



# INDIAN MISSION OF MEDICAL SCIENCES SOCIETY

SOCIETY DEDICATED FOR HEALTH EDUCATION AND HUMAN SERVICES

Ref. No.

File No. F. No. 21-49/2018-IA-III

Date .....

Date:

To,

The Director (IA.III),

Ministry of Environment, Forests &amp; Climate Change (MoEF&amp;CC),

Indira Paryavaran Bhawan, Jor Bagh Road,

New Delhi- 110003

**Sub :** Regarding Environmental Clearance for Sudha Medical College and Hospital Umedpura, Jagpura, Tehsil Ladpura, Kota, Rajasthan by M/s Indian Mission of Medical Sciences Society.

**Ref :** Minutes of 32<sup>nd</sup> Meeting of Expert Appraisal Committee (Infra-2) held on 2-4 July, 2018.

Sir,

In regards to the above, we hereby enclose the following for your kind perusal:

S. No.	Query	Reply
1.	The project proponents were advised to get the water quality certified by the CGWA and only proposes it for supply if it meets the prescribed standards. Alternatively the proponents were asked to suggest separate water treatment facilities, instead of household R.O. Systems (Which are unsustainable in terms rejects) or propose sourcing water from the local authorities.	We would like to mention that the alternative water source has also been proposed, Public health & Education department, Kota agrees to provide the sufficient quantity of water to the project. Assurance letter from the PHED is enclosed as <b>Annexure I</b> .
2.	Alternate source of water supply/ water treatment plan.	Public health & Education department, Kota agrees to provide the sufficient quantity of water to the project. Assurance letter from the PHED is enclosed as <b>Annexure I</b> .
3.	The Air Quality Index shall be calculated for	The same is enclosed as <b>Annexure II</b> for your



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Ref. No.		Date .....
	base level air quality.	kind perusal.
4.	A detailed report on compliance to ECBC-2017 norms.	The same is enclosed as <b>Annexure III</b> for your kind perusal.
5.	A detailed traffic management and traffic decongestion plan to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D. and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.	There is proposed road near the project site and no major habitation is found in the vicinity of the project site. Hence there is no load on the existing traffic due to the project.
6.	A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point.	All the excessive treated water from the STP will be reutilized within the project. However, charges for the extra development have already been deposited in the Urban Improvement Trust, Kota. Receipt of the same is enclosed as <b>Annexure IV</b> .
7.	A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.	Application for the certificate for handling of municipal solid waste has been submitted to Nagar Nigam Jaipur. Copy of the same is enclosed as <b>Annexure V</b> .
8.	Submit plan for Effluent Treatment Plant for	The same is enclosed as <b>Annexure VI</b> .



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Ref. No.		Date .....
	treatment of effluent generated from the hospital/laboratory.	
9.	A management plan for handling and disposal of biomedical wastes to the satisfaction of the State Pollution Control Board shall be drawn up in conformance to the Biomedical Waste Management Rules, 2016.	Management Plan for the handling and disposal of biomedical waste is enclosed as <b>Annexure VII</b> .
10.	Plan for Corporate Environment Responsibility (CER) as specified under Ministry's Office Memorandum vide F. No. 22-65/2017-IA.III dated 1st May 2018 shall be submitted.	Corporate Environment Responsibility (CER) plan is enclosed as <b>Annexure VIII</b> .

Kindly consider the same and grant us with the Environment Clearance at the earliest.

For M/s Indian Mission of Medical Sciences Society

(Authorized Signatory)





कार्यालय अधिशाषी अभियंता जन स्वास्थ्य अभियांत्रिकी विभाग  
नगर खण्ड प्रथम प्रताप नगर दादाबाड़ी कोटा

"जल ही जीवन है" सुरक्षित जल सुरक्षित कल

Ph: No. 0744-2501961

Email: eephed\_pdkota@yahoo.in

क्रमांक : अअ/नखप्र/टीए/2018-19/1734-36

दिनांक: 11-7-18

अध्यक्ष महोदय,

सुधा जनरल हॉस्पिटल एंड मेडीकल कॉलेज,

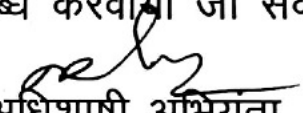
( ए युनिट ऑफ इण्डियन मिशन ऑफ मेडिकल साइंसेज सोसाइटी)

