



क्षेत्रीय कार्यालय—उ०प्र० प्रदूषण नियंत्रण बोर्ड, गाजियाबाद
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संदर्भ संख्या : २१२० /NGT OA-333/21/2022

दिनांक ०५/०३/२०२२

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 submitted in compliance to Hon'ble National Green Tribunal (NGT), Principal Bench, New Delhi Order dated 15-12-2021 in O.A. No. 333/2021 in the matter of M/s Real Anchors Developers Pvt. Ltd. Versus U.P. State Pollution Control Board & Ors

Respected Sir,

With reference to the above subject mentioned above the joint committee inspected the site in compliance of Hon'ble National Green Tribunal order dated 15-12-2021 in OA No. 333/2021 M/s Real Anchors Developers Pvt. Ltd. Versus U.P. State Pollution Control Board & 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, U.P. Pollution Control Board, Lucknow for information.
- 2- Shri Pradeep Misra, Advocate, Hon'ble Supreme Court/NGT, New Delhi for perusal and necessary action please.
- 3- Law Officer-I, U.P. Pollution Control Board, Lucknow for information.
- 4- Chief Environmental Officer, Circle-1, 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. 333/2021

M/s Real Anchors Developers Pvt. Ltd

Versus

U.P. State Pollution Control Board & Ors

Joint Report on Behalf of:

- i) District Administration, Ghaziabad
- ii) Central Pollution Control Board
- iii) Uttar Pradesh Pollution Control Board
- iv) Ghaziabad Development Authority
- v) Municipal Corporation, Ghaziabad

1. Background

The applicant has filed an application in Hon'ble Tribunal with regards to pollution due to operation of crematorium at Shakti Khand – 4, Indrapuram, Ghaziabad and to stop dumping of garbage at the site earmarked for STP at Indrapuram. The primary prayer of the applicant to relocate the crematorium has been rejected by Hon'ble Tribunal, citing the fact that crematorium has been in place since 1989 and subsequently residences have been established in the vicinity.

Further, Hon'ble Tribunal has constituted a joint Committee of Central Pollution Control Board, State Pollution Control Board, District Magistrate, Gautam Budh Nagar, Ghaziabad Development Authority and Ghaziabad Municipal Corporation to verify the factual status and take remedial action with regards to the issue of pollution due to disposal of ashes and dust generated during cremation and unscientific dumping of garbage at the STP site next to cremation ground. Relevant extract of Hon'ble Tribunal's order dated 15.12.2021 has been reproduced hereunder.

"....In view of above allegations, a joint Committee comprising of CPCB, State PCB, District Magistrate, Gautam Budh Nagar, Ghaziabad Development Authority and Ghaziabad Municipal Corporation needs to verify the factual status and take remedial action in the matter. The State PCB will be the nodal agency for coordination and compliance. The joint Committee may hold its first sitting preferably within two weeks, undertake visit to the site,

interact with the stakeholders and plan and execute remedial/mitigation measures in accordance with law. The Committee may also explore possibility of electric/PNG crematorium to prevent pollution....”.

2. Compliance Report

In compliance of Hon'ble Tribunal's directions, letter was issued by Regional Officer, U.P. Pollution Control Board, Ghaziabad on 23.12.2021 for seeking nominations from concerned departments for constitution of the Joint Committee.

Accordingly, the joint committee of following officers has been constituted:

- i) Additional District Magistrate on behalf of District Magistrate, Ghaziabad
- ii) Mr. Sharandeep Singh, Scientist 'D', Central Pollution Control Board
- iii) Mr. C.K. Dixit, Scientist 'C', Central Pollution Control Board
- iv) Shiv Pujan Yadav, Additional Municipal Commissioner, Municipal Corporation, Ghaziabad
- v) Shri Arvind Kumar Choudhary, Executive Engineer, Ghaziabad Development Authority
- vi) Regional Officer, U.P. Pollution Control Board

Above mentioned committee held a meeting and carried out a site visit of the crematorium and STP site at Indrapuram, Ghaziabad on 23.02.2022. Besides the nominated members, the Committee was assisted and accompanied by Shri Sushil Chaubey, OSD, Ghaziabad Development Authority and Dr. M.K. Singh, Municipal Health Officer, Municipal Corporation, Ghaziabad. Committee's findings and recommendations with regards to the crematorium and dump site have been detailed in following part of the report.

