

**BEFORE THE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH,
KOLKATA**

.....
**ORIGINAL APPLICATION No.115/2023/EZ
(Earlier O.A. No.769/2022/PB)**

IN THE MATTER OF:

Shankar Dayal Mishra

Vill.- Maheshmunda, Tahsil-Kahalgaon,
Dist.-Bhagalpur, Bihar,

...Applicant(s)

Versus

- 1. Ministry of Environment, Forests and Climate Change,**
Through its Secretary,
Indira Prayavaran Bhawan Jor Bagh Road,
Aliganj, New Delhi - 110003,
- 2. Department of Environment, Govt. of Bihar,**
Through its Principal Sectary,
Ground Floor, Sinchai Bhawan, Old Secretariat,
Patna - 800015,
- 3. Central Pollution Control Board,**
Through its Chairman,
Parivesh Bhawan, East Arjun Nagar,
Delhi -110032,
- 4. Bihar State Pollution Control Board,**
Through its Member Secretary,
Parivesh Bhawan, Plot No. Ns-B/2,
Paliputra Industrial Area, Patliputra, Patna (Bihar),
Pin – 800010,
- 5. District Magistrate, Bhagalpur District,**
Collectorate Campus, Bhagalpur, Bihar,
Pin - 812001,
- 6. NTPC Limited, Kahalgaon, Bhagalpur,**
Through its General Manger, P.O.- Kahalgaon,
Distict- Bhagalpur, Bihar,
Pin – 813214,

..... **Respondent(s)**

COUNSEL FOR APPLICANT(S):

Mr. Shankar Dayal Mishra, in person

COUNSEL FOR RESPONDENT(S) :

**Ms. Anamika Pandey, Advocate for R-1,
Mr. Surendra Kumar, Advocate for R-2&5,
Mr. Sibojyoti Chakraborty, Advocate for R-3,
Ms. Amrita Pandey, Advocate for R-4,
Mr. Probal Kumar Mukherjee, Sr. Advocate a/w Mr. Uttam
Kumar Mandal, Advocate and Mr. Sudhanshu Prakash,
Advocate for R-6,**

JUDGMENT

PRESENT:

**HON'BLE MR. JUSTICE B. AMIT STHALEKAR (JUDICIAL MEMBER)
HON'BLE Dr. ARUN KUMAR VERMA (EXPERT MEMBER)**

**Reserved On:- February 1st, 2024
Pronounce On:- February 12th, 2024**

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|---|------------|
| 1. Whether the Judgment is allowed to be published on the net? | Yes |
| 2. Whether the Judgment is allowed to be published in the NGT Reporter? | Yes |
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Heard the learned Counsel for the parties and perused the documents on record.

2. The Original Application No.769/2022 was taken up by the Delhi Bench of the National Green Tribunal on a letter petition dated 03.05.2021 received from the Applicant, Shankar Dayal Mishra, Resident of Village-Maheshamunda, Tahasil-Kahalgaon, District-Bhagalpur, Bihar.

3. The Tribunal on 04.01.2023 observed as under:-

“ORDER

1. This original application under Section 14 and 15 of National Green Tribunal Act, 2010 (hereinafter referred to as ‘NGT Act, 2010’) has been registered pursuant to a letter petition dated 03.05.2021 received from Shankar Dayal Mishra r/o Village Maheshamunda, Tehsil Kahalgaon, District Bhagalpur, State of Bihar.

2. It is stated that due to discharge of lacs of tonnes of fly ash per day from a coal based NTPC Thermal Power Project having production capacity of 2310 MW huge air pollution is being caused. Fly ash is stored in a huge Ash dyke located just 300 mtrs distance from residential area of village Maheshamunda, Tehsil Kahalgaon, District Bhagalpur in State of Bihar. Sometimes, height of ash heap reaches to 20 mtrs. As a result thereof with little blow of air, cloud of fly ash is created within 4-5 kms surrounding area covering various villages like Majdaha, Chayatola, Katoria, Ekchari, Ogri etc. NTPC is also transporting fly ash with the help of several Poklen and JCBs by Trucks which area always uncovered and spread dust throughout the way damaging environment and causing health hazards to the residents in the nearby areas.

3. We find that a similar complaint in respect of Rihand Reservoir area was considered by this Tribunal and besides directions particular to the subject, pan India directions were also issued vide order dated 18.01.2022 in O.A. No. 164/2018, Ashwani Kumar Dubey vs. Union of India & Ors.