कोटा।

विषय : ग्राम जगपुरा के समीप ग्राम उम्मेदपुरा में प्रस्तावित पीएचईडी द्वारा जल की सप्लाई हेतु ।

संदर्भ : आपका कार्यालय पत्रांक दिनांक 10.07.2018 के क्रम में।

उपरोक्त विषयान्तर्गत संदर्भित पत्र के क्रम में निवेदन है कि कोटा शहर एवं आसपास के ग्रामों को पेयजल उपलब्ध कराने के लिए माननीया मुख्यमंत्री महोदया के बजट घोषणा वर्ष 2017-18 के अनुसार एक समग्र कार्य योजना तैयार की जा रही है। जिसके पूर्ण होने के उपरान्त आपकी संस्था को 500 केएल पानी प्रतिदिन उपलब्ध करवाया जा सकेगा।

  
अधिशाषी अभियंता

जनस्वास्थ्य अभियांत्रिक विभाग

नगर खण्ड प्रथम कोटा

क्रमांक : अअ/नखप्र/टीए/2018-19/1734-36

दिनांक: 11-7-18

प्रतिलिपि:

1. श्रीमान् अतिरिक्त मुख्य अभियंता, जनस्वास्थ्य अभियांत्रिक विभाग, क्षेत्र कोटा।
2. श्रीमान् अधीक्षण अभियंता, जनस्वास्थ्य अभियांत्रिक विभाग, वृत कोटा।

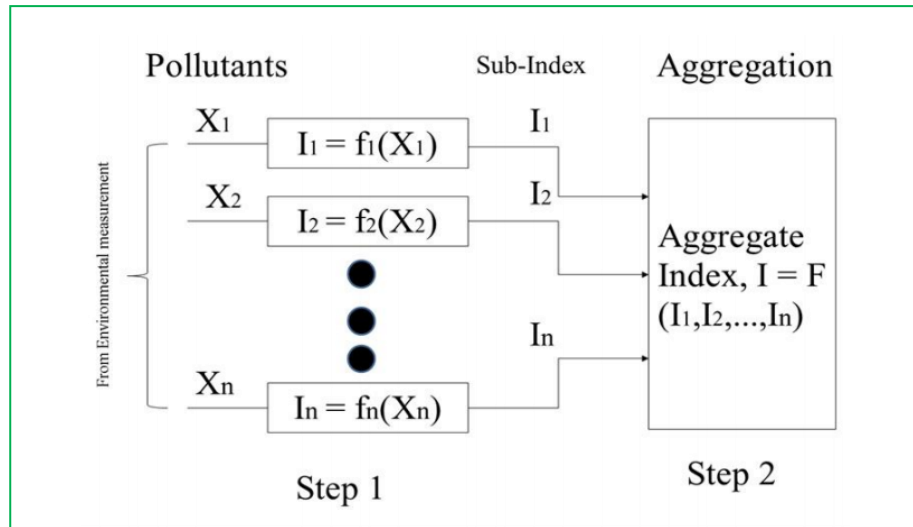
अधिशाषी अभियंता

जनस्वास्थ्य अभियांत्रिक विभाग

नगर खण्ड प्रथम कोटा

## Introduction

An air quality index is defined as an overall scheme that transforms the weighed values of individual air pollution related parameters (for example, pollutant concentrations) into a single number or set of numbers. The result is a set of rules (i.e. set of equations) that translate parameter values into a more simple form by means of numerical manipulation (Figure).



Source: CPCB

## Structure of an Index

Primarily two steps are involved in formulating an AQI: (i) formation of sub-indices (for each pollutant) and (ii) aggregation of sub-indices to get an overall AQI. Formation of sub-indices ( $I_1, I_2, \dots, I_n$ ) for  $n$  pollutant variables ( $X_1, X_2, \dots, X_n$ ) is carried out using subindex functions that are based on air quality standards and health effects.

Sub-index function represents the relationship between pollutant concentration  $X_i$  and corresponding sub-index  $I_i$ .

