5	235	110
1805	R	08/10/20	6.5	190	2.2	08.5	2.3	215	100
1806	R	09/10/20	6.5	180	2.3	09.5	2.2	195	85
1807	R	09/10/20	6.7	190	2.2	10.0	2.0	185	90
1808	R	09/10/20	6.6	210	2.0	09.0	2.1	175	80
1809	R	12/10/20	6.5	230	2.1	10.0	2.4	185	85
2034	R	14/10/20	7.5	250	1.1	10.5	2.2	115	55
2035	R	14/10/20	7.0	220	1.7	09.0	2.0	125	60
2036	R	16/10/20	6.5	210	2.0	09.5	2.3	120	55
2037	R	19/10/20	6.5	220	2.0	09.0	2.2	130	60
2038	R	19/10/20	7.0	240	2.1	10.0	2.5	170	75

R: River

STATE POLLUTION CONTROL BOARD- SIKKIM
MONITORING OF INDIAN NATIONAL AQUATIC RESOURCES

General Parameters to be analyzed regularly

Month: November Year: 2020

Station Code	Type	Sampling Date	pH	Cond. µmhos/ Cm	NO_3-N mg/l	D.O mg/l	B.O.D mg/l	T. Coliform MPN/100ml	Faecal Coliform 100/ml
1801	R	02/11/20	7.2	250	1.1	10.2	2.0	105	40
1802	R	03/11/20	7.1	240	1.4	09.6	2.1	130	55
1803	R	05/11/20	6.6	190	1.9	08.6	2.3	160	60
1804	R	05/11/20	6.5	175	2.1	08.1	2.6	230	105
1805	R	08/11/20	6.5	180	2.0	08.4	2.2	210	100
1806	R	09/11/20	6.6	180	2.1	09.0	2.2	190	80
1807	R	09/11/20	6.7	185	2.0	9.3	2.1	185	75
1808	R	11/11/20	6.6	205	2.1	8.8	2.1	170	80
1809	R	11/11/20	6.4	215	2.1	9.5	2.3	185	80
2034	R	13/11/20	7.0	240	1.0	10.4	2.2	110	50
2035	R	13/11/20	7.0	210	1.5	09.2	2.1	125	55
2036	R	19/11/20	6.7	215	1.8	09.5	2.1	120	50
2037	R	23/11/20	6.5	195	1.7	09.3	2.1	135	65
2038	R	23/11/20	6.5	220	2.0	9.8	2.2	170	70

R: River

STATE POLLUTION CONTROL BOARD- SIKKIM
MONITORING OF INDIAN NATIONAL AQUATIC RESOURCES

General Parameters to be analyzed regularly

Month: December Year: 2020

Station Code	Type	Sampling Date	pH	Cond. µmhos/ Cm	NO_3-N mg/l	D.O mg/l	B.O.D mg/l	T. Coliform MPN/100ml	Faecal Coliform 100/ml
1801	R	01/12/20	7.0	245	1.0	10.0	1.8	105	45
1802	R	03/12/20	7.1	240	1.3	09.5	2.0	120	55
1803	R	07/12/20	6.7	195	1.5	08.5	2.1	140	65
1804	R	07/12/20	6.5	170	2.0	08.0	2.5	230	105
1805	R	09/12/20	6.6	180	1.8	08.0	2.3	220	100
1806	R	09/12/20	6.5	185	2.0	09.0	2.2	195	95
1807	R	09/12/20	6.6	185	2.0	9.5	2.0	185	85
1808	R	11/12/20	6.7	200	2.1	8.5	2.2	175	70
1809	R	11/12/20	6.8	210	2.1	9.0	2.3	185	80
2034	R	14/12/20	7.5	230	1.0	10.0	2.0	110	50
2035	R	14/12/20	7.0	215	1.3	09.0	2.1	120	55
2036	R	14/12/20	6.8	220	1.5	09.5	2.1	125	55
2037	R	22/12/20	6.5	195	1.7	09.0	2.0	130	65
2038	R	22/12/20	6.7	210	2.0	9.5	2.2	160	75

R: River

STATE POLLUTION CONTROL BOARD-SIKKIM
MONITORING OF INDIAN NATIONAL AQUATIC RESOURCES

General Parameters to be analyzed regularly

Month: January Year: 2021

Station Code	Type	Sampling Date	pH	Cond. µmhos/ cm	NO_3-N mg/l	D.O mg/l	B.O.D mg/l	T. Coliform MPN/100ml	Faecal Coliform 100/ml
1801	R	03/01/2021	7.5	265	1.4	14.0	1.3	80	30
1802	R	06/01/2021	7.0	255	1.6	13.0	1.5	95	40
1803	R	08/01/2021	6.5	210	2.0	14.0	1.7	110	60
1804	R	10/01/2021	6.0	180	2.4	08.0	2.5	180	83
1805	R	10/01/2021	6.5	200	2.3	09.0	2.2	170	81
1806	R	13/01/2021	6.5	220	2.2	10.0	2.4	170	83
1807	R	13/01/2021	6.5	240	2.1	09.0	2.4	160	65
1808	R	16/01/2021	6.0	230	2.2	10.0	2.3	150	55
1809	R	16/01/2021	6.5	260	2.3	10.0	2.5	170	80
2034	R	20/01/2021	7.0	250	1.4	11.0	1.5	80	35
2035	R	20/01/2021	7.0	230	1.2	10.0	1.6	85	40
2036	R	22/01/2021	6.5	230	1.3	09.0	1.8	90	45
2037	R	22/01/2021	6.5	240	1.8	08.0	1.7	110	50
2038	R	24/01/2021	6.5	255	1.8	09.0	2.0	160	75

