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STATE POLLUTION CONTROL BOARD, ODISHA
[Dept., of Forest, Environment & Climate Change, Govt. of Odisha]
Paribesh Bhawan, A/118, Nilakanthanagar, Unit-VIII,
Bhubaneswar - 751012

No. 18295 / IND-I-CON-MISC-1758 Date 13-10-2025

CIRCULAR

In view of the amendment of Fly Ash Notification issued by Ministry of Environment, Forest & Climate Change, Govt. of India vide No. 5481(E), dtd.31.12.2021 and subsequent amendment, the Guidelines for Reclamation of Low Lying Areas and Abandoned Quarries with Ash issued by State Pollution Control Board, Odisha vide No- 11047, dtd.21.08.20217 hereby supersedes with the "**Standard Operating Procedure (SOP) for Reclamation of Low Lying Areas by Filling with Ash - October, 2025**".

The Standard Operating Procedure (SOP) for Reclamation of Low Lying Areas by Filling with Ash - October, 2025 shall be followed for utilization of ash for low lying area in conjunction with the Guidelines for disposal/utilisation of Fly Ash for reclamation of Low Lying Areas and in stowing of abandoned mines/quarries issued by Central Pollution Control Board, March-2019.

This will be effective from the date of the issue of this order.


Encl: As above.

By order of Chairman


13.10.25
Member Secretary

Memo No. 18296 /dtd. 13-10-2025

Copy along with enclosure forwarded to OSD to Chief Secretary - cum- Chairman, State Pollution Control Board, Odisha for kind information of Chief Secretary.


Member Secretary

Memo No. 18297 /**dtd.** 13-10-2025 /

Copy along with enclosure forwarded to Secretary Board of Revenue/ All the RDCs/ All Collectors for information and necessary action.


Member Secretary

Memo No. 18298 /**dtd.** 13-10-2025 /

Copy along with enclosure forwarded to the Special Secretary, Revenue & Disaster Management, Govt. of Odisha / Special Secretary to Govt., FE & CC Dept., Govt. of Odisha/ Special Secretary to Govt., Steel & Mines Dept., Govt. of Odisha / Special Secretary to Govt., Energy Dept., Govt. of Odisha / Special Secretary to Govt., Industries Dept., Govt. of Odisha / Director, Directorate of Minor Minerals, Govt. of Odisha for information and necessary action.


Member Secretary

Memo No. 18299 /**dtd.** 13-10-2025 /

Copy along with enclosure forwarded to all Branch Heads, SPC Board, Bhubaneswar / All Regional Officers, State Pollution Control Board, Odisha for information and necessary action.


Member Secretary

Memo No. 18300 /**dtd.** 13-10-2025 /

Copy along with enclosure forwarded to Chief Env. Engineer (IT Cell) for information. He is requested to upload this Circular along with the SOP in the Board's website for wide circulation.


Member Secretary



**Standard Operating Procedure (SOP)
for Reclamation of Low Lying Areas
by Filling with Ash**



October, 2025

**STATE POLLUTION CONTROL BOARD,
ODISHA
BHUBANESWAR**

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STANDARD OPERATING PROCEDURE (SOP) FOR RECLAMATION OF LOW LYING AREAS BY FILLING WITH ASH

1.0 Background :

A guideline for reclamation of low-lying areas and abandoned quarries was issued by the SPCB, Odisha vide Letter No.11047 dtd.21.08.2017. Subsequently the Central Pollution Control Board (CPCB), Delhi issued a Guideline for disposal/utilization of fly ash for reclamation of low-lying areas and in stowing of abandoned mine /quarries in March 2019.

The Ministry of Environment, Forest & Climate Change, Govt. of India, vide its Notification No. 5481(E), dtd.31.12.2021 in part B, Para (6) stipulates that filling of low-lying area with ash is recognized as utilization of fly ash and shall be carried out with prior permission of SPCB in accordance with the Guideline laid down by SPCB and CPCB. On the above background the following Standard Operating Procedure (SOP) is laid down for filling of low-lying area with fly ash and bottom ash that will qualify as Fly Ash Notification, in context of sub para (v) of para (2) of Part A of the Fly Ash Notification vide No. 5481(E), dtd. 31.12.2021 of MoEF & CC, Govt. of India. This SOP shall be applicable for the whole State of Odisha.

This SOP outlines the criteria for site selection, procedure to be followed for permission for low-lying area filling, monitoring and reporting protocols to ensure environmentally safe and secure utilization of ash generated from thermal power plant. The SOP also encompasses filling of low-lying area only for development and construction-related activities (e.g., site grading, platforms, industrial / institutional layouts) and explicitly prohibit use for indiscriminate disposal.

2.0 Definitions:

Low-lying Area: An area whose elevation, i.e., Reduced Level (RL), is lower than that of the surrounding contiguous land. Technically, the contour lines of the selected patch of low-lying area are lower than the contour lines of the contiguous land surrounding it, but do not include abandoned mines and quarries. The threshold depth of the low-lying area shall be ≥ 2 m compared to the average RL of the contiguous surrounding land.