Once the sub-indices are formed, they are combined or aggregated in a simple additive form or weighted additive form:

The sub-index ( $I_p$ ) for a given pollutant concentration ( $C_p$ ), as based on 'linear segmented principle' is calculated as:



$$I_p = \left[ \frac{(I_{HI} - I_{LO})}{(B_{HI} - B_{LO})} * (C_p - B_{LO}) \right] + I_{LO}$$

$B_{HI}$  = Breakpoint concentration greater or equal to given concentration

$B_{LO}$  = Breakpoint concentration smaller or equal to given concentration

$I_{HI}$  = AQI value corresponding to  $B_{HI}$

$I_{LO}$  = AQI value corresponding to  $B_{LO}$ ; subtract one from  $I_{LO}$ , if  $I_{LO}$  is greater than 50

Finally;

$$AQI = \text{Max} (I_p) \text{ (where; } p = 1, 2, \dots, n; \text{ denotes } n \text{ pollutants)}$$

*Source: CPCB*

## Breakpoints

The Breakpoints for AQI Scale 0-500 (units:  $\mu\text{g}/\text{m}^3$  unless mentioned otherwise)

AQI Category (Range)	PM <sub>10</sub> 24-hr	PM <sub>2.5</sub> 24-hr	NO <sub>2</sub> 24-hr	O <sub>3</sub> 8-hr	CO 8-hr (mg/m <sup>3</sup> )	SO <sub>2</sub> 24-hr	NH <sub>3</sub> 24-hr	Pb 24-hr
Good (0-50)	0-50	0-30	0-40	0-50	0-1.0	0-40	0-200	0-0.5
Satisfactory (51-100)	51-100	31-60	41-80	51-100	1.1-2.0	41-80	201-400	0.6-1.0
Moderate (101-200)	101-250	61-90	81-180	101-168	2.1- 10	81-380	401-800	1.1-2.0
Poor (201-300)	251-350	91-120	181-280	169-208	10.1-17	381-800	801-1200	2.1-3.0
Very poor (301-400)	351-430	121-250	281-400	209-748*	17.1-34	801-1600	1201-1800	3.1-3.5
Severe (401-500)	430 +	250+	400+	748+*	34+	1600+	1800+	3.5+

*\*One hourly monitoring (for mathematical calculation only)*

*Source: CPCB*

## AQI Calculation Using Excel

AQI for a particular day and at a desired location can be calculated using the MS Excel wherein a user friendly evaluation of AQI has been developed by the Central Pollution Control Board. The user needs to input at least three values of pollutant concentration (including at least one of PM<sub>10</sub> or PM<sub>2.5</sub>) in the blue cells and the sub-indices are calculated thus displaying the final AQI along with the colour signifying the AQI category.

**AQI at the Proposed Project Region**

Baseline data at the project site

S. No.	Parameter	Units	Project Site	NAAQS
1	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	63.50	100
2	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	37.80	60
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	7.70	80
4	Oxides of Nitrogen (NO <sub>x</sub> )	µg/m <sup>3</sup>	11.60	80
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.80	4 (1 Hourly)

**AQI at the Proposed Project Region**

Based on the MS Excel sheet provided by CPCB the AQI of the region is calculated and it is found to be **64 (Satisfactory)**

Pollutants		concentration in µg/m <sup>3</sup> (except for CO)	Sub-Index	Air Quality Index
PM10	24-hr avg	63.50	64	<b>64</b>
PM2.5	24-hr avg	37.80	63	
SO2	24-hr avg	7.70	10	
NOx	24-hr avg	11.60	15	
*CO (mg/m <sup>3</sup> )	max 8-hr	0.80	40	

<b>Good (0–50)</b>	Minimal Impact	<b>Poor (201–300)</b>	Breathing discomfort to people on prolonged exposure
<b>Satisfactory (51–100)</b>	Minor breathing discomfort to sensitive people	<b>Very Poor (301–400)</b>	Respiratory illness to the people on prolonged exposure
<b>Moderate (101–200)</b>	Breathing discomfort to the people with lung, heart disease, children and	<b>Severe (&gt;401)</b>	Respiratory effects even on healthy people

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<b>Project</b> : Sudha Medical College and Hospital	<i>ECBC Compliance</i>
<b>Promoter</b> : Indian Mission of Medical Sciences Society	

## ECBC COMPLIANCE

### Part 4: BUILDING ENVELOPE

**Climate Zone: Hot & Dry**

**Building type : All building types & No star Hotel**

S. No.	Building type	Classification	Parameters	U-Value (W/m <sup>2</sup> °K)	
				Prescribed*	Proposed
a.	Hospital building	All building types	Roof	0.33	0.253 (Max)
			Wall	0.40	0.369
b.	Medical College	All building types	Roof	0.33	0.253 (Max)
			Wall	0.40	0.369
c.	Hostels	No star Hotel	Roof	0.33	0.253 (Max)
			Wall	0.63	0.369
d.	Residential	All building types	Roof	0.33	0.253 (Max)
			Wall	0.40	0.369

\*As per ECBC, 2017 for ECBC compliant building.

