

Fifth Quarterly Report submitted by the State of Sikkim in compliance with Order dated 12.09.2019 passed in O.A. No. 606/2018 in the matter of Municipal Solid Waste Management Rules, 2016.

The 1st, 2nd, 3rd and 4th quarterly reports already submitted to Hon'ble NGT cover the progress made in the State in the implementation of Solid Waste Management Rules, 2016 upto 31/03/2020. The present report i.e., the 5th quarterly report now being submitted relates to the progress made in the matter between the periods **April 2020 to June 2020**.

During the various phases of lockdown due to COVID-19 situation, the list of activities undertaken by Government of Sikkim w.r.t. waste management in particular are as follows:

- 1) The State Government issued various guidelines and notifications for containment of spread of COVID-19 virus.
- 2) Steps were taken to secure compliance of the guidelines issued by Central Pollution Control Board-Delhi, Govt. of India on COVID-19 related Bio-medical Waste (BMW) Management from the concerned agencies. The guidelines and revised guidelines were shared, discussed and trainings conducted for Health Department, Urban Development Department, designated hospitals, Urban Local Bodies (ULBs), Animal Husbandry & Veterinary Department, District Magistrates, Public Health Engineering Department (PHED) and Rural Development Department for taking action as per the guidelines. This included revised guidelines on handling, treatment and disposal of waste generated during treatment/diagnosis/quarantine of COVID-19 patients.

The said guidelines were also uploaded in SPCB-Sikkim website. Urban Development was also intimated to bring out relevant awareness materials/ messages for general public.

SPCB-Sikkim also designated Nodal Officers for each four districts for monitoring of the activities of the concerned departments.

- 3) As per the direction of CPCB-Delhi, river water samples from three (3) stations under National Water Monitoring Programme (NWMP) i.e., viz.

1)	River MANEY KHOLA AT BURTUK near Army Base Camp 4 km U/s of Gangtok, East Sikkim
2)	River ManeyKhola after confluence with Ray khola at ADAMPOOL AFTER MEETING TREATED WASTE WATER of STP, Gangtok, East Sikkim
3)	After confluence of Rani Chu and Rorachu at RANIPOOL, East Sikkim

were collected and analyzed to see the impact of lockdown on river water quality, particularly due to non-operation of the industrial units. The analysis report of same is attached as **Annexure -I** for kind reference.

- 4) SPCB-Sikkim took out the following notices:

- a) Extension of consent granted under the provisions of Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 vide notice no. F.No.-/SPCB/3446(E) dated: 23/04/2020 which extended the validity of the consent till 30th June 2020 (**Annexure –II**).
 - b) Extension of authorization for handling and storage of hazardous wastes granted under the Rule 6 of Hazardous and Other Waste Management Rules (H&OWM) 2016 vide notice F. No.-/SPCB/3446(D) dated: 23/04/2020, which extended the authorization period till 30th June 2020(**Annexure –III**).
- 5) SPCB-Sikkim regularly carried out Ambient Air Monitoring at eight (8) Air stations to see the impact of lockdown on air quality which showed marked improvement. The analysis report and extract of press release are attached as **Annexure -IV** for kind reference.
- 6) SPCB-Sikkim conducted various meetings with concerned State authorities i.e., Health Department, Urban Development Department, Municipal Bodies (ULBs), PHE Department, etc. for deliberation on the specific functions to be carried by respective departments to review the situation and guideline accordingly for safe disposal of COVID-19 waste.

- 7) Training of Gangtok Municipal Corporation (GMC) waste handlers on use of PPEs by Health Department was conducted in coordination with State Pollution Control Board-Sikkim (SPCB-Sikkim) and GMC.
- 8) GMC and other Municipal Bodies carried out collection, transportation and transportation of solid waste as per the laid down procedures. Besides management of solid waste during COVID-19 pandemic they carried out sanitization of market complexes, highways, residential areas and Government buildings. They coordinated with Health Department for collection, transportation and disposal of solid waste from quarantine centres within their jurisdiction as well. They also took the responsibility of cremation of dead bodies of COVID-19 victims under strict guidelines as directed by competent agencies.
- 9) During this period regular correspondence with CPCB was maintained and weekly data of waste generation from quarantine facilities were submitted regularly.
- 10) Identification and authorization of STNM Super Speciality Hospital, Sochakgang, Gangtok, Central Referral Hospital, Tadong and four (4) Government district hospitals for utilization of captive facilities for treatment and disposal of COVID-19 and other Bio-medical Waste (BMW) in absence of common BMW treatment facility (CBWTF) in the State.
- 11) State Pollution Control Board-Sikkim (SPCB-Sikkim) through Nodal Officers inspected various designated Health Care Facilities (HCFs), captive facilities and deep burial pits. PPEs were also handed over to In-charge of quarantine centres.
- 12) State Pollution Control Board-Sikkim (SPCB-Sikkim) attended various video conferences (VC) meeting with the CPCB-Delhi like training on BMW mobile app, discussion on status of COVID-19 waste management.
- 13) As per the government notification duty rosters were prepared and followed. Frequent sanitization of office space was done. Contact-less hand sanitization machine was installed.