R: River

STATE POLLUTION CONTROL BOARD-SIKKIM
MONITORING OF INDIAN NATIONAL AQUATIC RESOURCES

General Parameters to be analyzed regularly

Month: February Year: 2021

Station Code	Type	Sampling Date	pH	Cond. µmhos/ cm	NO_3-N mg/l	D.O mg/l	B.O.D mg/l	T. Coliform MPN/100ml	Faecal Coliform 100/ml
1801	R	02/02/2021	7.5	180	1.0	9.0	0.8	70	15
1802	R	04/02/2021	7.0	165	1.2	9.0	1.0	95	30
1803	R	08/02/2021	6.5	150	1.6	8.0	1.0	100	35
1804	R	10/02/2021	6.5	155	1.8	6.0	1.2	190	40
1805	R	10/02/2021	6.5	160	1.8	6.5	1.0	110	35
1806	R	15/02/2021	6.5	165	1.7	6.8	1.1	120	42
1807	R	15/02/2021	7.0	170	1.6	7.0	1.0	100	32
1808	R	17/02/2021	7.0	175	1.7	7.0	1.1	110	30
1809	R	17/02/2021	6.5	170	1.6	7.0	1.0	110	35
2034	R	19/02/2021	7.5	190	1.2	9.5	0.8	60	15
2035	R	19/02/2021	7.0	140	1.2	9.0	1.0	70	18
2036	R	19/02/2021	6.5	165	1.3	9.0	1.2	75	20
2037	R	22/02/2021	6.5	130	1.5	8.0	1.1	90	25
2038	R	22/02/2021	6.5	165	1.6	7.0	1.0	105	30

R: River

Fig. View of D.O. water Sampling on the spot at Teesta River.

Fig. 2. View of water sample collection from NWMP station.

STATE POLLUTION CONTROL BOARD-SIKKIM
MONITORING OF INDIAN NATIONAL AQUATIC RESOURCES

General Parameters to be analyzed regularly

Month: March Year: 2021

Station Code	Type	Sampling Date	pH	Cond. µmhos/ cm	NO_3-N mg/l	D.O mg/l	B.O.D mg/l	T. Coliform MPN/100ml	Faecal Coliform 100/ml
1801	R	02/03/2021	7.0	265	1.0	10.2	1.1	150	60
1802	R	04/03/2021	7.0	260	1.2	10.0	1.2	195	80
1803	R	06/03/2021	6.5	200	1.5	9.5	1.2	120	50
1804	R	11/03/2021	6.5	185	1.8	8.0	2.4	210	85
1805	R	11/03/2021	6.5	190	1.7	8.1	2.2	200	80
1806	R	13/03/2021	6.5	180	1.4	7.9	2.0	180	75
1807	R	13/03/2021	7.0	190	1.6	8.0	2.0	160	65
1808	R	16/03/2021	7.0	190	1.7	7.3	1.6	170	70
1809	R	16/03/2021	6.5	195	1.5	7.5	1.8	190	75
2034	R	18/03/2021	7.0	210	1.0	9.0	1.9	120	55
2035	R	18/03/2021	7.0	170	1.2	8.5	2.1	90	40
2036	R	18/03/2021	6.5	185	1.3	8.0	2.0	75	30
2037	R	20/03/2021	6.5	175	1.3	7.9	2.0	90	35
2038	R	20/03/2021	6.5	190	1.5	7.5	2.2	150	65

R: River

Granted Consent Applications (CTE)