### Roof Assembly

Layers	Thickness (mm)	L/1000	Thermal conductivity (K)- W/mC	Reference	Resistance (L/K)	U Value (1/R) (W/sq.m.c)
<b>Ro (external surface film)</b>				ECBC user guide	0.040	
<b>White tile</b>	10	0.010	0.236	Manufacturer datasheet	0.042	
<b>Cement screed</b>	50	0.050	1.208	ECBC user guide	0.041	
<b>XPS insulation</b>	100	0.100	0.028	Manufacturer datasheet	3.571	
<b>Cement Screed</b>	20	0.020	1.208	ECBC user guide	0.017	
<b>Mother slab (RCC)</b>	150	0.150	1.411	ECBC user guide	0.106	



<b>Project</b> : Sudha Medical College and Hospital	<i>ECBC Compliance</i>
<b>Promoter</b> : Indian Mission of Medical Sciences Society	

<b>Ri ( internal Air Film)</b>			ECBC user guide	0.130	
<b>Total Thickness</b>	330			3.948	<b>0.253</b>

### Wall Assembly

Layers	Thickness (mm)	L/1000	Thermal conductivity (K)- W/mC	Reference	Resistance (L/K)	U Value (1/R) (W/sq.m.c)
<b>External surface resistance</b>				-	0.05	
<b>Cement plaster</b>	12	0.012	0.721	NBC	0.017	
<b>AAC blocks</b>	200	0.200	0.16	Biltech	1.25	
<b>AAC Blocks</b>	200	0.200	0.16	Biltech	1.25	
<b>Cement plaster</b>	12	0.012	0.721	NBC	0.017	
<b>External surface resistance</b>					0.124	
<b>Total Thickness</b>	424			-	2.708	<b>0.369</b>

- AAC blocks, PPC cements will be used for construction of opaque walls having lesser u-values
- Exposed roof area will be minimized by the use of solar panels for generation.
- DGU will be used for all air conditioned spaces
  - Specifications (6 mm coated glass + 12 mm air gap + 6 mm clear glass):
  - u-value: 2.8 W/m<sup>2</sup> K
  - VLT: 0.39

### **Fenestrations:**

WWR will be less than 40%

Allowable VLT : 0.27

Max SHGC (North) : 0.27

## **Part 5: COMFORT SYSTEMS & CONTROL**

<b>Project</b> : Sudha Medical College and Hospital	<i>ECBC Compliance</i>
<b>Promoter</b> : Indian Mission of Medical Sciences Society	

**Building Type** : Naturally ventilated building (Hostels, College Building, Dean Residence, 2 BHK)  
: Mechanically ventilated buildings (Hospital)

### 5.2.1 Ventilation

Naturally ventilated	Mechanically ventilated buildings
<ul style="list-style-type: none"> <li>• All the ceiling fans will be minimum BEE 3 star rated</li> <li>• Adequate openings in the living areas for better ventilation</li> <li>• BEE 3 star rated exhausts will be used in kitchens &amp; toilets</li> </ul>	<ul style="list-style-type: none"> <li>• Air changes (ACH) will be provided as per the provisions of NBC-2016.</li> <li>• No basements: hence, provisions of CO sensors are not applicable</li> </ul>

### 5.2.2 Minimum Space Conditioning Equipment Efficiencies

Chillers will meet the minimum efficiency requirements. The details are as under:

- Water cooled chillers will be used. In accordance with the High Side Unit the minimum COP of the Equipment will be 5.40 and minimum IPLV value 6.5

### 5.2.3 Mandatory requirements: Controls

- HVAC system in Hospital & Medical College Block will be controlled by time clocks for three different day types / week and 2 hours manual override
- Indicate temperature control with 3°C dead band minimum
- Separate thermostat control will be installed in each class room, lecture room, and computer room

