



क्षेत्रीय कार्यालय—उ०प्र० प्रदूषण नियंत्रण बोर्ड, गाजियाबाद
Regional Office, U.P. Pollution Control Board, Ghaziabad
Website- www.uppcb.com, e-mail: roghaziabad@uppcb.in

संदर्भ संख्या : 942/NGT-128/OA-334/21/2022

दिनांक 01/02/2022

To,

The Registrar,
The National Green Tribunal,
Principal Bench,
New Delhi
E-mail- judicial-ngt@gov.in & ngt.filling@gmail.com

Sub: Report of the Joint Committee in compliance to Hon'ble National Green Tribunal (NGT), Principal Bench, New Delhi Order dated 16-12-2022 in OA No-334/2021 Sushil Raghav & Ors. Versus Union of India & Ors.

Respected Sir,

With reference to the above-mentioned subject the Joint Committee inspected the HCF's in compliance of Hon'ble National Green Tribunal order dated 16-12-2022 in OA No-334/2021 Sushil Raghav & Ors. Versus Union of India & Ors. Joint Committee's report is hereby submitted for kind perusal and necessary action please.

Enclosure: Joint report.

Yours Sincerely

(Utsav Sharma)
Regional Officer

Copy to:

- 1- Member Secretary, Central Pollution Control Board, New Delhi for information.
- 2- Member Secretary, U.P. Pollution Control Board, Lucknow for information.
- 3- Shri Pradeep Misra, Advocate, Hon'ble Supreme Court/NGT, New Delhi for perusal and necessary action please.
- 4- Chief Environmental Officer, Circle-1, U.P. Pollution Control Board, Lucknow for information.
- 5- Law Officer-I, U.P. Pollution Control Board, Lucknow for information.

Regional Officer

क्षेत्रीय कार्यालय : आई०एन०एस०-२, सेक्टर-१६, वसुन्धरा, गाजियाबाद-२०१०१२ फोन-०१२०-४१६०१०८
मुख्यालय : TC-12V, विभूति खण्ड, गोमती नगर, लखनऊ २२६०१०

Compliance Report

In

Original Application No. 334/2021

Sushil Raghav & Ors.

Versus

Union of India & Ors.

Order Date – 16.12.2021

**Filed on Behalf of:
Uttar Pradesh Pollution Control Board**

1. Introduction

Hon'ble Tribunal had received an application against non-compliance of statutory norms by 14 private hospitals at Ghaziabad, Uttar Pradesh with regards to discharge of untreated effluent, operation without requisite permissions and violation of Bio-medical Waste Rules, 2016. Accordingly, Hon'ble Tribunal had passed following order on 16.12.2021 in O.A. No. 334/2021 in the matter of Sushil Raghav & Ors. Vs Union of India & Ors.: -

"In view of above allegations, we find it necessary to verify the factual position. Accordingly, we constitute a joint Committee of CPCB, UP State PCB and District Magistrate, Ghaziabad to verify the facts and furnish a factual and action taken report in the matter. The State PCB will be the nodal agency for coordination and compliance. The Committee may meet within two weeks, undertake site visit, interact with the stakeholders and take remedial action, following due process of law. The Committee may inter-alia ascertain performance of common bio-medical waste treatment facilities catering the need of the hospitals not having captive facilities...."

2. Compliance Report

In pursuance to Hon'ble Tribunal's, nominations were sought by Uttar Pradesh Pollution Control Board from District Administration and Central Pollution Control Board and a meeting of the Joint Committee was called upon along with all stakeholders under the Chairmanship of Additional District Magistrate (City), Ghaziabad on 22.02.2022 to ascertain the facts of the case and to discuss the course of action to be taken for ensuring compliance of said order. The meeting was followed by site visits of all health care facilities. Summary of Health Care Facilities' is presented in Table 1, detailed reports are annexed as **Annexure I**.

RK ← Singh

Sr. No.	Name of Hospital	No. of Beds	CTO	BMW Authorization	Status of ETP/STP	Sample Analysis	Observation During Visit
1	M/s. Meenakshi Hospital, B-12, Anand Vihar, Kaushambi, Ghaziabad	30	31.07.2023	31.07.2023	ETP Installed	HCF is complying with general standards stipulated in Schedule II of BMWM Rules, 2016 for discharge into public sewers	a. HCF should implement bar code system as per BMW Rules, 2016. b. Proper logbook with regards to operation of ETP should be maintained.
2	M/s. Yashoda Super Speciality Hospital, H-1, Kaushambi, Ghaziabad	300	31.12.2023	31.12.2023	STP/ETP Installed	HCF is complying with general standards stipulated in Schedule II of BMWM Rules, 2016 for discharge into public sewers	Overall compliance with regards to BMW Rules and other environmental norms was found to be satisfactory.
3	M/s. Max Hospital, W-3, Near Radisson Blu Hotel, Sector-1, Vaishali, Ghaziabad	436	31.12.2023	31.12.2023	STP/ETP Installed	HCF is complying with general standards stipulated in Schedule II of BMWM Rules, 2016 for discharge into public sewers	Overall compliance with regards to BMW Rules and other environmental norms was found to be satisfactory.
4	M/s. Flores Hospital, G-350, Pratap Vihar Road, G-Block Sector-11, Pratap Vihar, Ghaziabad	100	31.07.2021	25.10.2022	ETP Installed	HCF is complying with general standards stipulated in Schedule II of BMWM Rules, 2016 for discharge into public sewers	a. HCF should ensure timely disposal of BMW waste through CBWTF as per BMW Rules, 2016. b. HCF should ensure bar

R. K. Singh

							code system as per BMW Rules, 2016.
5	M/s. Atlanta Hospital, Plot No-NH-01, Sector-14, Vasundhara, Ghaziabad	100	NO	No		HCF is complying with general standards stipulated in Schedule II of BMW Rules, 2016 for discharge into public sewers	<ul style="list-style-type: none"> a. During inspection, ETP was found not operational. b. HCF should implement bar code system as per BMW Rules, 2016. c. BMW should be segregated properly and training of staff handling BMW waste is required. d. HCF have no dedicated common storage room for temporary storage of BMW within premises. e. Height of stack attached with DG is not as per norms. f. HCF has no valid CTO and BMW Authorization from UPPCB. g. The hospital not provided appropriate pretreatment facility for

K Singh

							laboratory generated liquid chemical waste. h. Records was not maintained properly and training of staff handling BMW waste is required.
6	M/s. Le Crest Hospital, Plot No-INS-13, Budh Chowk, Sector-4, Vasundhara, Ghaziabad	100	31.07.2023	31.07.2023	STP/ETP Installed	HCF is complying with general standards stipulated in Schedule II of BMWM Rules, 2016 for discharge into public sewers	a. HCF should implement bar code system as per BMW Rules, 2016. b. During inspection, chemical dosing system in ETP was not operational. c. BMW should be segregated properly and training of staff handling BMW waste is required.
7	M/s. Santosh Medical College, 170, Sector-12, Block-J, Pratap Vihar, Ghaziabad	150 Dental Chair	NO	No	ETP found under construction	Sample could not be collected as there was no discharge	a. Unit has not obtained valid CTO/ BMW authorization from Board b. Bar Code facility not being used.
8	M/s. Aarogya Hospital, NH-01, Sector-6, Vaishali, Ghaziabad	100	31.12.2020	31.07.2023	ETP Installed	HCF is complying with general standards stipulated in Schedule II	Bar Code facility not being used.

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						of BMWM Rules, 2016 for discharge into public sewers	
9	M/s. Aditi Hospital, Plot No-117, Kaling Marg, Sector-4, Vaishali, Ghaziabad	-	-	-		Closed	-
10	M/s. Paras Hospital, Plot No-130, Kaling Marg, Sector-4, Vaishali, Ghaziabad	50	31.07.2023	31.07.2023	STP/ETP Installed	HCF is complying with general standards stipulated in Schedule II of BMWM Rules, 2016 for discharge into public sewers	Bar Code facility not being used.
11	M/s. Clearmedi Hospital and Cancer Centre, HC-1, Sector-15, Vasundhara, Ghaziabad	100	31.07.2023	31.07.2023	STP/ETP Installed	HCF is complying with general standards stipulated in Schedule II of BMWM Rules, 2016 for discharge into public sewers	Bar Code facility not being used.
12	M/s. Vasundhara Hospital, 5, NH-1, Dr. Br Ambedkar Road, Near Atal Chowk, Sector-15, Vasundhara, Ghaziabad	50	31.07.2023	31.07.2022	ETP Installed	HCF is complying with general standards stipulated in Schedule II of BMWM Rules, 2016 for discharge into public sewers	<p>a. HCF should implement bar code system for BMW.</p> <p>b. No record is provided by HCF regarding generation and disposal of BMW.</p> <p>c. There was no provision given for appropriate category wise storage</p>

R. Singh

							room. Small area below the floor is treated as storage area. d. The hospital not provided appropriate pretreatment facility for laboratory generated liquid chemical waste.
13	M/s. Shanti Gopal Hospital, Plot NO-NH-01, Ahinsa Jhand-02, Indrapuram Ghaziabad	100	31.07.2022	31.10.2022	STP Installed	HCF is complying with general standards stipulated in Schedule II of BMWM Rules, 2016 for discharge into public sewers	a. HCF should implement bar code system as per BMW Rules, 2016. b. HCF have no dedicated common storage room for temporary storage of BMW within premises.
14	M/s. Yashoda Hospital, 3rd, Nehru Nagar Stadium Nehru Nagar, Ghaziabad	310	31.12.2022	31.12.2022	ETP cum STP Installed	HCF is complying with general standards stipulated in Schedule II of BMWM Rules, 2016 for discharge into public sewers	a. HCF should ensure bar code system as per BMW Rules, 2016. b. BMW should be segregated properly and training of staff handling BMW waste is required.

Dr K Singh

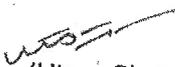
It has been brought up in the complaint that HCFs are operating without obtaining Environmental Clearance as stipulated under EIA Notification, 2006. It is submitted that besides M/s. Max Hospital none of the HCFs come under the purview of EIA Notification, 2006 and are thus not violating the conditions stipulated under EIA,2006. Among above mentioned HCFs, treatment plant was not found operational in 01 HCF (namely M/s. Atlanta Hospital, Plot No-NH-01, Sector-14, Vasundhara, Ghaziabad) and not installed 01 HCF (namely M/s. Santosh Medical College, 170, Sector-12, Block-J, Pratap Vihar, Ghaziabad). However, since all HCFs are in municipal limits and connected to terminal STPs. It has been observed that discharge was found to be complying with general standards stipulated in Schedule II of BMWM Rules, 2016 for discharge into public sewers by healthcare facilities. Also, Central Pollution Control Board, vide its letter number F. No. B-31011/BMW (27.10)/2021/WMD-I dated 12.11.2021 has informed under Right to Information Act, 2005 that 'In case the waste effluent is connected with public sewer which leads to terminal STP, the healthcare facility does not require to install separate/individual ETP.'

Besides this, 03 healthcare facilities, namely M/s. Atlanta Hospital, Plot No-NH-01, Sector-14, Vasundhara, Ghaziabad, M/s. Yashoda Hospital, 3rd, Nehru Nagar Stadium Nehru Nagar, Ghaziabad, M/s. Le Crest Hospital, Plot No-INS-13, Budh Chowk, Sector-4, Vasundhara, Ghaziabad were found to be non-complying with regards to collection and segregation of bio-medical waste. Further, M/s. Atlanta Hospital, Plot No-NH-01, Sector-14, Vasundhara, Ghaziabad and M/s. Santosh Medical College, 170, Sector-12, Block-J, Pratap Vihar, Ghaziabad are operating without obtaining statutory permission from Board. In view of above non-compliance, environmental compensation of Rs. 63,32,500/- has been recommended against these 04 HCFs. Also, implementation of bar coding in health care facilities and submission of Annual Report as mandated in BMW Rules is still not being complied by most of the HCFs.

Report is being put up for perusal and further necessary directions.


(Ranjeet Singh)
Assistant Env. Engineer
UPPCB, Ghaziabad


(Kishan Singh)
Assistant Env. Engineer
UPPCB, Ghaziabad


(Utsav Sharma)
Regional Officer
UPPCB, Ghaziabad


(Youthika Puri)
Scientist D, CPCB, New Delhi


(Bipin Kumar)
ADM (City), Ghaziabad

Checklist for Verification of Compliance of Provisions of BMW Rules in Health Care Facility (HCF)

I. Meenakshi Hospital, B-12 & 13, Kaushambhi, Ghaziabad.

I. General Information:				
(a)	Name & Address of the HCF	:	Meenakshi Hospital, B-12 & 13, Kaushambhi, Ghaziabad	
(b)	Contact person & Telephone No.	:	Dr. Rajiv kumar seth (9818075677)	
(c)	Month & Year of Establishment	:	2000	
(d)	Government/Trust/Private Hospital	:	Private Hospital	
(e)	Total no. of beds & average occupancy	:	30 Beds, occupancy- 20%	
(f)	Consent under Water (Prevention and Control of Pollution) Act, 1974	:	Yes	
	• Date of issue	:	22.07.2021	
	• Validity up to	:	31.07.2023	
(g)	Consent under Air (Prevention and Control of Pollution) Act, 1981	:	Yes	
	• Date of issue	:	22.07.2021	
	• Validity up to	:	31.07.2023	
(h)	Authorization under Bio-medical Waste (M & H) Rules, 1998	:	Yes	
	• Date of issue	:	31.01.2022	
	• Issued by	:	RO UPPCB, Ghaziabad	
	• Validity up to	:	31.07.2023	
(i)	Daily Operation schedule (timings)	:	24 Hr.	
(j)	Status of Annual Report submission	:	Not Submitted	
(k)	House Keeping and Sanitation status	:	Satisfactory	
(l)	Staff involvement in BMW management (no. of persons)	:		
	• Managerial/Administration	:	2	
	• Equipment operations	:	3	
	• Transportation of BMW	:	3	
	• Sanitation & others	:	4	
(m)	Whether annual report submitted by HCF to the SPCB/PCC/Any other prescribed authority (Date of submission and enclose a copy)	:	No	
II. Bio-medical Waste (Sources, Storage and segregation):				
(a)	Sources of Biomedical Waste Generation	:	Ward, O.T., Lab., OPD, Casualty etc.	
(b)	Total quantity of Bio-medical waste generated in Kg/day and in Kg/annum	:	15 Kg/day	
(c)	Typical Categories of wastes generated (pl. indicate category wise quantity in Kg/day):			
	Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal
	1	Human Anatomical Waste	6.5	Through CBWTF (Environ waste connections LLP, Hapur)

	2	Animal Waste	0	NA
	3	Microbiology & Biotechnology Waste	1.0	Through CBWTF (Environ waste connections LLP, Hapur)
	4	Waste Sharps	0.2	Through CBWTF (Environ waste connections LLP, Hapur)
	5	Discarded Medicines and Cytotoxic Drugs	0	NA
	6	Soiled Waste	0	Through CBWTF (Environ waste connections LLP, Hapur)
	7	Solid Waste (Wastes generated from disposable items other than the waste sharps)	7.5	Through CBWTF (Environ waste connections LLP, Hapur)
	8	Liquid Waste	2.0	Disposal through ETP
	9	Incineration Ash	0	NA
	10	Chemical Waste	0	NA
		Total solid waste Total liquid waste	15 kg/day 0.8 KLD	
(d)	Record keeping for generation and disposal of BMW			: Yes
(e)	Status of segregation and storage (Colored bins, plastic bags and any other mode)			: Colored bins
(f)	Status of temporary storage details (pl. indicate specific provision made by the HCF)			: Dedicated covered storage
(g)	Whether temporary storage is satisfactory (Yes/No)			: Yes
(h)	Status of treatment at wards and chemicals used			: No
(i)	Status of House Keeping in Wards and at source of BMW generation			: Yes
(j)	Mode of transportation of wastes from source to the temporary storage/on-site treatment facility (pl. indicate type of provision made by the HCF)			: Waste is being transferred through bins manually
(k)	Provision made for on-site transportation within HCF is satisfactory (Yes/No). Details thereof			: Yes
(l)	Category wise disposal options followed: All waste is being transferred and stored in temporary storage at HCF.			
	Colour Coding	Waste Categories	Treatment & Disposal	
	Red	Contaminated recyclable waste	Waste is being sent to CBWTF (M/s Environ connections LLP, Hapur)	
	Blue	Glassware	Waste is being sent to CBWTF (M/s Environ	

			connections LLP, Hapur)						
	Yellow	Anatomical	Waste is being sent to CBWTF (M/s Environ connections LLP, Hapur)						
	Green	General waste such as paper, cardboard boxes, packaging, kitchen waste etc.	Municipal waste is being disposed of through Municipal Corporation Ghaziabad						
III.	On-site Treatment of BWM by HCF: Not applicable								
(a)	Total quantity of bio-medical waste treated (Kg per day)								
	• Deep Burial in Kg/day	:	NA						
	• Incinerable in Kg/day	:							
	• Autoclaving/ Microwaving/ Hydroclaving in kg/day	:							
	• Others (please specify) in Kg/day	:							
(b)	On-site Treatment Provision by Incineration:								
	• Supplier of the Incinerator	:	NA						
	• Capacity of the Incineration in tonnes per hour and tonnes per annum	:	NA						
	• Operation conditions of the Incineration based on the designs/supplier	:	NA						
	• Provision made for Temperature measurements	:	NA						
	• Daily Operation schedule (timings)	:	NA						
	• Operating conditions as per records and as observed	:	NA						
	• Stack attached with the incinerator	:	NA						
	• Air pollution control systems attached with the incinerator	:	NA						
	• Auxiliary fuels used for incineration	:	NA						
	• Consumption of auxiliary fuels	:	<table border="1"> <thead> <tr> <th>Name of fuel</th> <th>Quantity per day/month</th> </tr> </thead> <tbody> <tr> <td>a) NA</td> <td>--</td> </tr> <tr> <td>b) NA</td> <td>--</td> </tr> </tbody> </table>	Name of fuel	Quantity per day/month	a) NA	--	b) NA	--
Name of fuel	Quantity per day/month								
a) NA	--								
b) NA	--								
	• Monitoring provision attached with the stack	:	NA						
	• Storage provision at the incinerator	:	NA						
	• Fire safety measures adopted	:	NA						
	• Log book for operation of incinerator	:	NA						
	• Type of wastes incinerated and its characteristics	:	NA						
	• Average quantity of wastes incinerated per day or per month or per annum	:	NA						
	• Duration of operating hours of incineration:	:	NA						
	• Details of heat recovery system installed with incinerator if any:	:	NA						
	• Stack gaseous emissions monitored:								

Emission Parameters	Permissible Limits	Monitored Values** by CPCB
Particulate matter (with 12% CO ₂ correction)	150 mg/Nm ³	NA
Nitrogen Oxides	450 mg/Nm ³	NA
HCl	50 mg/Nm ³	NA
SO ₂	Low Sulphur fuel to be used	NA
Stack Height	30 meters	NA
Volatile Organic compound in ash (%)	Less than 0.01%	NA
Temp. in Primary Chamber	800°C (+/-) 50°C	NA
Temp. in secondary Chamber	1050°C (+/-) 50°C	NA
Residence time in sec. chamber	1 second	NA
** Not applicable.		
• Quantity of ash generation per day or per month or per annum	:	NA
• Final disposal mode of incineration ash (also indicate characteristics)	:	NA
• Specific observations, if any, w.r.t. incineration (any chlorinated disinfectants, chlorinated plastics, sulphur content in auxiliary fuels used for incineration)	:	NA
(c) Autoclaving /Microwaving /Hydroclaving :		
• Capacity	:	NA
• Make	:	NA
• Air pollution control devices attached	:	NA
• Capacity of shredder and make:	:	NA
• Operating conditions as per designs	:	NA
• Graphic or computer recording devices attached with the system	:	NA
• Operating conditions as observed in recording system	:	NA
• Performance evaluation by spore testing or routine test. Details thereof	:	NA
• Biological indicators	:	NA
(d) Onsite Wastewater Treatment:		
• Consumption of water per day (in kl/day)	:	0.6 KLD
• Sources of water supply	:	Municipal corporation
• Sources of waste water generation and the quantity (in kl/day)	:	Lab- 0.2 KLD, OT- 0.4 KLD
• Total Waste water generation quantity (in kl/day)	:	0.5 KLD
• Steps involved in Effluent Treatment Plant (Also enclose flow chart of ETP)	:	Equalization tank, chemical dosing tanks, reaction cum settling tank, buffer tank, MGF, ACF, Sludge drying beds etc.
• Type of chemicals used in ETP and the consumption (in kg/day)	:	Alum- 2 Kg/day, Lime- 2 Kg/day
•	:	

	<ul style="list-style-type: none"> Intake characteristics of ETP 	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>7.09</td> </tr> <tr> <td>Colour</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>46</td> </tr> <tr> <td>COD</td> <td>261</td> </tr> <tr> <td>TSS</td> <td>3622</td> </tr> <tr> <td>Total Coliform</td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td>-</td> </tr> </tbody> </table>	Parameter	Monitored values** in mg/l except pH	pH	7.09	Colour	Turbid	BOD	46	COD	261	TSS	3622	Total Coliform	-	Fecal Coliform	-								
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	<ul style="list-style-type: none"> Final mode of disposal of treated wastewater (Reused/ Discharged through drain) 	:	Through Public sewer line																								
	<ul style="list-style-type: none"> compliance to the regulatory requirements for final disposal of treated liquid effluent: 	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Permissible limits in mg/l except pH</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>5.5 – 9.0</td> <td>7.28</td> </tr> <tr> <td>Colour</td> <td>-</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>350</td> <td>17.0</td> </tr> <tr> <td>COD</td> <td>N/A</td> <td>105.0</td> </tr> <tr> <td>TSS</td> <td>600</td> <td>76.</td> </tr> <tr> <td>Total Coliform</td> <td></td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td></td> <td>-</td> </tr> </tbody> </table> <p>**General Standards as applicable for public sewer.</p>	Parameter	Permissible limits in mg/l except pH	Monitored values** in mg/l except pH	pH	5.5 – 9.0	7.28	Colour	-	Turbid	BOD	350	17.0	COD	N/A	105.0	TSS	600	76.	Total Coliform		-	Fecal Coliform		-
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COD	N/A	105.0																									
TSS	600	76.																									
Total Coliform		-																									
Fecal Coliform		-																									
	<ul style="list-style-type: none"> Analysis procedures followed for characterization of waste water 	:	NA																								
	<ul style="list-style-type: none"> Any other mode of wastewater disposal, Details thereof 	:	NA																								
(e)	On-site BMW Disposal																										
	<ul style="list-style-type: none"> Disposal by Deep Burial/ Municipal Solid Waste Landfills/ Disposal in Open Yards or low-lying areas 	:	NA																								
	<ul style="list-style-type: none"> Give details of sharp pit/ encapsulation facility (pl. provide details such as size of pit, depth in m) 	:	NA																								
	<ul style="list-style-type: none"> Precautionary measures taken around the sharp pit or encapsulation facility 	:	NA																								
	<ul style="list-style-type: none"> Whether sharp pit/ encapsulation is authorized by SPCB/ PCC/ any prescribed authority 	:	NA																								
	<ul style="list-style-type: none"> Give measures taken for disposal of BMW by sharp pit/encapsulation: 	:	NA																								
	<ul style="list-style-type: none"> Ground Water Level and the Characteristics around the encapsulation pit: 	:	NA																								
	<ul style="list-style-type: none"> Records with regard to the Deep Burial 	:	NA																								