Sl. No.	Application No.	Application Name	Application Type
1	174255	HOPE DIAGNOSTICS	CTE
2	184450	GKR Infra. Pvt Ltd.,	CTE
3	109029	Mankind Pharma Limited	CTE
4	179714	Adhikaris'	CTE
5	177732	VKJ-NSPR (JV) Batching Plant	CTE
6	176114	Rainbow Dental CLinic	CTE
7	174508	NOBLESTRIDE RESORT & SPA	CTE
8	176950	M/s Uttam Pradhan	CTE
9	177707	VKJ NSPR JV	CTE
10	165931	Packaged Drinking Water & Juice Factory	CTE
11	141191	Hotel Najom	CTE
12	170404	Bar & Restaurent	CTE
13	169840	AMIKHEM MEDICAL CLINIC	CTE
14	169540	Khusendra Sharma (Stone Crusher)	CTE
15	173326	PRITAM DHAMALA	CTE
16	164302	Stone Crusher (40 TPH)	CTE
17	175068	Rupendra stone crusher plant	CTE
18	174161	Anu Bhutia	CTE
19	173283	A.K & J.K (JV)	CTE
20	176465	MS Suren Limboo	CTE
21	132016	Lanco Teesta Hydro Power Limited (A wholly owned subsidiary of NHPC Limited)	CTE
22	142918	Giriganga Infrasolution Pvt. Ltd	CTE
23	156992	M/S Dhungel Garage	CTE
24	178274	Hotel Polaris	CTE
25	153768	CITY DIAGNOSTIC CENTRE	CTE
26	161302	UTPAL DORJEE YONGDA	CTE
27	173755	Bir Pipal Retreat	CTE
28	161976	Krishna PD Adhikari	CTE
29	162868	TEESTA URJA LIMITED	CTE
30	124503	SAHARSH MOTORS PVT LTD	CTE
31	116336	Yadav Sharma	CTE
32	159745	Gangtok Resort	CTE
33	166568	M/s PRATIMA ENTERPRISE	CTE
34	138154	Hotel Ghakim	CTE
35	154349	AMEL QUEDARSE EN CASA	CTE
36	55447	Classical Paradise Hotels & Resort Limited	CTE
37	136378	Alembic Pharmaceuticals Ltd.,Unit-II	CTE
38	149856	MAYFAIR Hotels & Resorts (Sikkim) Pvt. Ltd.	CTE

39	145665	MAYFAIR Hotels & Resorts (Sikkim) Pvt. Ltd.	CTE
40	116804	AT Corporation PVT LTD	CTE
41	128739	Simsar Bakery	CTE
42	121518	evergreen garage	CTE
43	151617	VAJRA CINEMA	CTE
44	86175	T.T. autoworks	CTE
45	150391	Denzong Auto Solution	CTE
46	155873	RANGEET AUTO PRIVATE LIMITED	CTE
47	136790	MADHYA BHARAT POWER CORPORATION LIMITED	CTE
48	144420	Hotel Norling	CTE
49	159210	Rewati Crusher	CTE
50	156909	Roshan Garage	CTE
51	131924	TEESTA URJA LIMITED	CTE
52	141732	Giriganga Infrasolution Pvt. Ltd	CTE
53	88815	DG Set	CTE
54	138922	Tempo Chitim Bhutia	CTE
55	114190	VKJ-NSPR (JV) Batching Plant	CTE
56	122925	OM SHAKTI MEDICAL STORE	CTE
57	132199	TEESTA URJA LIMITED	CTE
58	136951	DENTISTREE DENTAL CLINIC & ORTHODONTIC CENTRE	CTE
59	151968	CARE DIAGNOSTICS	CTE
60	89197	yadav sharma	CTE
61	130104	Smile dental clinic	CTE
62	139357	NPCC LTD	CTE
63	139340	NPCC LTD	CTE
64	152112	Gastroliver Clinic cum Diagnostic Centre	CTE
65	153658	Tushar enterprice	CTE
66	150787	M/s Lochan Brothers	CTE
67	143518	Jericho Diagnostics Center	CTE
68	133663	Stone Crusher	CTE
69	136439	M/S BPA MINING (P).LTD	CTE
70	109113	De'Renees hotel	CTE
71	127688	THE TEMI BUNGALOW-UNIT OF PRIYA ENTERTAINMENTS	CTE

Granted Consent Applications (CTO)

Sl. No.	Application No.	Application Name	Application Type
1	134945	TECHPACK FOIL PRIVATE LIMITED	CTO
2	156411	SCORPION CONTAINERS PVT. LTD UNIT-II	CTO
3	156316	SCORPION CONTAINERS PRIVATE LIMITED UNIT-II	CTO
4	61306	SCORPION CONTAINERS PRIVATE LIMITED UNIT-I	CTO
5	180838	Mani Kumar Biswakarma	CTO
6	138359	V-Guard Industries Ltd, Unit I(D G)	CTO
7	129366	zydus wellness products limited	CTO
8	161505	FUTURECARE DIAGNOSTIC CENTRE	CTO
9	145914	FUTURECARE DIAGNOSTIC CENTRE	CTO
10	175962	Shri Neeknore Pradhan	CTO
11	134284	Mayell & Fraser Pvt Ltd	CTO
12	142601	SUKHIM DIAGNOSTIC & RESEARCH CENTRE	CTO
13	180542	Lividus Pharmaceuticals Pvt Ltd	CTO
14	187844	M/s Uttam Pradhan	CTO
15	142358	Tenzmeedentclinic	CTO
16	132894	SUN PHARMA LABORATORIES LTD. Unit - I	CTO
17	140336	SUN PHARMA LABORATORIES LIMITED , Unit-II	CTO
18	90713	BISHNU MAYA CHETTRI	CTO
19	147510	Phoenix Udyog Pvt Ltd	CTO
20	102747	V Guard unit III DG 320 KVA	CTO
21	179490	REGAL HEALTHCARE LIMITED	CTO
22	66718	MARCHAK MANUFACTURING PRIVATE LIMITED	CTO
23	129237	Manoj Karki	CTO
24	91490	BFPL INC	CTO
25	130152	Binod agarwal D.G. set	CTO
26	132276	Indchemie Health Specialities Pvt ltd, Unit -I	CTO
27	128237	HeBa Pharmaceutica LLP	CTO
28	102167	jagriti diagnostics	CTO
29	97770	NORTH EAST PHARMA PACK	CTO
30	178798	REGAL HEALTHCARE LIMITED	CTO
31	123940	M/s Salas Pharmaceuticals Pvt. ltd.	CTO