## Part 6: LIGHTING & CONTROLS

<b>Project : Sudha Medical College and Hospital</b>	<i>ECBC Compliance</i>
<b>Promoter : Indian Mission of Medical Sciences Society</b>	

- Automatic lighting shut offs system will be installed on all floors
- Automatic lighting controls will function on timer circuits based on independent program schedule.
- Lighting for exterior applications will be controlled by time switch that is capable of automatically turning off the exterior lighting when daylight is available or the lighting is not required.
- Façade lighting will have separate time switches
- Interior lighting power shall be as per the requirements of ECBC 2017 / or NBC 2016

### **Part 7: ELECTRICAL AND RENEWABLE ENERGY SYSTEMS**

- Permissible transformer losses: 5% for voltage class upto 11 kV: Full load rating and minimum acceptable efficiency at 50% will be selected.
- Energy efficient motors (IE > 2: high efficiency class) and pumps will be used.
- BEE star rated DG sets (minimum 3 star) will be used.
- Energy metering will be done during post construction phase.
- Services not exceeding 1000 kVA but over 65 kVA shall have permanently installed electric metering to record demand (kW), energy (kWh), and total power factor.
- Power factor shall be maintained around unity. APFC panel with capacitor will be used for Common Load & Fixed Capacitor for Transformer to minimize the losses.
- All capacitors will be provided with Harmonic Filters to avoid distortion in Voltage.
- 20% of the hot water requirement will be met through solar geysers
- Use of renewable energy: Grid tied solar PV plant of capacity 500 KW (>1% of connected load) will be installed to meet out the partial energy requirements for common areas.
- Area under REGZ free from obstacles will be greater than 25% for all the other exposed areas.

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N: 003180000254640

खाता संख्या : 11342040000010  
प्रथम प्रति (जमाकर्ता के लिए)

**ओरियन्टल बैंक ऑफ कॉमर्स**

शाखा : नगर विकास ब्यास, कोटा  
चालू खाता जमा पर्ची

क्र. सं. **7849** दिनांक **4/18**

रु. 50 हजार और अधिक राशि पर भूखण्डधारी  
के आयकर पेनकार्ड की स्वहस्ताक्षर फोटो कॉपी  
अनिवार्य रूप से संलग्न करें।

श्री **श्री 1084 न मिन** **श्री 1084 न मिन**  
पता **साईनर मोसायरी**  
K.M. No. 142 से 197 क 226 A  
भूखण्ड सं. **124 से 220** योजना **उत्तरी (प्रगति)**  
K.M. No. 124 से 220 एक 30000 (प्रगति)

विवरण	रुपये	पैसे
क) जमीन की कीमत		
ख) किराया.....		
ग) ब्याज.....		
घ) अमानत राशि		
च) नक्शा		
छ) जुर्माना <b>4602500 = 60</b>		
ज) शहरी मूल्योक्त नगर विकास ब्यास, कोटा		
ब्याज <b>4 JAN 2018</b>		
झ) अन्य		
ड) चालू खाता <b>अन्तरण / TRANSFER</b>		
	<b>4602500 = 60</b>	

रुपये **द्विधात्मक रूप से** **द्विधात्मक रूप से** **द्विधात्मक रूप से**

ऑनलाइन फंड ट्रांसफर हेतु सूचना पीछे अंकित है।  
जमाकर्ता के हस्ता. **बैंक मोहर**



# INDIAN MISSION OF MEDICAL SCIENCES SOCIETY

SOCIETY DEDICATED FOR HEALTH EDUCATION AND HUMAN SERVICES

Ref. No.

Date .....

24/7/18

To  
The Commissioner  
Nagar Nigam, Kota  
Opp. Dusshera Ground, C.A.D Circle,  
Shakti Nagar, Dadabari, Kota, Rajasthan

नगर नियम कोटा (राज.)  
P.T.S. क्रमांक 2018/8776  
दिनांक 24/7/18

Sub : Regarding disposal of solid waste as per the provision of Municipal Solid waste Rules, 2016 for  
"Sudha Medical College and Hospital" Umedpura, Jagpura, Tehsil Ladpura, Kota, Rajasthan by M/s  
Indian Mission of Medical Sciences Society.