IV.	Status of infrastructure (specify shortcomings observed if any):							
	<ul style="list-style-type: none"> • Treatment equipment room: :	Adequate	Adequate	Adequate	15 KVA with acoustic enclosure	Adequate	Adequate	Adequate
V.	Record keeping details:							
	<ul style="list-style-type: none"> • Does the operator have record keeping system in order to comply with the Rules? Specify shortcomings observed if any. :	NA						
VI.	Monitoring Frequency Details:							
	<ul style="list-style-type: none"> • Frequency of monitoring of incinerator/ autoclave/ microwave/ hydroclave/ ETP effluent discharge :	NA						
VII.	Monitoring results carried out by SPCB/ PCC:							
	<ul style="list-style-type: none"> • Incinerator gaseous stack emissions (attach monitoring results) :	NA						
VIII	Whether wastes are disposed-off through common facility. If so provide details:							
	Type of wastes disposed after treatment <ul style="list-style-type: none"> • Plastic wastes after treatment :						NA	
IX.	Check for the following (indicate YES/NO):							

	<ul style="list-style-type: none"> • Bio-medical waste not to be mixed with other waste. :	Yes
	<ul style="list-style-type: none"> • Needle/syringe destroyer at required places :	Yes
	<ul style="list-style-type: none"> • Segregation of waste in the coloured containers at the source of waste generation as per BMW Rules. :	Yes
	<ul style="list-style-type: none"> • Placement of required coloured containers at the source of waste generation labeled with bio-hazard symbol :	Yes
	<ul style="list-style-type: none"> • Whether awareness among hospital staff/ doctors generated? :	Yes
	<ul style="list-style-type: none"> • Whether labeling of bag has been done with respective ward no. in order to identify its source to enable improvement of segregation? :	Yes
	<ul style="list-style-type: none"> • Whether special care is taken with regard to mercury spillage/breakage :	Yes
	<ul style="list-style-type: none"> • Deployment of posters/placards within the hospitals :	Yes
	<ul style="list-style-type: none"> • Whether requisite treatment to segregated waste/ hand over to CBWTF operator within 48 hours of waste generation is imparted? :	Yes
	<ul style="list-style-type: none"> • Whether waste collected in a container of similar colour with label as per the Rules? :	Yes
	<ul style="list-style-type: none"> • Whether the person who collects BMW maintains a register? :	Yes
	<ul style="list-style-type: none"> • Type of vehicle used (closed type or open type) for transportation for final disposal? :	Closed
	<ul style="list-style-type: none"> • Has due attention been given in vehicles to prevent spillage/ pilferage/ loading/ unloading etc.? :	Yes
	<ul style="list-style-type: none"> • The facility operator collects waste daily or alternate day? Whether criterion of 48 hours is complied? :	Yes

X.	Other observations:	
	c. HCF should implement bar code system as per BMW Rules, 2016. d. Proper logbook with regards to operation of ETP should be maintained.	
XI	Name (s) of the visiting official (s) with address :	1. Mr. Bipin Kumar, ADM (city), Ghaziabad 2. Mrs. Youthika, Scientist- D, Central Pollution Control Board, New Delhi 3. Mr. Kishan Singh, AEE, UPPCB, Ghaziabad 4. Mr. Ranjeet Singh, JE, UPPCB, Ghaziabad



**Checklist for Verification of Compliance of Provisions of BMW Rules in Health Care Facility
(HCF)**

II. M/s Yashoda Super Speciality Hospital, H-1, Kaushambhi, Ghaziabad

I. General Information:				
(a)	Name & Address of the HCF	:	M/s. Yashoda Super Speciality Hospital, H-1, Kaushambhi, Ghaziabad	
(b)	Contact person & Telephone No.	:	Mr. Ravi Ranjan Sharma 9650376163	
(c)	Month & Year of Establishment	:	2006	
(d)	Government/Trust/Private Hospital	:	Private Hospital	
(e)	Total no. of beds & average occupancy	:	300 Beds/average Occupancy 75%	
(f)	Consent under Water (Prevention and Control of Pollution) Act, 1974	:	Yes	
	• Date of issue	:	08.05.2019	
	• Validity up to	:	31.12.2023	
(g)	Consent under Air (Prevention and Control of Pollution) Act, 1981	:	Yes	
	• Date of issue	:	08.05.2019	
	• Validity up to	:	31.12.2023	
(h)	Authorization under Bio-medical Waste (M & H) Rules, 1998	:	Yes	
	• Date of issue	:	18.07.2019	
	• Issued by	:	UPPCB, Lucknow	
	• Validity up to	:	31.12.2023	
(i)	Daily Operation schedule (timings)	:	24hrs	
(j)	Status of Annual Report submission	:	Submitted	
(k)	House Keeping and Sanitation status	:	satisfactory	
(l)	Staff involvement in BMW management (no. of persons)	:		
	• Managerial/Administration	:	01	
	• Equipment operations	:	02	
	• Transportation of BMW	:	4	
	• Sanitation & others	:	4	
(m)	Whether annual report submitted by HCF to the SPCB/PCC/Any other prescribed authority (Date of submission and enclose a copy)	:	Copy enclosed	
II. Bio-medical Waste (Sources, Storage and segregation):				
(a)	Sources of Biomedical Waste Generation	:	HCF	
(b)	Total quantity of Bio-medical waste generated in Kg/day and in Kg/annum	:	182 kg/day(approx.) 65490.628 kg/Annually (approx.)	
(c)	Typical Categories of wastes generated (pl. indicate category wise quantity in Kg/day):			
	Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal
	1	Human Anatomical Waste		Through CBWTF (M/s Environ waste connections LLP, Hapur)

	2	Animal Waste	0	NA
	3	Microbiology & Biotechnology Waste	0	NA
	4	Waste Sharps		Through CBWTF (M/s Environ waste connections LLP, Hapur)
	5	Discarded Medicines and Cytotoxic Drugs		Through CBWTF (M/s Environ waste connections LLP, Hapur)
	6	Soiled Waste		Through CBWTF (M/s Environ waste connections LLP, Hapur)
	7	Solid Waste (Wastes generated from disposable items other than the waste sharps)		Through CBWTF (M/s Environ waste connections LLP, Hapur)
	8	Liquid Waste	5.0 KLD	Disposal through ETP
	9	Incineration Ash	0	NA
	10	Chemical Waste	0	NA
		Total solid waste Total liquid waste	182 kg/day 5.0 KLD	
(d)	Record keeping for generation and disposal of BMW			: Yes
(e)	Status of segregation and storage (colored bins, plastic bags and any other mode)			: Colored bins
(f)	Status of temporary storage details (pl. indicate specific provision made by the HCF)			: Separate area for temporary storage
(g)	Whether temporary storage is satisfactory (Yes/No)			: Yes
(h)	Status of treatment at wards and chemicals used			: NA
(i)	Status of House Keeping in Wards and at source of BMW generation			: Satisfactory
(j)	Mode of transportation of wastes from source to the temporary storage/on-site treatment facility (pl. indicate type of provision made by the HCF)			: Transportation trolleys are available for BMW waste (separate for COVID & NON COVID)
(k)	Provision made for on-site transportation within HCF is satisfactory (Yes/No). Details thereof			: Yes
(l)	Category wise disposal options followed:			
	Colour Coding	Waste Categories	Treatment & Disposal	
	Red	Contaminated recyclable waste	Disposal Only (M/s ENVIRON WASTE CONNECTIONS LLP BN-102-104, UPSIDC Industrial Area, M.G Road, Phase-III, Hapur)	
	Blue	Glassware	Disposal Only (M/s ENVIRON WASTE CONNECTIONS LLP BN-102-104, UPSIDC	

			Industrial Area, M.G Road, Phase-III, Hapur)	
	Yellow	Anatomical	Disposal Only (M/s ENVIRON WASTE CONNECTIONS LLP BN-102-104, UPSIDC Industrial Area, M.G Road, Phase-III, Hapur)	
	Green	General waste such as paper, cardboard boxes, packaging, kitchen waste etc.	Through Municipal corporation, Ghaziabad	
III.	On-site Treatment of BWM by HCF:			
(a)	Total quantity of bio-medical waste treated (Kg per day)			NA
	• Deep Burial in Kg/day	:		
	• Incinerable in Kg/day	:		
	• Autoclaving/ Microwaving/ Hydroclaving in kg/day	:		
	• Others (please specify) in Kg/day	:		
(b)	On-site Treatment Provision by Incineration:			
	• Supplier of the Incinerator	:		NA
	• Capacity of the Incineration in tones per hour and tones per annum	:		NA
	• Operation conditions of the Incineration based on the designs/supplier	:		NA
	• Provision made for Temperature measurements	:		NA
	• Daily Operation schedule (timings)	:		NA
	• Operating conditions as per records and as observed	:		NA
	• Stack attached with the incinerator	:		NA
	• Air pollution control systems attached with the incinerator	:		NA
	• Auxiliary fuels used for incineration	:		NA
	• Consumption of auxiliary fuels	:		
			Name of fuel	Quantity per day/month
			a) NA	--
			b) NA	--
	• Monitoring provision attached with the stack	:		NA
	• Storage provision at the incinerator	:		NA
	• Fire safety measures adopted	:		NA
	• Log book for operation of incinerator	:		NA
	• Type of wastes incinerated and its characteristics	:		NA
	• Average quantity of wastes incinerated per day or per month or per annum	:		NA
	• Duration of operating hours of incineration:	:		NA
	• Details of heat recovery system installed with incinerator if any:	:		NA
	• Stack gaseous emissions monitored:			

	Emission Parameters	Permissible Limits	Monitored Values** by CPCB
	Particulate matter (with 12% CO ₂ correction)	150 mg/Nm ³	NA
	Nitrogen Oxides	450 mg/Nm ³	NA
	HCl	50 mg/Nm ³	NA
	SO ₂	Low Sulphur fuel to be used	NA
	Stack Height	30 meters	NA
	Volatile Organic compound in ash (%)	Less than 0.01%	NA
	Temp. in Primary Chamber	800°C (+/-) 50°C	NA
	Temp. in secondary Chamber	1050°C (+/-) 50°C	NA
	Residence time in sec. chamber	1 second	NA
	** Not applicable		
	• Quantity of ash generation per day or per month or per annum	:	NA
	• Final disposal mode of incineration ash (also indicate characteristics)	:	NA
	• Specific observations, if any, w.r.t. incineration (any chlorinated disinfectants, chlorinated plastics, sulphur content in auxiliary fuels used for incineration)	:	NA
(c)	Autoclaving /Microwaving /Hydroclaving :		
	• Capacity	:	NA
	• Make	:	NA
	• Air pollution control devices attached	:	NA
	• Capacity of shredder and make:	:	NA
	• Operating conditions as per designs	:	NA
	• Graphic or computer recording devices attached with the system	:	NA
	• Operating conditions as observed in recording system	:	NA
	• Performance evaluation by spore testing or routine test. Details thereof	:	NA
	• Biological indicators	:	NA
(d)	Onsite Wastewater Treatment:		
	• Consumption of water per day (in kl/day)	:	20 KLD
	• Sources of water supply	:	Municipal corporation
	• Sources of waste water generation and the quantity (in kl/day)	:	OT, Lab Dialysis
	• Total Waste water generation quantity (in kl/day)	:	Domestic- 15 KLD Industrial- 5 KLD
	• Steps involved in Effluent Treatment Plant (Also enclose flow chart of ETP)	:	Bar screen, Equalization tank, Flash mixer, tube settler, chemical dosing tanks, centrifuge etc.
	• Type of chemicals used in ETP and the consumption (in kg/day)	:	Lime, Alum, Polyelectrolyte

	<ul style="list-style-type: none"> Intake characteristics of ETP 	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>6.65</td> </tr> <tr> <td>Colour</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>141.0</td> </tr> <tr> <td>COD</td> <td>424.0</td> </tr> <tr> <td>TSS</td> <td>150.0</td> </tr> <tr> <td>Total Coliform</td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td>-</td> </tr> </tbody> </table>	Parameter	Monitored values** in mg/l except pH	pH	6.65	Colour	Turbid	BOD	141.0	COD	424.0	TSS	150.0	Total Coliform	-	Fecal Coliform	-								
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BOD	141.0																										
COD	424.0																										
TSS	150.0																										
Total Coliform	-																										
Fecal Coliform	-																										
	<ul style="list-style-type: none"> Final mode of disposal of treated wastewater (Reused/ Discharged through drain) 	:	Through Public sewer line																								
	<ul style="list-style-type: none"> compliance to the regulatory requirements for final disposal of treated liquid effluent: 	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Permissible limits in mg/l except pH</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>5.5 – 9.0</td> <td>8.12</td> </tr> <tr> <td>Colour</td> <td>-</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>350</td> <td>25.0</td> </tr> <tr> <td>COD</td> <td>N/A</td> <td>178.0</td> </tr> <tr> <td>TSS</td> <td>600</td> <td>80.0</td> </tr> <tr> <td>Total Coliform</td> <td></td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td></td> <td>-</td> </tr> </tbody> </table> <p>**General Standards as applicable for public sewer.</p>	Parameter	Permissible limits in mg/l except pH	Monitored values** in mg/l except pH	pH	5.5 – 9.0	8.12	Colour	-	Turbid	BOD	350	25.0	COD	N/A	178.0	TSS	600	80.0	Total Coliform		-	Fecal Coliform		-
Parameter	Permissible limits in mg/l except pH	Monitored values** in mg/l except pH																									
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Colour	-	Turbid																									
BOD	350	25.0																									
COD	N/A	178.0																									
TSS	600	80.0																									
Total Coliform		-																									
Fecal Coliform		-																									
	<ul style="list-style-type: none"> Analysis procedures followed for characterization of waste water 	:	NA																								
	<ul style="list-style-type: none"> Any other mode of wastewater disposal, Details thereof 	:	NA																								
(e)	On-site BMW Disposal																										
	<ul style="list-style-type: none"> Disposal by Deep Burial/ Municipal Solid Waste Landfills/ Disposal in Open Yards or low-lying areas 	:	NA																								
	<ul style="list-style-type: none"> Give details of sharp pit/ encapsulation facility (pl. provide details such as size of pit, depth in m) 	:	NA																								
	<ul style="list-style-type: none"> Precautionary measures taken around the sharp pit or encapsulation facility 	:	NA																								
	<ul style="list-style-type: none"> Whether sharp pit/ encapsulation is authorized by SPCB/ PCC/ any prescribed authority 	:	NA																								
	<ul style="list-style-type: none"> Give measures taken for disposal of BMW by sharp pit/encapsulation: 	:	NA																								
	<ul style="list-style-type: none"> Ground Water Level and the Characteristics around the encapsulation pit: 	:	NA																								

	<ul style="list-style-type: none"> Records with regard to the Deep Burial 	:	NA
IV.	Status of infrastructure (specify shortcomings observed if any):		
	<ul style="list-style-type: none"> Treatment equipment room: Main waste storage room: Treated waste storage room: Generator set (size and regulatory compliance details) Waste treatment site security (High walls, fencing, guarded gates etc.) Washing room for waste containers Protective gear for waste handlers 	:	Adequate Adequate Adequate 500 KVA, 320 KVA, 180 KVA, 1010 KVA with acoustic enclosure Adequate Adequate Adequate
V.	Record keeping details:		
	<ul style="list-style-type: none"> Does the operator have record keeping system in order to comply with the Rules? Specify shortcomings observed if any. 	:	Not applicable
VI.	Monitoring Frequency Details:		
	<ul style="list-style-type: none"> Frequency of monitoring of incinerator/ autoclave/ microwave/ hydroclave/ ETP effluent discharge name of the laboratory (specify approved or not) Give details of compliance/ non-compliance of liquid and air emissions. 	:	NA
VII	Monitoring results carried out by SPCB/ PCC:		
	<ul style="list-style-type: none"> Incinerator gaseous stack emissions (attach monitoring results) Validation/ efficacy test of autoclave/ microwave/ hydroclave: ETP inlet and outlet characteristics 	:	NA NA Report enclosed
VII I	Whether wastes are disposed-off through common facility. If so, provide details:		
	Type of wastes disposed after treatment <ul style="list-style-type: none"> Plastic wastes after treatment Treated sharps Incineration ash Other treated solid wastes Treated waste water 	:	NA
IX.	Check for the following (indicate YES/NO):		



**Checklist for Verification of Compliance of Provisions of BMW Rules in Health Care Facility
(HCF)**

III. M/s Max Super Specialty Hospital, W-3, Sector 1, Vaishali, Ghaziabad

I. General Information:				
(a)	Name & Address of the HCF	:	M/s. Max Super specialty Hospital, W-3, Near Radisson Blu Hotel, Sector-1, Vaishali, Ghaziabad	
(b)	Contact person & Telephone No.	:	Dr. Gaurav Aggarwal Sr. Vice President – Operations Mobile- 9717704457	
(c)	Month & Year of Establishment	:	August 2008	
(d)	Government/Trust/Private Hospital	:	Private Hospital	
(e)	Total no. of beds & average occupancy	:	436 Beds	
(f)	Consent under Water (Prevention and Control of Pollution) Act, 1974	:	Yes	
	• Date of issue	:	24.03.2021	
	• Validity up to	:	31.12.2023	
(g)	Consent under Air (Prevention and Control of Pollution) Act, 1981	:	Yes	
	• Date of issue	:	24.03.2021	
	• Validity up to	:	31.12.2023	
(h)	Authorization under Bio-medical Waste (M & H) Rules, 1998	:	Yes	
	• Date of issue	:	02-02-2021	
	• Issued by	:	UPPCB, Lucknow	
	• Validity up to	:	31.12.2023	
(i)	Daily Operation schedule (timings)	:	24 Hours	
(j)	Status of Annual Report submission	:	Submitted on 17 th June 2021	
(k)	House Keeping and Sanitation status	:	Satisfactory	
(l)	Staff involvement in BMW management (no. of persons)	:		
	• Managerial/Administration	:	10	
	• Equipment operations	:	06	
	• Transportation of BMW	:	25	
	• Sanitation & others	:	13	
(m)	Whether annual report submitted by HCF to the SPCB/PCC/Any other prescribed authority (Date of submission and enclose a copy)	:	Yes, submitted on 17 th June 2021 (Copy attached)	
II. Bio-medical Waste (Sources, Storage and segregation):				
(a)	Sources of Biomedical Waste Generation	:	Ward/ ICU/Lab/OT	
(b)	Total quantity of Bio-medical waste generated in Kg/day and in Kg/annum	:	317.32 kg/day 115824 kg/Annum (2021)	
(c)	Typical Categories of wastes generated (pl. indicate category wise quantity in Kg/day):			
	Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal
	1	Human Anatomical Waste	150.19 kg	Through CBWTF (M/s ENVIRON WASTE)

			CONNECTIONS LLP BN-102-104, UPSIDC Industrial Area, M.G Road, Phase-III, Hapur)
2	Animal Waste	Nil	N/A
3	Microbiology & Biotechnology Waste	22 kg	Through CBWTF (M/s ENVIRON WASTE CONNECTIONS LLP BN-102-104, UPSIDC Industrial Area, M.G Road, Phase-III, Hapur)
4	Waste Sharps (White Glassware Blue)	15.41 Kg 23.45 kg	Through CBWTF (M/s ENVIRON WASTE CONNECTIONS LLP BN-102-104, UPSIDC Industrial Area, M.G Road, Phase-III, Hapur)
5	Discarded Medicines and Cytotoxic Drugs	0.2 kg	Through CBWTF (M/s ENVIRON WASTE CONNECTIONS LLP BN-102-104, UPSIDC Industrial Area, M.G Road, Phase-III, Hapur)
6	Soiled Waste	Nil	N/A
7	Solid Waste (Wastes generated from disposable items other than the waste sharps)	478.69 kg	Through CBWTF (M/s ENVIRON WASTE CONNECTIONS LLP BN-102-104, UPSIDC Industrial Area, M.G Road, Phase-III, Hapur)
8	Liquid Waste	20.0 KLD	Disposal through ETP
9	Incineration Ash	Nil	N/A
10	Chemical Waste	Nil	N/A
	Total solid waste	478.69 kg/day	
	Total liquid waste	20 KLD	
(d)	Record keeping for generation and disposal of BMW	:	Yes- Available
(e)	Status of segregation and storage (Colored bins, plastic bags and any other mode)	:	Yes- As per guideline
(f)	Status of temporary storage details (pl. indicate specific provision made by the HCF)	:	Dedicated-BMW Room With colour coded bay
(g)	Whether temporary storage is satisfactory (Yes /No)	:	Yes- Satisfactory
(h)	Status of treatment at wards and chemicals used	:	Disinfection through Hypo Solution
(i)	Status of House Keeping in Wards and at source of BMW generation	:	Satisfactory
(j)	Mode of transportation of wastes from source to the temporary storage/on-site treatment facility (pl. indicate type of provision made by the HCF)	:	Used- Covered Trolley
(k)	Provision made for on-site transportation within HCF is satisfactory (Yes/No). Details thereof	:	Yes
(l)	Category wise disposal options followed:		

Colour Coding	Waste Categories	Treatment & Disposal						
Red	Contaminated recyclable waste	Disposal through CBWTF						
Blue	Glassware	Disposal through CBWTF						
Yellow	Anatomical	Disposal through CBWTF						
Green	General waste such as paper, cardboard boxes, packaging, kitchen waste etc.	Disposal through Municipal Corporation Ghaziabad						
III. On-site Treatment of BWM by HCF:								
(a)	Total quantity of bio-medical waste treated (Kg per day)							
	• Deep Burial in Kg/day	: N/A						
	• Incinerable in Kg/day	: N/A						
	• Autoclaving/ Microwaving/ Hydroclaving in kg/day	: NA						
	• Others (please specify) in Kg/day	: N/A						
(b)	On-site Treatment Provision by Incineration:							
	• Supplier of the Incinerator	: NA						
	• Capacity of the Incineration in tones per hour and tonnes per annum	: NA						
	• Operation conditions of the Incineration based on the designs/supplier	: NA						
	• Provision made for Temperature measurements	: NA						
	• Daily Operation schedule (timings)	: NA						
	• Operating conditions as per records and as observed	: NA						
	• Stack attached with the incinerator	: NA						
	• Air pollution control systems attached with the incinerator	: NA						
	• Auxiliary fuels used for incineration	: NA						
	• Consumption of auxiliary fuels	<table border="1"> <thead> <tr> <th>Name of fuel</th> <th>Quantity per day/month</th> </tr> </thead> <tbody> <tr> <td>a) NA</td> <td>--</td> </tr> <tr> <td>b) NA</td> <td>--</td> </tr> </tbody> </table>	Name of fuel	Quantity per day/month	a) NA	--	b) NA	--
Name of fuel	Quantity per day/month							
a) NA	--							
b) NA	--							
	• Monitoring provision attached with the stack	: NA						
	• Storage provision at the incinerator	: NA						
	• Fire safety measures adopted	: NA						
	• Log book for operation of incinerator	: NA						
	• Type of wastes incinerated and its characteristics	: NA						
	• Average quantity of wastes incinerated per day or per month or per annum	: NA						
	• Duration of operating hours of incineration:	: NA						
	• Details of heat recovery system installed with incinerator if any:	: NA						
	• Stack gaseous emissions monitored:							