4. The relevant extract from the order dated 18.01.2022 is reproduced below:-

“21. In the light of above discussion, it is patent that remedial measures are required in terms of recommendations set out in para 15 above in respect of individual TPPs or other projects as well as general issues applicable to all the TPPs such as timely installation of air pollution control and monitoring devices, timely utilisation and disposal of fly ash, scientific designing of fly ash dykes and safety norms, addressing public health

issues, steps for restoration of deteriorated environment by bringing down CEPI scores in the entire area, restoration of Rihand Reservoir and other damaged/degraded areas, providing arrangement for public health facilities, including water supply and by coordinated and concerted efforts and high level monitoring. The PP are to be accountable for past violations and are under obligation to remedy the violations and follow the norms for future. The regulators are to enforce the same and higher authorities are to oversee. Accordingly, following direction are issued:

i. We direct constitution of a fly ash management and utilization Mission to be jointly headed by the Secretaries, MoEF&CC, Coal and Power, GoI and Chief Secretaries of UP and MP. The Secretary, MoEF&CC will be the nodal agency for coordination and compliance. The Mission will coordinate and monitor issues relating to handling and disposal of flyash as well as all associated issues in the light of above discussion. It may hold its first meeting within one month to take stock of the situation and to prepare action plan in the light of recommendations of Joint Committees quoted earlier in para 15 above in respect of individual plants as well as road map generally. Thereafter, it may meet atleast once in a month for one year to review the progress. The resolutions of the Mission and quarterly progress may be placed on the website of MoEF&CC for information of the stake holders and inhabitants in the area. The Mission will be free to interact with the concerned Government Departments/ Expert institutions/ individuals/other stakeholders. The Mission may in its first meeting require voluntary financial contribution by all the projects in proportion of the financial capacity of the projects out of CSR funds or otherwise. The contribution, alongwith compensation which may be collected may be credited to a separate environment restoration account for restoration of environment and relief to the victims of damage to the environment in such manner as may be found necessary by the Mission. Any victim or aggrieved party will be free to approach the Mission for

providing such relief. The Mission may also consider the safeguards laid down in the Notification dated 31.12.2021, particularly for safety audits of the ash dykes which should be conducted particularly for structural stability, as far as possible within six months. Advisory issued by the Ministry of Power dated 22.9.2021 will not be enforced being against the spirit of notification dated 31.12.2021 and obstructing much needed speedy utilisation/disposal of legacy flyash. The Mission may evolve mechanism for interaction with stake holders, including associations of brick kiln owners. Guidelines be also issued for siting, design and engineering standards for the location, disposal, maintenance and regulation of Ash Ponds as breach of a fly ash ponds result in great disaster. Public health and risk impact assessment in the areas of operation of TPPs and generators of fly ash may be got conducted. The Mission may also monitor scientific management and utilization of fly ash by power projects outside Singrauli and Sonebhadra, in coordination with Chief Secretaries of concerned States and adopting safety measures for ash dykes, installing devices to control air pollution, (including FGDs, OCEMS) in a time bound manner and restoration of environment and public health. The Mission may also consider use of beneficiated coal. It may in particular consider on-site and off-site crisis management plans with regard to fly ash ponds and dykes. As noted earlier, legacy fly ash is 1670.602 Million Tonnes as on 31.12.2021 and data of ash generation and utilization of legacy fly ash is as follows:

“Summary of Ash Generation and Utilization during year 2020-21

No. of Thermal Power Stations	:	191
Capacity (MW)	:	2,13,030 MW
Coal consumed	:	672.130 Million Tonnes
Fly Ash Generation	:	222.789 Million Tonnes
Fly Ash Utilization	:	205.098 Million Tonnes
Percentage Utilization	:	92.06%
Legacy flyash	:	1670.602 Million Tonnes

The Committee of Secretaries, in coordination with PPs and statutory regulators, may draw a roadmap for utilization and disposal of entire legacy fly ash for Sonebhadra and Singrauli areas as well as for all the Power Plants located in clusters or standalone with tagging the sources to utilize fly ash on voluntary and compulsion mode for which required mechanism be laid down.

ii. With regard to past violations, the PPs remain liable and the Joint Committee of CPCB, State PCB and jurisdictional District Magistrates may determine compensation following due process, on the principles laid down inter alia in M.C. Mehta, (1987) 1 SCC 395, Sterlite (2013) 4 SCC 575 and Goel Ganga (2018) 18 SCC 257, having regard to the period of violation and financial capacity of the unit. The PPs may take remedial measures as per recommendations of the Committee and as per law, failing which coercive measures for continuing or future violations be taken by concerned authorities.

iii. Statutory regulators may take action in terms of need for compliances in the light of recommendations with regard to individual Plants as well as generally so as to require the concerned PPs to comply, failing which coercive measures be taken by the statutory regulators in accordance with law.”