Respected Sir,

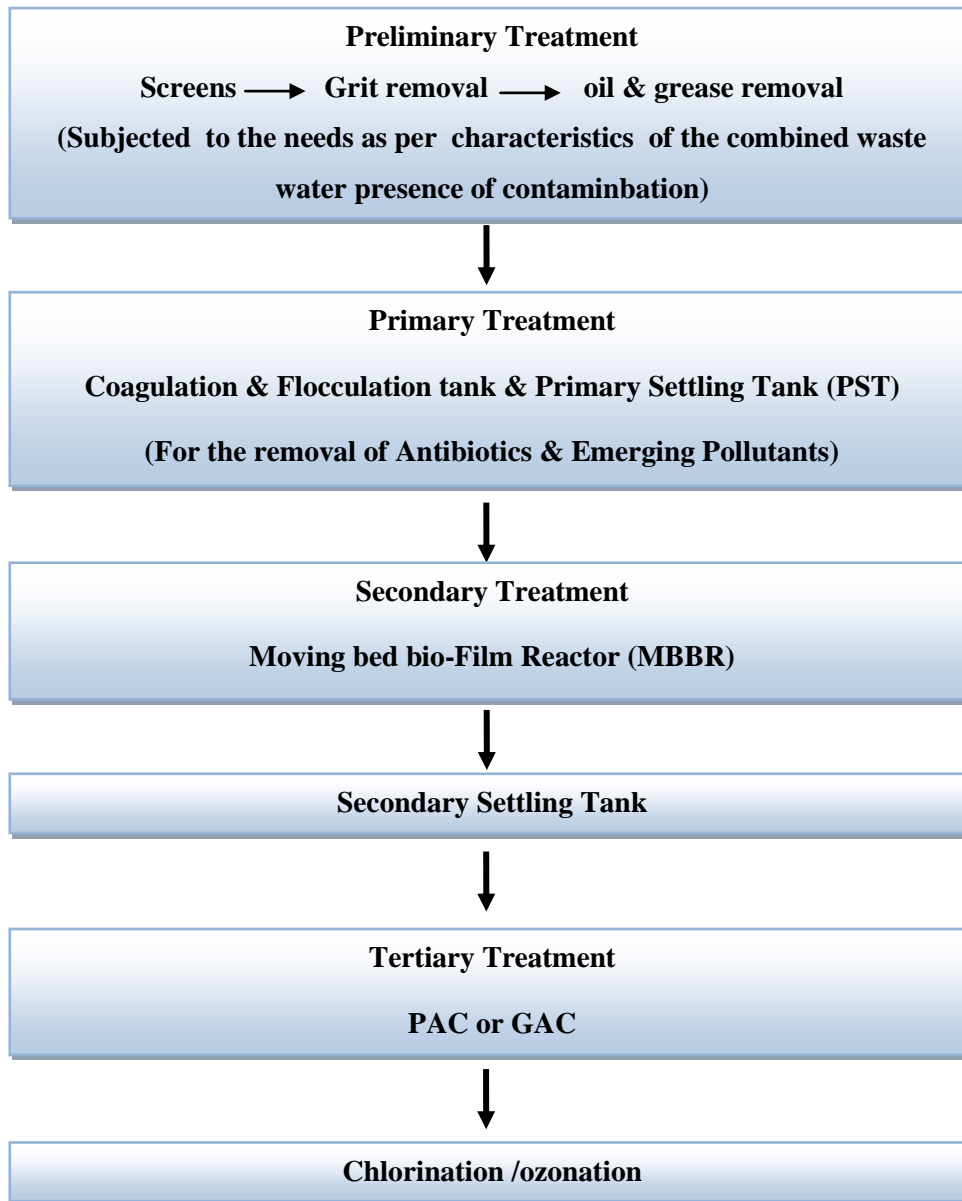
In regards to the above, we would like to bring into your kind notice that we are coming up with a hospital and medical college project "Sudha Medical College and Hospital". In this regards it is anticipated that about 1595 kg/day waste will be generated during post construction phase. The same needs to be disposed off as per the provisions of MSW Rules, 2016. Now as per the letter received from the MoEF & CC we request your goodself to kindly issue a certificate from your department indicating the existing civic capacities of handling and their adequacy to cater to the Municipal solid waste generated from our project.

Trust the same is reciprocated.