Emission Parameters	Permissible Limits	Monitored Values** by CPCB
Particulate matter (with 12% CO ₂ correction)	150 mg/Nm ³	NA
Nitrogen Oxides	450 mg/Nm ³	NA
HCl	50 mg/Nm ³	NA
SO ₂	Low Sulphur fuel to be used	NA
Stack Height	30 meter	NA
Volatile Organic compound in ash (%)	Less than 0.01%	NA
Temp. in Primary Chamber	800°C (+/-) 50°C	NA
Temp. in secondary Chamber	1050°C (+/-) 50°C	NA
Residence time in sec. chamber	1 second	NA
** Not applicable.		
• Quantity of ash generation per day or per month or per annum	:	NA
• Final disposal mode of incineration ash (also indicate characteristics)	:	N/A
• Specific observations, if any, w.r.t. incineration (any chlorinated disinfectants, chlorinated plastics, sulphur content in auxiliary fuels used for incineration)	:	N/A
(c) Autoclaving /Microwaving /Hydroclaving :		
• Capacity	:	N/A
• Make	:	N/A
• Air pollution control devices attached	:	N/A
• Capacity of shredder and make:	:	N/A
• Operating conditions as per designs	:	N/A
• Graphic or computer recording devices attached with the system	:	N/A
• Operating conditions as observed in recording system	:	N/A
• Performance evaluation by spore testing or routine test. Details thereof	:	N/A
• Biological indicators	:	N/A
(d) Onsite Wastewater Treatment:		
• Consumption of water per day (in kl/day)	:	400 KL/day
• Sources of water supply	:	Tanker, Ganga water, Borewell
• Sources of waste water generation and the quantity (in kl/day)	:	WC, Urinal, Washroom, DU ROOM- 210 KL/day
• Total Waste water generation quantity (in kl/day)	:	Domestic- 380 KL/day Industrial- 20 KLD
• Steps involved in Effluent Treatment Plant (Also enclose flow chart of ETP)	:	OT, Lab, CSSD, Blood Bank, BMW Room
• Type of chemicals used in ETP and the consumption (in kg/day)	:	Lime, Polyelectrolyte, Alum, Hypo

	<ul style="list-style-type: none"> Intake characteristics of ETP and STP 	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Monitored values** in mg/l except pH For ETP</th> <th>Monitored values** in mg/l except pH for STP</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>7.25</td> <td>7.26</td> </tr> <tr> <td>Colour</td> <td>Turbid</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>79.0</td> <td>139.0</td> </tr> <tr> <td>COD</td> <td>326.0</td> <td>202.0</td> </tr> <tr> <td>TSS</td> <td>213.0</td> <td>277.0</td> </tr> <tr> <td>Total Coliform</td> <td>-</td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Parameter	Monitored values** in mg/l except pH For ETP	Monitored values** in mg/l except pH for STP	pH	7.25	7.26	Colour	Turbid	Turbid	BOD	79.0	139.0	COD	326.0	202.0	TSS	213.0	277.0	Total Coliform	-	-	Fecal Coliform	-	-																								
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Total Coliform	-	-																																																	
Fecal Coliform	-	-																																																	
	<ul style="list-style-type: none"> Final mode of disposal of treated wastewater (Reused/ Discharged through drain) 	:	Reused- Flushing, Cooling Tower, Gardening & Discharge through public sewer																																																
	<ul style="list-style-type: none"> compliance to the regulatory requirements for final disposal of treated liquid effluent: 	:	<p>ETP outlet:</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Permissible limits in mg/l except pH</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>6.5 – 8.5</td> <td>7.0</td> </tr> <tr> <td>Colour</td> <td>-</td> <td>Colourless</td> </tr> <tr> <td>BOD</td> <td>30</td> <td>18.0</td> </tr> <tr> <td>COD</td> <td>250</td> <td>164.0</td> </tr> <tr> <td>TSS</td> <td>100</td> <td>86.0</td> </tr> <tr> <td>Total Coliform</td> <td></td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td></td> <td>-</td> </tr> </tbody> </table> <p>STP outlet:</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Permissible limits in mg/l except pH</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>5.5 – 9.0</td> <td>7.05</td> </tr> <tr> <td>Colour</td> <td>-</td> <td>Colourless</td> </tr> <tr> <td>BOD</td> <td>350</td> <td>26.0</td> </tr> <tr> <td>COD</td> <td>N/A</td> <td>155.0</td> </tr> <tr> <td>TSS</td> <td>600</td> <td>80.0</td> </tr> <tr> <td>Total Coliform</td> <td>-</td> <td>2100</td> </tr> <tr> <td>Fecal Coliform</td> <td>-</td> <td>830</td> </tr> </tbody> </table> <p>**General Standards as applicable for public sewer.</p>	Parameter	Permissible limits in mg/l except pH	Monitored values** in mg/l except pH	pH	6.5 – 8.5	7.0	Colour	-	Colourless	BOD	30	18.0	COD	250	164.0	TSS	100	86.0	Total Coliform		-	Fecal Coliform		-	Parameter	Permissible limits in mg/l except pH	Monitored values** in mg/l except pH	pH	5.5 – 9.0	7.05	Colour	-	Colourless	BOD	350	26.0	COD	N/A	155.0	TSS	600	80.0	Total Coliform	-	2100	Fecal Coliform	-	830
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	<ul style="list-style-type: none"> Disposal by Deep Burial/ Municipal Solid Waste Landfills/ Disposal in Open Yards or low-lying areas 	:	N/A
	<ul style="list-style-type: none"> Give details of sharp pit/ encapsulation facility (pl. provide details such as size of pit, depth in m) 	:	N/A
	<ul style="list-style-type: none"> Precautionary measures taken around the sharp pit or encapsulation facility 	:	N/A
	<ul style="list-style-type: none"> Whether sharp pit/ encapsulation is authorized by SPCB/ PCC/ any prescribed authority 	:	N/A
	<ul style="list-style-type: none"> Give measures taken for disposal of BMW by sharp pit/encapsulation: 	:	N/A
	<ul style="list-style-type: none"> Ground Water Level and the Characteristics around the encapsulation pit: 	:	N/A
	<ul style="list-style-type: none"> Records with regard to the Deep Burial 	:	N/A
IV.	Status of infrastructure (specify shortcomings observed if any):		
	<ul style="list-style-type: none"> Treatment equipment room: Main waste storage room: Treated waste storage room: Generator set (size and regulatory compliance details) Waste treatment site security (High walls, fencing, guarded gates etc.) Washing room for waste containers Protective gear for waste handlers 	:	Adequate Adequate Adequate PNG operated generator- 1500 KVA x02 with acoustic enclosure Adequate Adequate Adequate
V.	Record keeping details:		
	<ul style="list-style-type: none"> Does the operator have record keeping system in order to comply with the Rules? Specify shortcomings observed if any. 	:	Yes
VI.	Monitoring Frequency Details:		
	<ul style="list-style-type: none"> Frequency of monitoring of incinerator/ autoclave/ microwave/ hydroclave/ ETP effluent discharge name of the laboratory (specify approved or not) Give details of compliance/ non-compliance of liquid and air emissions. 	:	NA
VII	Monitoring results carried out by SPCB/ PCC:		
	<ul style="list-style-type: none"> Incinerator gaseous stack emissions (attach monitoring results) Validation/ efficacy test of autoclave/ microwave/ hydroclave: 	:	N/A N/A

	<ul style="list-style-type: none"> ETP inlet and outlet characteristics 	:	Analysis reports enclosed
VII I	Whether wastes are disposed-off through common facility. If so, provide details:		
	Type of wastes disposed after treatment <ul style="list-style-type: none"> Plastic wastes after treatment Treated sharps Incineration ash Other treated solid wastes Treated waste water 	:	NA
IX.	Check for the following (indicate YES/NO):		
	<ul style="list-style-type: none"> Bio-medical waste not to be mixed with other waste. Needle/syringe destroyer at required places Segregation of waste in the coloured containers at the source of waste generation as per BMW Rules. Placement of required coloured containers at the source of waste generation labeled with bio-hazard symbol Whether awareness among hospital staff/ doctors generated? Whether labeling of bag has been done with respective ward no. in order to identify its source to enable improvement of segregation? Whether special care is taken with regard to mercury spillage/breakage Deployment of posters/placards within the hospitals Whether requisite treatment to segregated waste/ hand over to CBWTF operator within 48 hours of waste generation is imparted? Whether waste collected in a container of similar colour with label as per the Rules? Whether the person who collects BMW maintains a register? Type of vehicle used (closed type or open type) for transportation for final disposal? Has due attention been given in vehicles to prevent spillage/ pilferage/ loading/ unloading etc.? The facility operator collects waste daily or alternate day? Whether criterion of 48 hours is compiled? 	:	Yes Yes Yes Yes Yes Yes Yes Yes- Collected every 24 hours Yes Yes Yes- Closed Vehicle Used Yes Yes- Collect Daily
X.	Other observations:		

	Overall compliance with regards to BMW Rules and other environmental norms was found to be satisfactory.	
XI	Name (s) of the visiting official (s) with address	: 1. Mr. Bipin Kumar, ADM (city), Ghaziabad 2. Mrs. Youthika, Scientist- D, Central Pollution Control Board, New Delhi 3. Mr. Utsav Sharma, RO, UPPCB, Ghaziabad 4. Mr. Ranjeet Singh, JE, UPPCB, Ghaziabad
XII	Date of visit to HCF	: 22.02.2022



**Checklist for Verification of Compliance of Provisions of BMW Rules in Health Care Facility
(HCF)**

IV. M/s Flores Hospital, G-350, Pratap Vihar Road, G- Block, Sector 11, Pratap Vihar, Ghaziabad

I. General Information:				
(a)	Name & Address of the HCF	:	M/s. Flores Hospital, G-350, Pratap Vihar Road, G-Block Sector-11, Pratap Vihar, Ghaziabad	
(b)	Contact person & Telephone No.	:	Mr. Sandeep Mittal (9871196577)	
(c)	Month & Year of Establishment	:	July 2017	
(d)	Government/Trust/Private Hospital	:	Private Hospital	
(e)	Total no. of beds & average occupancy	:	100 Beds	
(f)	Consent under Water (Prevention and Control of Pollution) Act, 1974	:	No, Expired on 01.08.2021	
	• Date of issue	:	-	
	• Validity up to	:	-	
(g)	Consent under Air (Prevention and Control of Pollution) Act, 1981	:	No, Expired on 01.08.2021	
	• Date of issue	:	-	
	• Validity up to	:	-	
(h)	Authorization under Bio-medical Waste (M & H) Rules, 1998	:	Yes	
	• Date of issue	:	26.10.2020	
	• Issued by	:	UPPCB, Ghaziabad	
	• Validity up to	:	25.10.2022	
(i)	Daily Operation schedule (timings)	:	24 hrs.	
(j)	Status of Annual Report submission	:	No	
(k)	House Keeping and Sanitation status	:	Satisfactory	
(l)	Staff involvement in BMW management (no. of persons)	:		
	• Managerial/Administration	:	02	
	• Equipment operations	:	02	
	• Transportation of BMW	:	06	
	• Sanitation & others	:	13	
(m)	Whether annual report submitted by HCF to the SPCB/PCC/Any other prescribed authority (Date of submission and enclose a copy)	:	No	
II. Bio-medical Waste (Sources, Storage and segregation):				
(a)	Sources of Biomedical Waste Generation	:	Wards/OT/OPD	
(b)	Total quantity of Bio-medical waste generated in Kg/day and in Kg/annum	:	2880 Kg/annum	
(c)	Typical Categories of wastes generated (pl. indicate category wise quantity in Kg/day):			
	Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal
	1	Human Anatomical Waste	1.5	Through CBWTF (Medicare Environmental Management Pvt. Ltd., Hapur)
	2	Animal Waste	0	NA

	3	Microbiology & Biotechnology Waste	0	Through CBWTF (Medicare Environmental Management Pvt. Ltd., Hapur)
	4	Waste Sharps	0.5	Through CBWTF (Medicare Environmental Management Pvt. Ltd., Hapur)
	5	Discarded Medicines and Cytotoxic Drugs	0	Through CBWTF (Medicare Environmental Management Pvt. Ltd., Hapur)
	6	Soiled Waste	0	Through CBWTF (Medicare Environmental Management Pvt. Ltd., Hapur)
	7	Solid Waste (Wastes generated from disposable items other than the waste sharps)	2	Through CBWTF (Medicare Environmental Management Pvt. Ltd., Hapur)
	8	Liquid Waste	1.0 KLD	Through ETP
	9	Incineration Ash	0	NA
	10	Chemical Waste	0	NA
		Total solid waste	3.0 Kg/day	
		Total liquid waste	0.8 KLD	
(d)	Record keeping for generation and disposal of BMW			: Yes- Available
(e)	Status of segregation and storage (colored bins, plastic bags and any other mode)			: Yes- As per guideline
(f)	Status of temporary storage details (pl. indicate specific provision made by the HCF)			: Dedicated-BMW Room With colour coded bay
(g)	Whether temporary storage is satisfactory (Yes /No)			: Yes- Satisfactory
(h)	Status of treatment at wards and chemicals used			: Disinfection through Hypo Solution
(i)	Status of House Keeping in Wards and at source of BMW generation			: Satisfactory
(j)	Mode of transportation of wastes from source to the temporary storage/on-site treatment facility (pl. indicate type of provision made by the HCF)			: Used- Covered Trolley
(k)	Provision made for on-site transportation within HCF is satisfactory (Yes/No). Details thereof			: Yes
(l)	Category wise disposal options followed:			
	Colour Coding	Waste Categories	Treatment & Disposal	
	Red	Contaminated recyclable waste	Disposal through CBWTF	
	Blue	Glassware	Disposal through CBWTF	
	Yellow	Anatomical	Disposal through CBWTF	
	Green	General waste	Disposal through Municipal Corporation	

		such as paper, cardboard boxes, packaging, kitchen waste etc.	Ghaziabad	
III.	On-site Treatment of BWM by HCF:			
(a)	Total quantity of bio-medical waste treated (Kg per day)			NA
	• Deep Burial in Kg/day	:		
	• Incinerable in Kg/day	:		
	• Autoclaving/ Microwaving/ Hydroclaving in kg/day	:		
	• Others (please specify) in Kg/day	:		
(b)	On-site Treatment Provision by Incineration:			
	• Supplier of the Incinerator	:		NA
	• Capacity of the Incineration in tonnes per hour and tonnes per annum	:		NA
	• Operation conditions of the Incineration based on the designs/supplier	:		NA
	• Provision made for Temperature measurements	:		NA
	• Daily Operation schedule (timings)	:		NA
	• Operating conditions as per records and as observed	:		NA
	• Stack attached with the incinerator	:		NA
	• Air pollution control systems attached with the incinerator	:		NA
	• Auxiliary fuels used for incineration	:		NA
	• Consumption of auxiliary fuels	:		
			Name of fuel	Quantity per day/month
			a) NA	--
			b) NA	--
	• Monitoring provision attached with the stack	:		NA
	• Storage provision at the incinerator	:		NA
	• Fire safety measures adopted	:		NA
	• Log book for operation of incinerator	:		NA
	• Type of wastes incinerated and its characteristics	:		NA
	• Average quantity of wastes incinerated per day or per month or per annum	:		NA
	• Duration of operating hours of incineration:	:		NA
	• Details of heat recovery system installed with incinerator if any:	:		NA
	• Stack gaseous emissions monitored:			

Emission Parameters	Permissible Limits	Monitored Values** by CPCB
Particulate matter (with 12% CO ₂ correction)	150 mg/Nm ³	NA
Nitrogen Oxides	450 mg/Nm ³	NA
HCl	50 mg/Nm ³	NA
SO ₂	Low Sulphur fuel to be used	NA
Stack Height	30 meters	NA
Volatile Organic compound in ash (%)	Less than 0.01%	NA
Temp. in Primary Chamber	800°C (+/-) 50°C	NA
Temp. in secondary Chamber	1050°C (+/-) 50°C	NA
Residence time in sec. chamber	1 second	NA
** Not applicable.		
• Quantity of ash generation per day or per month or per annum	:	NA
• Final disposal mode of incineration ash (also indicate characteristics)	:	NA
• Specific observations, if any, w.r.t. incineration (any chlorinated disinfectants, chlorinated plastics, sulphur content in auxiliary fuels used for incineration)	:	NA
(c) Autoclaving /Microwaving /Hydroclaving :		
• Capacity	:	NA
• Make	:	NA
• Air pollution control devices attached	:	NA
• Capacity of shredder and make:	:	NA
• Operating conditions as per designs	:	NA
• Graphic or computer recording devices attached with the system	:	NA
• Operating conditions as observed in recording system	:	NA
• Performance evaluation by spore testing or routine test. Details thereof	:	NA
• Biological indicators	:	NA
(d) Onsite Wastewater Treatment:		
• Consumption of water per day (in kl/day)	:	10 KLD
• Sources of water supply	:	Municipal water supply
• Sources of waste water generation and the quantity (in kl/day)	:	OT/wards/lab
• Total Waste water generation quantity (in kl/day)	:	Domestic- 8.0 KLD Industrial- 0.8 KLD
• Steps involved in Effluent Treatment Plant (Also enclose flow chart of ETP)	:	Equalization tank, chemical dosing tanks, reaction cum settling tank, buffer tank, MGF, ACF, Sludge drying beds etc.
• Type of chemicals used in ETP and the consumption (in kg/day)	:	Polyelectrolyte, lime, alum etc.
•	:	

	<ul style="list-style-type: none"> Intake characteristics of ETP 	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>7.39</td> </tr> <tr> <td>Colour</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>51.0</td> </tr> <tr> <td>COD</td> <td>559.0</td> </tr> <tr> <td>TSS</td> <td>148.0</td> </tr> <tr> <td>Total Coliform</td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td>-</td> </tr> </tbody> </table>	Parameter	Monitored values** in mg/l except pH	pH	7.39	Colour	Turbid	BOD	51.0	COD	559.0	TSS	148.0	Total Coliform	-	Fecal Coliform	-								
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	<ul style="list-style-type: none"> Final mode of disposal of treated wastewater (Reused/ Discharged through drain) 	:	Through Public sewer line																								
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	<ul style="list-style-type: none"> Analysis procedures followed for characterization of waste water 	:	NA																								
	<ul style="list-style-type: none"> Any other mode of wastewater disposal, Details thereof 	:	NA																								
(e)	On-site BMW Disposal																										
	<ul style="list-style-type: none"> Disposal by Deep Burial/ Municipal Solid Waste Landfills/ Disposal in Open Yards or low-lying areas 	:	NA																								
	<ul style="list-style-type: none"> Give details of sharp pit/ encapsulation facility (pl. provide details such as size of pit, depth in m) 	:	NA																								
	<ul style="list-style-type: none"> Precautionary measures taken around the sharp pit or encapsulation facility 	:	NA																								
	<ul style="list-style-type: none"> Whether sharp pit/ encapsulation is authorized by SPCB/ PCC/ any prescribed authority 	:	NA																								
	<ul style="list-style-type: none"> Give measures taken for disposal of BMW by sharp pit/encapsulation: 	:	NA																								
	<ul style="list-style-type: none"> Ground Water Level and the Characteristics around the encapsulation pit: 	:	NA																								
	<ul style="list-style-type: none"> Records with regard to the Deep Burial 	:	NA																								
IV.	Status of infrastructure (specify shortcomings observed if any):																										

	<ul style="list-style-type: none"> • Treatment equipment room: • Main waste storage room: • Treated waste storage room: • Generator set (size and regulatory compliance details) • Waste treatment site security (High walls, fencing, guarded gates etc.) • Washing room for waste containers • Protective gear for waste handlers 	<ul style="list-style-type: none"> : Adequate : Adequate : Adequate : 62.5 KVA with acoustic enclosure : Adequate : Adequate : Adequate
V.	Record keeping details:	
	<ul style="list-style-type: none"> • Does the operator have record keeping system in order to comply with the Rules? Specify shortcomings observed if any. 	: Yes
VI.	Monitoring Frequency Details:	
	<ul style="list-style-type: none"> • Frequency of monitoring of incinerator/ autoclave/ microwave/ hydroclave/ ETP effluent discharge • name of the laboratory (specify approved or not) • Give details of compliance/ non-compliance of liquid and air emissions. 	: NA
VII	Monitoring results carried out by SPCB/ PCC:	
	<ul style="list-style-type: none"> • Incinerator gaseous stack emissions (attach monitoring results) • Validation/ efficacy test of autoclave/ microwave/ hydroclave: • ETP inlet and outlet characteristics 	: NA : NA : Report enclosed
VII I	Whether wastes are disposed-off through common facility. If so, provide details:	
	Type of wastes disposed after treatment <ul style="list-style-type: none"> • Plastic wastes after treatment • Treated sharps • Incineration ash • Other treated solid wastes • Treated waste water 	: : : : :
IX.	Check for the following (indicate YES/NO):	

	<ul style="list-style-type: none"> • Bio-medical waste not to be mixed with other waste. • Needle/syringe destroyer at required places • Segregation of waste in the coloured containers at the source of waste generation as per BMW Rules. • Placement of required coloured containers at the source of waste generation labeled with bio-hazard symbol • Whether awareness among hospital staff/ doctors generated? • Whether labeling of bag has been done with respective ward no. in order to identify its source to enable improvement of segregation? • Whether special care is taken with regard to mercury spillage/breakage • Deployment of posters/placards within the hospitals • Whether requisite treatment to segregated waste/ hand over to CBWTF operator within 48 hours of waste generation is imparted? • Whether waste collected in a container of similar colour with label as per the Rules? • Whether the person who collects BMW maintains a register? • Type of vehicle used (closed type or open type) for transportation for final disposal? • Has due attention been given in vehicles to prevent spillage/ pilferage/ loading/ unloading etc.? • The facility operator collects waste daily or alternate day? Whether criterion of 48 hours is compiled? 	<ul style="list-style-type: none"> : Yes : Yes- Closed Vehicle Used : Yes : Yes- Collect Daily :
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X.	Other observations:	
	a. HCF should ensure timely disposal of BMW waste through CBWTF as per BMW Rules, 2016. b. HCF should ensure bar code system as per BMW Rules, 2016.	
XI	Name (s) of the visiting official (s) with address	1. Mr. Bipin Kumar, ADM (city), Ghaziabad 2. Mrs. Youthika, Scientist- D, Central Pollution Control Board, New Delhi 3. Mr. Kishan Singh, AEE, UPPCB, Ghaziabad 4. Mr. Ranjeet Singh, JE, UPPCB, Ghaziabad