32	130811	Alkem Laboratories Ltd	CTO
33	129875	SUN PHARMA LABORATORIES LIMITED , Unit-II	CTO
34	145858	SUN PHARMA LABORATORY LTD. Unit - I	CTO
35	134769	Alkem Laboratories Limited	CTO
36	131901	ALKEM HEALTH SCIENCE, UNIT 3	CTO
37	134352	ALKEM HEALTH SCIENCE(A UNIT OF ALKEM LABS LTD	CTO
38	132233	ALKEM HEALTH SCIENCE (UNIT 2)	CTO
39	134514	ALKEM HEALTH SCIENCE 2(A UNIT OF ALKEM LABS LTD)	CTO
40	135330	Alkem Laboratories Ltd. Unit-5	CTO
41	132341	Alkem Laboratories Limited, Unit-5	CTO
42	131117	ALKEM HEALTH SCIENCE (A UNIT OF ALKEM LABS LTD)	CTO
43	134663	ALKEM HEALTH SCIENCE 3 (A UNIT OF ALKEM LABS L	CTO
44	167735	RANGEET AUTO PRIVATE LIMITED	CTO
45	178676	KT Garage	CTO
46	137739	Indchemie Health Specialities Pvt Ltd, Unit-II	CTO
47	124568	Lanco Teesta Hydro Power Limited	CTO
48	133121	Dinesh Chandra Agarwal	CTO
49	133035	DINESH CHANDRA AGARWAL PVT. LTD.	CTO
50	139748	Zydus Healthcare Limited	CTO
51	139857	Zydus Healthcare Limited	CTO
52	134319	GOLDENCROSS PHARMA LTD	CTO
53	127200	GOLDENCROSS PHARMA LTD.	CTO
54	127500	Cipla Limited	CTO
55	140043	Zydus Healthcare Limited	CTO
56	79640	HOTEL FLORA FOUNTAIN	CTO
57	142909	NORTH EAST PHARMA PACK	CTO
58	116355	Suresh Kumar Mittal	CTO
59	172147	Basnet workshop	CTO
60	176756	IDEAL CURES PVT LTD	CTO
61	130329	Ideal Cures Pvt Ltd.	CTO
62	131929	Swiss Garnier Genexiaa Sciences Pvt Ltd. Unit II	CTO
63	145052	Cipla Limited (Unit II)	CTO
64	143076	CURETEC PHARMACEUTICALS PVT. LTD.	CTO

65	137954	Ajay Bio-Tech (India) Ltd.	CTO
66	128034	Lupin Limited	CTO
67	146779	SUNIL KUMAR AGARWAL	CTO
68	167662	Jolly Aggregate	CTO
69	124467	Aristo Pharmaceuticals Private Limited.	CTO
70	156455	Cipla Limited (Unit II)	CTO
71	123793	LUPIN LIMITED	CTO
72	83886	SARAMSA ENCLAVE	CTO
73	157427	MACLEODS PHARMACEUTICALS LIMITED	CTO
74	145956	MACLEODS PHARMACEUTICALS LIMITED	CTO
75	137453	MACLEODS PHARMACEUTICALS LIMITED	CTO
76	127582	MARC LIFESCIENCES SIKKIM	CTO
77	155094	CKIM PHARMA LLP	CTO
78	154116	Rangit Power Station	CTO
79	128689	Indchemie Health Specialities Pvt ltd, Unit-I	CTO
80	132285	Indchemie Health Specialities Pvt Ltd, Unit-II	CTO
81	144277	HUHTAMAKI PPL LTD.	CTO
82	147861	MOHAN BAJAJ	CTO
83	124313	M/s Salas Pharmaceuticals Pvt. Ltd.	CTO
84	133071	Mankind Pharma Limited Sikkim	CTO
85	134539	Mankind Pharma Limited	CTO
86	130546	HeBa Pharmaceutica LLP	CTO
87	160486	86 RCC (GREF)	CTO
88	160480	86 RCC(GREF)	CTO
89	160475	86 RCC (9GREF)	CTO
90	160468	86 RCC (GREF)	CTO
91	129197	Zydus wellness products limited unit II	CTO
92	178128	Hotel Crown De-La-Cruz	CTO
93	127955	THE TEMI BUNGALOW-UNIT OF PRIYA ENTERTAINMENTS	CTO
94	143375	SIKKIM AGRO CHEM PRIVATE LIMITED	CTO
95	127504	Cipla Limited	CTO
96	146939	Temi Tea Estate	CTO
97	105390	Topsel Toyota A Unit of Topsel Pvt.Ltd.	CTO
98	170001	IRIS INN	CTO