For Indian Mission of Medical Sciences Society

(Authorized Signatory)

# **EFFLUENT TREATMENT PLAN FOR THE HOSPITAL AND THE LABORATORY WASTE WATER**



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## **MANAGEMENT PLAN FOR HANDLING AND DISPOSAL OF BIOMEDICAL WASTES**

### **INTRODUCTION:**

The proposed project “Sudha Medical College & Hospital” is promoted by Indian Mission of Medical Sciences Society. The project is coming up at village Umedpura, via Jagpura, Patwar Halka Alaniya, Jhalawar Road NH-12, Kota-325003 (Rajasthan).

### **BIOMEDICAL WASTE GENERATED:**

About 532 kg/day biomedical waste will be generated from the project, which will be disposed off as per the Biomedical Waste Management Rules, 2016.

### **MANAGEMENT OF BIOMEDICAL WASTE:**

Following stages will be followed to manage the biomedical waste at the site:

- 1) Segregation of Biomedical Waste
- 2) Proper collection & Storage of biomedical waste in colour coded bags
- 3) Transportation
- 4) Treatment & disposal

### **Following points will be taken into consideration for the Management and handling of biomedical waste at source:-**

- All necessary steps to ensure that bio-medical waste is handled without any adverse effect to human health and the environment and in accordance with biomedical waste rules 2016 will be taken.
- Provision within the premises for a safe, ventilated and secured location for storage of segregated biomedical waste in colored bags or containers in the manner as specified in Schedule I, will be done.
- Pre-treat the laboratory waste, microbiological waste, blood samples and blood bags through disinfection or sterilization on-site in the manner as prescribed by the World Health Organization (WHO) or National AIDs Control Organization (NACO) guidelines and will be sent to the CBWTF for final disposal.
- Training will be provided to all the health care workers and others, involved in handling of bio medical waste.
- Immunization will be provided to all the health care workers and others, involved in handling of bio-medical waste for protection against diseases including Hepatitis B and Tetanus that are likely to be transmitted by handling of bio-medical waste, in the manner as prescribed in the National

Immunization Policy or the guidelines of the Ministry of Health and Family Welfare issued from time to time.

- Bar- Code System will be established for bags or containers containing bio-medical waste to be sent out of the premises or place for any purpose.
- Proper segregation of liquid chemical waste at source and pre-treatment or neutralization prior to mixing with other effluent generated from health care facilities will be done.

### 1) Segregation of Biomedical Waste

Proper segregation of biomedical waste will be done at health care unit. Colour coded bags and containers will be used to segregate the biomedical waste as per the Bio-Medical Waste Management Rules, 2016.

### 2) Proper collection & Storage of biomedical waste in colour coded bags

Proper collection and storage of biomedical waste will be done, details are as under:-

Category	Type of Waste	Type of Bag or Container to be used
(1)	(2)	(3)
Yellow	<p><b>(a) Human Anatomical Waste:</b></p> <p>Human tissues, organs, body parts and fetus below the viability period (as per the Medical Termination of Pregnancy Act 1971, amended from time to time).</p>	Yellow coloured non-chlorinated plastic bags
	<p><b>(b) Animal Anatomical Waste :</b></p> <p>Experimental animal carcasses, body parts, organs, tissues, including the waste generated from animals used in experiments or testing in veterinary hospitals or colleges or animal houses.</p>	
	<p><b>(c) Soiled Waste:</b></p> <p>Items contaminated with blood, body fluids like dressings, plaster casts, cotton swabs and bags containing residual or discarded blood and blood components.</p>	

