

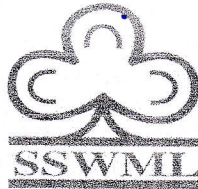
EXECUTIVE SUMMARY
FOR
PROPOSED COMMON BIO-MEDICAL WASTE TREATMENT
FACILITY

PROJECT LOCATION

**Khata no.100 (Plot no. 416), Khata no.133 (Plot no.415),
Khata no.76 (Plot no.742) Mauza Ainio, Fatuha, District
Patna, Bihar.**

PROJECT PROPONENT

M/s S R Solution



CONSULTANT

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(An ISO 9001, 14001 & OHSAS 18001 Certified Co) Accredited by

QCI/NABET: GOI

**Certificate No. NABET/EIA/2023/SA 0169 dated July,28, 2022 valid up
to August 16, 2023**

October 2022

Executive Summary

1. Project Name and location:

a. Project Name: Proposed Common Bio-medical Treatment Facility (CBMWTF) to be established by M/s S R Solution.

b. Project Location: Proposed Project Site is located Khata no.100 (Plot no. 416), Khata no.133 (Plot no.415), Khata no.76 (Plot no.742) Mauza Ainio, Fatuha, District Patna, Bihar.

Site Description

Sr. No	Particulars	Description
1.	Total Plot Area	1.1 Acres
2.	Location of the Project.	Proposed Project Site is located Khata no.100 (Plot no. 416), Khata no.133 (Plot no.415), Khata no.76 (Plot no.742) Mauza Ainio, Fatuha, District Patna, Bihar. Site Co-ordinates are: 25°26'45.55"N- 85°12'12.68"E 25°26'46.83"N- 85°12'13.39"E 25°26'46.09"N- 85°12'14.62"E 25°26'43.15"N- 85°12'12.67"E 25°26'43.63"N- 85°12'14.56"E 25°26'42.91"N- 85°12'13.90"E Toposheet Number: : 72G2, 72G3, 72G6, 72G7
3.	Landform, Land use and land ownership	The proposed site agricultural land. CLU has been Applied.
4.	Nearest Water body	Dardha Nadi-1.86 Km in West Dhowan Nadi-1.90 Km in ESE Punpun River- 6.91 Km in North Ganga River – 12.48 Km in NE.

		Mahatwain (Falgu) Nadi-6.04 km in
5.	Forest	No reserved forest nearby.
6.	Nearest Highway/Road	Nasriganj-chandi-bihta road (SH-78)- 178 m in North. SH-1- 2.93 km in WNW SH-4 - 8.80 km in East.
7.	Nearest railway station	Patna Railway Station is at 18.5 km in NNW direction.
8.	Nearest airport/air strip	Lok Nayak Jayprakash Narayan International Airport, Patna is at 19.93 Km in NNW.
9.	Nearest village	Bhargawan village is 879 m in SSW.
10.	Nearest major city	Patna is at 14.7 Km in NNW direction.

2. Capacities

S.No.	Equipment	Number	Proposed Capacity
1.	Incinerator	02	750 kg/hr
2.	Autoclave	01	1000 liter/batch
3.	Shredder	01	300 kg/hr
4.	Effluent Treatment Plant	01	10 KLD

3. Requirement of land, raw materials, water, power, fuel with source of supply

a. Land:

Total land area is 1.1 acres. Change in Land use from agricultural to Industrial use has been made .

b. Water requirement: The total water requirement for the project is 10 KLD and the source is Ground Bore Well.

c. Power requirement

0.1 MW (Source: South Bihar Power Distribution Company Limited)

100 kVA DG set to be maintained as an emergency alternative source.

4 Process description

Process of Waste Collection, Transportation, Storage and Treatment

Bio-medical waste shall be collected from healthcare facilities, transported to Common treatment site and treated as per the prescribed procedure & norms laid down in the regulation.

TREATMENT TECHNOLOGY

A. Incineration

Incineration is a waste treatment process. The waste is incinerated in two stages i.e. the primary chamber and the secondary combustion chamber which are positioned adjacent to each other.

B. Shredder

Shredding is a process by which waste are de-shaped or cut into smaller pieces to make the wastes unrecognizable. Shredder has non- corrosive sharp blades capable for shredding of plastic wastes, bottles, syringes, tubing and other general wastes.

C. Autoclave

An autoclave is a specialized piece of equipment designed to deliver heat under pressure to a chamber, with the goal of decontaminating or sterilizing the contents of the chamber.

5. Baseline environment data

The baseline study has been carried out during the study period March-May'2022.

The ambient air quality was monitored within 10 km radius. The results obtained are summarized as below:

- PM10: 50.12 to 88.32 $\mu\text{g}/\text{m}^3$. (Maximum Near Project Site)
- PM2.5: 22.62 to 46.25 $\mu\text{g}/\text{m}^3$ (Maximum Near Project Site)
- SO₂: 4.31 to 13.63 $\mu\text{g}/\text{m}^3$ (Maximum Near at Project Site)
- NO_x: 9.15 to 20.28 $\mu\text{g}/\text{m}^3$ (Maximum at Project Site)

The ambient air quality results obtained and found that all recorded values within the applicable limits of residential and rural area limits.

Baseline noise levels have been monitored using a noise measurement device. The Results shown that the day equivalents and the night equivalents were within the Ambient Noise standards of residential and commercial area standards.

Water samples in the study area were analyzed for physical and chemical characteristics. Overall, all the ground water samples collected from the study area were found to be fit for human consumption as per IS 10500 drinking water standards.