99	146791	PADAM GURUNG	CTO
100	125656	Aristo Pharmaceuticals Private Limited	CTO
101	64351	THE GOLDEN CREST	CTO
102	143564	SKIPPING STONES PVT. LTD.	CTO
103	127453	Zydus Healthcare Limited	CTO
104	127456	Zydus Healthcare Limited	CTO
105	144619	TEXIMCO FOILS PVT. LTD. (UNIT-II)	CTO
106	158068	Coastal project limited	CTO
107	155108	CKIM PHARMA LLP	CTO
108	126625	SUN PACKMET PVT LTD	CTO
109	126575	SUN PACKMET PVT LTD	CTO
110	110322	Corrugated Box Manufacturing Industry	CTO
111	125419	REGAL HEALTHCARE LIMITED	CTO
112	146528	Sneha Kinetic Power Projects Pvt. Ltd	CTO
113	124903	Glenmark Pharmaceuticals Limited	CTO
114	127320	Zuventus Healthcare Limited	CTO
115	127571	MICRO LABS LTD	CTO
116	130107	Reliance Jio Infratel Pvt. Ltd. (Formally RJIL)-1	CTO
117	136909	GK BURMAN HERBAL & HEALTH CARE	CTO
118	138952	Reliance Jio Infratel Pvt. Ltd. (Formally RJIL)-2	CTO
119	138974	Reliance Jio Infratel Pvt. Ltd. (Formally RJIL)-3	CTO
120	139000	Reliance Jio Infratel Pvt. Ltd. (Formally RJIL)-4	CTO
121	139024	Reliance Jio Infratel Pvt. Ltd. (Formally RJIL)-5	CTO
122	139096	Reliance Jio Infratel Pvt. Ltd. (Formally RJIL)-7	CTO
123	129528	Zydus Wellness Products ltd.	CTO
124	138907	GK Burman Pet & Fragrances	CTO
125	129645	zydus wellness Products Ltd. unit ii	CTO
126	140502	V Guard Industries Limited Unit-III	CTO
127	144689	Ascend Telecom Infrastructure Pvt. Ltd-Lower	CTO
128	144725	Ascend Telecom Infrastructure Pvt. Ltd-DENTAM	CTO
129	144966	Ascend Telecom Infrastructure Pvt. Ltd-TIGJUG	CTO
130	144981	Ascend Telecom Infrastructure Pvt. Ltd-Kirnibazar	CTO

131	145012	Ascend Telecom Infrastructure Pvt. Ltd-Swastik	CTO
132	139639	V-Guard Industries Ltd- Unit II DG	CTO
133	145227	TEXIMCO FOILS PVT LTD	CTO
134	145255	TEXIMCO FOILS PVT LTD	CTO
135	149001	Tashi engineering workshop	CTO
136	151350	Temi Tea Estate	CTO
137	101682	deysweets	CTO
138	153031	SHANGRILA INDUSTRIES PRIVATE LIMITED	CTO
139	152439	SHANGRILA INDUSTRIES PRIVATE LIMITED	CTO
140	161861	129 RCC (GREF)	CTO
141	164236	FIT FAT GARAGE	CTO
142	151165	86 RCC (GREF)	CTO
143	143907	Hotel Suprabhatam	CTO
144	169355	Hotel Helia	CTO
145	102096	Conveyer & rope way services pvt. Ltd.	CTO
146	126134	Zuventus Healthcare Ltd	CTO
147	138203	Reliance Jio Infratel Pvt. Ltd. (Formally RJIL)-2	CTO
148	142650	Ascend Telecom Infrastructure Pvt. Ltd-HEEGAON	CTO
149	144744	Ascend Telecom Infrastructure Pvt. Ltd-BHUSUK	CTO
150	144763	Ascend Telecom Infrastructure Pvt. Ltd-23rd Mile	CTO
151	144778	Ascend Telecom Infrastructure Pvt. Ltd-Ariter	CTO
152	144890	Ascend Telecom Infrastructure Pvt. Ltd-Cipla	CTO
153	144905	Ascend Telecom Infrastructure Pvt. Ltd-Dikchu	CTO
154	144920	Ascend Telecom Infrastructure Pvt. Ltd-High Way	CTO
155	144936	Ascend Telecom Infrastructure Pvt. Ltd-Legship	CTO
156	144951	Ascend Telecom Infrastructure Pvt. Ltd-MANGAN II	CTO
157	144996	Ascend Telecom Infrastructure Pvt. Ltd-Sombaria	CTO
158	137927	TRANSASIA BIO MEDICALS LIMITED	CTO
159	141457	Teesta-V Power Station, NHPC Limited	CTO
160	140128	SHANGRILA INDUSTRIES (P) LTD., SIKKIM	CTO