5. In our view, a substantial question relating to environment for implementation of the Scheduled enactment of NGT Act, 2010 has arisen. However, before taking any further action, we find it appropriate to obtain a factual report. For the purpose thereof, we constitute a joint Committee comprising State PCB and District Magistrate, Bhagalpur who shall visit the site and collect relevant information and submit factual report as also action taken, if any, report to this Tribunal within two months by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF. District Magistrate, Bhagalpur will be the nodal agency for coordination and compliance.

6. MoEF&CC will also submit a report giving details of the action taken in compliance of this Tribunal's order dated 18.01.2022 passed in O.A. No. 164/2018, Ashwani Kumar Dubey vs. Union of India & Ors. within two months."

4. Thereafter, the case was transferred to the Eastern Bench of the Tribunal at Kolkata vide New Delhi Bench order dated 18.08.2023 and the said Original Application has now been registered as Original Application No.115/2023/EZ.

5. The District Magistrate, Bhagalpur, Respondent No.5, has filed affidavit dated 06.12.2023 bringing on record an Inspection Report of an inspection carried out on 09.02.2023. The Inspection Report reads as under:-

"Inspection report of M/s Kahalgaon Super Thermal Power Plant, NTPC Limited, Kahalgaon, Dist.-Bhagalpur.

A . Background:

1. The unit was inspected on 09.02.2023 by the Joint Committee comprising of Sri C. Madhukant, Sub-Divisional Officer, Kahalgaon as represented of District Magistrate- Bhagalpur; Sri S.N. Jha, Regional Officer, Bhagalpur, BSPCB; Sri S. P. Roy, Regional Officer, Barauni, BSPCB and Sri S.N. Jayaswal, Scientific Advisor, BSPCB, HQ, Patna in compliance with the order of the Hon'ble NGT dated—4.01.2023 in O.A. No. 769/2022 in the matter of Shankar Dayal Mishra Vs State of Bihar for verification of facts & relevant information to submit the report to the Hon'ble Tribunal.

Sri N.P. Shahar, GM (O&M); Sri Rajesh Gupta, GM (ADM); Sri Faizur Rahman, AGM (EMG); Sri Maninath Prasad, DGM (P&G); Sri Manish Kumar, Sr. Manager (AUD); Sri Manish Pandey, Sr.

Manager (EMG); and other officials of NTPC, Kahalgaon were present during the inspection.

2. The Hon'ble NGT has registered a complaint case (O.A. No. 769/2022) pursuant to a letter petition dated-03.05.2021 received from Shankar Dayal Mishra, resident of village Maheshamunda, Tahsil-Kahalgaon, Dist.- Bhagalpur, State of Bihar with allegation that due to discharge of lacs of tones of fly ash per day from coal based NTPC TPP, huge air pollution is being caused.

The Hon'ble NGT in its order dated-04.01.2023 in the aforesaid matter has stated that fly ash is stored in a huge ash dyke located just 300 meters distance from residential area of village Maheshamunda, Tahasil-Kahalgaon, Dist.-Bhagalpur, in State of Bihar. Sometimes, height of ash heap reaches to 20 meters. As a result, thereof with little blow of air cloud of fly ash is created within 4-5 Kilometers surrounding area covering various villages like Majdaha, Chayatola, Katoria, Ekchari, Ogri etc. NTPC is also transporting fly ash with help of several poklen and JCBs by uncovered trucks and spread dust throughout the way damaging environment and causing health hazards to the resident to nearby areas.

3. In view of the above, the Hon'ble NGT has constituted a Joint Committee comprising State PCB and District Magistrate, Bhagalpur to visit the site and collect relevant information and submit factual report and also action taken, if any, report to the Hon'ble Tribunal within two months by e-mail at judicial-ngt@got.in. The District Magistrate, Bhagalpur will be the nodal agency for co-ordination and compliance.

4. Kahalgaon Super Thermal Power Plant, NTPC Limited, Bhagalpur is a coal based Thermal Power Plant (TPP) of 2340 MW electricity generation capacity (Stage-I, 4 X 210=840 MW, Stage-II 3 X 500=1500 MW). The plant site is 3-4 Km south-east of Kahalgaon and about 32 Km east of Bhagalpur city and is approachable from the NH-80 and railway line. Total land area covered by KhSTPP is 3360 acres.