**Checklist for Verification of Compliance of Provisions of BMW Rules in Health Care Facility
(HCF)**

V. M/s Atlanta Mediworld Multispecialty Hospital & Research Centre, NH-01, Sector 14, Vasundhara, Ghaziabad

I. General Information:				
(a)	Name & Address of the HCF	:	M/s. Atlanta Mediworld Multispecialty hospital & research centre (A unit of RRM services), Plot No. NH-01, Sector-14, Vasundhara, Ghaziabad	
(b)	Contact person & Telephone No.	:	Dr. Rawinder Singh (9312502752)	
(c)	Month & Year of Establishment	:	November 2014	
(d)	Government/Trust/Private Hospital	:	Private Hospital	
(e)	Total no. of beds & average occupancy	:	100 Beds	
(f)	Consent under Water (Prevention and Control of Pollution) Act, 1974	:	No	
	• Date of issue	:	-	
	• Validity up to	:	-	
(g)	Consent under Air (Prevention and Control of Pollution) Act, 1981	:	No	
	• Date of issue	:	-	
	• Validity up to	:	-	
(h)	Authorization under Bio-medical Waste (M & H) Rules, 1998	:	No	
	• Date of issue	:	-	
	• Issued by	:	-	
	• Validity up to	:	-	
(i)	Daily Operation schedule (timings)	:	24 hrs.	
(j)	Status of Annual Report submission	:	No	
(k)	House Keeping and Sanitation status	:	Satisfactory	
(l)	Staff involvement in BMW management (no. of persons)	:		
	• Managerial/Administration	:	No information provided	
	• Equipment operations	:	No information provided	
	• Transportation of BMW	:	No information provided	
	• Sanitation & others	:	No information provided	
(m)	Whether annual report submitted by HCF to the SPCB/PCC/Any other prescribed authority (Date of submission and enclose a copy)	:	No	
II. Bio-medical Waste (Sources, Storage and segregation):				
(a)	Sources of Biomedical Waste Generation	:	OPD/Wards/OT	
(b)	Total quantity of Bio-medical waste generated in Kg/day and in Kg/annum	:	6.33 Kg/day or 2280 Kg/annum	
(c)	Typical Categories of wastes generated (pl. indicate category wise quantity in Kg/day):			
	Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal

	1	Human Anatomical Waste	2	Through CBWTF (M/s Synergy waste management Pvt. Ltd. Meerut)
	2	Animal Waste	0	NA
	3	Microbiology & Biotechnology Waste	1	Through CBWTF (M/s Synergy waste management Pvt. Ltd. Meerut)
	4	Waste Sharps	1	Through CBWTF (M/s Synergy waste management Pvt. Ltd. Meerut)
	5	Discarded Medicines and Cytotoxic Drugs		NA
	6	Soiled Waste		NA
	7	Solid Waste (Wastes generated from disposable items other than the waste sharps)	2	Through CBWTF (M/s Synergy waste management Pvt. Ltd. Meerut)
	8	Liquid Waste	4.0 KLD	Through ETP (5.0 KLD)
	9	Incineration Ash	0	NA
	10	Chemical Waste	0	NA
		Total solid waste	6.33 Kg/day	
		Total liquid waste	4.0 KLD	
(d)	Record keeping for generation and disposal of BMW			: Yes
(e)	Status of segregation and storage (colored bins, plastic bags and any other mode)			: Colored bins
(f)	Status of temporary storage details (pl. indicate specific provision made by the HCF)			: Covered storage
(g)	Whether temporary storage is satisfactory (Yes /No)			: Yes
(h)	Status of treatment at wards and chemicals used			: Yes
(i)	Status of House Keeping in Wards and at source of BMW generation			: Satisfactory
(j)	Mode of transportation of wastes from source to the temporary storage/on-site treatment facility (pl. indicate type of provision made by the HCF)			: Covered trolley
(k)	Provision made for on-site transportation within HCF is satisfactory (Yes/No). Details thereof			: Yes
(l)	Category wise disposal options followed:			
	Colour Coding	Waste Categories	Treatment & Disposal	
	Red	Contaminated recyclable waste	Disposal through CBWTF	
	Blue	Glassware	Disposal through CBWTF	
	Yellow	Anatomical	Disposal through CBWTF	
	Green	General waste such as paper, cardboard	Disposal through Municipal Corporation Ghaziabad	

		boxes, packaging, kitchen waste etc.		
III. On-site Treatment of BWM by HCF:				
(a)	Total quantity of bio-medical waste treated (Kg per day)			NA
	• Deep Burial in Kg/day	:		
	• Incinerable in Kg/day	:		
	• Autoclaving/ Hydroclaving in kg/day	:	Microwaving/	
	• Others (please specify) in Kg/day	:		
(b)	On-site Treatment Provision by Incineration:			
	• Supplier of the Incinerator	:		NA
	• Capacity of the Incineration in tonnes per hour and tonnes per annum	:		NA
	• Operation conditions of the Incineration based on the designs/supplier	:		NA
	• Provision made for Temperature measurements	:		NA
	• Daily Operation schedule (timings)	:		NA
	• Operating conditions as per records and as observed	:		NA
	• Stack attached with the incinerator	:		NA
	• Air pollution control systems attached with the incinerator	:		NA
	• Auxiliary fuels used for incineration	:		NA
	• Consumption of auxiliary fuels	:		
			Name of fuel	Quantity per day/month
			a) NA	--
			b) NA	--
	• Monitoring provision attached with the stack	:		NA
	• Storage provision at the incinerator	:		NA
	• Fire safety measures adopted	:		NA
	• Log book for operation of incinerator	:		NA
	• Type of wastes incinerated and its characteristics	:		NA
	• Average quantity of wastes incinerated per day or per month or per annum	:		NA
	• Duration of operating hours of incineration:	:		NA
	• Details of heat recovery system installed with incinerator if any:	:		NA
	• Stack gaseous emissions monitored:			

Emission Parameters	Permissible Limits	Monitored Values** by CPCB
Particulate matter (with 12% CO ₂ correction)	150 mg/Nm ³	NA
Nitrogen Oxides	450 mg/Nm ³	NA
HCl	50 mg/Nm ³	NA
SO ₂	Low Sulphur fuel to be used	NA
Stack Height	30 meters	NA
Volatile Organic compound in ash (%)	Less than 0.01%	NA
Temp. in Primary Chamber	800°C (+/-) 50°C	NA
Temp. in secondary Chamber	1050°C (+/-) 50°C	NA
Residence time in sec. chamber	1 second	NA
** Not applicable.		
• Quantity of ash generation per day or per month or per annum	:	NA
• Final disposal mode of incineration ash (also indicate characteristics)	:	NA
• Specific observations, if any, w.r.t. incineration (any chlorinated disinfectants, chlorinated plastics, sulphur content in auxiliary fuels used for incineration)	:	NA
(c) Autoclaving /Microwaving /Hydroclaving :		
• Capacity	:	NA
• Make	:	NA
• Air pollution control devices attached	:	NA
• Capacity of shredder and make:	:	NA
• Operating conditions as per designs	:	NA
• Graphic or computer recording devices attached with the system	:	NA
• Operating conditions as observed in recording system	:	NA
• Performance evaluation by spore testing or routine test. Details thereof	:	NA
• Biological indicators	:	NA
(d) Onsite Wastewater Treatment:		
• Consumption of water per day (in kl/day)	:	10 KLD
• Sources of water supply	:	Municipal supply
• Sources of waste water generation and the quantity (in kl/day)	:	OT/Lab/wards
• Total Waste water generation quantity (in kl/day)	:	Domestic- 5.0 KLD Industrial- 2.0 KLD
• Steps involved in Effluent Treatment Plant (Also enclose flow chart of ETP)	:	Equalization tank, chemical dosing tanks, reaction cum settling tank, MGF, ACF, SDB etc.
• Type of chemicals used in ETP and the consumption (in kg/day)	:	Lime, Polyelectrolyte, alum etc.

	<ul style="list-style-type: none"> Intake characteristics of ETP 	:	During inspection, ETP was found not operational																								
	<ul style="list-style-type: none"> Final mode of disposal of treated wastewater (Reused/ Discharged through drain) 	:	Through public sewer line																								
	<ul style="list-style-type: none"> compliance to the regulatory requirements for final disposal of treated liquid effluent: 	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Permissible limits in mg/l except pH</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>5.5 – 9.0</td> <td>7.38</td> </tr> <tr> <td>Colour</td> <td>-</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>350</td> <td>186.0</td> </tr> <tr> <td>COD</td> <td>N/A</td> <td>338.0</td> </tr> <tr> <td>TSS</td> <td>600</td> <td>280.0</td> </tr> <tr> <td>Total Coliform</td> <td></td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td></td> <td>-</td> </tr> </tbody> </table> <p>**General Standards as applicable for public sewer.</p>	Parameter	Permissible limits in mg/l except pH	Monitored values** in mg/l except pH	pH	5.5 – 9.0	7.38	Colour	-	Turbid	BOD	350	186.0	COD	N/A	338.0	TSS	600	280.0	Total Coliform		-	Fecal Coliform		-
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	<ul style="list-style-type: none"> Disposal by Deep Burial/ Municipal Solid Waste Landfills/ Disposal in Open Yards or low-lying areas 	:	NA																								
	<ul style="list-style-type: none"> Give details of sharp pit/ encapsulation facility (pl. provide details such as size of pit, depth in m) 	:	NA																								
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	<ul style="list-style-type: none"> Whether sharp pit/ encapsulation is authorized by SPCB/ PCC/ any prescribed authority 	:	NA																								
	<ul style="list-style-type: none"> Give measures taken for disposal of BMW by sharp pit/encapsulation: 	:	NA																								
	<ul style="list-style-type: none"> Ground Water Level and the Characteristics around the encapsulation pit: 	:	NA																								
	<ul style="list-style-type: none"> Records with regard to the Deep Burial 	:	NA																								
IV.	Status of infrastructure (specify shortcomings observed if any):																										
	<ul style="list-style-type: none"> Treatment equipment room: Main waste storage room: Treated waste storage room: Generator set (size and regulatory compliance details) Waste treatment site security (High walls, fencing, guarded gates etc.) Washing room for waste containers 	:	<p>Adequate</p> <p>Not provided in premises</p> <p>Adequate</p> <p>62.5 KVA, 125 KVA with acoustic enclosure</p> <p>Adequate</p> <p>Adequate</p>																								

	<ul style="list-style-type: none"> Protective gear for waste handlers 	:	Adequate
V.	Record keeping details:		
	<ul style="list-style-type: none"> Does the operator have record keeping system in order to comply with the Rules? Specify shortcomings observed if any. 	:	Yes,
VI.	Monitoring Frequency Details:		
	<ul style="list-style-type: none"> Frequency of monitoring of incinerator/ autoclave/ microwave/ hydroclave/ ETP effluent discharge name of the laboratory (specify approved or not) Give details of compliance/ non-compliance of liquid and air emissions. 	:	<p>Half yearly</p> <p>NA</p> <p>NA</p>
VII	Monitoring results carried out by SPCB/ PCC:		
	<ul style="list-style-type: none"> Incinerator gaseous stack emissions (attach monitoring results) Validation/ efficacy test of autoclave/ microwave/ hydroclave: ETP inlet and outlet characteristics 	:	<p>--</p> <p>--</p> <p>Report enclosed</p>
VII I	Whether wastes are disposed-off through common facility. If so, provide details:		
	Type of wastes disposed after treatment	:	
	<ul style="list-style-type: none"> Plastic wastes after treatment Treated sharps Incineration ash Other treated solid wastes Treated waste water 	:	
IX.	Check for the following (indicate YES/NO):		

	<ul style="list-style-type: none"> • Bio-medical waste not to be mixed with other waste. :	Yes
	<ul style="list-style-type: none"> • Needle/syringe destroyer at required places :	Yes
	<ul style="list-style-type: none"> • Segregation of waste in the coloured containers at the source of waste generation as per BMW Rules. :	Yes
	<ul style="list-style-type: none"> • Placement of required coloured containers at the source of waste generation labeled with bio-hazard symbol :	Yes
	<ul style="list-style-type: none"> • Whether awareness among hospital staff/ doctors generated? :	Yes
	<ul style="list-style-type: none"> • Whether labeling of bag has been done with respective ward no. in order to identify its source to enable improvement of segregation? :	Yes
	<ul style="list-style-type: none"> • Whether special care is taken with regard to mercury spillage/breakage :	Yes
	<ul style="list-style-type: none"> • Deployment of posters/placards within the hospitals :	Yes
	<ul style="list-style-type: none"> • Whether requisite treatment to segregated waste/ hand over to CBWTF operator within 48 hours of waste generation is imparted? :	Yes
	<ul style="list-style-type: none"> • Whether waste collected in a container of similar colour with label as per the Rules? :	Yes
	<ul style="list-style-type: none"> • Whether the person who collects BMW maintains a register? :	Yes
	<ul style="list-style-type: none"> • Type of vehicle used (closed type or open type) for transportation for final disposal? :	Yes
	<ul style="list-style-type: none"> • Has due attention been given in vehicles to prevent spillage/ pilferage/ loading/ unloading etc.? :	Yes
	<ul style="list-style-type: none"> • The facility operator collects waste daily or alternate day? Whether criterion of 48 hours is compiled? :	Daily

X.	Other observations:
	<ul style="list-style-type: none"> i. During inspection, ETP was found not operational. j. HCF should implement bar code system as per BMW Rules, 2016. k. HCF should segregate BMW waste properly. l. HCF have no dedicated common storage room for temporary storage of BMW within premises. m. Height of stack attached with DG is not as per norms. n. HCF has no valid CTO from UPPCB. o. The hospital not provided appropriate pretreatment facility for laboratory generated liquid chemical waste. p. Records was not maintained properly and training of staff handling BMW waste is required.

XII	Name (s) of the visiting official (s) with address	:	1. Mr. Bipin Kumar, ADM (city), Ghaziabad 2. Mrs. Youthika, Scientist- D, Central Pollution Control Board, New Delhi 3. Mr. Kishan Singh, AEE, UPPCB, Ghaziabad 4. Mr. Ranjeet Singh, JE, UPPCB, Ghaziabad
XII	Date of visit to HCF	:	23.02.2022



**Checklist for Verification of Compliance of Provisions of BMW Rules in Health Care Facility
(HCF)**

VI. M/s Le Crest Hospital, INS-13, Sector 4, Vasundhara, Ghaziabad

I. General Information:				
(a)	Name & Address of the HCF	:	M/s. Le Crest Hospital, Plot No-INS-13, Buddh Chowk, Sector-4, Vasundhara, Ghaziabad	
(b)	Contact person & Telephone No.	:	Mr. Vivek Garg (9818005257)	
(c)	Month & Year of Establishment	:	2021	
(d)	Government/Trust/Private Hospital	:	Private Hospital	
(e)	Total no. of beds & average occupancy	:	Total -100 Beds, Occupancy- 30%	
(f)	Consent under Water (Prevention and Control of Pollution) Act, 1974	:	Yes	
	• Date of issue	:	12.08.2021	
	• Validity up to	:	31.07.2023	
(g)	Consent under Air (Prevention and Control of Pollution) Act, 1981	:	Yes	
	• Date of issue	:	12.08.2021	
	• Validity up to	:	31.07.2023	
(h)	Authorization under Bio-medical Waste (M & H) Rules, 1998	:	Yes	
	• Date of issue	:	28.09.2021	
	• Issued by	:	UPPCB, Ghaziabad	
	• Validity up to	:	31.07.2023	
(i)	Daily Operation schedule (timings)	:	24 hrs.	
(j)	Status of Annual Report submission	:	Not submitted	
(k)	House Keeping and Sanitation status	:	Satisfactory	
(l)	Staff involvement in BMW management (no. of persons)	:		
	• Managerial/Administration	:	04	
	• Equipment operations	:	08	
	• Transportation of BMW	:	06	
	• Sanitation & others	:	02	
(m)	Whether annual report submitted by HCF to the SPCB/PCC/Any other prescribed authority (Date of submission and enclose a copy)	:	No	
II. Bio-medical Waste (Sources, Storage and segregation):				
(a)	Sources of Biomedical Waste Generation	:	OT/ lab/ wards	
(b)	Total quantity of Bio-medical waste generated in Kg/day and in Kg/annum	:	3.0 kg/day, 1100 kg/day	
(c)	Typical Categories of wastes generated (pl. indicate category wise quantity in Kg/day):			
	Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal
	1	Human Anatomical Waste	1.7	Through CBWTF (M/s Environ waste connections LLP)
	2	Animal Waste	0	NA
	3	Microbiology &	0	NA

		Biotechnology Waste		
	4	Waste Sharps	0.2	Through CBWTF (M/s Environ waste connections LLP)
	5	Discarded Medicines and Cytotoxic Drugs	0	Through CBWTF (M/s Environ waste connections LLP)
	6	Soiled Waste	0	NA
	7	Solid Waste (Wastes generated from disposable items other than the waste sharps)	1.5	Through CBWTF (M/s Environ waste connections LLP)
	8	Liquid Waste	4.0 KLD	
	9	Incineration Ash	0	NA
	10	Chemical Waste	0	NA
		Total solid waste	3.0 kg/day	
		Total liquid waste	4.0 KLD	
(d)	Record keeping for generation and disposal of BMW		:	Yes
(e)	Status of segregation and storage (colored bins, plastic bags and any other mode)		:	Colored bins
(f)	Status of temporary storage details (pl. indicate specific provision made by the HCF)		:	Dedicated covered storage
(g)	Whether temporary storage is satisfactory (Yes /No)		:	Yes
(h)	Status of treatment at wards and chemicals used		:	Sodium Hypochlorite
(i)	Status of House Keeping in Wards and at source of BMW generation		:	Satisfactory
(j)	Mode of transportation of wastes from source to the temporary storage/on-site treatment facility (pl. indicate type of provision made by the HCF)		:	Covered bins with trolley
(k)	Provision made for on-site transportation within HCF is satisfactory (Yes/No). Details thereof		:	Yes
(l)	Category wise disposal options followed:			
	Colour Coding	Waste Categories	Treatment & Disposal	
	Red	Contaminated recyclable waste	Disposal through CBWTF	
	Blue	Glassware	Disposal through CBWTF	
	Yellow	Anatomical	Disposal through CBWTF	
	Green	General waste such as paper, cardboard boxes, packaging, kitchen waste etc.	Disposal through Municipal Corporation Ghaziabad	

III.	On-site Treatment of BWM by HCF:								
(a)	Total quantity of bio-medical waste treated (Kg per day) <ul style="list-style-type: none"> • Deep Burial in Kg/day • Incinerable in Kg/day • Autoclaving/ Microwaving/ Hydroclaving in kg/day • Others (please specify) in Kg/day 	: : : :	NA						
(b)	On-site Treatment Provision by Incineration:								
	• Supplier of the Incinerator	:	NA						
	• Capacity of the Incineration in tonnes per hour and tonnes per annum	:	NA						
	• Operation conditions of the Incineration based on the designs/supplier	:	NA						
	• Provision made for Temperature measurements	:	NA						
	• Daily Operation schedule (timings)	:	NA						
	• Operating conditions as per records and as observed	:	NA						
	• Stack attached with the incinerator	:	NA						
	• Air pollution control systems attached with the incinerator	:	NA						
	• Auxiliary fuels used for incineration	:	NA						
	• Consumption of auxiliary fuels	:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Name of fuel</th> <th style="width: 40%;">Quantity per day/month</th> </tr> </thead> <tbody> <tr> <td>a) NA</td> <td>--</td> </tr> <tr> <td>b) NA</td> <td>--</td> </tr> </tbody> </table>	Name of fuel	Quantity per day/month	a) NA	--	b) NA	--
Name of fuel	Quantity per day/month								
a) NA	--								
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	• Monitoring provision attached with the stack	:	NA						
	• Storage provision at the incinerator	:	NA						
	• Fire safety measures adopted	:	NA						
	• Log book for operation of incinerator	:	NA						
	• Type of wastes incinerated and its characteristics	:	NA						
	• Average quantity of wastes incinerated per day or per month or per annum	:	NA						
	• Duration of operating hours of incineration:	:	NA						
	• Details of heat recovery system installed with incinerator if any:	:	NA						
	• Stack gaseous emissions monitored:								

Emission Parameters	Permissible Limits	Monitored Values** by CPCB
Particulate matter (with 12% CO ₂ correction)	150 mg/Nm ³	NA
Nitrogen Oxides	450 mg/Nm ³	NA
HCl	50 mg/Nm ³	NA
SO ₂	Low Sulphur fuel to be used	NA
Stack Height	30 meters	NA
Volatile Organic compound in ash (%)	Less than 0.01%	NA
Temp. in Primary Chamber	800°C (+/-) 50°C	NA
Temp. in secondary Chamber	1050°C (+/-) 50°C	NA
Residence time in sec. chamber	1 second	NA
** Not applicable.		
• Quantity of ash generation per day or per month or per annum	:	NA
• Final disposal mode of incineration ash (also indicate characteristics)	:	NA
• Specific observations, if any, w.r.t. incineration (any chlorinated disinfectants, chlorinated plastics, sulphur content in auxiliary fuels used for incineration)	:	NA
(c) Autoclaving /Microwaving /Hydroclaving :		
• Capacity	:	NA
• Make	:	NA
• Air pollution control devices attached	:	NA
• Capacity of shredder and make:	:	NA
• Operating conditions as per designs	:	NA
• Graphic or computer recording devices attached with the system	:	NA
• Operating conditions as observed in recording system	:	NA
• Performance evaluation by spore testing or routine test. Details thereof	:	NA
• Biological indicators	:	NA
(d) Onsite Wastewater Treatment:		
• Consumption of water per day (in kl/day)	:	50 KLD
• Sources of water supply	:	Municipal supply water
• Sources of waste water generation and the quantity (in kl/day)	:	OT/Lab/wards
• Total Waste water generation quantity (in kl/day)	:	Domestic- 30 KLD Industrial- 4.0 KLD
• Steps involved in Effluent Treatment Plant (Also enclose flow chart of ETP)	:	Bar screen, Equalization tank, Flash mixer, Primary tube settler, chemical dosing tanks, centrifuge etc. Final outlet from ETP is further connected with inlet of STP 80 KLD.
• Type of chemicals used in ETP and the consumption (in kg/day)	:	Lime, alum, polyelectrolyte etc.