161	142053	Ram Chandra Pradeep Kumar Jewelers	CTO
162	140378	THE ROYAL PLAZA HOTEL	CTO
163	137672	MOSH VARAYA INFRASTRUCTURE LIMITED	CTO
164	143187	CURETEC PHARMACEUTICALS PVT. LTD.	CTO
165	144110	SHANGRILA INDUSTRIES (P) LTD.	CTO
166	152608	SAHARSH MOTORS PVT LTD	CTO
167	107365	HOTEL DENZONG REGENCY	CTO
168	154419	HOTMIX	CTO
169	130821	Torrent Pharmaceuticals Limited Unit III	CTO
170	123831	Torrent Pharmaceuticals Limited, Sikkim	CTO
171	130783	Torrent Pharmaceuticals Limitet-Unit-III	CTO
172	134180	Torrent Pharmaceuticals Limited Unit-II	CTO
173	133932	Torrent Pharmaceuticals Limited	CTO
174	143401	Teesta-V Power Station, NHPC Limited	CTO
175	127123	SUN CARE	CTO
176	127165	SUNCARE	CTO
177	157175	Binod Hotmix	CTO
178	152135	Ashmita enterprise	CTO
179	155374	Stone Crusher	CTO
180	156208	SKIPPING STONES PVT. LTD.	CTO
181	75340	Damodar Ropeways and infra ltd.	CTO
182	146526	M/s. Sneha Kinetic Power Projects Pvt. Ltd.	CTO
183	146783	SUNIL KUMAR AGARWAL	CTO
184	158815	Sikkim Dairy Products Pvt Ltd	CTO
185	158738	Sikkim Dairy Products Pvt Ltd	CTO
186	143495	The Royal Demazong Resort	CTO
187	143530	Royal Demazong Resort	CTO
188	158503	129 RCC (GREF)	CTO
189	158575	129 RCC (GREF)	CTO
190	163370	Ms Pravesh Enterprise	CTO
191	164430	NPCC LTD	CTO
192	164449	NPCC LTD	CTO
193	163163	maa jagdamba trading	CTO
194	151201	86 RCC (GREF)	CTO
195	151556	86 RCC (GREF)	CTO

196	151567	86 RCC (GREF)	CTO
197	163659	Blue Star Hotel	CTO
198	124895	Glenmark Pharmaceuticals Limited	CTO
199	144530	Swiss Garnier Genexiaa Sciences Pvt Ltd. Unit II	CTO
200	125357	SWISS GARNIER GENEXIAA SCIENCES PVT LTD UNIT-1	CTO
201	104230	86 RCC (GREF)	CTO
202	126354	Hidden Forest Resort	CTO
203	71511	SURYA SALES AGENCY	CTO
204	139074	Reliance Jio Infratel Pvt. Ltd. (Formally RJIL)-6	CTO
205	139118	Reliance Jio Infratel Pvt. Ltd. (Formally RJIL)-8	CTO
206	139139	Reliance Jio Infratel Pvt. Ltd. (Formally RJIL)-9	CTO
207	139192	Reliance Corporate IT Park Limited	CTO
208	147560	BVSR CONSTRUCTIONS PVT LTD	CTO
209	123905	RANGPO DEPOT, IOCL (MD)	CTO
210	166936	RR AGGREGATE	CTO
211	123878	RANGPO DEPOT, IOCL (MD)	CTO
212	117172	K Square	CTO
213	74394	SANJAY KHAWAS	CTO
214	131267	Alembic Pharmaceuticals Limited	CTO
215	144500	SWISS GARNIER GENEXIAA SCIENCES PVT LTD UNIT-1	CTO
216	133416	Swiss Garnier Genexiaa Sciences Pvt Ltd. Unit II	CTO
217	134912	Intas Pharmaceuticals Limited (Unit-1)	CTO
218	130390	BHARAT PETROLEUM CORPORATION LIMITED. (Pakyong AFS)	CTO
219	156163	tashiling residency	CTO
220	158389	Sundar Hotel and Resort	CTO
221	137650	MOSH VARAYA INFRASTRUCTURE LIMITED	CTO
222	150698	Kamal Kumar Rai hotmix	CTO
223	155731	apex motorcycles	CTO
224	143522	HANG-SAHA REGENCY. J.B. SUBBA, BURTUK, GANGTOK	CTO
225	153965	Tashiling Residency	CTO
226	147658	Stone Crusher	CTO
227	138616	Indian Oil Corporation Limited	CTO