- 14) A status report on impact of lockdown on air quality and status of BMW Management in relation to COVID-19 was uploaded in State Pollution Control Board-Sikkim (SPCB-Sikkim) portal and Sikkim ENVIS website of Forest and Environment Department.
- 15) Regular co-ordination meeting with Central Monitoring Committee under Ministry of Jal Shakti with regard to progress made in solid and liquid waste management in the State.

ANNEXURE-I
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. (°C)	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

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

General Parameters

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



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STATE POLLUTION CONTROL BOARD

DEPARTMENT OF FOREST & ENVIRONMENT
GOVERNMENT OF SIKKIM
DEORALI – 737102

F. No. - /SPCB/3446(E)

Dated: 23/04/2020

NOTICE

Sub: Extension of Consent granted under the provisions of Section 25 of the Water (Prevention & Control of Pollution) Act, 1974 and Section 21 of the Air (Prevention & Control of Pollution) Act, 1981.

Under extraordinary situation of COVID-19 outbreak and declaration of Pan-India lockdown as a part of preventative measure to thereof, inspection of industrial units before the grant of consent cannot be conducted by State Pollution Control Board-Sikkim officials.

Consistent with the directions of the Ministry of Home Affairs vide letter no. 40-3/2020-DM-I(A) dated 24/03/2020 and notifications of the Home Department, government of Sikkim vide letter no. 28/Home/2020 dated 17/04/2020, the State Pollution Control Board Sikkim hereby extends the validity of Consent to Operate and Establish for all industrial units for a period of 90 (ninety) days from the 31st March 2020.

This notice shall be void after 30th June 2020 or from the date of lifting of lockdown, whichever is earlier.

However, during this period the industrial units shall apply for online consent via Online Consent Monitoring & Management System (OCMMS) portal and also ensure compliance of all the conditions reflected with the consent issued earlier.

This issues with the approval of the Competent Authority.

(Dr. Gopal Pradhan)
Member Secretary,
State Pollution Control Board-Sikkim



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STATE POLLUTION CONTROL BOARD

DEPARTMENT OF FOREST & ENVIRONMENT
GOVERNMENT OF SIKKIM
DEORALI – 737102

F. No. - /SPCB/ 3446(D)

Dated: 23/04/2020

NOTICE

Sub: Extension of Authorization for Handling Hazardous Waste granted under the provisions of Rule 6 of the Hazardous & Other Waste (Management & Transboundary Movement) Rules, 2016.

Under extraordinary situation of COVID-19 outbreak and declaration of Pan-India lockdown as a part of preventative measure thereof, Hazardous & Other wastes may require to be handled and stored by occupiers for more than 90 days.

The Rule 3(21) defines the occupiers as “ Occupier in relation to any factory or premises, means a person who has control over the affairs of the factory or the premises and includes in relation to any hazardous and other waste, the person in possession of the hazardous or other waste.”

Therefore in exercise of power under the provisions of Rule 21 Schedule VII and Rule 8 of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016, the State Pollution Control Board-Sikkim hereby permits the occupiers as defined under Rule 3(21) the extension of the Authorisation for Handling Hazardous & Other wastes for a period of 90 (ninety) days from 31st March,2020..

This notice shall be void after 30th June, 2020 or from the date of lifting of lockdown, whichever is earlier.

However, during this period the occupier shall ensure environmentally safe and sound storage of hazardous & other waste generated in their premises as per the conditions stipulated in the earlier consent/authorisation.

This issues with the approval of the Competent Authority.



