

BEFORE THE NATIONAL GREEN TRIBUNAL SOUTHERN ZONE,  
CHENNAI

O.A. No. 229 of 2025

S. Murugesan

Applicant

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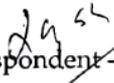
The Union of India & 3 Others

Respondents

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Dated at Chennai this the 9<sup>th</sup> day of January 2026.

  
Counsel for Respondent - 2

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**BEFORE THE NATIONAL GREEN TRIBUNAL SOUTH ZONE AT CHENNAI  
O.A. No. 229 of 2025**

S.Murugesan,  
Porkaali Amman koil street, 1<sup>st</sup> cross  
street,Kattukuppam, Ennore, Kattivakkam,  
Tiruvallur,  
TamilNadu-600057.

: Applicant

Versus

1. Union of India,  
Represented by its Secretary,  
The Ministry of Environment,Forests and Climate Change,  
Jorbagh, New Delhi
2. North Chennai Thermal Power Station Stage-I ,  
Represented by its Chief Engineer,  
Athipattu, Chennai  
Thiruvallur District-600120.
3. The Tamil Nadu Pollution Control Board,  
Represented by its Member Secretary,  
No.76, Mount Salai, Guindy,  
Chennai-600 032.
4. Tamil Nadu Power Generation Corporation Limited (TNPGL),  
Represented by its Managing Director,  
6<sup>th</sup>floor, TANTRANSCO Building, 144 Anna Salai,  
Chennai-600 002.

: Respondents



CHIEF ENGINEER  
NORTH CHENNAI THERMAL POWER STATION  
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**COUNTER AFFIDAVIT OF 2<sup>nd</sup> RESPONDENT**

I, K. Muthukrishnan, son of Thiru K. Kandhan, Hindu, aged about 59 years, Employment ID No. 12029277, employed as Chief Engineer, Tamil Nadu Power Generation Corporation Limited (TNPGL), having office at North Chennai Thermal Power Station-I, Chennai – 600 120, do hereby solemnly affirm and sincerely state as follows:

I am the 2<sup>nd</sup> Respondent herein and I am filing this affidavit on my own behalf and also on behalf of the 4<sup>th</sup> Respondent. I am competent and duly authorized to swear this affidavit for myself and on behalf of the 4<sup>th</sup> Respondent.

At the outset, the Respondents deny all the allegations, averments and statements made in paragraphs 1 to 15 of the application, except those expressly admitted herein. The applicant is put to strict proof of each and every allegation. Any allegation not specifically admitted herein shall not be construed as admitted and is hereby denied.

1. I deny para No.1 of application is false and misleading and that the existing ash pond of NCTPS-I was constructed during the period 1995-96 in consultation with Tata Consulting Engineers, Bombay. At the time of construction, the provision of lining of the ash pond with impervious material such as HDPE lining was not mandatory. However, the ash dyke bund was designed with an impervious clay core of GC type (Clayey Gravel) at the centre, having a top width of 2.0 m and a base width of 7.5 m at existing ground level, and a width of 6.5 m maintained at 1.0 m below ground level. The upstream and downstream casing soils were of CI type (Intermediate Plasticity Clay) with a slope of 1:2.5. Further, adjoining the centre core on the downstream side, three layers of filter sand, each of 250 mm thickness, were provided up to the top of the bund. A toe drain of size 0.6 m × 1.0 m, along with a rock toe consisting of stones weighing 30-60 Kg, was provided for smooth disposal of seepage water, if any. The initial height of the bund was 6.0 m, including a freeboard of 1.0 m. The top width of the bund is 4.0 m, and the total bottom width is approximately 34.5 m.

It is further submitted that soil impermeability tests were recently conducted by collecting undisturbed soil samples at depths of 1.0 m, 2.0 m, 3.0 m and 4.0 m from the bed of the ash dyke, and the same were tested at IIT Madras. As per IS:1498-1970, the Earth Manual, and standard texts on soil mechanics and foundation engineering, soils having a coefficient of permeability (K value) ranging from  $1 \times 10^{-4}$  cm/sec to  $1 \times 10^{-6}$  cm/sec are classified as impervious, with very poor drainage characteristics. It is further



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recognized that a significant reduction in hydraulic conductivity commences from a K value of  $1 \times 10^{-4}$  cm/sec.

In the present case, the ash dyke bed comprising silty clay has exhibited K values of  $1 \times 10^{-8}$  cm/sec and  $1 \times 10^{-9}$  cm/sec up to a depth of 4.0 metres from the floor of the ash dyke, thereby clearly establishing the presence of a highly impervious clay layer. Hence, there is no leaching, percolation or seepage of ash water outside the ash dyke through the ash bund (embankment). Consequently, the question of providing lining of the ash pond with impervious materials such as HDPE lining, to prevent contamination of soil, does not arise.