Thermal Power Plants: Power Plant generating steam and electricity by using coal as primary fuel.

Fly Ash: Residue of coal combustion which is captured by air pollution control devices.

Bottom Ash: The non-combustible residue remaining at the bottom of a boiler after combustion, typically produced from burning of coal or other materials / fuel.

3.0 Qualifying Conditions of the Site:

The low-lying areas fulfilling the following conditions / features shall be considered for filling up with ash from the thermal power plants and may be treated as ash utilization as per the MoEF & CC Notification No. 5481 (E), dtd. 31.12.2021.

- 1) Private land of minimum of 20 Acre with a minimum void volume of 2,50,000m³.
- 2) Self-owned industrial premises (inside / outside) having boundary wall on all sides irrespective of size of the land.
- 3) Reclamation of forest land, irrespective of size of the land, subject to clearance from the Ministry of Environment, Forest and Climate Change (MoEF & CC), Government of India, in accordance with the Forest Conservation Act (FC Act), 1980.
- 4) Low laying area inside educational institutions, Health care facilities having boundary wall on all sides and Govt. land irrespective of size of the land may be allowed for filling of ash on request of the

competent authority of the land.

- 5) The soil permeability of the site shall be less than 10^{-7} cm/s.

4.0 Sitting Criteria:

Filling of low-lying areas in the aforesaid categories can be permitted subject to confirmation of the following sitting criteria.

- 1) The low-lying area should not be in flood plain area, wetland, agricultural land, or gochar kism.
- 2) There should be no natural/storm water drainage passing through the plot.
- 3) The proposed site must be at least 500 meters away from water bodies like rivers, lakes, reservoirs, or natural streams, measured from the boundary of the low-lying area.
- 4) Forest land having low-lying area shall not be used for ash filling without forest diversion as per the provision of Forest Conservation Act, 1980. In case of diversion of Forest land, the area not less than 20 Acre is permitted for ash filling.
- 5) The site shall have a minimum distance of 250 meters from schools, educational institutions, human habitation, or hospitals measured from the boundary of the low-lying area.

5.0 Application Procedure:

- 1) The Thermal Power Plants (TPP) who desire to utilize ash through low-lying area filling after fulfilling the stipulations at clause 3.0 and 4.0 shall make an application online through online portal (www.odocmms.nic.in) for Consent to Operate (CTO : Low-Lying Area Ash Filling) under Water (PCP) Act, 1974 and Air (PCP) Act, 1981.
- 2) One applicant can apply for maximum two low-lying areas.
- 3) The online application shall be accompanied with a processing fee of Rs.1.00 per m^3 of void volume to be filled up with ash.

- 4) The application shall be accompanied with,
 - a. KML file with geographical and permanent features within 1 km surrounding the plot.
 - b. Project report covering site layout, soil characteristics, ground water level, soil permeability, existing environmental details (average annual rainfall, wind rose diagram, ground water quality, and ambient air quality), details of transportation route (KML map in this regard), contour / topographic survey [Differential Global Positioning System (DGPS) / Total Station], void volume calculation, month-wise filling schedule (excluding monsoon period), manpower detail and machinery list (rollers, dozers, tippers, water bowsers, wheel-washing units etc.), post closure plan and subsequent use of reclaimed land.
* The project report is mandatory for area 20 Acre of land.
 - c. Land documents (Registered agreement with landowner/Patta/sale deed of self-owned).

6.0 Processing of Application:

- 1) The online application shall be scrutinized by the SPCB at Head Office for completeness and then forwarded to the concerned Regional Office for the necessary site inspection and site suitability report.
- 2) The concerned Regional Officer shall inspect the site. The inspection report shall confirm that the proposed site meets the siting criteria (clause 4.0) with clear recommendation on suitability of the site for filling with ash.
- 3) In-principle approval of site for ash filling will be accorded by the Member Secretary after ensuring compliance to the stipulations made at clause 3.0 and 4.0.
- 4) The applicant shall furnish Bank Guarantee of Rs.30/- per m³ to ensure post-closure activities. The Bank Guarantee shall remain valid

for a period of six months beyond the expected date of completion of ash filling activities.

- 5) The application shall be disposed off within 30 days from the date of submission of complete application.
- 6) The Consent to Operate Order shall be issued with maximum validity upto one year upon submission of the Bank Guarantee and fulfilling the basic facility required at the site. The renewal of the Consent to Operate shall be considered subject to compliance of the existing CTO order.

7.0 Basic Facility Requirement at the Site:

The proposed low-lying area for filling up with ash shall have following basic infrastructure.

