

File No. Pr-23025/16/2026-O/o Project Development (Uttar Pradesh)-NMCG

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास एवं गंगा संरक्षण विभाग
राष्ट्रीय स्वच्छ गंगा मिशन

प्रथम तल, मेजर ध्यानचंद नेशनल स्टेडियम,
इंडिया गेट, नई दिल्ली

दिनांक: 29th May 2026

**NOTICE INVITING SUGGESTIONS/ COMMENTS/ OBJECTIONS ON
PROPOSED SLUDGE TREATMENT PRACTICES**

The National Mission for Clean Ganga (NMCG) proposes to strengthen sludge treatment and management practices at existing and upcoming Sewage Treatment Plants (STPs) in line with the objectives of sustainable wastewater management, circular economy, and climate change mitigation.

At present, sludge treatment in many STPs/CETPs is generally limited to mechanical dewatering or conventional sludge drying beds, which typically achieve solids concentration up to around 20% dry solids. While a portion of the treated sludge is utilized as manure, a significant quantity is disposed of in landfills or low-lying areas. However, with the continuous expansion of sewerage networks and wastewater treatment infrastructure in urban areas, the quantity of sewage sludge generated is increasing substantially, thereby necessitating the adoption of efficient sludge treatment technologies and environmentally safe disposal and reuse practices.

Wastewater sludge contains both organic and inorganic constituents and, when adequately treated, may be considered a recoverable resource. The organic fraction can support beneficial applications such as soil conditioning, composting, co-processing, and energy recovery, whereas the inorganic fraction may have limited utilization in construction-related applications, subject to applicable environmental regulations. Dried sludge also possesses calorific value and may therefore be considered for thermal energy recovery applications. Proper utilization of sludge can significantly reduce the quantity requiring final disposal and promote sustainable resource management.

In this context, the recent advisory issued by the Central Public Health and Environmental Engineering Organisation (CPHEEO) under the Ministry of Housing and Urban Affairs in December 2025, titled “*Advisory on Promoting Off-take of Treated Sewage Sludge using Solar Greenhouse Dryer*”, recommends the adoption of Solar Greenhouse Dryers (SGHDs) at existing STPs/FSTPs or the development of centralized cluster-based sludge drying facilities to address emerging sludge management challenges.

Accordingly, NMCG proposes adoption of suitable Key Performance Indicators (KPIs) for advanced sludge management systems, including reduction of sludge moisture content to 20–30%, reduction in sludge handling and transportation costs, minimization of energy consumption, and optimization of land requirements for final disposal or reuse.

The proposed modifications in the relevant technical provisions and qualification criteria of tender documents for HAM and DBOT projects are enclosed with this notice for seeking suggestions, comments, objections, and views from the general public, experts, urban local bodies, industries, and other stakeholders.

Interested persons may submit their comments/suggestions in writing within 10 (ten) working days from the date of publication of this notice through e-mail at: ed.projects@nmcg.nic.in.

The changes proposed in the relevant technical provisions and qualification criteria for the tender documents of HAM and DBOT projects are tabulated below:

Tender document provisions for HAM Project

#	Bid Clause Reference	Existing provision	Changes proposed																		
Technical provisions																					
1	Schedule 10 - Key Performance Indicators	3. Digested/dewatered sludge The sludge to be disposed shall meet the following requirements: <table><tr><th>Units</th><th>Value</th></tr><tr><td>Solids Concentration of dewatered sludge</td><td>More than 20%</td></tr><tr><td>Volatile Solids</td><td>At-least 38% of reduction in volatile solids (from digester inlet to final dewatered sludge)</td></tr></table>	Units	Value	Solids Concentration of dewatered sludge	More than 20%	Volatile Solids	At-least 38% of reduction in volatile solids (from digester inlet to final dewatered sludge)	3. Digested/dewatered sludge The sludge to be disposed shall meet the following requirements: <table><tr><th>Units</th><th>Value</th></tr><tr><td colspan="2">At the outlet of Dewatering Sludge</td></tr><tr><td>Inlet solids consistency to sludge drying system</td><td>20%–30% (minimum 20% and maximum 30% from mechanical sludge dewatering systems)</td></tr><tr><td>Volatile Solids</td><td>At-least 38% of reduction in volatile solids (from digester inlet to final dewatered sludge)</td></tr><tr><td colspan="2">At the outlet of Sludge Dryer</td></tr><tr><td>Outlet dry solids consistency from drying system</td><td>Minimum 70% dry solids at outlet of solar dryer</td></tr></table> <i>Note: The maximum dry solids content from a sludge dewatering machine can be considered as 30% for design purpose.</i>	Units	Value	At the outlet of Dewatering Sludge		Inlet solids consistency to sludge drying system	20%–30% (minimum 20% and maximum 30% from mechanical sludge dewatering systems)	Volatile Solids	At-least 38% of reduction in volatile solids (from digester inlet to final dewatered sludge)	At the outlet of Sludge Dryer		Outlet dry solids consistency from drying system	Minimum 70% dry solids at outlet of solar dryer
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2	Schedule 12: Technical Specifications,	Digested Sludge shall be mechanically dewatered to produce a cake concentration of at least 20%	Digested sludge shall be mechanically dewatered to produce a cake concentration of 20%–30%																		