228	130749	Alembic Pharmaceuticals Limited	CTO
229	141299	Titan Company Limited,Jewellery Division	CTO
230	152931	M/S Vivek Sharma	CTO
231	148134	Man Maya Sharma	CTO
232	153250	Hotel kusum international	CTO
233	150427	Nikhil Agarwal (Stone crusher plant)	CTO
234	104062	sundar hotel and resort	CTO
235	146670	SUNIL KUMAR AGARWAL	CTO
236	127472	DENZONG ALBREW PRIVATE LIMITED.	CTO
237	132996	Baching Plant	CTO
238	92714	sagarmal agarwal hotmix	CTO
239	103950	HOTEL TIBET	CTO
240	129708	Intas Pharmaceuticals Limited (DG, Unit-1)	CTO
241	129703	Intas Pharmaceuticals Limited (DG, Unit-2)	CTO
242	129279	Intas Pharmaceuticals Limited (Unit-2)	CTO
243	107335	HOTEL DENZONG REGENCY	CTO
244	156478	ELGIN HOTELS PVT LTD A/C NORKHILL HOTEL	CTO
245	156023	ELGIN HOTELS PVT LTD A/C NORKHILL HOTEL	CTO
246	160416	Gangtok Prime.	CTO
247	137616	MOSH VARAYA INFRASTRUCTURE LIMITED	CTO
248	132438	TEESTA URJA LIMITED	CTO
249	134897	TECHPACK FOIL PRIVATE LIMITED	CTO
250	129967	Sikkim Manipal University	CTO
251	67727	Aurochem Laboratories (I) Pvt. Ltd.	CTO
252	139538	CB Stone Crusher	CTO
253	84288	SIKKIM MOTORS	CTO
254	55442	SBL PRIVATE LIMITED	CTO
255	146129	107 RCC	CTO
256	92919	DOBARI STONE CRYSTAL PLANT	CTO
257	146589	K K GROUP OF COMPANY PRIVATE LIMITED	CTO
258	142302	ABIR INFRASTRUCTURE PVT.LTD.	CTO
259	149375	VKJ-NSPR (JV) Stone crusher	CTO
260	151972	TULSI CHETTRI CRUSHER	CTO

261	95813	Suraj And Company	CTO
262	148493	Rodic Sikkim Project Pvt. Ltd.	CTO
263	146146	107 RCC GREF	CTO
264	146163	107 RCC GREF	CTO
265	130142	Stone crusher	CTO
266	84243	SIKKIM MOTORS	CTO
267	130387	BHARAT PETROLEUM CORPORATION LIMITED.(Pakyong AFS)	CTO
268	131725	Sikkim Manipal University	CTO
269	131748	Indian Oil Corporation Limited	CTO
270	139385	Jolly Aggregate	CTO
271	140537	DOBARI STONE CRYSTAL PLANT	CTO
272	146573	K K GROUP OF COMPANY PRIVATE LIMITED	CTO
273	146580	K K GROUP OF COMPANY PRIVATE LIMITED	CTO
274	140634	V Guard Industries Limited Unit III DG 200 KVA	CTO
275	141960	JAYN TRADERS	CTO
276	147594	20TH MILE QUARRY	CTO
277	134110	RSK CONSTRUCTION JV	CTO
278	134097	RSK CONSTRUCTION JV	CTO
279	131262	MAHABIR PRASAD AGARWAL	CTO
280	131588	TEESTA URJA LIMITED	CTO
281	134062	RSK CONSTRUCTION JV	CTO
282	132367	TEESTA URJA LIMITED	CTO
283	142288	GIRIGANGA INFRASOLUTIONS PVT. LTD.	CTO
284	147853	DG SET	CTO
285	142357	Santosh Stone crusher	CTO
286	129511	Titan Company Limited	CTO
287	148501	Temi Tea Estate	CTO
288	148981	GOLDEN CRESCENT	CTO
289	148955	GOLDEN CRESCENT	CTO
290	143741	Ratan Builders	CTO
291	94610	Jugal Kishore Ramkrishan Agarwal Infra Pvt. Ltd.	CTO
292	90510	Shumbuk Homes Serviced Apartments	CTO
293	53529	SBL PRIVATE LIMITED	CTO
294	71807	SCORPION CONTAINERS PVT. LTD UNIT-	CTO

		II	
295	83603	Sunny Guest House	CTO
296	107134	M/S Sister & Sister's Diagnostic center & Medicine	CTO
297	139392	RR AGGREGATE	CTO
298	129954	Sawney Stone Crusher Unit	CTO
299	147855	stone crusher	CTO
300	54980	Sikkim Manipal Institute of Technology	CTO
301	59786	SHANGRILA INDUSTRIES PRIVATE LIMITED	CTO
302	123170	M/S Vivek Sharma	CTO
303	61330	SKIPPING STONES PVT. LTD.	CTO
304	128193	Titan Company Limited	CTO
305	147813	hot mix/wet mix	CTO
306	63453	Nikhil Agarwal (Stone crusher plant)	CTO
307	60284	SHANGRILA INDUSTRIES PRIVATE LIMITED	CTO
308	116512	Auto Centre	CTO
309	140064	M/s Banari Residency	CTO
310	106161	86 RCC (GREF)	CTO
311	120491	TRIPTIS ENTERPRISES	CTO
312	107242	TRIPTIS ENTERPRISES	CTO
313	99663	Mayell and Fraser Pvt. Limit	CTO
314	65843	SHREE HARI PHARMA PACKPLUS	CTO

