

BIO MEDICAL WASTE

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Issue-2

NEWSLETTER

Introduction

COVID-19 is the infectious disease caused by the most recently discovered corona virus, corona viruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). This virus and disease were unknown before the outbreak in Wuhan, China, in December 2019.

The name corona is derived from Latin which means crown. Corona viruses are circular or pleomorphic encompassed molecule with large(120-160nm) enveloped RNA viruses that have a s.s. genome and spike glycoprotein on their envelope. The viral genome contains particular highlights, including a novel N-terminal section inside the spike protein. In corona viruses the major structural protein occurs in 5'-3' order.

Symptoms of COVID-19

- Fever, Fatigue, and Dry cough
- Nasal congestion, Runny nose and Sore throat
- Muscle pains and Diarrhoea.
- Nausea, headache and vomiting
- Loss of taste and smell senses
- Shortness of breath or difficulty in breathing.



While we are still working about how COVID-2019 affects people, older persons and persons with pre-existing medical conditions (such as high blood pressure, heart disease, lung disease, cancer or diabetes) appear to develop serious illness more often than others. It is also observed that many of COVID patients are asymptomatic

Why corona virus is pandemic?

A pandemic describes an infectious disease where we see significant and ongoing person-to-person spread in multiple countries around the world at the same time. Pandemics are more likely if a virus is brand new, able to infect people easily and can spread from person-to-person in an efficient and sustained way. With no vaccine or treatment that can prevent it yet, containing its spread is vital

Important Protection Measures from Covid-19

- Thoroughly and regularly clean your hands with an alcohol-based sanitizer or with soap.
- Maintain social distancing and proper hygiene.
- Cover your mouth and nose with a mask.
- Avoid crowded places, stay home and isolate from others when sick.
- Routinely clean and disinfect frequently touched the surface.

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BIO MEDICAL WASTE MANAGEMENT IN PANDEMIC COVID-19

Why waste generation from diagnose and treatment of **Covid-19 is Contagious?**

The biomedical waste from Covid-19 includes infectious (masks, gloves, PPE Kits), pathological, pharmaceutical, chemical, and radioactive nature. There is no certain time that how long the virus survives on surfaces, but several studies report that corona virus may persist on surfaces for few hours to few days. Several environmental conditions are also responsible for this i.e., temperature or humidity. The strategy like "Identify, isolate, disinfect, and safe treatment practices" has been found to be effective for safer management of COVID-waste. Many of these facilities are equipped with infrastructure for steamsterilization (autoclaving), energy-based treatments (microwave, radiowave), incineration, chemical disinfection, etc., for BMW as specified by the regulatory body.

Directions/Guidelines issued by UKPCB for Management of Bio-Medical Waste generated from treatment and diagnose of COVID 19.

S.No.	Date	Issued to	Directions/Guidelines			
1	20.04.2020	 Director General, Medical Health, Uttarakhand Director, Urban Dept. Directorate, Dehradun All DMS, Uttarakhand 	Guidelines for Handling, Treatment and Disposal of Waste generated during Treatment/ Diagnosis/ Quarantine of COVID 19 patients issued by CPCB			
2	29.07.2020	 Director General, Medical Health, Uttarakhand Director, AllMS, Rishikesh CMS, Doon Hospital, Dehradun Medical Superintendent, Dr. Shushila Tiwari med. College, Haldwani Medical Superintendent, Coronation Hospital, Dehradun Director, Urban Dept. Directorate, Dehradun All DMs, Uttarakhand Addl. Director, CPCB RO, UKPCB Both CBWTF, Uttarakhand 	Guidelines for Handling, Treatment and Disposal of Waste generated during Treatment/ Diagnosis/ Quarantine of COVID 19 patients- Revision-4 dated 21 st July 2020 issued by CPCB			
3	04.09.2020	 Director Urban Dept. Directorate, Dehradun All DMs, Uttarakhand Director General, Medical Health and Family Welfare, Dehradun All DMs, Uttarakhand All CMOs, Uttarakhand 	 Use of COVID19BWM APP by all Municipal Corporations. All Municipal Corporation shall educate households about segregation and ensure treatment of such BMW through Common Facility or deep burial Ensure that all Health Care Facilities shall use COVID19 BWM tracking app and feed daily data pertaining to generation of such waste. 			



Covid-19 status in Uttarakhand (As on Dec 2020)

According to demographics the present population of Uttarakhand is about 1.17 crore. State covers 13 districts. About 60155 people have been affected so far in Uttarakhand by novel corona virus covid-19. Fortunately 54169 have recovered. Sadly, 984 patients have died due to corona virus in Uttarakhand. 4542 patients are still in hospital and recovering.