I. Operation of Crematorium

The said crematorium is a traditional wood based crematorium set up in an area of around 2536.31 sq.m. out of which an area of around 485.99 sq.m. is covered with a temporary shed for carrying out traditional wood based cremations. As per the attendant present on site and officers of Municipal Corporation, Ghaziabad, the crematorium is used sparsely as the crematorium at Hindon Ghat is the main crematorium centre in Ghaziabad. The records of the crematorium were perused and as per records, on an average 20-30 mortal remains are being cremated. Maximum number of cremations were held in month of April, 2021 due to comparative increase in number of deaths due to COVID 19 pandemic. The said crematorium is located at Indrapuram locality of Ghaziabad, which is a densely populated area. The crematorium shares its boundary with a legacy waste dump site on three sides and a road on one side, same has been shown in Figure 1.



Figure 1: Site of Indrapuram, Ghaziabad Crematorium

In Indian tradition, cremation exercise is linked with traditional beliefs as it is considered to be a mode of purification of various impurities through fire, *agni*. Cremation is also the last significant life cycle ritual and sacrament for Hindus, known as *dah sanskar*, 'sacrament of fire' or *antyeshti* 'last sacrifice'. Thus,

considering the socio-religious considerations associated with performance of last rites in Hindu society, any major alteration in technology/infrastructure of the crematorium needs to be done with social consensus of the residents of the area.

Municipal Corporation, Ghaziabad has already initiated the process of adding an additional pyre based on Improved Wood Based Cremation technology in the existing crematorium complex. Amount of Rs. 42.05 lakhs has already been sanctioned and invitation for e-tender has been invited, same has been put on hold in view of Model Code of Conduct due to General Elections of the Legislative Assembly of Uttar Pradesh. Once installed and operational, this shall lead to reduction in pollution load as it will not only bring down wood consumption by 200-300 Kgs per cremation but will also reduce time taken for combustion. Also, the IWC based system proposed has an in-built air pollution control system.

In present infrastructure of traditional wood-based crematorium, a body is kept on a pyre loaded with around 350-450 kg of wood and is burnt in open air without any mechanism for controlling emission of gases and pollutants into the atmosphere. Also, the cremation process takes around 4-5 hours for complete combustion.

Besides religious beliefs, availability of area is also an essential factor in switching any traditional crematorium to a green technology crematorium

operational on gas, electricity or converting an existing traditional wood-based crematorium into an Improved Wood Based Crematorium (IWC). National Mission for Clean Ganga has prepared a document '*Model Crematoria Designs, Conventional and Improvised Designs*' which intends to bring clarity and uniformity in design and costs of crematoria by providing proficient design options ranging from basic to electric based crematorium. Comparative statement with minimum basic design requirement for each type of crematoria has been presented in Figure 2.

Components	Crematoria Type							
	Conventional Crematoria		Improvise Crematoria					
	Stand-alone Crematoria		Basic Crematorium Complex for urban areas	Green Cremation System (Improved Wood Pyre Type)		Gasifier Crematoria	Electric Crematoria	
	a) Model for Rural areas	b) Model for small towns/semi-urban areas		a) Model for Rural areas	b) Model for small towns	c) Model for cities/towns		
Pyre Type	MS pyre with tray	MS pyre with tray	MS pyre with tray	Improved wood pyre	Improved wood pyre	Improved wood pyre with hood, chimney and 2 nos. trays	Gas Furnace	Electric Furnace
Area (For single pyre)	22 sq m	26 sq m	400 sq m for single pyre complex	15-20 sq m	25-30 sq m	140 sq m	400 sq m for single furnace building	190 sq m for single furnace building
Waiting/Prayer Hall			Yes (42 sq m)	No	No	No	Yes	Yes
Ritual Platform			Yes	No	No	No	No	No
Body washing area			Yes	No	No	Yes	No	No
Ash storage			No	No	1 No. rack	1 No. rack		No
Office & Caretaker room	Only cremation shed with metal sheet roofing	Only cremation shed with complete RCC structure	Yes (11 sq m)	No	No	Guard cum operator room	1 No. Care taker room	No
Wood store			Yes (9.5 sq m)	No	No	No	No	No
Sitting			2 nos. Chabutra	No	No	RCC Benches	Yes	Yes
Lighting	No	No	4 no. solar light poles	Yes	Yes	Yes	Yes	Yes
Toilet	No	No	No	No	No	No	Yes	Separate building for amenities
Hand wash	1 no. Hand pump	No	1 no. Hand pump	No	No	No	Yes	
Boundary wall	No	No	1.5 meter high wall	No	No	No	1.5 meter high wall	1.5 meter high wall
Entry gate	No	No	1 no. simple gate	No	No	No	Entry doors to the building	Entry doors to the building
Time period for provision of operator	NA	NA	NA	3 months	1 Year	1 Year	Yes	5 Years
Public education and awareness	No	No	No	Yes	Yes	Yes	No	No
Cost (In Lakhs)	3.87	5.02	20.31	11.82	20.86	46.78	143.35	180.05

Figure 2: Comparative Statement for Model Crematoria Designs.
Source: NIMCG Document

As is evident from the table above, for urban setup, the space requirement for a single pyre complex varies from 140 sq.m. in case of IWC to 400 sq.m. in case of gas-based crematoria for a single furnace building. Also, pyres as such are just a part of the crematorium, its landscape and zoning needs to be done so as to provide an atmosphere where architecture or structures inherently are in harmony with human emotions.