5. The coal requirement as fuel and ash generation in the unit are hereunder:-

Electricity Generation	Coal Requirement (Tones/day)	Ash Generation (Tones/day)	Remarks
On installed Capacity (2340 MW)	45000	18000	➤ Coal requirement@ 0.80 Kg/Kwh. ➤ Ash content in coal: 40%
On average operation (80% of installed capacity as per demand)	36000	14400	

6. The unit is having wet ash management system and dry fly ash management system.

In wet ash management system, unit has a total of 5 nos, of lagoons/ ash dykes namely IIA, IIB, IIAB, IIC, IID and an Over Flow Lagoon (OFL) with Ash Water Re-circulation System (AWRS) for ensuring reuse of water in ash slurry preparation as well as for dust suppression in the dry area of ash dyke. The total land area covered under ash dykes is approximately 1400 areas.

In dry ash management system, the unit has Installed silos for collection of dry fly ash as hereunder:-

Stage	Units	Capacity	Total Capacity
Stage-I	1&2	350 m ³ each	700 m ³
State-II	5,6&7	1000 m ³ each	3000 m ³
Present installed & operational capacity of silos			3700 m³
Stage-I	3 & 4	750 m ³ each	*1500 m ³ (under Construction)
	Additional	1000 m ³	*1000 m ³ (Under Construction)

Presently, the unit is having operational silos of total 3700 m³ capacity for dry ash collection from units 1 & 2 of State –I and from units 5,6 & 7 of Stage- II. The silos for units 3 & 4 of Stage- I are under construction and likely to put into operation very shortly as reported. In addition to the above, unit has plan for

augmentation/expansion of dry ash collection system by installing one additional silo of 1000 m³ capacity.

7. The unit has Electro Static Precipitator (ESP) attached with all boilers for control of particulate matter emission as air pollution control devices (APCDs).

8. The unit is using Ganga water for industrial & domestic purposes. The unit has liquid waste treatment plant/oil water separator, settling tank at coal handling plants and ETP for maintaining ZLD with provision of sluice gate at Ekchari Nala. Cooling water is kept in closed circuit through open approach channel with cooling towers. The unit has STP of 3050 m³ capacity for treatment of domestic waste water.

9. Bihar State Pollution Control Board has granted Consent-to-Operate (CTOs) vide ref. no. B-3798, DATED-12.07.2019 (Discharge consent) and B-3799, electricity generation for the period from 01.04.2019 to 31.03.2024 with the conditions mentioned therein.

B. Observations:

a) KhSTPP was operational during the inspection.

b) The unit is having wet ash management system and dry fly ash management system.

c) In wet ash management system, unit has a total of 5 nos. of lagoons namely IIA, IIB, IIIAB, IIIC, IIID and an Over Flow Lagoon (OFL) with Ash Water Re-circulation System (AWRS) for ensuring reuse of water in ash slurry preparation as well as dust suppression in the dry area of ash dyke.

d) In dry ash management system, presently, the unit is having operational silos of total 3700 m³ capacity for dry ash collection from units 1 & 2 of Stage –I and from units 5,6 & 7 of Stage –II. The silos for units 3 & 4 of Stage-I are under construction and likely to put into operation very shortly as reported. In addition to the above, unit has plan for augmentation/expansion of dry ash collection system by installing one silo of 1000 m³ capacity.

e) At present, ash slurry was being discharged/disposed into ash dyke no. IIA, IIB & IIIC during the inspection.

- f) Ash from the ash dykes no. IIIAB and IIID was under lifting/excavation with the help of several Poclain & JCBs and for its transportation by trucks with cover for its utilization in road construction by NHAI. The lifting and transportation of ash from IIID has been started few day back.
- g) The height of the ash dykes (IIA,IIB,IIIC, IIIAB) is approximately 2.. meter from the nearly ground level. The height of the ash dyke (IIID) is approximately 10 meter from the nearly ground level.
- h) The Majdaha village is located at the distance of approximately 150 meter in east direction from ash dyke no. IIID. The Maheshmunda and Ogri Village are located at the distance of more than 1 Km. in north east direction from ash dyke no. IIA & IIB. The village Ekachari is located at distance of 300 meter in south-west direction from ash dyke no. IIIAB.
- i) The water was discharged and sprinkled on surface of ash dyke no. IIID to avoid fugitive emission through 07 MS pipelines and water sprinklers. The khas grass plantation on ash dyke no. IIID has been done but it has to be maintained properly for its survival.
- j) Lush green agricultural field was found around the ash dykes.
- k) There was high fugitive emission at ash dyke no. IIIAB due to lifting, excavation of ash with the help of Poclain and JCBs and movement of vehicles carrying ash.
- l) There was no any static/permanent water sprinkler in around ash dykes arrangement for dust suppression/control of fugitive emission. The unit uses mobile water tankers for sprinkling of water on peripheral roads. It spite of the above arrangements, there was no proper control of fugitive emission around the ash dyke no. IIIAB.
- m) The vehicles carrying ash, passing through nearby Ekachari end was also causing air pollution in nearby area in addition to the ash lifting activities from ash dyke no. IIIAB.