	<ul style="list-style-type: none"> Intake characteristics of ETP and STP 	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Monitored values** in mg/l except pH For ETP</th> <th>Monitored values** in mg/l except pH for STP</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>7.44</td> <td>7.24</td> </tr> <tr> <td>Colour</td> <td>Turbid</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>92.0</td> <td>48.0</td> </tr> <tr> <td>COD</td> <td>876.0</td> <td>412.0</td> </tr> <tr> <td>TSS</td> <td>968.0</td> <td>184.0</td> </tr> <tr> <td>Total Coliform</td> <td>-</td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Parameter	Monitored values** in mg/l except pH For ETP	Monitored values** in mg/l except pH for STP	pH	7.44	7.24	Colour	Turbid	Turbid	BOD	92.0	48.0	COD	876.0	412.0	TSS	968.0	184.0	Total Coliform	-	-	Fecal Coliform	-	-																		
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	pit, depth in m)		
	• Precautionary measures taken around the sharp pit or encapsulation facility	:	NA
	• Whether sharp pit/ encapsulation is authorized by SPCB/ PCC/ any prescribed authority	:	NA
	• Give measures taken for disposal of BMW by sharp pit/encapsulation:	:	NA
	• Ground Water Level and the Characteristics around the encapsulation pit:	:	NA
	• Records with regard to the Deep Burial	:	NA
IV.	Status of infrastructure (specify shortcomings observed if any):		
	• Treatment equipment room:	:	Adequate
	• Main waste storage room:	:	Adequate
	• Treated waste storage room:	:	Adequate
	• Generator set (size and regulatory compliance details)	:	750 KVA, 500 KVA with acoustic enclosure
	• Waste treatment site security (High walls, fencing, guarded gates etc.)	:	Adequate
	• Washing room for waste containers	:	Adequate
	• Protective gear for waste handlers	:	Adequate
V.	Record keeping details:		
	• Does the operator have record keeping system in order to comply with the Rules? Specify shortcomings observed if any.	:	Yes
VI.	Monitoring Frequency Details:		
	• Frequency of monitoring of incinerator/ autoclave/ microwave/ hydroclave/ ETP effluent discharge	:	Yearly
	• name of the laboratory (specify approved or not)	:	--
	• Give details of compliance/ non-compliance of liquid and air emissions.	:	--
VII	Monitoring results carried out by SPCB/ PCC:		
.			
	• Incinerator gaseous stack emissions (attach monitoring results)	:	NA
	• Validation/ efficacy test of autoclave/ microwave/ hydroclave:	:	NA
	• ETP inlet and outlet characteristics	:	Report enclosed
VII I	Whether wastes are disposed-off through common facility. If so, provide details:		

	Type of wastes disposed after treatment	:	NA
	<ul style="list-style-type: none"> • Plastic wastes after treatment • Treated sharps • Incineration ash • Other treated solid wastes • Treated waste water 	:	
IX.	Check for the following (indicate YES/NO):		
	<ul style="list-style-type: none"> • Bio-medical waste not to be mixed with other waste. • Needle/syringe destroyer at required places • Segregation of waste in the coloured containers at the source of waste generation as per BMW Rules. • Placement of required coloured containers at the source of waste generation labeled with bio-hazard symbol • Whether awareness among hospital staff/ doctors generated? • Whether labeling of bag has been done with respective ward no. in order to identify its source to enable improvement of segregation? • Whether special care is taken with regard to mercury spillage/breakage • Deployment of posters/placards within the hospitals • Whether requisite treatment to segregated waste/ hand over to CBWTF operator within 48 hours of waste generation is imparted? • Whether waste collected in a container of similar colour with label as per the Rules? • Whether the person who collects BMW maintains a register? • Type of vehicle used (closed type or open type) for transportation for final disposal? • Has due attention been given in vehicles to prevent spillage/ pilferage/ loading/ unloading etc.? • The facility operator collects waste daily or alternate day? Whether criterion of 48 hours is compiled? 	:	<p>Yes</p> <p>Daily</p>
X.	Other observations:		
	<ul style="list-style-type: none"> a. HCF should implement bar code system as per BMW Rules, 2016. b. During inspection, chemical dosing system in ETP was not operational. c. BMW should be segregated properly and training of staff handling BMW waste is required. 		

XI	Name (s) of the visiting official (s) with address	: 1. Mr. Bipin Kumar, ADM (city), Ghaziabad 2. Mrs. Youthika, Scientist- D, Central Pollution Control Board, New Delhi 3. Mr. Kishan Singh, AEE, UPPCB, Ghaziabad 4. Mr. Ranjeet Singh, JE, UPPCB, Ghaziabad
XII	Date of visit to HCF	: 23.02.2022



Checklist for Verification of Compliance of Provisions of BMW Rules in Health Care Facility (HCF)

VII. M/s Santosh Medical College, 170, Sector 12, J Block, Pratap Vihar, Ghaziabad

I. General Information:																	
(a)	Name & Address of the HCF : M/s Santosh Medical College, 170, Sector-12, Block-J, Pratap Vihar, Ghaziabad																
(b)	Contact person & Telephone No. : Mr. R. Ravindran (7838554407)																
(c)	Month & Year of Establishment : May 1995																
(d)	Government/Trust/Private Hospital : Private																
(e)	Total no. of beds & average occupancy : 150 (dental chairs)																
(f)	Consent under Water (Prevention and Control of Pollution) Act, 1974 : No																
	• Date of issue : -																
	• Validity up to : -																
(g)	Consent under Air (Prevention and Control of Pollution) Act, 1981 : No																
	• Date of issue : -																
	• Validity up to : -																
(h)	Authorization under Bio-medical Waste (M & H) Rules, 1998 : No																
	• Date of issue : -																
	• Issued by : -																
	• Validity up to : -																
(i)	Daily Operation schedule (timings) : 11 hrs.																
(j)	Status of Annual Report submission : No																
(k)	House Keeping and Sanitation status : Satisfactory																
(l)	Staff involvement in BMW management (no. of persons) :																
	• Managerial/Administration : 02																
	• Equipment operations : 01																
	• Transportation of BMW : 10																
	• Sanitation & others : 09																
(m)	Whether annual report submitted by HCF to the SPCB/PCC/Any other prescribed authority (Date of submission and enclose a copy) : No																
II. Bio-medical Waste (Sources, Storage and segregation):																	
(a)	Sources of Biomedical Waste Generation : OPD/OT																
(b)	Total quantity of Bio-medical waste generated in Kg/day and in Kg/annum : 10 Kg/day																
(c)	Typical Categories of wastes generated (pl. indicate category wise quantity in Kg/day):																
	<table border="1"> <thead> <tr> <th>Category No.</th> <th>Category of Waste</th> <th>Quantity Generated (kg/day)</th> <th>Treatment & Disposal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Human Anatomical Waste</td> <td>7.0 kg/day</td> <td>Through CBWTF (M/s Synergy waste management Pvt. Ltd., Meerut)</td> </tr> <tr> <td>2</td> <td>Animal Waste</td> <td>0</td> <td>NA</td> </tr> <tr> <td>3</td> <td>Microbiology & Biotechnology Waste</td> <td>0</td> <td>Through CBWTF (M/s Synergy waste management Pvt. Ltd.,</td> </tr> </tbody> </table>	Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal	1	Human Anatomical Waste	7.0 kg/day	Through CBWTF (M/s Synergy waste management Pvt. Ltd., Meerut)	2	Animal Waste	0	NA	3	Microbiology & Biotechnology Waste	0	Through CBWTF (M/s Synergy waste management Pvt. Ltd.,
Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal														
1	Human Anatomical Waste	7.0 kg/day	Through CBWTF (M/s Synergy waste management Pvt. Ltd., Meerut)														
2	Animal Waste	0	NA														
3	Microbiology & Biotechnology Waste	0	Through CBWTF (M/s Synergy waste management Pvt. Ltd.,														

				Meerut)
	4	Waste Sharps	0.5 kg/day	Through CBWTF (M/s Synergy waste management Pvt. Ltd., Meerut)
	5	Discarded Medicines and Cytotoxic Drugs	0	Through CBWTF (M/s Synergy waste management Pvt. Ltd., Meerut)
	6	Soiled Waste	0	Through CBWTF (M/s Synergy waste management Pvt. Ltd., Meerut)
	7	Solid Waste (Wastes generated from disposable items other than the waste sharps)	6.5 kg/day	Through CBWTF (M/s Synergy waste management Pvt. Ltd., Meerut)
	8	Liquid Waste	2.5 KLD	Through ETP
	9	Incineration Ash	0	NA
	10	Chemical Waste	0	NA
		Total solid waste Total liquid waste	10 Kg/day 2.5 KLD	
(d)	Record keeping for generation and disposal of BMW		:	Yes
(e)	Status of segregation and storage (colored bins, plastic bags and any other mode)		:	Colored bins
(f)	Status of temporary storage details (pl. indicate specific provision made by the HCF)		:	Dedicated covered storage
(g)	Whether temporary storage is satisfactory (Yes/No)		:	Yes
(h)	Status of treatment at wards and chemicals used		:	Yes
(i)	Status of House Keeping in Wards and at source of BMW generation		:	Satisfactory
(j)	Mode of transportation of wastes from source to the temporary storage/on-site treatment facility (pl. indicate type of provision made by the HCF)		:	Covered trolley
(k)	Provision made for on-site transportation within HCF is satisfactory (Yes/No). Details thereof		:	Yes
(l)	Category wise disposal options followed:			
	Colour Coding	Waste Categories	Treatment & Disposal	
	Red	Contaminated recyclable waste	Disposal through CBWTF	
	Blue	Glassware	Disposal through CBWTF	
	Yellow	Anatomical	Disposal through CBWTF	
	Green	General waste such as paper,	Disposal through Municipal Corporation Ghaziabad	

		cardboard boxes, packaging, kitchen waste etc.								
III.	On-site Treatment of BWM by HCF:									
(a)	Total quantity of bio-medical waste treated (Kg per day)			NA						
	• Deep Burial in Kg/day	:								
	• Incinerable in Kg/day	:								
	• Autoclaving/ Microwaving/ Hydroclaving in kg/day	:								
	• Others (please specify) in Kg/day	:								
(b)	On-site Treatment Provision by Incineration:									
	• Supplier of the Incinerator	:		NA						
	• Capacity of the Incineration in tonnes per hour and tonnes per annum	:		NA						
	• Operation conditions of the Incineration based on the designs/supplier	:		NA						
	• Provision made for Temperature measurements	:		NA						
	• Daily Operation schedule (timings)	:		NA						
	• Operating conditions as per records and as observed	:		NA						
	• Stack attached with the incinerator	:		NA						
	• Air pollution control systems attached with the incinerator	:		NA						
	• Auxiliary fuels used for incineration	:		NA						
	• Consumption of auxiliary fuels	:	<table border="1"> <thead> <tr> <th>Name of fuel</th> <th>Quantity per day/month</th> </tr> </thead> <tbody> <tr> <td>a) NA</td> <td>--</td> </tr> <tr> <td>b) NA</td> <td>--</td> </tr> </tbody> </table>	Name of fuel	Quantity per day/month	a) NA	--	b) NA	--	
Name of fuel	Quantity per day/month									
a) NA	--									
b) NA	--									
	• Monitoring provision attached with the stack	:		NA						
	• Storage provision at the incinerator	:		NA						
	• Fire safety measures adopted	:		NA						
	• Log book for operation of incinerator	:		NA						
	• Type of wastes incinerated and its characteristics	:		NA						
	• Average quantity of wastes incinerated per day or per month or per annum	:		NA						
	• Duration of operating hours of incineration:	:		NA						
	• Details of heat recovery system installed with incinerator if any:	:		NA						
	• Stack gaseous emissions monitored:									

Emission Parameters	Permissible Limits	Monitored Values** by CPCB
Particulate matter (with 12% CO ₂ correction)	150 mg/Nm ³	NA
Nitrogen Oxides	450 mg/Nm ³	NA
HCl	50 mg/Nm ³	NA
SO ₂	Low Sulphur fuel to be used	NA
Stack Height	30 meter	NA
Volatile Organic compound in ash (%)	Less than 0.01%	NA
Temp. in Primary Chamber	800°C (+/-) 50°C	NA
Temp. in secondary Chamber	1050°C (+/-) 50°C	NA
Residence time in sec. chamber	1 second	NA
** Not applicable.		
• Quantity of ash generation per day or per month or per annum	:	NA
• Final disposal mode of incineration ash (also indicate characteristics)	:	NA
• Specific observations, if any, w.r.t. incineration (any chlorinated disinfectants, chlorinated plastics, sulphur content in auxiliary fuels used for incineration)	:	NA
(c) Autoclaving /Microwaving /Hydroclaving :		
• Capacity	:	NA
• Make	:	NA
• Air pollution control devices attached	:	NA
• Capacity of shredder and make:	:	NA
• Operating conditions as per designs	:	NA
• Graphic or computer recording devices attached with the system	:	NA
• Operating conditions as observed in recording system	:	NA
• Performance evaluation by spore testing or routine test. Details thereof	:	NA
• Biological indicators	:	NA
(d) Onsite Wastewater Treatment:		
• Consumption of water per day (in kl/day)	:	Details not furnished
• Sources of water supply	:	
• Sources of waste water generation and the quantity (in kl/day)	:	
• Total Waste water generation quantity (in kl/day)	:	Details not furnished
• Steps involved in Effluent Treatment Plant (Also enclose flow chart of ETP)	:	NA
• Type of chemicals used in ETP and the consumption (in kg/day)	:	
• Intake characteristics of ETP	:	

	<ul style="list-style-type: none"> Final mode of disposal of treated wastewater (Reused/ Discharged through drain) 	:	Through Public sewer line
	<ul style="list-style-type: none"> compliance to the regulatory requirements for final disposal of treated liquid effluent: 	:	Through Public sewer line
	<ul style="list-style-type: none"> Analysis procedures followed for characterization of waste waster 	:	NA
	<ul style="list-style-type: none"> Any other mode of wastewater disposal, Details thereof 	:	NA
(e)	On-site BMW Disposal		
	<ul style="list-style-type: none"> Disposal by Deep Burial/ Municipal Solid Waste Landfills/ Disposal in Open Yards or low-lying areas 	:	NA
	<ul style="list-style-type: none"> Give details of sharp pit/ encapsulation facility (pl. provide details such as size of pit, depth in m) 	:	NA
	<ul style="list-style-type: none"> Precautionary measures taken around the sharp pit or encapsulation facility 	:	NA
	<ul style="list-style-type: none"> Whether sharp pit/ encapsulation is authorized by SPCB/ PCC/ any prescribed authority 	:	NA
	<ul style="list-style-type: none"> Give measures taken for disposal of BMW by sharp pit/encapsulation: 	:	NA
	<ul style="list-style-type: none"> Ground Water Level and the Characteristics around the encapsulation pit: 	:	NA
	<ul style="list-style-type: none"> Records with regard to the Deep Burial 	:	NA
IV.	Status of infrastructure (specify shortcomings observed if any):		
	<ul style="list-style-type: none"> Treatment equipment room: Main waste storage room: Treated waste storage room: Generator set (size and regulatory compliance details) Waste treatment site security (High walls, fencing, guarded gates etc.) Washing room for waste containers Protective gear for waste handlers 	:	Adequate Adequate Adequate Adequate Adequate Adequate Adequate
V.	Record keeping details:		
	<ul style="list-style-type: none"> Does the operator have record keeping system in order to comply with the Rules? Specify shortcomings observed if any. 	:	Yes

VI.	Monitoring Frequency Details:		
	<ul style="list-style-type: none"> • Frequency of monitoring of incinerator/ autoclave/ microwave/ hydroclave/ ETP effluent discharge • name of the laboratory (specify approved or not) • Give details of compliance/ non-compliance of liquid and air emissions. 	<ul style="list-style-type: none"> : : : 	<ul style="list-style-type: none"> NA
VII	Monitoring results carried out by SPCB/ PCC:		
.			
	<ul style="list-style-type: none"> • Incinerator gaseous stack emissions (attach monitoring results) • Validation/ efficacy test of autoclave/ microwave/ hydroclave: • ETP inlet and outlet characteristics 	<ul style="list-style-type: none"> : : : 	<ul style="list-style-type: none"> NA NA
VII	Whether wastes are disposed-off through common facility. If so provide details:		
I	Type of wastes disposed after treatment		NA
	<ul style="list-style-type: none"> • Plastic wastes after treatment • Treated sharps • Incineration ash • Other treated solid wastes • Treated waste water 	<ul style="list-style-type: none"> : : : : : 	
IX.	Check for the following (indicate YES/NO):		

**Checklist for Verification of Compliance of Provisions of BMW Rules in Health Care Facility
(HCF)**

VIII. Aarogya Hospital, NH-1, Sector 6, Vaishali, Ghaziabad

I.	General Information:			
(a)	Name & Address of the HCF	:	Aarogya Hospital (a Unit of Kastura Medicos Ltd), Plot No-NH-1, Sector-6, Vaishali, Ghaziabad.	
(b)	Contact person & Telephone No.	:	Mr. Sanoj Kumar Mob: 9540093313	
(c)	Month & Year of Establishment	:	January, 2012	
(d)	Government/Trust/Private Hospital	:	Private	
(e)	Total no. of beds & average occupancy	:	Total- 100 beds, Occupancy – 40%	
(f)	Consent under Water (Prevention and Control of Pollution) Act, 1974	:	Yes	
	• Date of issue	:	16.05.2021	
	• Validity up to	:	31.07.2024	
(g)	Consent under Air (Prevention and Control of Pollution) Act, 1981	:	Yes	
	• Date of issue	:	16.05.2021	
	• Validity up to	:	31.07.2024	
(h)	Authorization under Bio-medical Waste (M & H) Rules, 1998	:	Yes	
	• Date of issue	:	02/03/2021	
	• Issued by	:	UPPCB, Ghaziabad	
	• Validity up to	:	31.07.2023	
(i)	Daily Operation schedule (timings)	:	24 hrs.	
(j)	Status of Annual Report submission	:	Submitted	
(k)	House Keeping and Sanitation status	:	Satisfactory	
(l)	Staff involvement in BMW management (no. of persons)	:		
	• Managerial/Administration	:	2	
	• Equipment operations	:	3	
	• Transportation of BMW	:	8	
	• Sanitation & others	:	15	
(m)	Whether annual report submitted by HCF to the SPCB/PCC/Any other prescribed authority (Date of submission and enclose a copy)	:	YES	
II.	Bio-medical Waste (Sources, Storage and segregation):			
(a)	Sources of Biomedical Waste Generation	:	Patient Care	
(b)	Total quantity of Bio-medical waste generated in Kg/day and in Kg/annum	:	8410 Kg/annum	
(c)	Typical Categories of wastes generated (pl. indicate category wise quantity in Kg/day):			
	Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal

	1	Human Anatomical Waste	1.8	Through Medicare Management Pvt Ltd., Hapur)	CBWTF (M/s Environment
	2	Animal Waste	0	NA	
	3	Microbiology & Biotechnology Waste	1.0	Through Medicare Management Pvt Ltd., Hapur)	CBWTF (M/s Environment
	4	Waste Sharps	0.89	Through Medicare Management Pvt Ltd., Hapur)	CBWTF (M/s Environment
	5	Discarded Medicines and Cytotoxic Drugs	0.2	Through Medicare Management Pvt Ltd., Hapur)	CBWTF (M/s Environment
	6	Soiled Waste	2.2	Through Medicare Management Pvt Ltd., Hapur)	CBWTF (M/s Environment
	7	Solid Waste (Wastes generated from disposable items other than the waste sharps)	18.48	Through Medicare Management Pvt Ltd., Hapur)	CBWTF (M/s Environment
	8	Liquid Waste	3.0 KLD	Through ETP	
	9	Incineration Ash	0	NA	
	10	Chemical Waste	0	NA	
		Total solid waste	20 Kg/day		
		Total liquid waste	1.0 KLD		
(d)	Record keeping for generation and disposal of BMW			:	YES
(e)	Status of segregation and storage (Colored bins, plastic bags and any other mode)			:	Colored Covered Bins
(f)	Status of temporary storage details (pl. indicate specific provision made by the HCF)			:	Covered with lock Central Biomedical Waste Storage Area
(g)	Whether temporary storage is satisfactory (Yes /No)			:	YES
(h)	Status of treatment at wards and chemicals used			:	Segregated
(i)	Status of House Keeping in Wards and at source of BMW generation			:	Available
(j)	Mode of transportation of wastes from source to the temporary storage/on-site treatment facility (pl. indicate type of provision made by the HCF)			:	Transportation in Colored big wheeled bins to the main storage area.
(k)	Provision made for on-site transportation			:	YES

within HCF is satisfactory (Yes/No). Details thereof	
--	--

(I) Category wise disposal options followed:

Colour Coding	Waste Categories	Treatment & Disposal
Red	Infected Plastic items	Disinfected with 1% Hypochlorite Solution & Sent to CBWTF.
Blue	Non-Broken Glass Vials	Through CBWTF
Yellow	All infected Solid waste	Through CBWTF
Green	General waste such as paper, cardboard boxes, packaging, kitchen waste etc.	Through municipal corporation

III. On-site Treatment of BWM by HCF:

(a)	Total quantity of bio-medical waste treated (Kg per day)	NA
	• Deep Burial in Kg/day	:
	• Incinerable in Kg/day	:
	• Autoclaving/ Microwaving/ Hydroclaving in kg/day	:
	• Others (please specify) in Kg/day	:

(b) On-site Treatment Provision by Incineration: **NA**

	• Supplier of the Incinerator	:	NA						
	• Capacity of the Incineration in tonnes per hour and tonnes per annum	:	NA						
	• Operation conditions of the Incineration based on the designs/supplier	:	NA						
	• Provision made for Temperature measurements	:	NA						
	• Daily Operation schedule (timings)	:	NA						
	• Operating conditions as per records and as observed	:	NA						
	• Stack attached with the incinerator	:	NA						
	• Air pollution control systems attached with the incinerator	:	NA						
	• Auxiliary fuels used for incineration	:	NA						
	• Consumption of auxiliary fuels	:	<table border="1"> <thead> <tr> <th>Name of fuel</th> <th>Quantity per day/month</th> </tr> </thead> <tbody> <tr> <td>a) NA</td> <td>--</td> </tr> <tr> <td>b) NA</td> <td>--</td> </tr> </tbody> </table>	Name of fuel	Quantity per day/month	a) NA	--	b) NA	--
Name of fuel	Quantity per day/month								
a) NA	--								
b) NA	--								
	• Monitoring provision attached with the stack	:	NA						
	• Storage provision at the incinerator	:	NA						
	• Fire safety measures adopted	:	NA						
	• Log book for operation of incinerator	:	NA						
	• Type of wastes incinerated and its	:	NA						

	characteristics		
	• Average quantity of wastes incinerated per day or per month or per annum	:	NA
	• Duration of operating hours of incineration:	:	NA
	• Details of heat recovery system installed with incinerator if any:	:	NA

	• Stack gaseous emissions monitored:		
--	--------------------------------------	--	--

Emission Parameters	Permissible Limits	Monitored Values** by CPCB
Particulate matter (with 12% CO ₂ correction)	150 mg/Nm ³	NA
Nitrogen Oxides	450 mg/Nm ³	NA
HCl	50 mg/Nm ³	NA
SO ₂	Low Sulphur fuel to be used	NA
Stack Height	30 meters	NA
Volatile Organic compound in ash (%)	Less than 0.01%	NA
Temp. in Primary Chamber	800°C (+/-) 50°C	NA
Temp. in secondary Chamber	1050°C (+/-) 50°C	NA
Residence time in sec. chamber	1 second	NA

** Not applicable.

	• Quantity of ash generation per day or per month or per annum	:	NA
--	--	---	-----------

	• Final disposal mode of incineration ash (also indicate characteristics)	:	NA
--	---	---	-----------

	• Specific observations, if any, w.r.t. incineration (any chlorinated disinfectants, chlorinated plastics, sulphur content in auxiliary fuels used for incineration)	:	NA
--	--	---	-----------

(c)	Autoclaving /Microwaving /Hydroclaving :		
-----	--	--	--

	• Capacity	:	NA
--	------------	---	-----------

	• Make	:	NA
--	--------	---	-----------

	• Air pollution control devices attached	:	NA
--	--	---	-----------

	• Capacity of shredder and make:	:	NA
--	----------------------------------	---	-----------

	• Operating conditions as per designs	:	NA
--	---------------------------------------	---	-----------

	• Graphic or computer recording devices attached with the system	:	NA
--	--	---	-----------

	• Operating conditions as observed in recording system	:	NA
--	--	---	-----------

	• Performance evaluation by spore testing or routine test. Details thereof	:	NA
--	--	---	-----------