	<p><b>(d) Expired or Discarded Medicines:</b></p> <p>Pharmaceutical waste like antibiotics, cytotoxic drugs including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc.</p>	Yellow coloured non-chlorinated plastic bags or containers
	<p><b>(e) Chemical Waste:</b></p> <p>Chemicals used in production of biological and used or discarded disinfectants.</p>	Yellow coloured containers or non-chlorinated plastic bags
	<p><b>(f) Chemical Liquid Waste :</b></p> <p>Liquid waste generated due to use of chemicals in production of biological and used or discarded disinfectants, Silver X-ray film developing liquid, discarded Formalin, infected secretions, aspirated body fluids, liquid from laboratories and floor washings, cleaning, house-keeping and disinfecting activities etc.</p>	Separate collection system leading to effluent treatment system
	<p><b>(g) Discarded linen, mattresses, beddings contaminated with blood or body fluid.</b></p>	Non-chlorinated yellow plastic bags or suitable packing material
	<p><b>(h) Microbiology, Biotechnology and other clinical laboratory waste:</b></p> <p>Blood bags, Laboratory cultures, stocks or specimens of microorganism, live or attenuated vaccines, human and animal cell cultures used in research, industrial laboratories, production of biological, residual toxins, dishes and devices used for cultures.</p>	Autoclave safe plastic bags or containers
Red	<p><b>Contaminated Waste (Recyclable)</b></p> <p>(a) Wastes generated from disposable items such as tubing, bottles, intravenous tubes and sets, catheters, urine bags, syringes (without needles and <i>fixed needle syringes</i>) and vaccutainers with</p>	Red coloured non-chlorinated plastic bags or containers

	their needles cut) and gloves.	
White (Translucent)	<b>Waste sharps including Metals:</b> Needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpels, blades, or any other contaminated sharp object that may cause puncture and cuts. This includes both used, discarded and contaminated metal sharps	Puncture proof, Leak proof, tamper proof containers
Blue	<b>(a) Glassware:</b> Broken or discarded and contaminated glass including medicine vials and ampoules except those contaminated with cytotoxic wastes.	Cardboard boxes with blue colored marking
	<b>(b) Metallic Body Implants</b>	

### 3) Transportation

The bio-medical waste collected in colored containers will be transported to the CBWTF in a fully covered vehicle. Such vehicle will be dedicated for transportation of bio-medical waste only. Depending upon the volume of the wastes to be transported, the vehicle may be a three-wheeler, light motor vehicle or heavy duty vehicle.

### 4) Treatment & disposal

The collected biomedical waste will be treated at common biomedical waste treatment facility with various technologies.

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# INDIAN MISSION OF MEDICAL SCIENCES SOCIETY

SOCIETY DEDICATED FOR HEALTH EDUCATION AND HUMAN SERVICES

Ref. No.

## UNDERTAKING

Date .....

I, **Dr. Rajendra Kumar Agarwal** S/o Lt. Sh. Shree Lal agarwal, R/o 11A, Jhalawar road , Talwandi, Kota Authorized Signatory of **Indian Mission of Medical Science Society**, do solemnly affirm and undertake as under:-

1. That, I am responsible for construction of hospital project "**Sudha Medical College and Hospital**" coming up at Village Umedpura, via Jagpura, Patwar Halka Alaniya, Jhalawar Road NH-12, Kota-325003 (Rajasthan).
2. That, an amount of Rs. 2.9 Crores (1.5 % of the total project cost) will be spent under the provision of **Corporate Environment Responsibility (CER)** in a period of 5 years from the date of obtaining Environment Clearance.
3. The various heads for which the amount of CER will be spent are as under:

S.No.	Facilities to be provided	Activities to be done by PP	Total Expenditure (Rs in lac)
1	Education (4-5 schools within 10 km radius of project site )	<ul style="list-style-type: none"> <li>• Maintenance of the school/ Construction of separate toilets and repair work of rooms.</li> <li>• Setting up of water coolers/ RO and its maintenance</li> <li>• Green belt development/ Plantation in school premises of nearby areas</li> <li>• Provision of Solar powered computer laboratory</li> <li>• Construction of classrooms &amp; renovation of existing classrooms</li> <li>• Construction of Science labs-4-5 nos.</li> <li>• Installation of roof -top grid tide solar panels-100 KW</li> </ul>	40.0 15.00 10.00 20.0 20.0 50.0 55.0
2	Jal Swawlamban Yojana	Cleaning, maintenance of pond at Block Ladpura in consultation with District Administration, Kota	30.0
3	Sanitation	• Construction of 300 toilets under Swacch Bharat Abhiyaan	30.0
4	Women empowerment	<ul style="list-style-type: none"> <li>• Provision of 500 sewing machines along with training for 6 months.</li> <li>• Awareness programme for women regarding menstrual hygiene.</li> </ul>	20.0
	<b>Total</b>		<b>290 lacs</b>
<i>Rs. 290 lacs under the Corporate Environment Responsibility (CER) will be spent in 5 years.</i>			

For

(Dr. Rajendra Kumar Agarwal)

Authorized Signatory