C. Conclusion:-

- a) KhSTPP is having ash dykes for collection of ash slurry. The height of the ash dykes (IIA, IIB, IIIC, IIIAB) is approximately 20 meter from the nearby ground level. The height of the ash dyke (IIID) is approximately 10 meter from the nearby ground level.
- b) The villages Majdaha and Ekachari are located nearby ash dykes approximately at the distance of 300 meter whereas villages

Maheshamunda and Ogri are located at the distance of more than 1 Km. from ash dyke.

c) In spite of the uses of mobile tankers, there was air pollution due to lifting, loading and transportation of ash from ash dyke no. IIIAB.

d) The unit has operation al silos of 3700 m3 capacity for collection of dry fly ash in order to channelize to cement industries.

D. Recommendations:

- 1. The unit shall ensure that excavation, loading, unloading and storage of ash are done in environmentally sound manner with all precautions to prevent air pollution such as regular water sprinkling and transportation of ash in covered vehicles and shall submit the status in the prescribed format as per MoEF&CC, Govt. of India notification no. 5181(E), dated-31.12.2021.*
- 2. The unit shall procure/outsouce and use anti smog gun/truck mounted mist cannon for control of fugitive emission/air pollution due to excavation, loading of ash from ash dykes.*
- 3. The unit shall regularly discharge/sprinkle water on the surface of ash dyke on the other end of lifting/excavation point to avoid fugitive emission/air pollution.*
- 4. The unit shall provide water jacketing sprinkling facility all around the ash dyke for control of fugitive dust emission.*
- 5. The unit shall construct 100% Water Bound Macadam (WBM) road around all lagoons/ash dykes.*
- 6. The unit shall construct Pavement Quality Concrete (PQC) road from Ekachari end to Narlya Nala Bridge and AWRS pump house to Majdaha village for movement of heavy vehicles.*
- 7. The unit shall ensure lifting of ash from 4th raising and then 3th raising in lagoon IIIAB and IIIC to meet the demand of ash to NHAI road projects.*
- 8. The unit shall install adequate no. of CCTV Camera at different locations of ash dyke to monitor the activities involve in ash lifting and transportation with cover vehicles.*
- 9. The unit shall ensure installation of adequate no. Of lighting mast in around ash dyke area.*

10. *The unit shall expand its dry ash collection system by installing dedicated more silos for storage of dry fly ash for at least 16 hours of ash based on installed capacity.*
 11. *The unit shall submit future plan on ash utilization in consistent with MoEF&CC, Govt. of India notification.*
 12. *The unit shall ensure regular inspection by dedicated supervisor on use of water sprinkling system for dust suppression/control of fugitive emission.*
 13. *The unit shall submit time bound action plan for compliance of the aforesaid recommendations.*
 14. *Direction may be issued under Section 31A of the Air (Prevention and Control of Pollution) Act, 1981 to ensure the compliance of the aforesaid recommendations.”*
6. Alongwith this affidavit, a further Inspection Report of an inspection carried out on 22.07.2023 has been filed. The Inspection Report reads as under:-

“Inspection report of M/s NTPC, Kahalgaon, District-Bhagalpur, regarding verification of compliance status of unit in reference to the direction issued vide the Board’s Memo No. 309 dated 23.02.2023

In Compliance with the order of the Hon’ble NGT dated 04.01.2023 in O.A. No. 769/2022 in the matter of Shankar Dayal Mishra V/s State of Bihar, joint committee comprising of Sri Madhukant, SDO, Kahalgaon, Sri S.N. Jayaswal, Scientific Advisor, BSPCB, Patna, Sri S.N. Jha, Regional Officer, Bhagalpur, and Sri S.P. Ray regional Officer, Barauni, BSPCB was constituted for verification of facts.

Joint Committee inspected M/s Kahalgoan Super Thermal Power Plant, NTPC Limited, Khalgawn, District- Bhagalpur on 09.02.2023. In reference to the inspection report, Direction under Section 31A of the Air (Prevention and Control of Pollution) Act, 1981 vide Board’s Memo No. 309 dated 23.02.2023 was issued to the unit.

KhSTPP, NTPC Limited submitted point wise time bough action plan with target dated for compliance of the conditions mentioned in direction vide Ref. No. Khs 092-ED(Kh)/BSPCB date 04.03.2023.

BSPCB issued letter to the unit vide REF. No.762 dated 05.04.2023 for acceptance of action plant target dated and unit was directed to complete proposed action plan within target date.