	• Biological indicators	:	NA
--	-------------------------	---	-----------

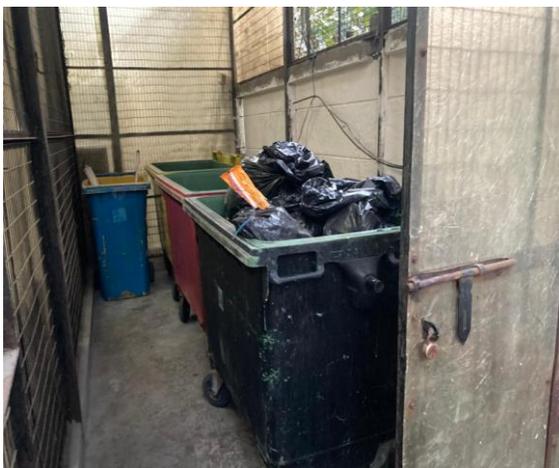
(d)	Onsite Wastewater Treatment:		
-----	------------------------------	--	--

	• Consumption of water per day (in kl/day)	:	20 KLD
--	--	---	--------

	• Sources of water supply	:	Nagar Nigam & Submersible																										
	• Sources of waste water generation and the quantity (in kl/day)	:	OT/Lab/wards																										
	• Total Waste water generation quantity (in kl/day)	:	Domestic- 15 KLD Industrial- 1.0 KLD																										
	• Steps involved in Effluent Treatment Plant (Also enclose flow chart of ETP)	:	Equalization tank, chemical dosing tanks, reaction cum settling tank, buffer tank, MGF, ACF, Sludge drying beds etc.																										
	• Type of chemicals used in ETP and the consumption (in kg/day)	:	Polyelectrolyte Powder, Caustic Soda Powder & Potash Alum																										
	• Intake characteristics of ETP	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th colspan="2">Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td colspan="2">7.48</td> </tr> <tr> <td>Colour</td> <td colspan="2">Turbid</td> </tr> <tr> <td>BOD</td> <td colspan="2">259.0</td> </tr> <tr> <td>COD</td> <td colspan="2">595.0</td> </tr> <tr> <td>TSS</td> <td colspan="2">276.0</td> </tr> <tr> <td>Total Coliform</td> <td colspan="2">-</td> </tr> <tr> <td>Fecal Coliform</td> <td colspan="2">-</td> </tr> </tbody> </table>			Parameter	Monitored values** in mg/l except pH		pH	7.48		Colour	Turbid		BOD	259.0		COD	595.0		TSS	276.0		Total Coliform	-		Fecal Coliform	-	
Parameter	Monitored values** in mg/l except pH																												
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BOD	259.0																												
COD	595.0																												
TSS	276.0																												
Total Coliform	-																												
Fecal Coliform	-																												
	• Final mode of disposal of treated wastewater (Reused/ Discharged through drain)	:	Through public sewer line																										
	• compliance to the regulatory requirements for final disposal of treated liquid effluent:	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Permissible limits in mg/l except pH</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>5.5 – 9.0</td> <td>7.47</td> </tr> <tr> <td>Colour</td> <td>-</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>350</td> <td>25.0</td> </tr> <tr> <td>COD</td> <td>N/A</td> <td>200.0</td> </tr> <tr> <td>TSS</td> <td>600</td> <td>90.0</td> </tr> </tbody> </table> <p>**General Standards as applicable for public sewer.</p>			Parameter	Permissible limits in mg/l except pH	Monitored values** in mg/l except pH	pH	5.5 – 9.0	7.47	Colour	-	Turbid	BOD	350	25.0	COD	N/A	200.0	TSS	600	90.0						
Parameter	Permissible limits in mg/l except pH	Monitored values** in mg/l except pH																											
pH	5.5 – 9.0	7.47																											
Colour	-	Turbid																											
BOD	350	25.0																											
COD	N/A	200.0																											
TSS	600	90.0																											
	• Analysis procedures followed for characterization of waste water	:	NA																										
	• Any other mode of wastewater disposal, Details thereof	:	NA																										
(e)	On-site BMW Disposal																												
	• Disposal by Deep Burial/ Municipal Solid Waste Landfills/ Disposal in Open Yards or low-lying areas	:	NA																										
	• Give details of sharp pit/ encapsulation facility (pl. provide details such as size of pit, depth in m)	:	NA																										
	• Precautionary measures taken around the sharp pit or encapsulation facility	:	NA																										
	• Whether sharp pit/ encapsulation is authorized by SPCB/ PCC/ any prescribed authority	:	NA																										
	• Give measures taken for disposal of	:	NA																										

	BMW by sharp pit/encapsulation:		
	<ul style="list-style-type: none"> Ground Water Level and the Characteristics around the encapsulation pit: 	:	NA
	<ul style="list-style-type: none"> Records with regard to the Deep Burial 	:	NA
IV.	Status of infrastructure (specify shortcomings observed if any):		
	<ul style="list-style-type: none"> Treatment equipment room: Main waste storage room: Treated waste storage room: Generator set (size and regulatory compliance details) Waste treatment site security (High walls, fencing, guarded gates etc.) Washing room for waste containers Protective gear for waste handlers 	:	Adequate Adequate Adequate 125 KVA x02 with acoustic enclosure Adequate Adequate Adequate
V.	Record keeping details:		
	<ul style="list-style-type: none"> Does the operator have record keeping system in order to comply with the Rules? Specify shortcomings observed if any. 	:	YES
VI.	Monitoring Frequency Details:		
	<ul style="list-style-type: none"> Frequency of monitoring of incinerator/ autoclave/ microwave/ hydroclave/ ETP effluent discharge name of the laboratory (specify approved or not) Give details of compliance/ non-compliance of liquid and air emissions. 	:	Yearly
VII	Monitoring results carried out by SPCB/ PCC:		
	<ul style="list-style-type: none"> Incinerator gaseous stack emissions (attach monitoring results) Validation/ efficacy test of autoclave/ microwave/ hydroclave: ETP inlet and outlet characteristics 	:	NA NA Report enclosed
VII I	Whether wastes are disposed-off through common facility. If so, provide details:		
	Type of wastes disposed after treatment	:	
	<ul style="list-style-type: none"> Plastic wastes after treatment Treated sharps Incineration ash Other treated solid wastes Treated waste water 	:	
IX.	Check for the following (indicate YES/NO):		

XI.	Name (s) of the visiting official (s) with address	: 1. Mr. Bipin Kumar, ADM (city), Ghaziabad 2. Mrs. Youthika, Scientist- D, Central Pollution Control Board, New Delhi 3. Mr. Kishan Singh, AEE, UPPCB, Ghaziabad 4. Mr. Ranjeet Singh, JE, UPPCB, Ghaziabad
XII	Date of visit to HCF	: 24.02.2022



IX. M/s Aditi Hospital, Plot No-117, Kaling Marg, Sector-4, Vaishali, Ghaziabad

During inspection, it is found that HCF is not situated at above mentioned address and Board of M/s Siya Chandra medical center was placed at plot no. 117, sector-4, Vaishali. Main entrance of premise was found closed at the time of inspection.

As per information provided by local residents, No HCF is operational at above mentioned plot. Photograph taken during inspection is as below:



Checklist for Verification of Compliance of Provisions of BMW Rules in Health Care Facility (HCF)

X. M/s Paras Hospital, Plot No. 130, Kaling Marg, Sector 4, Vaishali, Ghaziabad

I. General Information:				
(a)	Name & Address of the HCF	:	M/s Paras Hospital, Plot No-130, Kaling Marg, Sector-4, Vaishali, Ghaziabad	
(b)	Contact person & Telephone No.	:	Mr. Manpreet Singh (9599106787)	
(c)	Month & Year of Establishment	:	January 2005	
(d)	Government/Trust/Private Hospital	:	Private	
(e)	Total no. of beds & average occupancy	:	Total 50 (occupancy- 15 per day approx.)	
(f)	Consent under Water (Prevention and Control of Pollution) Act, 1974	:	Yes	
	• Date of issue	:	11.02.2021	
	• Validity up to	:	31.07.2023	
(g)	Consent under Air (Prevention and Control of Pollution) Act, 1981	:	Yes	
	• Date of issue	:	11.02.2021	
	• Validity up to	:	31.07.2023	
(h)	Authorization under Bio-medical Waste (M & H) Rules, 1998	:	No	
	• Date of issue	:	08.01.2020	
	• Issued by	:	UPPCB, Ghaziabad	
	• Validity up to	:	30.11.2020	
(i)	Daily Operation schedule (timings)	:	24 hrs.	
(j)	Status of Annual Report submission	:	Yes, copy attached	
(k)	House Keeping and Sanitation status	:	Satisfactory	
(l)	Staff involvement in BMW management (no. of persons)	:		
	• Managerial/Administration	:	2	
	• Equipment operations	:	3	
	• Transportation of BMW	:	3	
	• Sanitation & others	:	3	
(m)	Whether annual report submitted by HCF to the SPCB/PCC/Any other prescribed authority (Date of submission and enclose a copy)	:	Yes, copy attached	
II. Bio-medical Waste (Sources, Storage and segregation):				
(a)	Sources of Biomedical Waste Generation	:	ICU/wards/OT/Dialysis	
(b)	Total quantity of Bio-medical waste generated in Kg/day and in Kg/annum	:	2.81 Kg/day or 1027.72 kg/annum	
(c)	Typical Categories of wastes generated (pl. indicate category wise quantity in Kg/day):			
	Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal
	1	Human Anatomical Waste	0.5	Through CBWTF (M/s Synergy waste management Pvt. Ltd., Meerut)
	2	Animal Waste	0	NA
	3	Microbiology &	0.3	Through CBWTF (M/s Synergy

		Biotechnology Waste		waste management Pvt. Ltd., Meerut)
	4	Waste Sharps	0.2	Through CBWTF (M/s Synergy waste management Pvt. Ltd., Meerut)
	5	Discarded Medicines and Cytotoxic Drugs	0	NA
	6	Soiled Waste	0.512	Through CBWTF (M/s Synergy waste management Pvt. Ltd., Meerut)
	7	Solid Waste (Wastes generated from disposable items other than the waste sharps)	0.519	Through CBWTF (M/s Synergy waste management Pvt. Ltd., Meerut)
	8	Liquid Waste	0.5 KLD	Through ETP
	9	Incineration Ash	0	NA
	10	Chemical Waste	0	NA
		Total solid waste	0.689 kg/day	
		Total liquid waste	0.5 KLD	
(d)	Record keeping for generation and disposal of BMW			: Yes
(e)	Status of segregation and storage (colored bins, plastic bags and any other mode)			: Colored bins
(f)	Status of temporary storage details (pl. indicate specific provision made by the HCF)			: Dedicated covered storage
(g)	Whether temporary storage is satisfactory (Yes/No)			: Yes
(h)	Status of treatment at wards and chemicals used			: Satisfactory
(i)	Status of House Keeping in Wards and at source of BMW generation			: Satisfactory
(j)	Mode of transportation of wastes from source to the temporary storage/on-site treatment facility (pl. indicate type of provision made by the HCF)			: Covered bins with trolley
(k)	Provision made for on-site transportation within HCF is satisfactory (Yes/No). Details thereof			: Yes
(l)	Category wise disposal options followed:			
	Colour Coding	Waste Categories	Treatment & Disposal	
	Red	Infected Plastic items	Through CBWTF	
	Blue	Non-Broken Glass Vials	Through CBWTF	
	Yellow	All infected Solid waste	Through CBWTF	

	Green	General waste such as paper, cardboard boxes, packaging, kitchen waste etc.	Through Municipal corporation Ghaziabad							
III.	On-site Treatment of BWM by HCF:									
(a)	Total quantity of bio-medical waste treated (Kg per day)			NA						
	• Deep Burial in Kg/day		:							
	• Incinerable in Kg/day		:							
	• Autoclaving/ Hydroclaving in kg/day	Microwaving/	:							
	• Others (please specify) in Kg/day		:							
(b)	On-site Treatment Provision by Incineration:									
	• Supplier of the Incinerator		:	NA						
	• Capacity of the Incineration in tonnes per hour and tonnes per annum		:	NA						
	• Operation conditions of the Incineration based on the designs/supplier		:	NA						
	• Provision made for Temperature measurements		:	NA						
	• Daily Operation schedule (timings)		:	NA						
	• Operating conditions as per records and as observed		:	NA						
	• Stack attached with the incinerator		:	NA						
	• Air pollution control systems attached with the incinerator		:	NA						
	• Auxiliary fuels used for incineration		:	NA						
	• Consumption of auxiliary fuels		:	<table border="1"> <thead> <tr> <th>Name of fuel</th> <th>Quantity per day/month</th> </tr> </thead> <tbody> <tr> <td>a) NA</td> <td>--</td> </tr> <tr> <td>b) NA</td> <td>--</td> </tr> </tbody> </table>	Name of fuel	Quantity per day/month	a) NA	--	b) NA	--
Name of fuel	Quantity per day/month									
a) NA	--									
b) NA	--									
	• Monitoring provision attached with the stack		:	NA						
	• Storage provision at the incinerator		:	NA						
	• Fire safety measures adopted		:	NA						
	• Log book for operation of incinerator		:	NA						
	• Type of wastes incinerated and its characteristics		:	NA						
	• Average quantity of wastes incinerated per day or per month or per annum		:	NA						
	• Duration of operating hours of incineration:		:	NA						
	• Details of heat recovery system installed with incinerator if any:		:	NA						
	• Stack gaseous emissions monitored:									

Emission Parameters	Permissible Limits	Monitored Values** by CPCB
Particulate matter (with 12% CO ₂ correction)	150 mg/Nm ³	NA
Nitrogen Oxides	450 mg/Nm ³	NA
HCl	50 mg/Nm ³	NA
SO ₂	Low Sulphur fuel to be used	NA
Stack Height	30 meter	NA
Volatile Organic compound in ash (%)	Less than 0.01%	NA
Temp. in Primary Chamber	800°C (+/-) 50°C	NA
Temp. in secondary Chamber	1050°C (+/-) 50°C	NA
Residence time in sec. chamber	1 second	NA
** Not applicable.		
• Quantity of ash generation per day or per month or per annum	:	NA
• Final disposal mode of incineration ash (also indicate characteristics)	:	NA
• Specific observations, if any, w.r.t. incineration (any chlorinated disinfectants, chlorinated plastics, sulphur content in auxiliary fuels used for incineration)	:	NA
(c) Autoclaving /Microwaving /Hydroclaving :		
• Capacity	:	NA
• Make	:	NA
• Air pollution control devices attached	:	NA
• Capacity of shredder and make:	:	NA
• Operating conditions as per designs	:	NA
• Graphic or computer recording devices attached with the system	:	NA
• Operating conditions as observed in recording system	:	NA
• Performance evaluation by spore testing or routine test. Details thereof	:	NA
• Biological indicators	:	NA
(d) Onsite Wastewater Treatment:		
• Consumption of water per day (in kl/day)	:	2.0 KLD
• Sources of water supply	:	Municipal supply
• Sources of waste water generation and the quantity (in kl/day)	:	Dialysis/OT/Lab
• Total Waste water generation quantity (in kl/day)	:	Domestic- 1.0 KLD Industrial- 0.5 KLD
• Steps involved in Effluent Treatment Plant (Also enclose flow chart of ETP)	:	Equalization tank, chemical dosing tanks, reaction cum settling tank, MGF, ACF, SDB etc.
• Type of chemicals used in ETP and the consumption (in kg/day)	:	Alum, polyelectrolyte, lime etc.

	<ul style="list-style-type: none"> Intake characteristics of ETP 	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>7.21</td> </tr> <tr> <td>Colour</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>209.0</td> </tr> <tr> <td>COD</td> <td>792.0</td> </tr> <tr> <td>TSS</td> <td>596.0</td> </tr> <tr> <td>Total Coliform</td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td>-</td> </tr> </tbody> </table>	Parameter	Monitored values** in mg/l except pH	pH	7.21	Colour	Turbid	BOD	209.0	COD	792.0	TSS	596.0	Total Coliform	-	Fecal Coliform	-								
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TSS	596.0																										
Total Coliform	-																										
Fecal Coliform	-																										
	<ul style="list-style-type: none"> Final mode of disposal of treated wastewater (Reused/ Discharged through drain) 	:	Through public sewer line																								
	<ul style="list-style-type: none"> compliance to the regulatory requirements for final disposal of treated liquid effluent: 	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Permissible limits in mg/l except pH</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>5.5 – 9.0</td> <td>7.22</td> </tr> <tr> <td>Colour</td> <td>-</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>350</td> <td>24.0</td> </tr> <tr> <td>COD</td> <td>N/A</td> <td>126.0</td> </tr> <tr> <td>TSS</td> <td>600</td> <td>72.0</td> </tr> <tr> <td>Total Coliform</td> <td></td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td></td> <td>-</td> </tr> </tbody> </table> <p>**General Standards as applicable for public sewer.</p>	Parameter	Permissible limits in mg/l except pH	Monitored values** in mg/l except pH	pH	5.5 – 9.0	7.22	Colour	-	Turbid	BOD	350	24.0	COD	N/A	126.0	TSS	600	72.0	Total Coliform		-	Fecal Coliform		-
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COD	N/A	126.0																									
TSS	600	72.0																									
Total Coliform		-																									
Fecal Coliform		-																									
	<ul style="list-style-type: none"> Analysis procedures followed for characterization of waste water 	:	NA																								
	<ul style="list-style-type: none"> Any other mode of wastewater disposal, Details thereof 	:	NA																								
(e)	On-site BMW Disposal																										
	<ul style="list-style-type: none"> Disposal by Deep Burial/ Municipal Solid Waste Landfills/ Disposal in Open Yards or low-lying areas 	:	NA																								
	<ul style="list-style-type: none"> Give details of sharp pit/ encapsulation facility (pl. provide details such as size of pit, depth in m) 	:	NA																								
	<ul style="list-style-type: none"> Precautionary measures taken around the sharp pit or encapsulation facility 	:	NA																								
	<ul style="list-style-type: none"> Whether sharp pit/ encapsulation is authorized by SPCB/ PCC/ any prescribed authority 	:	NA																								
	<ul style="list-style-type: none"> Give measures taken for disposal of BMW by sharp pit/encapsulation: 	:	NA																								
	<ul style="list-style-type: none"> Ground Water Level and the Characteristics around the encapsulation pit: 	:	NA																								

	<ul style="list-style-type: none"> Records with regard to the Deep Burial 	:	NA
IV.	Status of infrastructure (specify shortcomings observed if any):		
	<ul style="list-style-type: none"> Treatment equipment room: Main waste storage room: Treated waste storage room: Generator set (size and regulatory compliance details) Waste treatment site security (High walls, fencing, guarded gates etc.) Washing room for waste containers Protective gear for waste handlers 	:	Adequate Adequate Adequate 125 KVA with acoustic enclosure Adequate Adequate Adequate
V.	Record keeping details:		
	<ul style="list-style-type: none"> Does the operator have record keeping system in order to comply with the Rules? Specify shortcomings observed if any. 	:	Yes
VI.	Monitoring Frequency Details:		
	<ul style="list-style-type: none"> Frequency of monitoring of incinerator/ autoclave/ microwave/ hydroclave/ ETP effluent discharge name of the laboratory (specify approved or not) Give details of compliance/ non-compliance of liquid and air emissions. 	:	Yearly -- --
VII	Monitoring results carried out by SPCB/ PCC:		
	<ul style="list-style-type: none"> Incinerator gaseous stack emissions (attach monitoring results) Validation/ efficacy test of autoclave/ microwave/ hydroclave: ETP inlet and outlet characteristics 	:	-- -- Reports enclosed
VII I	Whether wastes are disposed-off through common facility. If so, provide details:		
	Type of wastes disposed after treatment <ul style="list-style-type: none"> Plastic wastes after treatment Treated sharps Incineration ash Other treated solid wastes Treated waste water 	:	NA
IX.	Check for the following (indicate YES/NO):		



**Checklist for Verification of Compliance of Provisions of BMW Rules in Health Care Facility
(HCF)**

XI. M/s Clearmedi Hospital & Cancer Centre, HC-1, Sector 15, Vasundhara, Ghaziabad

I. General Information:				
(a)	Name & Address of the HCF	:	M/s Clearmedi Hospital and Cancer Centre, HC-1, Sector-15, Vasundhara, Ghaziabad	
(b)	Contact person & Telephone No.	:	Dr. Suresh Kumar 9810325452	
(c)	Month & Year of Establishment	:	2013	
(d)	Government/Trust/Private Hospital	:	Private	
(e)	Total no. of beds & average occupancy	:	Total 100, Occupancy- 50%	
(f)	Consent under Water (Prevention and Control of Pollution) Act, 1974	:	Yes	
	• Date of issue	:	19.03.2021	
	• Validity up to	:	31.07.2023	
(g)	Consent under Air (Prevention and Control of Pollution) Act, 1981	:	Yes	
	• Date of issue	:	19.03.2021	
	• Validity up to	:	31.07.2023	
(h)	Authorization under Bio-medical Waste (M & H) Rules, 1998	:	Yes	
	• Date of issue	:	26.03.2021	
	• Issued by	:	UPPCB, Ghaziabad	
	• Validity up to	:	31.07.2023	
(i)	Daily Operation schedule (timings)	:	10:00 am to 11:00 am	
(j)	Status of Annual Report submission	:	Submitted	
(k)	House Keeping and Sanitation status	:	satisfactory	
(l)	Staff involvement in BMW management (no. of persons)	:		
	• Managerial/Administration	:	05	
	• Equipment operations	:	04	
	• Transportation of BMW	:	05	
	• Sanitation & others	:	25	
(m)	Whether annual report submitted by HCF to the SPCB/PCC/Any other prescribed authority (Date of submission and enclose a copy)	:	Yes	
II. Bio-medical Waste (Sources, Storage and segregation):				
(a)	Sources of Biomedical Waste Generation	:	OT/wards/lab	
(b)	Total quantity of Bio-medical waste generated in Kg/day and in Kg/annum	:	21.48 Kg/day, 7841 Kg/Annum	
(c)	Typical Categories of wastes generated (pl. indicate category wise quantity in Kg/day):			
	Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal
	1	Human Anatomical Waste	1.96	Through CBWTF (M/s Environ waste connections LLP, Hapur)
	2	Animal Waste	0	NA
	3	Microbiology & Biotechnology Waste	1.28	Through CBWTF (M/s Environ waste connections LLP,