Current scenario of covid-19

Status of Biomedical waste generation from the diagnosis & treatment of Covid Patients is as follows:





COVID waste disposal



Date of waste	Quantity of COVID waste disposed Kg/day					
generation	CBWTF	Captive	Deep Burial	Total Disposed		
Up to May	41275.9	2854.97	768.13	44863.185		
June	45211.9	3092	867.838	49171.728		
July	70127.9	7448.13	4162.462	81738.515		
August	109823	12467.9	6920.576	129211.671		
September	132920	22180	17708.915	172808.707		
October	89949.2	20493	26005.515	136447.5		
November	51975.5	5618	5829.366	63422.9		
December	67411.8	8012	798.1	76221.89		

* CBWTF : Common Bio-Medical Waste Treatment Facility



Status of Bio Medical Waste Generation and Disposal in State of Uttarakhand in Compliance of Bio Medical Waste Management Rules

S.No. Details

1	Total Bio Medical Waste Generated (MT/Day):			
	Total COVID- 2.46 MT/Day as on December 2020			
	Total Bio-medical waste(Non COVID)- 3.8 MT/Day as per annual report 2019			
	Total: - 6.26 (MT/Day)			
2	Facilities for Disposal of Bio Medical Waste: -			
	No. of Common Bio Medical Waste Treatment Facilities: - 02			
	1. Medical Pollution Control Committee, Mandawar, Roorkee (100 Kg/Hr Incineration Capacity) and allowed 100 Kg/Hr			
	incinerator as stand by arrangement			
	2. Global Environmental Solutions, Gadarpur (100 Kg/Hr Incineration Capacity).			

No. of Captive Facilities: - 01 (Rajkiya Medical College (Shushila Tiwari Hospital), Haldwani (100 Kg/Hr Incineration).

Against the complaint of violation of guidelines for COVID 19 Waste Management at Railway Colony premises of Lalkuan, regarding illegal disposal of PPE Kits, burning of such waste with municipal waste.

S.No.	Date	Environmental compensation Imposed	Amount of Environmental	Amount Recovered
			Compensation	
1		Executive Officer, Nagar Panchayat, Lalkuan, Nainital	Rs. 50,000/-	Rs. 50,000/-
2		Station Superintendent, Lalkuan Railway Station, Nainital	Rs. 50,000/-	Rs. 50,000/-
		(For collection of EC from MK Enterprises, Bareilly)		
3	06.08.2020	Chief Medical Officer, Nainital	Rs. 50,000/-	Rs. 50,000/-
		(For collection of EC from Superintendent/ Incharge of Quarantine Centre at		
		Lalkuan Railway Station		

Regulatory Compliance & BMW Rules

Uttarakhand Pollution Control Board is a regulatory organisation as Biomedical Waste (BMW) rules are prescribed under Environment (Protection) Act. So various directions to authorities is issued by UKPCB for ensuring compliance of the Waste Management due to Covid-19.



Α.	Ensure that all municipal corporations/CBWTFs use 'COVID19BWM' tracking app and feed daily data pertaining to collection and disposal of biomedical waste;	Director General, Medical Health and Family Welfare, Uttarakhand as well as Director, Urban Development Department has been directed under Section (5) of Environment (Protection) Act, 1986 on dated 27.05.2020 to ensure that all Health Care Facilities shall use COVID19BWM tracking App and feed daily data pertaining to generation of such waste and dispose it either through common facility or through deep burial as the case may be.		
	Direct municipal corporations to ensure that they educate households about segregation and also send the bio-medical waste for treatment to common facilities only.	Further, Board has also issued direction under Section (5) of Environment (Protection) Act, 1986 to Director, Urban Development Directorate, Uttarakhand vide letter no. UKPCB/ HO/BMW-11(II)/2020/728 dated: 04.09.2020 with a copy to all concerned District Magistrates to educate households about segregation and ensure treatment of such Biomedical Waste either through common facility or deep burial as the case may be.		
B.	Ensure that all CBWTFs have online continuous emission monitoring systems (OCEMS) installed in the plants and that the data is transmitted to both	Board has issued directions under Section (5) of Environment (Protection) Act, 1986 vide letter no. UKPCB/HO/Gen-		

B. the plants and that the data is transmitted to both the state board website and CPCB

Directions of CPCB

Take appropriate follow-up action on data from real-time OCEMS data being shared with SPCBs/ PCCs through CPCB's RTDMS;;

nt n-11(Vol-2)/2020/730 dated: 04.09.2020 to CBWTFs established in State for installation of Online Continuous Emission Monitoring System in their plants, as well as to use COVID19BWM app and make regular entries in it.

Compliance Status



Feedback Form

Dear Information Seeker,

ENVIS Hub, UKPCB, Dehra Dun furnishes you with the services to collect and disseminate information related to environment of Uttarakhand. To share information with us you are requested to fill up the form given below:

Your feedback is valuable to us and will be highly appreciated.

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			•			•.	
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Uttarakhand Pollution Control Board Gaura Devi Paryawaran Bhavan, 46B, IT Park, Sahastradhara Road, Dehradun Website: www.utrenvis.nic.in MANAGEMENT IN PANDEMIC