There is no notified/protected ecologically sensitive area including forest, national park, sanctuary, Elephant/Tiger reserves existing in the study area.

The biomedical waste is required to be treated at an approved common treatment facility. It is to be ensured that no untreated biomedical waste shall be kept stored beyond a period of 48 hours.

6.Measures for mitigating the impact on the environment and mode of discharge or disposal

Air pollution mitigation measures

Provision of dry technology has been kept for proposed facility as Air pollution control device. Alternatively wet scrubber shall be installed if need arises.

The new dry technology incinerators are the most advanced incineration technology complying the stringent emission standards and ensuring zero wastewater discharge.

Online stack monitoring system shall be installed for monitoring of emitting gases from the stack and to make available the information on the server installed in CPCB and Bihar SPCB.

Water pollution mitigation measure

Surface water

- During construction activity, dust will be suppressed by sprinkling of water at construction site and on road used for transporting the construction material.
- During operation phase wastewater coming out from autoclave, vehicle, wheel wash, and container washing will be collected & treated in ETP. The treated water will be partly recycled and will be used for maintaining greenery.
- Domestic wastewater is proposed to be disposed into septic tank and soak pit.

Ground water

- Adequate drainage system requiring channelization of runoff water will be made to avoid water logging. Therefore, no long-term adverse impact on ground water quality (ground) is anticipated during construction phase.

- All precaution will be taken to prevent leaching of contaminants by providing proper flooring in storage and treatment area. Spillage of waste during transportation, loading & unloading operation shall be cleaned immediately.

Soil pollution mitigation measure

- Topsoil shall be stored separately initially for its use during landscaping and green belt development.
- Contamination of soil due to accidental spillage of bio-medical waste shall be cleaned immediately.

Noise pollution mitigation measure

- DG sets will be provided with noise control measures such as acoustic enclosures as per CPCB norms to ensure noise abatement.
- Employees will be provided with Personnel Protective Equipment's (PPE) like ear plugs/muffs at site.
- Greenbelt shall be developed around the plant site.
- Ambient noise levels are monitored at regular intervals.

Solid & Hazardous Waste Generation and Mitigation Measure

- As this is a Common Biomedical Waste Treatment Facility, Incinerator Ash will be sent to nearest TSDF site for its final disposal.
- Spillage of waste during transportation & during unloading operation is prevented not to contaminate soil/ land.

Details of Greenbelt

Total 1.1 Acre land area is available at site; out of this area about 35% (16,799.60sq M) of area will be developed as greenbelt and other forms of greenery.

7. Identification of hazards in handling, processing and storage of hazardous materials and safety system provided to mitigate the risk

The potential hazards associated with the facility are primarily classified into:

Biological Hazard:

- a. Health hazard due to handling of Infectious waste
- b. Injury from handling sharps, needles broken glassware, etc.

Accident Hazard:

- a. During transportation of Biomedical Waste
- b. During operation of Incinerator, autoclave, shredder

We further commit to ensure the compliances as follows:

- Type and quality of waste containers will be reviewed regularly, if necessary, it will be upgraded to more suitable container and bar code system will be implemented.
- To provide safety to build an emergency preparedness and to implement suitable measures to prevent and control an accident hazard and regular health checkup of the employees will be done.
- Dioxin and Furan monitoring will be done at regular intervals.
- To organize frequent mock drill exercises to check the preparedness towards emergency.
- To encourage water conservation through water re-use and re-cycling.
- To take care of waste gases, wastewater, noise, and solid waste as per guidelines of MOEF, CPCB and SPCB.
- Company will take all steps and follow the latest guidelines issued by CPCB for handling waste from COVID-19 Patients to reduce the risk of exposure to infection by establishing written policies and procedures based upon the most currently accepted clinical and occupational health and safety information in consultation with experts, workers handling and disposing biomedical waste.

8. Environment management plan

As per OM dated 30th September 2020 company shall implement all the commitments, issues raised during Public hearing along with detailed action plan with budgetary allocation. This will be part of environment management plan.

In order to comply with the environmental protection measures budgetary provision for environmental protection and safety measures has been made as Rs. 30 lakhs for capital investment and recurring cost of Rs 7.3 lakhs per annum.

S.No	Particulars	Capital Cost (Rs) Lakhs	Recurring Cost (Rs)Lakhs per annum
1.	Air Pollution Control Systems	15	2.0
2.	Effluent Treatment Plant and Septic tank etc. Strom water drains and storage tanks	10	1.0

3.	Landscaping, Green belt Development	3.0	0.5
4	Monitoring of ambient Air, Water, Soil, Noise etc. (Including yearly Dioxin & Furan Monitoring by 3 rd party)	0.5	3.0
5.	Occupational Health & Safety, Immunization, Health Checkups Training and PPE	0.5	0.5
6.	Provision of CCTV Camera & GPS monitoring system in transport vehicles	1.0	0.1
7.	Provision of cost for the transportation of hazardous waste (Incineration ash + ETP Sludge) to TSDF site	-	0.2
Total		30	7.3

9. Capital cost of the project, estimated time of completion:

Total Project cost is estimated to be 3.0 crore(approx.)

Project implementation time is within six months after receipt of Environmental clearance(EC) letter.

10. Post project monitoring plan

Implementation of environment Management plan

M/s SR Solutions is responsible for implementation of all the mitigation and management measures. A separate department "Environment Management Cell" (EMC) shall be established to look after all environmental related matters of the plant. It will also ensure to meet all the Statutory Requirements.