				Hapur)
	4	Waste Sharps	0.87gm	Through CBWTF (M/s Environ waste connections LLP, Hapur)
	5	Discarded Medicines and Cytotoxic Drugs	0.62gm	Through CBWTF (M/s Environ waste connections LLP, Hapur)
	6	Soiled Waste	2.68 kg	Through CBWTF (M/s Environ waste connections LLP, Hapur)
	7	Solid Waste (Wastes generated from disposable items other than the waste sharps)	9.24 kg	Through CBWTF (M/s Environ waste connections LLP, Hapur)
	8	Liquid Waste	4.0 KLD	
	9	Incineration Ash	0	NA
	10	Chemical Waste	0	NA
		Total solid waste	3376 kg/annual	
		Total liquid waste	4.0 KLD	
(d)	Record keeping for generation and disposal of BMW		:	Yes
(e)	Status of segregation and storage (Colored bins, plastic bags and any other mode)		:	Yes
(f)	Status of temporary storage details (pl. indicate specific provision made by the HCF)		:	Available BMW segregation area
(g)	Whether temporary storage is satisfactory (Yes /No)		:	Yes
(h)	Status of treatment at wards and chemicals used		:	Satisfactory
(i)	Status of House Keeping in Wards and at source of BMW generation		:	Satisfactory
(j)	Mode of transportation of wastes from source to the temporary storage/on-site treatment facility (pl. indicate type of provision made by the HCF)		:	Covered bins
(k)	Provision made for on-site transportation within HCF is satisfactory (Yes/No). Details thereof		:	Yes
(l)	Category wise disposal options followed:			
	Colour Coding	Waste Categories	Treatment & Disposal	
	Red	Contaminated recyclable waste	Disposal through CBWTF	
	Blue	Glassware	Disposal through CBWTF	
	Yellow	Anatomical	Disposal through CBWTF	
	Green	General waste such as paper, cardboard	Disposal through Municipal Corporation Ghaziabad	

		boxes, packaging, kitchen waste etc.							
III. On-site Treatment of BWM by HCF:									
(a)	Total quantity of bio-medical waste treated (Kg per day)		NA						
	• Deep Burial in Kg/day	:							
	• Incinerable in Kg/day	:							
	• Autoclaving/ Hydroclaving in kg/day	:							
	• Microwaving/ Others (please specify) in Kg/day	:							
(b)	On-site Treatment Provision by Incineration:								
	• Supplier of the Incinerator	:	NA						
	• Capacity of the Incineration in tonnes per hour and tonnes per annum	:	NA						
	• Operation conditions of the Incineration based on the designs/supplier	:	NA						
	• Provision made for Temperature measurements	:	NA						
	• Daily Operation schedule (timings)	:	NA						
	• Operating conditions as per records and as observed	:	NA						
	• Stack attached with the incinerator	:	NA						
	• Air pollution control systems attached with the incinerator	:	NA						
	• Auxiliary fuels used for incineration	:	NA						
	• Consumption of auxiliary fuels	:	<table border="1"> <thead> <tr> <th>Name of fuel</th> <th>Quantity per day/month</th> </tr> </thead> <tbody> <tr> <td>a) NA</td> <td>--</td> </tr> <tr> <td>b) NA</td> <td>--</td> </tr> </tbody> </table>	Name of fuel	Quantity per day/month	a) NA	--	b) NA	--
Name of fuel	Quantity per day/month								
a) NA	--								
b) NA	--								
	• Monitoring provision attached with the stack	:	NA						
	• Storage provision at the incinerator	:	NA						
	• Fire safety measures adopted	:	NA						
	• Log book for operation of incinerator	:	NA						
	• Type of wastes incinerated and its characteristics	:	NA						
	• Average quantity of wastes incinerated per day or per month or per annum	:	NA						
	• Duration of operating hours of incineration:	:	NA						
	• Details of heat recovery system installed with incinerator if any:	:	NA						
	• Stack gaseous emissions monitored:								

Emission Parameters	Permissible Limits	Monitored Values** by CPCB
Particulate matter (with 12% CO ₂ correction)	150 mg/Nm ³	NA
Nitrogen Oxides	450 mg/Nm ³	NA
HCl	50 mg/Nm ³	NA
SO ₂	Low Sulphur fuel to be used	NA
Stack Height	30 meters	NA
Volatile Organic compound in ash (%)	Less than 0.01%	NA
Temp. in Primary Chamber	800°C (+/-) 50°C	NA
Temp. in secondary Chamber	1050°C (+/-) 50°C	NA
Residence time in sec. chamber	1 second	NA
** Not applicable.		
• Quantity of ash generation per day or per month or per annum	:	NA
• Final disposal mode of incineration ash (also indicate characteristics)	:	NA
• Specific observations, if any, w.r.t. incineration (any chlorinated disinfectants, chlorinated plastics, sulphur content in auxiliary fuels used for incineration)	:	NA
(c) Autoclaving /Microwaving /Hydroclaving :		
• Capacity	:	
• Make	:	NA
• Air pollution control devices attached	:	NA
• Capacity of shredder and make:	:	NA
• Operating conditions as per designs	:	NA
• Graphic or computer recording devices attached with the system	:	NA
• Operating conditions as observed in recording system	:	NA
• Performance evaluation by spore testing or routine test. Details thereof	:	NA
• Biological indicators	:	NA
(d) Onsite Wastewater Treatment:		
• Consumption of water per day (in kl/day)	:	50.0 KLD
• Sources of water supply	:	Municipal Supply (Ganga Water)
• Sources of waste water generation and the quantity (in kl/day)	:	Domestic, OT, lab, wards etc
• Total Waste water generation quantity (in kl/day)	:	Domestic- 30 KLD Industrial- 5.0 KLD
• Steps involved in Effluent Treatment Plant (Also enclose flow chart of ETP)	:	Equalization tank, Flash mixer, Tube settler, chemical dosing tanks, MGF, ACF, SDB etc.
• Type of chemicals used in ETP and the consumption (in kg/day)	:	Lime, alum, polyelectrolyte etc.

	<ul style="list-style-type: none"> Intake characteristics of ETP 	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Monitored values** in mg/l except pH For ETP</th> <th>Monitored values** in mg/l except pH for STP</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>9.0</td> <td>9.1</td> </tr> <tr> <td>Colour</td> <td>Turbid</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>142.0</td> <td>162.0</td> </tr> <tr> <td>COD</td> <td>488.0</td> <td>482.0</td> </tr> <tr> <td>TSS</td> <td>180.0</td> <td>184.0</td> </tr> <tr> <td>Total Coliform</td> <td>-</td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Parameter	Monitored values** in mg/l except pH For ETP	Monitored values** in mg/l except pH for STP	pH	9.0	9.1	Colour	Turbid	Turbid	BOD	142.0	162.0	COD	488.0	482.0	TSS	180.0	184.0	Total Coliform	-	-	Fecal Coliform	-	-																		
Parameter	Monitored values** in mg/l except pH For ETP	Monitored values** in mg/l except pH for STP																																											
pH	9.0	9.1																																											
Colour	Turbid	Turbid																																											
BOD	142.0	162.0																																											
COD	488.0	482.0																																											
TSS	180.0	184.0																																											
Total Coliform	-	-																																											
Fecal Coliform	-	-																																											
	<ul style="list-style-type: none"> Final mode of disposal of treated wastewater (Reused/ Discharged through drain) 	:	Through public sewer line																																										
	<ul style="list-style-type: none"> compliance to the regulatory requirements for final disposal of treated liquid effluent: 	:	<p>ETP outlet:</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Permissible limits in mg/l except pH</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>6.5 – 8.5</td> <td>7.24</td> </tr> <tr> <td>Colour</td> <td>-</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>30</td> <td>28.0</td> </tr> <tr> <td>COD</td> <td>250</td> <td>142.0</td> </tr> <tr> <td>TSS</td> <td>100</td> <td>84.0</td> </tr> <tr> <td>Total Coliform</td> <td></td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td></td> <td>-</td> </tr> </tbody> </table> <p>STP outlet:</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Permissible limits in mg/l except pH</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>5.5 – 9.0</td> <td>8.2</td> </tr> <tr> <td>Colour</td> <td>-</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>350</td> <td>28.0</td> </tr> <tr> <td>COD</td> <td>NA</td> <td>104.0</td> </tr> <tr> <td>TSS</td> <td>600</td> <td>84.0</td> </tr> </tbody> </table> <p>**General Standards as applicable for public sewer.</p>	Parameter	Permissible limits in mg/l except pH	Monitored values** in mg/l except pH	pH	6.5 – 8.5	7.24	Colour	-	Turbid	BOD	30	28.0	COD	250	142.0	TSS	100	84.0	Total Coliform		-	Fecal Coliform		-	Parameter	Permissible limits in mg/l except pH	Monitored values** in mg/l except pH	pH	5.5 – 9.0	8.2	Colour	-	Turbid	BOD	350	28.0	COD	NA	104.0	TSS	600	84.0
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	pit, depth in m)		
	• Precautionary measures taken around the sharp pit or encapsulation facility	:	NA
	• Whether sharp pit/ encapsulation is authorized by SPCB/ PCC/ any prescribed authority	:	NA
	• Give measures taken for disposal of BMW by sharp pit/encapsulation:	:	NA
	• Ground Water Level and the Characteristics around the encapsulation pit:	:	NA
	• Records with regard to the Deep Burial	:	NA
IV.	Status of infrastructure (specify shortcomings observed if any):		
	• Treatment equipment room:	:	Adequate
	• Main waste storage room:	:	Adequate
	• Treated waste storage room:	:	Adequate
	• Generator set (size and regulatory compliance details)	:	225 KVA, 500 KVA with acoustic enclosure
	• Waste treatment site security (High walls, fencing, guarded gates etc.)	:	Adequate
	• Washing room for waste containers	:	Adequate
	• Protective gear for waste handlers	:	Adequate
V.	Record keeping details:		
	• Does the operator have record keeping system in order to comply with the Rules? Specify shortcomings observed if any.	:	Yes
VI.	Monitoring Frequency Details:		
	• Frequency of monitoring of incinerator/ autoclave/ microwave/ hydroclave/ ETP effluent discharge	:	NA
	• name of the laboratory (specify approved or not)	:	
	• Give details of compliance/ non-compliance of liquid and air emissions.	:	
VII	Monitoring results carried out by SPCB/ PCC:		
	• Incinerator gaseous stack emissions (attach monitoring results)	:	NA
	• Validation/ efficacy test of autoclave/ microwave/ hydroclave:	:	NA
	• ETP inlet and outlet characteristics	:	Report enclosed
VII I	Whether wastes are disposed-off through common facility. If so, provide details:		

	Type of wastes disposed after treatment	:	NA
	<ul style="list-style-type: none"> • Plastic wastes after treatment • Treated sharps • Incineration ash • Other treated solid wastes • Treated waste water 	:	
IX.	Check for the following (indicate YES/NO):		
	<ul style="list-style-type: none"> • Bio-medical waste not to be mixed with other waste. • Needle/syringe destroyer at required places • Segregation of waste in the coloured containers at the source of waste generation as per BMW Rules. • Placement of required coloured containers at the source of waste generation labeled with bio-hazard symbol • Whether awareness among hospital staff/ doctors generated? • Whether labeling of bag has been done with respective ward no. in order to identify its source to enable improvement of segregation? • Whether special care is taken with regard to mercury spillage/breakage • Deployment of posters/placards within the hospitals • Whether requisite treatment to segregated waste/ hand over to CBWTF operator within 48 hours of waste generation is imparted? • Whether waste collected in a container of similar colour with label as per the Rules? • Whether the person who collects BMW maintains a register? • Type of vehicle used (closed type or open type) for transportation for final disposal? • Has due attention been given in vehicles to prevent spillage/ pilferage/ loading/ unloading etc.? • The facility operator collects waste daily or alternate day? Whether criterion of 48 hours is compiled? 	:	<p>Yes</p>
X.	Other observations:		
	a. HCF should implement barcode system as per BMW, Rules 2016.		
XI	Name (s) of the visiting official (s) with address	:	1. Mr. Bipin Kumar, ADM (city), Ghaziabad

		<ol style="list-style-type: none"> 2. Mrs. Youthika, Scientist- D, Central Pollution Control Board, New Delhi 3. Mr. Kishan Singh, AEE, UPPCB, Ghaziabad 4. Mr. Ranjeet Singh, JE, UPPCB, Ghaziabad
XII	Date of visit to HCF	: 23.02.2021



**Checklist for Verification of Compliance of Provisions of BMW Rules in Health Care Facility
(HCF)**

XII. M/s Vasundhara Hospital, 5,NH-1, Sector 15, Vasundhara, Ghaziabad

I. General Information:				
(a)	Name & Address of the HCF	:	M/s Vasundhara Hospital, 5, NH-1, Dr. Br Ambedkar Road, Near Atal Chowk, Sector-15, Vasundhara, Ghaziabad	
(b)	Contact person & Telephone No.	:	Dr. Girjesh Rustagi (9818320545)	
(c)	Month & Year of Establishment	:	2003	
(d)	Government/Trust/Private Hospital	:	Private	
(e)	Total no. of beds & average occupancy	:	Total 50, Occupancy- 32%	
(f)	Consent under Water (Prevention and Control of Pollution) Act, 1974	:	Yes	
	• Date of issue	:	28.10.2020	
	• Validity up to	:	31.07.2023	
(g)	Consent under Air (Prevention and Control of Pollution) Act, 1981	:	Yes	
	• Date of issue	:	28.10.2020	
	• Validity up to	:	31.07.2023	
(h)	Authorization under Bio-medical Waste (M & H) Rules, 1998	:	Yes	
	• Date of issue	:	11.12.2019	
	• Issued by	:	RO, UPPCB, Ghaziabad	
	• Validity up to	:	31.07.2022	
(i)	Daily Operation schedule (timings)	:	24 hrs.	
(j)	Status of Annual Report submission	:	Not submitted	
(k)	House Keeping and Sanitation status	:	Satisfactory	
(l)	Staff involvement in BMW management (no. of persons)	:		
	• Managerial/Administration	:	1	
	• Equipment operations	:	3	
	• Transportation of BMW	:	3	
	• Sanitation & others	:	4	
(m)	Whether annual report submitted by HCF to the SPCB/PCC/Any other prescribed authority (Date of submission and enclose a copy)	:	No	
II. Bio-medical Waste (Sources, Storage and segregation):				
(a)	Sources of Biomedical Waste Generation	:	Wards/causality/OT	
(b)	Total quantity of Bio-medical waste generated in Kg/day and in Kg/annum	:	6.0 Kg/day or 900 kg/annum	
(c)	Typical Categories of wastes generated (pl. indicate category wise quantity in Kg/day):			
	Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal
	1	Human Anatomical Waste	1	Through CBWTF ((Synergy Waste Management Pvt. Ltd.)
	2	Animal Waste	0	NA
	3	Microbiology &	0.5	Through CBWTF ((Synergy

		Biotechnology Waste		Waste Management Pvt. Ltd.)
	4	Waste Sharps	0.2	Through CBWTF ((Synergy Waste Management Pvt. Ltd.)
	5	Discarded Medicines and Cytotoxic Drugs	0.1	Through CBWTF ((Synergy Waste Management Pvt. Ltd.)
	6	Soiled Waste	0.5	Through CBWTF ((Synergy Waste Management Pvt. Ltd.)
	7	Solid Waste (Wastes generated from disposable items other than the waste sharps)	2.0	Through CBWTF ((Synergy Waste Management Pvt. Ltd.)
	8	Liquid Waste	1.0 KLD	Through ETP
	9	Incineration Ash	0	NA
	10	Chemical Waste	0	NA
		Total solid waste	Approx. 6.0 kg/day	
		Total liquid waste	Approx. 1.0 KLD	
(d)	Record keeping for generation and disposal of BMW			: Yes
(e)	Status of segregation and storage (colored bins, plastic bags and any other mode)			: Colored bins
(f)	Status of temporary storage details (pl. indicate specific provision made by the HCF)			: Dedicated covered storage
(g)	Whether temporary storage is satisfactory (Yes /No)			: Yes
(h)	Status of treatment at wards and chemicals used			: Sodium Hypochlorite
(i)	Status of House Keeping in Wards and at source of BMW generation			: Satisfactory
(j)	Mode of transportation of wastes from source to the temporary storage/on-site treatment facility (pl. indicate type of provision made by the HCF)			: Covered bins with trolley
(k)	Provision made for on-site transportation within HCF is satisfactory (Yes/No). Details thereof			: Yes
(l)	Category wise disposal options followed:			
	Colour Coding	Waste Categories	Treatment & Disposal	
	Red	Contaminated recyclable waste	Disposal through CBWTF	
	Blue	Glassware	Disposal through CBWTF	
	Yellow	Anatomical	Disposal through CBWTF	
	Green	General waste such as paper, cardboard boxes, packaging, kitchen waste	Disposal through Municipal Corporation Ghaziabad	

	etc.							
III. On-site Treatment of BWM by HCF:								
(a)	Total quantity of bio-medical waste treated (Kg per day)	NA						
	• Deep Burial in Kg/day	:						
	• Incinerable in Kg/day	:						
	• Autoclaving/ Microwaving/ Hydroclaving in kg/day	:						
	• Others (please specify) in Kg/day	:						
(b)	On-site Treatment Provision by Incineration: NA							
	• Supplier of the Incinerator	:						
	• Capacity of the Incineration in tonnes per hour and tonnes per annum	: NA						
	• Operation conditions of the Incineration based on the designs/supplier	: NA						
	• Provision made for Temperature measurements	: NA						
	• Daily Operation schedule (timings)	: NA						
	• Operating conditions as per records and as observed	: NA						
	• Stack attached with the incinerator	: NA						
	• Air pollution control systems attached with the incinerator	: NA						
	• Auxiliary fuels used for incineration	: NA						
	• Consumption of auxiliary fuels	: <table border="1"> <thead> <tr> <th>Name of fuel</th> <th>Quantity per day/month</th> </tr> </thead> <tbody> <tr> <td>a) NA</td> <td>--</td> </tr> <tr> <td>b) NA</td> <td>--</td> </tr> </tbody> </table>	Name of fuel	Quantity per day/month	a) NA	--	b) NA	--
Name of fuel	Quantity per day/month							
a) NA	--							
b) NA	--							
	• Monitoring provision attached with the stack	: NA						
	• Storage provision at the incinerator	: NA						
	• Fire safety measures adopted	: NA						
	• Log book for operation of incinerator	: NA						
	• Type of wastes incinerated and its characteristics	: NA						
	• Average quantity of wastes incinerated per day or per month or per annum	: NA						
	• Duration of operating hours of incineration:	: NA						
	• Details of heat recovery system installed with incinerator if any:	: NA						
	• Stack gaseous emissions monitored:							

Emission Parameters	Permissible Limits	Monitored Values** by CPCB
Particulate matter (with 12% CO ₂ correction)	150 mg/Nm ³	NA
Nitrogen Oxides	450 mg/Nm ³	NA
HCl	50 mg/Nm ³	NA
SO ₂	Low Sulphur fuel to be used	NA
Stack Height	30 meters	NA
Volatile Organic compound in ash (%)	Less than 0.01%	NA
Temp. in Primary Chamber	800°C (+/-) 50°C	NA
Temp. in secondary Chamber	1050°C (+/-) 50°C	NA
Residence time in sec. chamber	1 second	NA
** Not applicable.		
• Quantity of ash generation per day or per month or per annum	:	NA
• Final disposal mode of incineration ash (also indicate characteristics)	:	NA
• Specific observations, if any, w.r.t. incineration (any chlorinated disinfectants, chlorinated plastics, sulphur content in auxiliary fuels used for incineration)	:	NA
(c) Autoclaving /Microwaving /Hydroclaving :		
• Capacity	:	NA
• Make	:	NA
• Air pollution control devices attached	:	NA
• Capacity of shredder and make:	:	NA
• Operating conditions as per designs	:	NA
• Graphic or computer recording devices attached with the system	:	NA
• Operating conditions as observed in recording system	:	NA
• Performance evaluation by spore testing or routine test. Details thereof	:	NA
• Biological indicators	:	NA
(d) Onsite Wastewater Treatment:		
• Consumption of water per day (in kl/day)	:	20 KLD
• Sources of water supply	:	Municipal corporation
• Sources of waste water generation and the quantity (in kl/day)	:	OT/Lab/wards/casualty
• Total Waste water generation quantity (in kl/day)	:	Domestic- 15 KLD Industrial- 1.0 KLD
• Steps involved in Effluent Treatment Plant (Also enclose flow chart of ETP)	:	Equalization tank, Flash mixer, Tube settler, chemical dosing tanks, MGF, ACF, SDB etc.
• Type of chemicals used in ETP and the consumption (in kg/day)	:	Lime, alum, polyelectrolyte etc.

	<ul style="list-style-type: none"> Intake characteristics of ETP 	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>7.51</td> </tr> <tr> <td>Colour</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>48.0</td> </tr> <tr> <td>COD</td> <td>341.0</td> </tr> <tr> <td>TSS</td> <td>150.0</td> </tr> <tr> <td>Total Coliform</td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td>-</td> </tr> </tbody> </table>	Parameter	Monitored values** in mg/l except pH	pH	7.51	Colour	Turbid	BOD	48.0	COD	341.0	TSS	150.0	Total Coliform	-	Fecal Coliform	-		
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	<ul style="list-style-type: none"> Analysis procedures followed for characterization of waste water 	:	NA																		
	<ul style="list-style-type: none"> Any other mode of wastewater disposal, Details thereof 	:	NA																		
(e)	On-site BMW Disposal																				
	<ul style="list-style-type: none"> Disposal by Deep Burial/ Municipal Solid Waste Landfills/ Disposal in Open Yards or low-lying areas 	:	NA																		
	<ul style="list-style-type: none"> Give details of sharp pit/ encapsulation facility (pl. provide details such as size of pit, depth in m) 	:	NA																		
	<ul style="list-style-type: none"> Precautionary measures taken around the sharp pit or encapsulation facility 	:	NA																		
	<ul style="list-style-type: none"> Whether sharp pit/ encapsulation is authorized by SPCB/ PCC/ any prescribed authority 	:	NA																		
	<ul style="list-style-type: none"> Give measures taken for disposal of BMW by sharp pit/encapsulation: 	:	NA																		
	<ul style="list-style-type: none"> Ground Water Level and the Characteristics around the encapsulation pit: 	:	NA																		
	<ul style="list-style-type: none"> Records with regard to the Deep Burial 	:	NA																		
IV.	Status of infrastructure (specify shortcomings observed if any):																				

	<ul style="list-style-type: none"> • Treatment equipment room: • Main waste storage room: • Treated waste storage room: • Generator set (size and regulatory compliance details) • Waste treatment site security (High walls, fencing, guarded gates etc.) • Washing room for waste containers • Protective gear for waste handlers 	: : : : : : : :	NA There was no provision given for appropriate category wise storage room. Small area below the floor is treated as storage area. 62.5 KVA with acoustic enclosure Adequate Adequate Adequate
V.	Record keeping details:		
	<ul style="list-style-type: none"> • Does the operator have record keeping system in order to comply with the Rules? Specify shortcomings observed if any. 	: :	NA
VI.	Monitoring Frequency Details:		
	<ul style="list-style-type: none"> • Frequency of monitoring of incinerator/ autoclave/ microwave/ hydroclave/ ETP effluent discharge • name of the laboratory (specify approved or not) • Give details of compliance/ non-compliance of liquid and air emissions. 	: : :	NA NA NA
VII	Monitoring results carried out by SPCB/ PCC:		
	<ul style="list-style-type: none"> • Incinerator gaseous stack emissions (attach monitoring results) • Validation/ efficacy test of autoclave/ microwave/ hydroclave: • ETP inlet and outlet characteristics 	: : :	NA NA Analysis report enclosed
VII I	Whether wastes are disposed-off through common facility. If so, provide details:		
	Type of wastes disposed after treatment <ul style="list-style-type: none"> • Plastic wastes after treatment • Treated sharps • Incineration ash • Other treated solid wastes • Treated waste water 	: : : : :	Through CBWTF
IX.	Check for the following (indicate YES/NO):		

			Ghaziabad 4. Mr. Ranjeet Singh, JE, UPPCB, Ghaziabad
XII	Date of visit to HCF	:	23.02.2022



Checklist for Verification of Compliance of Provisions of BMW Rules in Health Care Facility (HCF)