Further, it is submitted that NCTPS-I discharges only about 40% of the total ash generated into the ash dyke in the form of ash slurry. The balance 60% of the total ash generated is issued in dry form as fly ash to various cement companies and other end users directly from the premises of NCTPS-I. It is further submitted that NCTPS-I has achieved 100% fly ash utilization, inclusive of both wet ash and dry fly ash, during the following periods, as detailed below:

Period	Percentage of utilization of fly ash
2020-21	256.79%
2021-22	142.40%
2022-23	102.38%
2023-24	61.94%
2024-25	120.53%
2025-26	141.54% (till December 2025)

2. I deny para No.2 of application and submitted that soil impermeability tests were recently conducted by collecting undisturbed soil samples at depths of 1.0 m, 2.0 m, 3.0 m and 4.0 m from the bed of the ash dyke, and the same were tested at IIT Madras. As per IS:1498-1970, the Earth Manual, and standard texts on soil mechanics and foundation engineering, soils having a coefficient of permeability (K value) ranging from  $1 \times 10^{-4}$  cm/sec to  $1 \times 10^{-6}$  cm/sec are classified as impervious, with very poor drainage characteristics. It is further recognized that a significant reduction in hydraulic conductivity commences from a K value of  $1 \times 10^{-4}$  cm/sec. In the present case, the ash dyke bed comprising silty clay has exhibited K values of  $1 \times 10^{-8}$  cm/sec and  $1 \times 10^{-9}$  cm/sec up to a depth of 4.0 metre from the floor of the ash dyke, thereby clearly establishing the presence of a highly impervious clay layer. Hence, there is no leaching,

  
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percolation or seepage of ash water outside the ash dyke through the ash bund (embankment). Consequently, the question of providing lining of the ash pond with impervious materials such as HDPE lining, to prevent contamination of soil, does not arise.

3. I deny para No.3 of application and submitted that NCTPS-I has not voluntarily dumped fly ash or bottom ash into the Buckingham Canal or the Kosasthalaiyar River. Any such occurrence in the past was unintentional and occurred solely due to leakages in ash slurry disposal pipelines. It is further submitted that all 5 Nos. of ash slurry disposal pipelines (ASDL) have since been replaced with new pipelines, and at present there is no leakage in any of the ash slurry disposal lines. It is also submitted that the leaked/spilled ash in the Buckingham Canal and the Kosasthalaiyar River has been desilted/dredged by the Public Works Department, with financial assistance provided by NCTPS-I.
4. I admit the para No.4 of application.
5. I deny para No.5 of application and submitted that soil impermeability tests were recently conducted by collecting undisturbed soil samples at depths of 1.0 m, 2.0 m, 3.0 m and 4.0 m from the bed of the ash dyke, and the same were tested at IIT Madras. As per IS:1498-1970, the Earth Manual, and standard texts on soil mechanics and foundation engineering, soils having a coefficient of permeability (K value) ranging from  $1 \times 10^{-4}$  cm/sec to  $1 \times 10^{-6}$  cm/sec are classified as impervious, with very poor drainage characteristics. It is further recognized that a significant reduction in hydraulic conductivity commences from a K value of  $1 \times 10^{-4}$  cm/sec. In the present case, the ash dyke bed comprising silty clay has exhibited K values of  $1 \times 10^{-8}$  cm/sec and  $1 \times 10^{-9}$  cm/sec up to a depth of 4.0 metre from the floor of the ash dyke, thereby clearly establishing the presence of a highly impervious clay layer. Hence, there is no leaching, percolation or seepage of ash water outside the ash dyke through the ash bund (embankment). Consequently, the question of providing lining of the ash pond with impervious materials such as HDPE lining, to prevent contamination of soil, does not arise.

It is further submitted that lining of an "Operational ash pond" with impervious material such as HDPE is practically not feasible, as continuous evacuation of wet ash is carried out using heavy earth-moving machinery. However, proposals have been evolved and are under process for providing Reinforced Cement Concrete (RCC) lining on the inner sides of the secondary pond only, to avoid percolation of water and scouring of side slopes, if any.



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6. I deny para No.6 of application and submitted that any contamination of water in the Buckingham Canal, Kosasthalaiyar River, and groundwater in the region cannot be attributed solely to NCTPS-I, as several other industries, including M/s. KPL, M/s. CPCL, and other petrochemical industries, are also located in the region and discharge wastes, which contribute to the overall environmental condition. It is further submitted that at present there are no leakages in the ash slurry disposal pipelines and No leaching, percolation or seepage from the ash dyke.
7. I deny para No.7 of application and submit that the ash pond of NCTPS-I is structurally stable and that there is no leaching, percolation or seepage from the ash dyke.
8. I deny para No.8 of application and submitted that all the 5 Nos. of ash slurry disposal pipelines have been replaced with new pipelines, and at present there is no leakage in any of the ash slurry disposal lines. It is further submitted that, 12,04,579 cubic metre of spilled ash/silt material have been removed from water bodies, land areas along the ash slurry disposal pipeline route, and the areas around the ash dyke.
9. I deny para No.9 of application and submitted that the existing ash pond of NCTPS-I was constructed during the period 1995-96 in consultation with Tata Consulting Engineers, Bombay. At the time of construction, the provision of lining of the ash pond with impervious material such as HDPE lining was not mandatory.