#	Bid Clause Reference	Existing provision	Changes proposed
	Part A - Process Requirements and Design Criteria of Sewerage Work, 6.10. Dewatering system	dry solids and the solids recovery shall not be less than 95%. The dewatering facility and associated ancillaries such as all pumps and polymer dosing equipment shall be arranged in at least two parallel streams (1 working + 1 standby), each sized to handle the average daily sludge quantities over not more than 16 hours per day. The dewatered sludge shall be disposed off. The concessionaire shall ensure at least 38% reduced Volatile solids for Vector Attraction Reduction during sludge treatment. The Concessionaire shall also ensure less than 20,00,000 most probable number per gram of total dry solids (20,00,000 MPN/gTS) in sludge before disposal.	dry solids for feeding to the sludge drying system (with a minimum solids concentration of 20% and a maximum of 30%). The solids recovery shall not be less than 95%. The dewatering facility and associated ancillaries such as all pumps and polymer dosing equipment shall be arranged in at least two parallel streams (1 working + 1 standby), each sized to handle the average daily sludge quantities over not more than 16 hours per day. The dewatered sludge shall be disposed off. The concessionaire shall ensure at least 38% reduction in volatile solids for Vector Attraction Reduction during sludge treatment. The Concessionaire shall also ensure less than 20,00,000 most probable number per gram of total dry solids (20,00,000 MPN/gTS) in sludge after dewatering. The dewatered sludge shall be further processed in the sludge drying system to achieve a minimum dry solids consistency of 70% at the outlet of the solar dryer prior to disposal/reuse. The dried sludge shall be disposed of in accordance with applicable standards and regulations.
3	Schedule 12: Technical Specifications, Section G4.1: General mechanical specifications, 12. Sludge dewatering units, 4 th para	The dewatered sludge should be truck-able & be suitable for disposal by open body truck and should have a minimum solid concentration of 20% or more (measured as dry solids w/w basis).	The dewatered sludge from the mechanical dewatering system shall be truck-able and suitable for conveyance to the sludge drying system by open body truck and shall have a dry solids concentration in the range of 20%–30% (minimum 20% and maximum 30% on dry solids w/w basis). The sludge drying system shall achieve a minimum outlet dry solids

#	Bid Clause Reference	Existing provision	Changes proposed
			consistency of 70% at the solar dryer discharge.
Bidder Eligibility Criterion			
4	RFP Clause 4, Qualification Criteria	-	<u>Newly Added:</u> 4.1 (e): The Solar Sludge Dryer technology proposed for this Contract must have been adopted (not necessarily built by the Bidder), at a minimum of two (2) locations during the last seven (7) years preceding the month of publication of the NIT. Each such Solar Sludge Dryer shall have a minimum outlet drying capacity of 1 TPD and must have been successfully operated and maintained for a minimum period of one (1) year within the said seven (7) year period.

Tender document provisions for DBOT Projects

#	Bid Clause Reference	Existing provision		Changes proposed															
Technical provisions																			
1	Effluent quality requirements to be met	<table><tr><td>Treated Sludge</td><td>Consistency>20%</td></tr></table>		Treated Sludge	Consistency>20%	<table><tr><td colspan="2">KPIs for Sludge</td></tr><tr><td>Units</td><td>Value</td></tr><tr><td colspan="2">At the outlet of Dewatering Sludge</td></tr><tr><td>Inlet solids consistency to sludge drying system</td><td>20%–30% (minimum 20% and maximum 30% from mechanical sludge dewatering systems)</td></tr><tr><td>Volatile Solids</td><td>At-least 38% of reduction in volatile solids (from digester inlet to final dewatered sludge)</td></tr><tr><td colspan="2">At the outlet of Sludge Dryer</td></tr></table>		KPIs for Sludge		Units	Value	At the outlet of Dewatering Sludge		Inlet solids consistency to sludge drying system	20%–30% (minimum 20% and maximum 30% from mechanical sludge dewatering systems)	Volatile Solids	At-least 38% of reduction in volatile solids (from digester inlet to final dewatered sludge)	At the outlet of Sludge Dryer	
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			Outlet dry solids consistency from drying system	Minimum 70% dry solids at outlet of solar dryer
<i>Note: The maximum dry solids content from a sludge dewatering machine can be considered as 30% for design purpose.</i>				
Bidder Eligibility Criterion				
4	NIT & Annexure A, Part h, Qualification Criteria	-	<u>Newly Added:</u> 1.4 (a) 8: The Solar Sludge Dryer technology proposed for this Contract must have been adopted (not necessarily built by the Bidder), at a minimum of two (2) locations during the last seven (7) years preceding the month of publication of the NIT. Each such Solar Sludge Dryer shall have a minimum outlet drying capacity of 1 TPD and must have been successfully operated and maintained for a minimum period of one (1) year within the said seven (7) year period.	