XIII. M/s Shanti Gopal Hospital, NH-01, Ahinsa Khand-2, Indirapuram, Ghaziabad

I. General Information:				
(a)	Name & Address of the HCF	:	M/s Shanti Gopal Hospital, Plot No-NH-01, Ahinsa Khand-02, Indirapuram Ghaziabad	
(b)	Contact person & Telephone No.	:	Mr. Ajay Kumar (9818580183)	
(c)	Month & Year of Establishment	:	November 2008	
(d)	Government/Trust/Private Hospital	:	Private	
(e)	Total no. of beds & average occupancy	:	Total 100 (occupancy- 50 %)	
(f)	Consent under Water (Prevention and Control of Pollution) Act, 1974	:	Yes	
	• Date of issue	:	10.04.2019	
	• Validity up to	:	31.07.2022	
(g)	Consent under Air (Prevention and Control of Pollution) Act, 1981	:	Yes	
	• Date of issue	:	10.04.2019	
	• Validity up to	:	31.07.2022	
(h)	Authorization under Bio-medical Waste (M & H) Rules, 1998	:	Yes	
	• Date of issue	:	13.01.2020	
	• Issued by	:	UPPCB, Ghaziabad	
	• Validity up to	:	31.10.2022	
(i)	Daily Operation schedule (timings)	:	24 hrs.	
(j)	Status of Annual Report submission	:	Not submitted	
(k)	House Keeping and Sanitation status	:	Satisfactory	
(l)	Staff involvement in BMW management (no. of persons)	:		
	• Managerial/Administration	:	3	
	• Equipment operations	:	8	
	• Transportation of BMW	:	2	
	• Sanitation & others	:	4	
(m)	Whether annual report submitted by HCF to the SPCB/PCC/Any other prescribed authority (Date of submission and enclose a copy)	:	No	
II. Bio-medical Waste (Sources, Storage and segregation):				
(a)	Sources of Biomedical Waste Generation	:	Wards/OT/causality	
(b)	Total quantity of Bio-medical waste generated in Kg/day and in Kg/annum	:	20 kg/day or 6000 kg/annum	
(c)	Typical Categories of wastes generated (pl. indicate category wise quantity in Kg/day):			
	Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal
	1	Human Anatomical Waste	8	Through CBWTF (Medicare Environmental Management Pvt. Ltd., Hapur)
	2	Animal Waste	0	NA
	3	Microbiology & Biotechnology Waste	6	Through CBWTF (Medicare Environmental Management

				Pvt. Ltd., Hapur)
	4	Waste Sharps	1	Through CBWTF (Medicare Environmental Management Pvt. Ltd., Hapur)
	5	Discarded Medicines and Cytotoxic Drugs	0	Through CBWTF (Medicare Environmental Management Pvt. Ltd., Hapur)
	6	Soiled Waste	0	Through CBWTF (Medicare Environmental Management Pvt. Ltd., Hapur)
	7	Solid Waste (Wastes generated from disposable items other than the waste sharps)	5	Through CBWTF (Medicare Environmental Management Pvt. Ltd., Hapur)
	8	Liquid Waste	5 KLD	Through ETP
	9	Incineration Ash	0	NA
	10	Chemical Waste	0	NA
		Total solid waste	20 kg/day	
		Total liquid waste	3.0 KLD	
(d)	Record keeping for generation and disposal of BMW			: Yes
(e)	Status of segregation and storage (colored bins, plastic bags and any other mode)			: Yes
(f)	Status of temporary storage details (pl. indicate specific provision made by the HCF)			: Available BMW segregation area
(g)	Whether temporary storage is satisfactory (Yes/No)			: Yes
(h)	Status of treatment at wards and chemicals used			: Sodium Hypochlorite
(i)	Status of House Keeping in Wards and at source of BMW generation			: Satisfactory
(j)	Mode of transportation of wastes from source to the temporary storage/on-site treatment facility (pl. indicate type of provision made by the HCF)			: Covered bins
(k)	Provision made for on-site transportation within HCF is satisfactory (Yes/No). Details thereof			: Yes
(l)	Category wise disposal options followed:			
	Colour Coding	Waste Categories	Treatment & Disposal	
	Red	Contaminated recyclable waste	Disposal through CBWTF	
	Blue	Glassware	Disposal through CBWTF	
	Yellow	Anatomical	Disposal through CBWTF	

	Green	General waste such as paper, cardboard boxes, packaging, kitchen waste etc.	Disposal through Nature clean Enviro services Pvt. Ltd.							
III. On-site Treatment of BWM by HCF:										
(a)	Total quantity of bio-medical waste treated (Kg per day)			NA						
	• Deep Burial in Kg/day		:							
	• Incinerable in Kg/day		:							
	• Autoclaving/ Hydroclaving in kg/day	Microwaving/	:							
	• Others (please specify) in Kg/day		:							
(b)	On-site Treatment Provision by Incineration:									
	• Supplier of the Incinerator		:	NA						
	• Capacity of the Incineration in tonnes per hour and tonnes per annum		:	NA						
	• Operation conditions of the Incineration based on the designs/supplier		:	NA						
	• Provision made for Temperature measurements		:	NA						
	• Daily Operation schedule (timings)		:	NA						
	• Operating conditions as per records and as observed		:	NA						
	• Stack attached with the incinerator		:	NA						
	• Air pollution control systems attached with the incinerator		:	NA						
	• Auxiliary fuels used for incineration		:	NA						
	• Consumption of auxiliary fuels		:	<table border="1"> <thead> <tr> <th>Name of fuel</th> <th>Quantity per day/month</th> </tr> </thead> <tbody> <tr> <td>a) NA</td> <td>--</td> </tr> <tr> <td>b) NA</td> <td>--</td> </tr> </tbody> </table>	Name of fuel	Quantity per day/month	a) NA	--	b) NA	--
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b) NA	--									
	• Monitoring provision attached with the stack		:	NA						
	• Storage provision at the incinerator		:	NA						
	• Fire safety measures adopted		:	NA						
	• Log book for operation of incinerator		:	NA						
	• Type of wastes incinerated and its characteristics		:	NA						
	• Average quantity of wastes incinerated per day or per month or per annum		:	NA						
	• Duration of operating hours of incineration:		:	NA						
	• Details of heat recovery system installed with incinerator if any:		:	NA						
	• Stack gaseous emissions monitored:									

Emission Parameters	Permissible Limits	Monitored Values** by CPCB
Particulate matter (with 12% CO ₂ correction)	150 mg/Nm ³	NA
Nitrogen Oxides	450 mg/Nm ³	NA
HCl	50 mg/Nm ³	NA
SO ₂	Low Sulphur fuel to be used	NA
Stack Height	30 meters	NA
Volatile Organic compound in ash (%)	Less than 0.01%	NA
Temp. in Primary Chamber	800°C (+/-) 50°C	NA
Temp. in secondary Chamber	1050°C (+/-) 50°C	NA
Residence time in sec. chamber	1 second	NA
** Not applicable.		
• Quantity of ash generation per day or per month or per annum	:	NA
• Final disposal mode of incineration ash (also indicate characteristics)	:	NA
• Specific observations, if any, w.r.t. incineration (any chlorinated disinfectants, chlorinated plastics, sulphur content in auxiliary fuels used for incineration)	:	NA
(c) Autoclaving /Microwaving /Hydroclaving :		
• Capacity	:	NA
• Make	:	NA
• Air pollution control devices attached	:	NA
• Capacity of shredder and make:	:	NA
• Operating conditions as per designs	:	NA
• Graphic or computer recording devices attached with the system	:	NA
• Operating conditions as observed in recording system	:	NA
• Performance evaluation by spore testing or routine test. Details thereof	:	NA
• Biological indicators	:	NA
(d) Onsite Wastewater Treatment:		
• Consumption of water per day (in kl/day)	:	35 KLD
• Sources of water supply	:	Municipal supply
• Sources of waste water generation and the quantity (in kl/day)	:	Wards/OT/Lab
• Total Waste water generation quantity (in kl/day)	:	Domestic- 15 KLD Industrial- 3.0 KLD
• Steps involved in Effluent Treatment Plant (Also enclose flow chart of ETP)	:	Equalization tank, Flash mixer, Tube settler, chemical dosing tanks, MGF, ACF, SDB etc.
• Type of chemicals used in ETP and the consumption (in kg/day)	:	Lime, alum, polyelectrolyte etc.

	<ul style="list-style-type: none"> Intake characteristics of ETP 	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>7.25</td> </tr> <tr> <td>Colour</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>72.0</td> </tr> <tr> <td>COD</td> <td>191.0</td> </tr> <tr> <td>TSS</td> <td>612.0</td> </tr> <tr> <td>Total Coliform</td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td>-</td> </tr> </tbody> </table>	Parameter	Monitored values** in mg/l except pH	pH	7.25	Colour	Turbid	BOD	72.0	COD	191.0	TSS	612.0	Total Coliform	-	Fecal Coliform	-		
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	<ul style="list-style-type: none"> Disposal by Deep Burial/ Municipal Solid Waste Landfills/ Disposal in Open Yards or low-lying areas 	:	NA																		
	<ul style="list-style-type: none"> Give details of sharp pit/ encapsulation facility (pl. provide details such as size of pit, depth in m) 	:	NA																		
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	<ul style="list-style-type: none"> Give measures taken for disposal of BMW by sharp pit/encapsulation: 	:	NA																		
	<ul style="list-style-type: none"> Ground Water Level and the Characteristics around the encapsulation pit: 	:	NA																		
	<ul style="list-style-type: none"> Records with regard to the Deep Burial 	:	NA																		
IV.	Status of infrastructure (specify shortcomings observed if any):																				

	<ul style="list-style-type: none"> • Treatment equipment room: • Main waste storage room: • Treated waste storage room: • Generator set (size and regulatory compliance details) • Waste treatment site security (High walls, fencing, guarded gates etc.) • Washing room for waste containers • Protective gear for waste handlers 	<ul style="list-style-type: none"> : Adequate : Adequate : Adequate : 250 KVA x02 with acoustic enclosure : Adequate : Adequate : Adequate
V.	Record keeping details:	
	<ul style="list-style-type: none"> • Does the operator have record keeping system in order to comply with the Rules? Specify shortcomings observed if any. 	: Yes
VI.	Monitoring Frequency Details:	
	<ul style="list-style-type: none"> • Frequency of monitoring of incinerator/ autoclave/ microwave/ hydroclave/ ETP effluent discharge • name of the laboratory (specify approved or not) • Give details of compliance/ non-compliance of liquid and air emissions. 	: Yearly
VII	Monitoring results carried out by SPCB/ PCC:	
.	<ul style="list-style-type: none"> • Incinerator gaseous stack emissions (attach monitoring results) • Validation/ efficacy test of autoclave/ microwave/ hydroclave: • ETP inlet and outlet characteristics 	: NA : NA : NA
VII I	Whether wastes are disposed-off through common facility. If so, provide details:	
	Type of wastes disposed after treatment <ul style="list-style-type: none"> • Plastic wastes after treatment • Treated sharps • Incineration ash • Other treated solid wastes • Treated waste water 	: : : : :
IX.	Check for the following (indicate YES/NO):	



Checklist for Verification of Compliance of Provisions of BMW Rules in Health Care Facility (HCF)

XIV. M/s Yashoda Hospital & Research Centre, Nehru Nagar, Ghaziabad

I. General Information:																	
(a)	Name & Address of the HCF : M/s Yashoda Hospital and Research Centre, 3rd, Nehru Nagar, Ghaziabad																
(b)	Contact person & Telephone No. : Dr. Ruchika (8178787342)																
(c)	Month & Year of Establishment : 2007																
(d)	Government/Trust/Private Hospital : Private																
(e)	Total no. of beds & average occupancy : Total 310 (occupancy- 75%)																
(f)	Consent under Water (Prevention and Control of Pollution) Act, 1974 : Yes																
	• Date of issue : 15.05.2020																
	• Validity up to : 31.12.2022																
(g)	Consent under Air (Prevention and Control of Pollution) Act, 1981 : Yes																
	• Date of issue : 15.05.2020																
	• Validity up to : 31.12.2022																
(h)	Authorization under Bio-medical Waste (M & H) Rules, 1998 : Yes																
	• Date of issue : 03.07.2020																
	• Issued by : UPPCB, Lucknow																
	• Validity up to : 31.12.2022																
(i)	Daily Operation schedule (timings) : 24 hrs.																
(j)	Status of Annual Report submission : Submitted																
(k)	House Keeping and Sanitation status : Satisfactory																
(l)	Staff involvement in BMW management (no. of persons) :																
	• Managerial/Administration : 07																
	• Equipment operations : 02																
	• Transportation of BMW : 04																
	• Sanitation & others : 06																
(m)	Whether annual report submitted by HCF to the SPCB/PCC/Any other prescribed authority (Date of submission and enclose a copy) : Yes, Copy attached																
II. Bio-medical Waste (Sources, Storage and segregation):																	
(a)	Sources of Biomedical Waste Generation : OT/Wards/OPD/dialysis/lab																
(b)	Total quantity of Bio-medical waste generated in Kg/day and in Kg/annum : 130 kg/day or 47450 kg/annum																
(c)	Typical Categories of wastes generated (pl. indicate category wise quantity in Kg/day):																
	<table border="1"> <thead> <tr> <th>Category No.</th> <th>Category of Waste</th> <th>Quantity Generated (kg/day)</th> <th>Treatment & Disposal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Human Anatomical Waste</td> <td>15</td> <td>Through CBWTF (M/s Environ waste connections LLP, Hapur)</td> </tr> <tr> <td>2</td> <td>Animal Waste</td> <td>0</td> <td>NA</td> </tr> <tr> <td>3</td> <td>Microbiology & Biotechnology Waste</td> <td>8</td> <td>Through CBWTF (M/s Environ waste connections LLP,</td> </tr> </tbody> </table>	Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal	1	Human Anatomical Waste	15	Through CBWTF (M/s Environ waste connections LLP, Hapur)	2	Animal Waste	0	NA	3	Microbiology & Biotechnology Waste	8	Through CBWTF (M/s Environ waste connections LLP,
Category No.	Category of Waste	Quantity Generated (kg/day)	Treatment & Disposal														
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3	Microbiology & Biotechnology Waste	8	Through CBWTF (M/s Environ waste connections LLP,														

				Hapur)
	4	Waste Sharps	6	Through CBWTF (M/s Environ waste connections LLP, Hapur)
	5	Discarded Medicines and Cytotoxic Drugs	2	Through CBWTF (M/s Environ waste connections LLP, Hapur)
	6	Soiled Waste	2	Through CBWTF (M/s Environ waste connections LLP, Hapur)
	7	Solid Waste (Wastes generated from disposable items other than the waste sharps)	20	Through CBWTF (M/s Environ waste connections LLP, Hapur)
	8	Liquid Waste	2.0 KLD	Through STP
	9	Incineration Ash	0	NA
	10	Chemical Waste	0	NA
		Total solid waste Total liquid waste	130 kg/day 2.0 KLD	
(d)	Record keeping for generation and disposal of BMW			: Yes
(e)	Status of segregation and storage (colored bins, plastic bags and any other mode)			: Yes
(f)	Status of temporary storage details (pl. indicate specific provision made by the HCF)			: Available BMW segregation area
(g)	Whether temporary storage is satisfactory (Yes/No)			: Yes
(h)	Status of treatment at wards and chemicals used			: Sodium Hypochlorite
(i)	Status of House Keeping in Wards and at source of BMW generation			: Satisfactory
(j)	Mode of transportation of wastes from source to the temporary storage/on-site treatment facility (pl. indicate type of provision made by the HCF)			: Covered bins
(k)	Provision made for on-site transportation within HCF is satisfactory (Yes/No). Details thereof			: Yes
(l)	Category wise disposal options followed:			
	Colour Coding	Waste Categories	Treatment & Disposal	
	Red	Contaminated recyclable waste	Disposal through CBWTF	
	Blue	Glassware	Disposal through CBWTF	
	Yellow	Anatomical	Disposal through CBWTF	
	Green	General waste such as paper,	Through Municipal Corporation Ghaziabad	

		cardboard boxes, packaging, kitchen waste etc.								
III.	On-site Treatment of BWM by HCF:									
(a)	Total quantity of bio-medical waste treated (Kg per day)			NA						
	• Deep Burial in Kg/day	:								
	• Incinerable in Kg/day	:								
	• Autoclaving/ Microwaving/ Hydroclaving in kg/day	:								
	• Others (please specify) in Kg/day	:								
(b)	On-site Treatment Provision by Incineration:									
	• Supplier of the Incinerator	:		NA						
	• Capacity of the Incineration in tones per hour and tones per annum	:		NA						
	• Operation conditions of the Incineration based on the designs/supplier	:		NA						
	• Provision made for Temperature measurements	:		NA						
	• Daily Operation schedule (timings)	:		NA						
	• Operating conditions as per records and as observed	:		NA						
	• Stack attached with the incinerator	:		NA						
	• Air pollution control systems attached with the incinerator	:		NA						
	• Auxiliary fuels used for incineration	:		NA						
	• Consumption of auxiliary fuels	:	<table border="1"> <thead> <tr> <th>Name of fuel</th> <th>Quantity per day/month</th> </tr> </thead> <tbody> <tr> <td>a) NA</td> <td>--</td> </tr> <tr> <td>b) NA</td> <td>--</td> </tr> </tbody> </table>	Name of fuel	Quantity per day/month	a) NA	--	b) NA	--	
Name of fuel	Quantity per day/month									
a) NA	--									
b) NA	--									
	• Monitoring provision attached with the stack	:		NA						
	• Storage provision at the incinerator	:		NA						
	• Fire safety measures adopted	:		NA						
	• Log book for operation of incinerator	:		NA						
	• Type of wastes incinerated and its characteristics	:		NA						
	• Average quantity of wastes incinerated per day or per month or per annum	:		NA						
	• Duration of operating hours of incineration:	:		NA						
	• Details of heat recovery system installed with incinerator if any:	:		NA						
	• Stack gaseous emissions monitored:									

Emission Parameters	Permissible Limits	Monitored Values** by CPCB
Particulate matter (with 12% CO ₂ correction)	150 mg/Nm ³	NA
Nitrogen Oxides	450 mg/Nm ³	NA
HCl	50 mg/Nm ³	NA
SO ₂	Low Sulphur fuel to be used	NA
Stack Height	30 meters	NA
Volatile Organic compound in ash (%)	Less than 0.01%	NA
Temp. in Primary Chamber	800°C (+/-) 50°C	NA
Temp. in secondary Chamber	1050°C (+/-) 50°C	NA
Residence time in sec. chamber	1 second	NA
** Not applicable.		
• Quantity of ash generation per day or per month or per annum	:	NA
• Final disposal mode of incineration ash (also indicate characteristics)	:	NA
• Specific observations, if any, w.r.t. incineration (any chlorinated disinfectants, chlorinated plastics, sulphur content in auxiliary fuels used for incineration)	:	NA
(c) Autoclaving /Microwaving /Hydroclaving :		
• Capacity	:	NA
• Make	:	NA
• Air pollution control devices attached	:	NA
• Capacity of shredder and make:	:	NA
• Operating conditions as per designs	:	NA
• Graphic or computer recording devices attached with the system	:	NA
• Operating conditions as observed in recording system	:	NA
• Performance evaluation by spore testing or routine test. Details thereof	:	NA
• Biological indicators	:	NA
(d) Onsite Wastewater Treatment:		
• Consumption of water per day (in kl/day)	:	45 KLD
• Sources of water supply	:	Municipal corporation
• Sources of waste water generation and the quantity (in kl/day)	:	OT/wards/lab
• Total Waste water generation quantity (in kl/day)	:	Domestic- 38 KLD Industrial- 2.0 KLD
• Steps involved in Effluent Treatment Plant (Also enclose flow chart of ETP)	:	Equalization tank, chemical dosing tanks, reaction cum settling tank, MBBR cum aeration tank, tube settler tank, buffer tank, ACF, MGF, Filter press etc.
• Type of chemicals used in ETP and the consumption (in kg/day)	:	NA

	<ul style="list-style-type: none"> Intake characteristics of STP 	:	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Monitored values** in mg/l except pH</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>7.3</td> </tr> <tr> <td>Colour</td> <td>Turbid</td> </tr> <tr> <td>BOD</td> <td>80.0</td> </tr> <tr> <td>COD</td> <td>564.0</td> </tr> <tr> <td>TSS</td> <td>974.0</td> </tr> <tr> <td>Total Coliform</td> <td>-</td> </tr> <tr> <td>Fecal Coliform</td> <td>-</td> </tr> </tbody> </table>	Parameter	Monitored values** in mg/l except pH	pH	7.3	Colour	Turbid	BOD	80.0	COD	564.0	TSS	974.0	Total Coliform	-	Fecal Coliform	-		
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(e)	On-site BMW Disposal																				
	<ul style="list-style-type: none"> Disposal by Deep Burial/ Municipal Solid Waste Landfills/ Disposal in Open Yards or low-lying areas 	:	NA																		
	<ul style="list-style-type: none"> Give details of sharp pit/ encapsulation facility (pl. provide details such as size of pit, depth in m) 	:	NA																		
	<ul style="list-style-type: none"> Precautionary measures taken around the sharp pit or encapsulation facility 	:	NA																		
	<ul style="list-style-type: none"> Whether sharp pit/ encapsulation is authorized by SPCB/ PCC/ any prescribed authority 	:	NA																		
	<ul style="list-style-type: none"> Give measures taken for disposal of BMW by sharp pit/encapsulation: 	:	NA																		
	<ul style="list-style-type: none"> Ground Water Level and the Characteristics around the encapsulation pit: 	:	NA																		
	<ul style="list-style-type: none"> Records with regard to the Deep Burial 	:	NA																		
IV.	Status of infrastructure (specify shortcomings observed if any):																				

	<ul style="list-style-type: none"> • Treatment equipment room: • Main waste storage room: • Treated waste storage room: • Generator set (size and regulatory compliance details) • Waste treatment site security (High walls, fencing, guarded gates etc.) • Washing room for waste containers • Protective gear for waste handlers 	<ul style="list-style-type: none"> : Adequate : Adequate : Adequate : 500 KVA, 600 KVA with acoustic enclosure : Adequate : Adequate : Adequate
V.	Record keeping details:	
	<ul style="list-style-type: none"> • Does the operator have record keeping system in order to comply with the Rules? Specify shortcomings observed if any. 	: Yes
VI.	Monitoring Frequency Details:	
	<ul style="list-style-type: none"> • Frequency of monitoring of incinerator/ autoclave/ microwave/ hydroclave/ ETP effluent discharge • name of the laboratory (specify approved or not) • Give details of compliance/ non-compliance of liquid and air emissions. 	: NA
VII	Monitoring results carried out by SPCB/ PCC:	
	<ul style="list-style-type: none"> • Incinerator gaseous stack emissions (attach monitoring results) • Validation/ efficacy test of autoclave/ microwave/ hydroclave: • STP inlet and outlet characteristics 	: NA : NA : Report enclosed
VII I	Whether wastes are disposed-off through common facility. If so, provide details:	
	Type of wastes disposed after treatment <ul style="list-style-type: none"> • Plastic wastes after treatment • Treated sharps • Incineration ash • Other treated solid wastes • Treated waste water 	: NA
IX.	Check for the following (indicate YES/NO):	