Unit was inspected on 22.07.2023 by S.N. Jha, Regional Officer, Bhagalpur, BSPCB and Amish Kumar, A.S.O., BSPCB, Bhagalpur, for verification of pointwise compliance status of direction issued by the Board and action plan submitted by KhSTPP. Following official of NTPC, Kahalgaon were present during inspection-

- i. Sri N.P. Sahar, Hop,*
- ii. Sir Shyamal Mandal, AGM, ash utilization,*
- iii. Md. Khaliful Zama, AGM, ash handling,*
- iv. Sri Jagannath Day, DGM, Ash handling,*
- v. Sri Manish Pandey, Sr. Manager, EMG,*
- vi. Sri Manish Kumar, Sr. Manager, ash utilization,*
- vii. Sri Chandrasekhar, Somu, Sr. Manager, O&M civil, and*
- viii. Sir Ram Krishna Dubey, Assistant Officer, EMG*

Unit was operational during inspection with production of 2130 megawatt. One unit of 210 MW capacity was not in operation. Ash slurry was being discharged in Lagoon IIA and IIB. Ash was being lifted/excavated from lagoon IIIAB, IIIC & IIID. Toe-drain pump was under construction for re-use of water discharge from toe-drain of ash dyke. Good vegetation along ash dyke area was observed.

Pointwise compliance status of above direction and action plan submitted by unit are as following-

Sl. No.	Direction	Action plan submitted by unit	Compliance status
<i>a</i>	<i>Ensure that excavation, loading, unloading and storage of ash are done in</i>	<i>1) Additional 01No. of 12000 Ltr capacity water tanker shall be deployed 2) The annual status</i>	<i>Water is being sprinkled in ash dyke movement area. Additional truck mounted water tanker</i>

	<i>environmentally sound manner with all precautions to prevent air pollution such as regular water sprinkling and transportation of ash in covered vehicles and shall submit the status in prescribed format as per MoEF&CC, Govt. of India notification no. 5181 (E) dated 31.12.2021;</i>	<i>in prescribed format as per MOEF&CC, Govt. of India notification no 5481 (E) dated 31.12. 2021 shall be submitted at the end of FY-2022-2023</i>	<i>of 20,000 liter capacity has been deployed for water sprinkling around ash lifting/excavation area. Vehicles engaged in ash transportation were covered. Annual ash compliance report has been submitted for FY 2022-23.</i>
<i>b</i>	<i>Use anti-smog gun/truck mounted mist cannon for control of fugitive emission/ air pollution due to excavation, loading of ash from ash dykes;</i>	<i>Deployment of fog canon machine will be processed through tendering for control of fugitive emission/ air pollution.</i>	<i>At present static water sprinklers and flexible hose pipes are being used for dust suppression near ash lifting/excavation area. It was informed that vendor has been contacted for site visit and submission of technical suitability.</i>
<i>c</i>	<i>Regularly discharge/ sprinkle water on the surface of ash dyke on the other end of lifting/excavation point to avoid fugitive emission/ air pollution.</i>	<i>1) In addition to 17 nos. of tractor mounted tankers, 02 nos. of 12000 Ltr water tankers will be added for sprinkling of water throughout the year for effective suppression of ash from ash dyke road. 2) Additionally, 2</i>	<i>One no. Of 12000 liter and one no. of 20000 liter water tankers deployed additionally through transporting agencies for water sprinkling around lifting/excavation area.</i>

		more no of flexible hose pipe will be installed in Lagoon III D. 3) Additionally, 200 no of static sprinkler will be installed. 4) Water ponding will be ensured by NTPC as per requirement. 5) Vegetation in all lagoons will be maintained/ensured to suppress as emission.	Flexible hose pipes have been deployed at lagoon IIID for dust suppression near lifting/excavation area . Water sprinklers have been installed in lagoon IIID. Water ponding is being done in lagoon IIIAB, IIIC and IIID. Cover of vegetation was observed at lagoon IIID.
d	Provide water jacketing sprinkling facility all fugitive dust emission.	Water jacketing in all the four lagoons will be ensured by NTPC on or before 31.12.2023 in phased manner.	Approx. 1500 meter water jacketing pipelines has been installed along lagoon IIIAB towards Ekchari Village. Purchase requisition (PR) has been raised for water jacketing around the ash dyke area (approx.16 Km. length)
e	Construct 100 % Water Bound Macadam (WBM)road around all lagoons/ash dykes	Construct 100 % Water Bound Macadam (WBM) road around all lagoons/ash dykes	Construction of WBM road along lagoon II (APPROX.2.7 Km.)completed. Construction of GSB Road at 1st raising of lagoon IIIAB & IIIC in progress. PO issued for