- 1) The development of the site shall be done as per the CPCB Guidelines for disposal / utilisation of Fly Ash for reclamation of Low Lying Areas and in stowing of Abandoned mines / quarries of March, 2019.
- 2) Under no circumstances the excavation shall be carried out for creation of additional void.
- 3) Water facility shall be provided for construction, compaction and sprinkling activities.
- 4) The boundary/property line of the plot shall be demarcated by constructing an earthen bund as per the above CPCB Guidelines.
- 5) Temporary sheds shall be constructed at the site for security and ancillary activities. The site shall be kept with adequate security and watch-and-ward services.
- 6) HD IP surveillance cameras shall be installed at both the source and destination points to monitor real-time ash handling and dumping activities at the site. Alternate provision shall be made in the disposal site, especially in remote areas where electrical connection is a matter of concern.

- 7) A display board with a QR code shall be provided at the exit point to record latitude and longitude of the location which will be scanned by the driver using a mobile-based application during exit.

8.0 Facilities at Ash Loading Point (Silos/Ash Ponds):

Following facilities shall be developed at the loading end of the plant premises / ash pond by the TPPs.

- 1) A weighbridge to take the weighment of tare weight and weight of the loaded vehicles to ascertain the quantity of ash loaded.
- 2) A maximum 15% of moisture may be taken into account during weighment of ash.
- 3) A scanner that records the exit time and generates a QR code containing the quantity of ash, vehicle details, driver credentials and the destination.
- 4) Geo-fencing shall be done for the transport route and dumping area to ensure adherence to the defined / allocated route. Instant alert will be transmitted to SPCB, District Collector, Local Police and Stakeholders in case of any deviation.
- 5) Wheel washing system (full body) shall be provided for washing of ash loaded vehicles before exit of the Ash Pond / Plant gate.
- 6) The trucks / trolleys / dumpers carrying ash shall be properly covered with tarpaulin firmly from all sides so that there is no spillage during transportation.
- 7) The transport vehicles shall be equipped with tamper proof GPS devices compatible to all software / technologies to be used by SPCB for tracking.
- 8) The provision for tracking of transport vehicles can be made on a common platform through computerized systems having access to SPCB, District Administration and District Police apart from the Plant authorities.

9.0 Monitoring and Record Keeping:

- 1) A computerized system shall be implemented at the Plant level to maintain updated records of vehicles, including details of their entry time (at silos or ash ponds), exit time, overloading, breakdowns, etc., in synchronizing with data generated through the Mobile Application and inputs from the site records.
- 2) After unloading the ash at the site, the driver shall take a geo-tagged real-time photo of the empty carrier, which shall be uploaded in the Mobile Application.
- 3) Thermal Power Plants (TPPs) shall submit details ash transportation data to the SPCB on a weekly basis, in the prescribed format.

10.0 Post Closure Actions:

- 1) Concerned Regional Officer shall inspect the ash filling site atleast twice during the ash filling activity.
- 2) The industry shall intimate the concerned Regional Officer (RO) in advance when 90% of volume / void is filled up.
- 3) Upon receiving the intimation, the concerned RO shall conduct a site visit and recommend any leftover actions to be completed before the post-closure plan is undertaken.
- 4) Groundwater/surface water quality monitoring inside and in 1 km surrounding shall be conducted for a minimum period of five years post closure of the dumping site by a reputed institution preferably NIT / IIT.
- 5) The unit shall submit detail post-closure action plan including remediation and rejuvenation of the project site.
- 6) After successful completion of post-closure activities, it shall be verified by RO. Under satisfactory compliance report, Bank Guarantee shall be released.
- 7) If the site is to be developed for green belt development, then a comprehensive plantation programme including its maintenance should be implemented.

- 8) If the land is private, then the landowner shall obtain prior permission from District Administration on its land use after all reclamation measures are completed and stabilized.

11.0 Online Monitoring & Mobile Application:

A real-time monitoring system for the entire activities in the process involved shall be made by customized software through a Mobile Application and Web-Portal to be developed by the SPCB using advanced technology.

- 1) In this Mobile Application and Web-Portal, all stakeholders like generators, transporters, SPCB, District Administration & District Police shall be registered.
- 2) The generator shall have access to view all activities of entire process.
- 3) District Administration, concerned Police & RTO shall have access to track the transport vehicles.

12.0 Action to be taken by SPCB against the Violators:

- 1) In case of any deviation observed during transportation such as overloading, unauthorized dumping, spillages on the way, runoff flowing to nearby site, wrong route, tampering of GPS, without tarpaulin cover, excess filling of the low-lying area and any other violations to the provisions of the SOP, the Project Proponent shall be responsible and proportionate Environmental Compensation (EC) shall be imposed by SPCB in accordance with the provisions of Fly Ash Notification, 2021.
- 2) The EC will be utilized for environmental management of the area.
- 3) The onus of ensuring compliance to all statutory norms / Acts / Rules / stipulations / Guidelines shall lie with the ash generator i.e. the concerned TPP. The land owner, in no way and at no point of time, shall be responsible for any lapses / non-compliances in the whole process.

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