It is further submitted that soil impermeability tests were recently conducted by collecting undisturbed soil samples at depths of 1.0 m, 2.0 m, 3.0 m and 4.0 m from the bed of the ash dyke, and the same were tested at IIT Madras. As per IS:1498-1970, the Earth Manual, and standard texts on soil mechanics and foundation engineering, soils having a coefficient of permeability (K value) ranging from  $1 \times 10^{-4}$  cm/sec to  $1 \times 10^{-6}$  cm/sec are classified as impervious, with very poor drainage characteristics. It is further recognised that a significant reduction in hydraulic conductivity commences from a K value of  $1 \times 10^{-4}$  cm/sec. In the present case, the ash dyke bed comprising silty clay has exhibited K values of  $1 \times 10^{-8}$  cm/sec and  $1 \times 10^{-9}$  cm/sec up to a depth of 4.0 metre from the floor of the ash dyke, thereby clearly establishing the presence of a highly impervious clay layer. Hence, there is no leaching, percolation or seepage of ash water outside the ash dyke through the ash bund (embankment). Consequently, the question of providing lining of the ash pond with impervious materials such as HDPE lining, to prevent contamination of soil, does not arise.



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10. I deny para No.10 of application and humbly submit that, the existing ash pond of NCTPS-I was constructed during the period 1995-96 in consultation with Tata Consulting Engineers, Bombay. At the time of construction, the provision of lining of the ash pond with impervious material such as HDPE lining was not mandatory.

It is further submitted that at present there is no leaching or percolation of ash water and no seepage outside the ash dyke through the ash bund (embankment). It is also submitted that lining of an "operational ash pond" with impervious material such as HDPE is practically not feasible, as continuous evacuation of wet ash is carried out using heavy earth-moving machinery. However, proposals have been evolved and are under process for providing Reinforced Cement Concrete (RCC) lining on the inner sides of the secondary pond only, to avoid percolation of water and scouring of side slopes, if any.

11. I deny para No.11 of application and submit that the ash pond of NCTPS-I is structurally stable and that there is no leaching, percolation or seepage from the ash dyke.

12. I admit para No.12 of application.

13. I deny para No.13 of application and humbly submit that NCTPS-I has not increased the size or capacity of the existing ash pond.

14. I deny para No.14 of application and submitted that NCTPS-III and Ennore SEZ Thermal Power Plant are designed for 100% evacuation and utilization of fly ash through a dry fly ash system. Only during emergency or breakdown situations, ash may be temporarily discharged into the ash dyke.

15. Therefore, present OA is nothing but abuse of the process of law, filed with oblique motives and based on incorrect technical assumptions, and it does not disclose any continuing environmental violation on the part of NCTPS-I.

16. I deny the ground No. A of the application and submitted that there is no leaching, percolation or seepage from the ash dyke. It is further submitted that there is no violation of the Water (Prevention and Control of Pollution) Act, 1974, the Environment (Protection) Act, 1986, the EIA Notification, 2006, or the Fly Ash Notifications.

17. I deny the ground No. B of the application and submitted that NCTPS-I is not contaminating the groundwater in the region.

18. I deny the ground No. C of the application and submitted NCTPS-I is strictly complying with the rules, regulations and guidelines of the Ministry of Environment,



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Forest and Climate Change and the Tamil Nadu Pollution Control Board, without any deviation, and is not causing environmental degradation in the Ennore region.

19. I deny the ground No. D of the application and submitted NCTPS-I has achieved 100% fly ash utilization for the past several years and is strictly complying with the Fly Ash Notifications, without any deviation.

20. I deny the ground No. D of the application and submitted hat NCTPS-I is strictly adhering to all norms and directions issued by the Ministry of Environment, Forest and Climate Change and the Tamil Nadu Pollution Control Board, without any violation.

It is therefore prayed that this Hon'ble court may be pleased to dismiss this OA with exemplary cost and thus render justice.

Solemnly affirmed at Chennai

BEFORE ME

This the 9<sup>th</sup> day of January 2026

And signed his name in my presence

~~Advocate: Chennai~~



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Before me,  
G.S. Phani,  
(MS-1745/11)  
(Advocate, Chennai)