			<i>construction of WBM road at Ekchari side.</i>
<i>f</i>	<i>Construction Pavement Quality Concrete (PQC)ROAD FROM Ekchari end to Nariyan Ballah Bridge and AWRS pump house to Mazda Village for movement of heavy vehicles.</i>	<i>Award of contract and start of construction- PQC road by 30.06.2023</i>	<i>Purchased order issued for PQC Road.</i>
<i>g</i>	<i>Ensure lifting of ash from 4th raising and then 3rd raising in lagoon III AB & III C to meet the demand of ash to NHAI road projects.</i>	<i>NTPC Kahalgaon in planning for lifting from 3rd raising in lagoon III AB & IIIC after suitable modification in ash dyke bund to meet the demand of NHAI road projects</i>	<i>It was informed that proposal for dismantling of lagoon III AB & III C 4th raising initiated, as proposal has been sent to department.</i>
<i>h</i>	<i>Install adequate no. of CCTV camera at different locations of ash dyke to monitor the activities involving ash lifting transportation with covered vehicles</i>	<i>NTPC Kahalgaon will install 12 nos. of CCTV across different locations of Ash dyke to monitor the activities involving ash lifting and transportation with covered vehicles</i>	<i>Purchase requisition (PR) has been raised for procurement and installation of 12 Nos. CCTV.</i>
<i>i</i>	<i>Ensure installation of adequate number of high mast lighting in and around ash dyke area</i>	<i>Additional 08 nos. high mast light will be installed in ash dyke area.</i>	<i>Purchase requisition (PR) has been raised for additional 8 nos. of high mast lights with 6 Nos. of existing high mast lights.</i>
<i>j</i>	<i>Expand dry ash collection system by</i>	<i>Total capacity after installation of all</i>	<i>Installation and commissioning of two</i>

	<i>installing more dedicated silos for storage of dry fly ash for at least 16 hours of ash based on installed capacity.</i>	<i>silos will be 6200MT, which will cater the storage requirement of 16 Hours of dry fly ash. (Note: Considering Sp. Coal of 0.75 kg/k Wh, Avg. PLF-75% (last four years) and Avg. ash content 35 %, Total DFA produced in 16 hours shall be approx.5900 MT.</i>	<i>silos (1500 MT each) completed. Total dry fly ash silo capacity is 52000 MT, is Erection work started for construction of proposed on new silo of capacity 1000 MT.</i>
<i>k</i>	<i>Submit future plan on ash utilization with MoEF&CC Govt. of India notification.</i>		<i>Future plan of ash utilization for 5 years submitted.</i>
<i>l</i>	<i>Ensure regular inspection by dedicated supervisor on use of water sprinkling system for dust suppression/control of fugitive emission.</i>	<i>Additionally, 03Nos. of dedicated supervisor have been deployed for monitoring/ control of fugitive dust emission.</i>	<i>Work order awarded.</i>
<i>m</i>	<i>Submit time bound action plan for compliance of the aforesaid directions.</i>		<i>Action plan submitted to the Board vide Ref. No. Khs 092ED(Kh)/BSPCB dated 04.03.2023.</i>

7. The NTPC, Respondent No.6, has filed affidavit dated 03.11.2023 bringing on record the Present Status of the Report and Action Plan submitted to the Bihar State Pollution Control Board

vide letter dated 04.03.2023 as Annexure-R-6/F which reads as under:-

**“PRESENT STATUS OF THE REPORT & ACTION PLAN
SUBMITTED TO THE BIHAR STATE POLLUTION CONTROL
BOARD VIDE LETTER NO. KHS092: ED (KH)/BSPCB DATED
04.03.2023**

Sl. No.	OBSERVATIONS	STATUS AS ON 04.03.2023	ACTION PLAN AS ON 04.03.2023	TARGET DATE AS PER ACTION PLAN DATED 04.03.2023	PRESENT STATUS (AS ON 31.10.2023)
(a)	Ensure that excavation, loading, unloading and storage of ash are done in environmentally sound manner with all precautions to prevent air pollution such as regular water sprinkling and transportation of ash in covered vehicles and shall submit the status in prescribed format as per MoEF&CC, Govt. of India notification no. 5181 (E) dated 31.12.2021;	1) NTPC Kahalgaon is ensuring Pond ash transportation with 100% Covered vehicles. 02 nos. of 12000 Ltr. Capacity water tankers deployed through transporting agencies for the lagoons from which ash evacuation is being done. 2) Polymer sheets are being used for covering the top surface of ash – in non - evacuation zone as per requirement.	1) Additional 01 no. of 12000 Ltr. Capacity water tanker shall be deployed. 2) The annual status in prescribed format as per MoEF&CC, Govt. of India notification no. 5481(E) dated 31.12.2021 shall be submitted at the end of FY-2022-23.	15.03.2023 15.05.2023	1. Instead of a water tanker, having capacity of 12000 Litres, one n No. of 20000 litres water tanker (with increase in capacity) has been deployed in lagoon 3D in the month of March 2023. This is in addition to two 12000 litres water tankers already operating, as stated in status on 04.03.2023. Annual Ash compliance report was sent on 01.05.2023 to BSPCB, CPCB