IWC based infrastructure proposed by Municipal Corporation is ideal for a small cremation ground at Indrapuram and its promotion shall lead to switching of more cremation grounds to IWC technology. Presently, Municipal Corporation has proposed to build an additional structure for IWC based pyre with requisite pollution control system having a wet scrubbing system on site as shown in Figure 3. Ghaziabad Development Authority should allocate funds for conversion of existing pyres to IWC technology in long term. In interim, Miyawaki forestation should be done by Municipal Corporation, Ghaziabad on area reclaimed from disposal of legacy waste processing adjacent to the cremation area as it will serve as a buffer as well as a sink for pollutants emanating from cremation rituals.



Figure 3: Indicative Layout Plan of the Crematorium Complex.

II. Dumping of Municipal Solid Waste

Background:

The applicant has also mentioned the issue of dumping of garbage near the crematorium at Shakti Khand- 4, Indrapuram, Ghaziabad.

The dumpsite is located at Indrapuram locality of Ghaziabad, which is a densely populated area and shares its boundary with a crematorium, STP and a road on two sides.

Observations:

- During visit, Ghaziabad Nagar Nigam (GNN) informed that total 105313 MT legacy waste has been processed so far at the site and the processing of waste is being done through M/s. Geron Engineering Pvt. Ltd (**Photo I**) and, all waste pertaining to them shall be processed within 6 - 7 days.
- Further, GNN informed that out of processed waste,
 - ✓ 8544 MT of RDF/Dry has been obtained till date which was further disposed to cement plants at Ultratech Cement and J K Cement, Rajasthan and Waste to Energy plant at Ghazipur.
 - ✓ 63000 MT & 2175 MT of compost/bio earth and Inert

respectively also generated after processing of waste and are being used by farmers for compost and GNN for leveling of sites.

- During visit, it was found and informed by the representative that fresh waste (approx. 95 - 100 TPD) is being dumped regularly by Ghaziabad Development Authority (GDA) on the site on daily basis. However, Ghaziabad Nagar Nigam (GNN) has stopped dumping of fresh solid waste. For processing of the fresh waste, GDA informed that they will provide financial support to GNN for the processing of the waste dumped by GDA.
- During visit, the segregated fractions such as RDF, Compost was also found stored at the site. As informed by representative of GNN, the stored RDF at the site shall be shifted to the proposed WtE plant at Mussoorie Gulawati road industrial area Ghaziabad which is supposed to be operational by April 2022 and reclaimed land will be developed as forest area by Miyawaki method of forestation. The stored compost shall be used in the forestation.



The matter pertaining to solid waste disposal at said site is already being heard by Hon'ble Tribunal in O.A. 909/2018, Confederation of Trans Hindon RWA's Ghaziabad versus State Pollution Control Board.

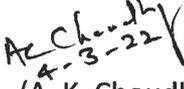
Recommendation:

Committee recommends the following:

- Ghaziabad Development Authority (GDA) will provide financial support to Ghaziabad Nagar Nigam (GNN) to process the waste which has been dumped by GDA till date and complete the processing of waste within 6 months.
- The waste from said site should be shifted to already identified site at Galand and in case of any issue. Ghaziabad Development Authority should identify and earmark alternative site for dumping of fresh waste in collaboration with Ghaziabad Nagar Nigam and District Administration within 6 months. No further waste should be dumped on said site after 6 months
- Further, committee recommends that GNN may develop transfer stations at the site for storing and further processing of the waste which GDA will

generate and dump from day onwards.

- In order to improve and facilitate enforcement with regards to segregation and dumping of solid waste, a dedicated Police Chowki for purpose of lodging complaints should be earmarked.
- Municipal Corporation, Ghaziabad will speed up the process of adding an additional pyre based on Improved Wood Based Cremation technology in the existing crematorium complex.
- Ghaziabad Nagar Nigam should develop dense forest on Miyawaki technique on the land reclaimed by processing of legacy waste.


(A. K. Choudhary)
Executive Engineer
Ghaziabad Development
Authority


(C.K. Dixit)
Scientist 'C'
Central Pollution Control
Board, New Delhi


(Utsav Sharma)
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Additional Municipal
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