SIKKIM
GOVERNMENT GAZETTE

EXTRAORDINARY
PUBLISHED BY AUTHORITY

Gangtok Wednesday 5th October, 2016 No.381

GOVERNMENT OF SIKKIM

HEALTH CARE, HUMAN SERVICES & FAMILY WELFARE DEPARTMENT

GANGTOK-737101

No. 49/HC, HS&FW **Dated: 26/09/2016**

NOTIFICATION

In exercise of the powers conferred by rule 11 of the Bio-Medical Waste (Management and Handling) Rules 2016 and in supersession of notification number 5/H & FW dated 17/7/2000 the State Government hereby re-constitutes an Advisory Committee consisting of the following members namely:-

1.	DG cum Secretary, Health Care, Human Service and Family Welfare Department.	Chairman
2.	Principal Director Health Services	Member Secretary
3.	Special Secretary, Urban Development and Housing Department	Member
4.	Director, Animal Husbandry and Veterinary Services	Member
5.	Chief Engineer, Public Health Engineering Department	Member
6.	Member Secretary, State Pollution Control Board	Member
7.	Chief Municipal Commissioner	Member
8.	Representative-Sikkim Medical Association	Member
9.	Representative- Voluntary Health Association of Sikkim	Member

DR. K. BHANDARI, DM
DIRECTOR GENERAL CUM SECRETARY TO THE GOVERNMENT OF SIKKIM HEALTH CARE, HUMAN SERVICES & FAMILY WELFARE DEPARTMENT

S.G.P.G-381/Com.6/200 Cps./Dt:-05.10.2016.

SIKKIM
GOVERNMENT GAZETTE

EXTRAORDINARY
PUBLISHED BY AUTHORITY

Gangtok **Wednesday 26th September, 2018** **No. 514**

GOVERNMENT OF SIKKIM
HEALTH CARE, HUMAN SERVICES & FAMILY WELFARE DEPARTMENT

No. 101/HC,HS&FW Dated: 25.09.2018

NOTIFICATION

In exercise of the powers conferred by sub-rule (4) and (6) of rule 12 of the Bio-Medical Waste Management Rules 2016, the State Government hereby constitutes the District Level Monitoring Committee in the Districts to monitor the compliance of the provision of these rules in the health care facilities generating Bio-medical waste and in the common bio-medical waste treatment and disposal facilities where the Bio-medical waste is treated and disposed of, consisting of the following members namely:-

1.	District Collector (East/West/South/North)	-	Chairman
2.	Divisional Engineer Water Security & PHED (East/West/South/North)	-	Member
3.	Municipal Councilor (East/West/South/North)	-	Member
4.	Representative State Medical Association (East/West/South/North)	-	Member
5.	Representative NGO (East/West/South/North)	-	Member
6.	Representative State Pollution Control Board (East/West/South/North)	-	Member
7.	District Medical Superintendent (East/West/South/North)	-	Member Secretary

VISHAL CHAUHAN, IAS
COMMISSIONER CUM SECRETARY TO THE GOVERNMENT OF SIKKIM HEALTH CARE, HUMAN SERVICES & FAMILY WELFARE DEPARTMENT

S.G.P.G-5 14/Com.6/Gazette/100 Nos./Dt:-26.09.2018.Z

[1][SCHEDULE VII]

[See Rule 3(3B)]

NATIONAL AMBIENT AIR QUALITY STANDARDS

S. No.	Pollutant	Time Weighted Average	Concentration in Ambient Air		
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1	Sulphur Dioxide (SO_2), $\mu g/m^3$	Annual*	50	20	- Improved West and Gaeke
		24 hours**	80	80	- Ultraviolet fluorescence
2	Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual*	40	30	- Modified Jacob & Hochheiser (Na-Arsenite)
		24 hours**	80	80	-Chemiluminescence
3	Particulate Matter (size less than 10µm) or PM_{10} $\mu g/m^3$	Annual*	60	60	- Gravimetric - TOEM
		24 hours**	100	100	- Beta attenuation
4	Particulate Matter (size less than 2.5µm) or $PM_{2.5}$ $\mu g/m^3$	Annual*	40	40	- Gravimetric - TOEM
		24 hours**	60	60	- Beta attenuation
5	Ozone (O_3) $\mu g/m^3$	8 hours**	100	100	- UV photometric - Chemilminescence
		1 hour**	180	180	- Chemical Method
6	Lead (Pb) $\mu g/m^3$	Annual*	0.50	0.50	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper
		24 hours**	1.0	1.0	- ED-XRF using Teflon filter
7	Carbon Monoxide (CO) mg/m^3	8 hours**	02	02	- Non Dispersive Infra Red (NDIR) spectroscopy
		1 hour**	04	04	
8	Ammonia (NH_3) $\mu g/m^3$	Annual*	100	100	- Chemiluminescence
		24 hours**	400	400	- Indophenol blue method

[1] Substituted by Rule 3 of the Environment (Protection) Seventh Amendment Rules, 2009 notified by G.S.R. 826 (E) dated 16.11.2009.