(Dr. Gopal Pradhan)
Member Secretary,
State Pollution Control Board-Sikkim

Dr. Gopal Pradhan
Member Secretary
State Pollution Control Board
Forest, Env. & W/L Manat. D

Press Release

Impact of Lockdown due to Covid-19 Pandemic on the air quality of Sikkim

The State Pollution Control Board Sikkim has been conducting ambient air quality monitoring under the National Ambient Air Monitoring Programme in eight stations in the state of Sikkim. As per the analysis conducted, the ambient air quality in the state has been well within the permissible limits as per the provisions of the Air (Prevention and Control of Pollution) Act, 1981. Despite the lockdown, monitoring of Air and water quality is being conducted by the Board as per directives of the CPCB. Air quality is categorized into various indices such as good, satisfactory, moderate, poor, very poor & severe. As per the comparative analysis of the data generated for the average air quality index of March, April & May 2020, the state is well within the permissible limits and improvement has been observed after the implementation of the lockdown. The restriction in vehicular movement in addition to closure of all construction activities is likely to have contributed to the decrease in air pollution levels in the 1st and 2nd phase of the lockdown. However during the 3rd phase of lockdown in which vehicular movement was allowed along with transportation of construction material the air pollution levels has shown a slight increase although the values are within the permissible limits. Ravangla is the only station that has shown gradual decrease in the air quality pollution index which may be due to the fact that it receives more rainfall during the South West Monsoon season.

Average Air Quality Index, 2020

Sl. No.	Station	March 2020	April 2020	May 2020
1.	Deorali, Gangtok	60 (Satisfactory)	21 (Good)	38(Good)
2.	Rangpo	62(Satisfactory)	38 (Good)	38 (Good)
3.	Singtam	53(Satisfactory)	32(Good)	31(Good)
4.	Namchi	34 (Good)	10(Good)	24(Good)
5.	Ravangla	26 (Good)	25(Good)	15(Good)
6.	Mangan	33(Good)	13(Good)	20(Good)
7.	Chungthang	23(Good)	10(Good)	17(Good)
8.	Pelling	27(Good)	9(Good)	14(Good)

Air Quality Index Impacts

1.	0-50 (Good)	Minimal Impact
2.	51 -100 (Satisfactory)	Minor Breathing discomfort to sensitive people
3.	101-200 (Moderate)	Breathing discomfort to people with lung, heart disease, children and older adults
4.	201-300 (Poor)	Breathing discomfort to people on prolonged exposure
5.	301-400 (Very poor)	Respiratory illness to the people on prolonged exposure
6.	>401	Respiratory effects on even healthy people

Similarly, water Quality Monitoring has also been conducted and reports are within permissible limits. The complete data has also been uploaded in ENVIS Centre, Gangtok portal.

Annexure - IV

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Air quality shows marked improvement in Sikkim

KUNALRAI

GANGTOK, May 2: As Sikkim observed the second phase of 19-day lockdown to contain spread of Covid-19, the State's Air Quality Index (AQI) showed a marked improvement in April against March, earlier this year.

According to AQI monitored by the State Pollution Control Board (SPCB) in eight stations, the AQI is well within permissible limits and improvement observed after implementation of the lockdown on March 25.

As per the Deorali station, the AQI was 60 (Satisfactory) in the month of March whereas in April the record stated 21 (Good). Similar AQI has been recorded in all other stations across the State, SPCB member secretary Gopal Pradhan informed.

The AQI monitoring was done under the National Ambient Air Monitoring Programme and the permissible limit is as per the provisions of the Air (Prevention and Control of Pollution) Act, 1981.

Air quality is categorized into various indices such as good, satisfactory, moderate, poor, very poor and severe.

The restriction in vehicular movement in addition to closure of all constructions activities is likely to have contributed to the current status, explained Pradhan.

According to the member secretary, the SPCB-Sikkim in the matter of O.A 72/2020 Management of Biomedical Waste (BMW) generated due to Covid-19 is required to implement the directions of the National Green Tribunal

(NGT). The board has directed all the healthcare facilities that the guidelines for handling, treatment and disposal of waste generated during treatment, diagnosis, quarantine of Covid-19 patients be strictly implemented to ensure that the outbreak does not spread due to improper disposal of contaminated waste generated from quarantine or isolation centers. The guidelines further specify establishment, operation of Covid-19 samples collection and testing laboratories and the same should be informed to the SPCB, PCC of the State.

The guidelines also specify that the Pollution Control Boards are an essential health service for management of Covid-19, BMW and halting its rapid spread from contaminated waste.

Likewise, SPCB-Sikkim has appealed to all the citizens who are under self-quarantine or facility quarantine to ensure that all protective equipment are disposed off separately and are not mixed with the domestic solid waste. Further, all the citizens of the State have been advised to use masks compulsorily and proper disposal of the same in scientific manner to further prevent its reuse.

With respect to assessment of water quality, the SPCB has been keeping a close eye on the operation of Effluent Treatment Plants (ETP) and data is derived regularly to make sure that the ETP data are not manipulated. Also, CCTV cameras have been installed which are monitored on a weekly basis.