		installed at 02 locations in IIID – Lagoon from where ash evacuation is in progress 3) 180 nos. of static sprinkler are under operation in Lagoon-IIID and 100 no's are being installed. 4) Water ponding in approx.. 30% area in Lagoon IIID & 40% in Lagoon IIIAB. 5) Long Kass grass of approx.. 1.50 lakh sq. m. in Lagoon III-D and 1.75 lakh sq.m. in	flexible hose pipe will be installed in Lagoon IIID. 3) Additionally, 200 nos. of static sprinkler will be installed. 4) Water ponding will be ensured by NTPC as per requirement. 5) Vegetation in all lagoons will be maintained/ensured to suppress ash emission	length 100 meter each has been deployed at 05 locations at Lagoon-IIID along Mazdha village side for sprinkling of water (through 03 personnel) inside the lagoons. 15.04.2023 Continuous process Continuous process	3) Work Completed. Total 400 nos. static water sprinklers have been installed in 3D area on 15.04.2023. 4) Water pipelines have been kept in service at 15 locations and ponding has been ensured in Lagoon-IIID, 15 nos. of locations in IIIAB & 9 nos. of locations at IIC [by discharge of water through pipelines]. 5) Purchase order was awarded for plantation of Long Kass grass. All plantation
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		<i>Lagoon III AB & C.</i>			<i>work has been completed, as planned.</i>
<i>(d)</i>	<i>Provide water jacketing sprinkling facility all-round the ash dyke for control of fugitive dust emission</i>	<i>PR initiation in process. As a PILOT Project- Ekchari Village - IIID side 1.200 km water jacketing will be implemented before 31.03.2023.</i>	<i>Water jacketing in all the four lagoons will be ensured by NTPC Ltd. on or before 31.12.2023 in phased manner.</i>	<i>31.12.2023</i>	<i>1) 500 nos. of PVC sprinkler and 243 nos. of Bronze sprinkler have been installed on 04.07.2023.</i> <i>2) 1500 mtr. water jacketing pipe has been installed along the III#AB towards Ekchari side and is running successfully.</i> <i>3) 250 Nominal Bore, Mild Steel, Electro Resistance Welding Pipe for 9 KM Purchase Order has been awarded to M/s SAIL. Material delivery completed. Proposal for service contract for laying of water sprinkler is in tendering process.</i> <i>4) Proposal initiated for procurement of 100 Nominal</i>

					Bore, Heavy duty pipe for 16 KM. Proposal is under tendering stage.
(e)	Construct 100% Water Bound Macadam (WBM) road around all lagoons/ash dykes	1. Construction of WBM road for 2.7 Km (along lagoon II – Maheshmunda in progress. 2. Construction of GSB road Started Dyke/ 1st raising of Lagoon III AB&C in progress. 3. Proposal for construction of WBM road Lagoon III AB & C-4th & 3rd raising-is under tendering process.	NTPC will ensure WBM roads laying at different elevation and at different lagoons in phased manner from 31.08.2023 to 31.03.2024.	31.03.2024	1) Contract awarded for Water Bound Macadam (WBM) road. Construction of WBM Road has been completed in the month of June 2023. 2) Work awarded for construction of Granular-Sub-base Road at Lagoon III AB&C – (80% construction completed). 3) Contract awarded for Water Bound Macadam (WBM) Road-Ekchari side-Levelling works completed - Work in progress. (expected date of completion of work is November

					2023). 4) Starter dyke of Lagoon III AB &C-Made motorable-7.0 KM in the month of September 2023.
(f)	Construct Pavement Quality Concrete (PQC) road from Ekchari end to Nariya Nallah Bridge and AWRS pump house to Mazda Village for movement of heavy vehicles.	Construct Pavement Quality Concrete (PQC) road- 3.00 km length, in tendering process.	Award of contract and start of construction – PQC road by 30.03.2023.	31.12.2023	Contract awarded for Pavement Quality Concrete/PQC road. Survey for PQC road has been completed. Design ix has been received at the site. Materials (cement sand & aggregate) sent to NTPC third party approved lab Visvesvaraya National Institute of Technology Nagpur for evaluation. Expected date of start of work is mid of November 2023 and is likely to be completed by March 2024.
(g)	Ensuring lifting of ash from 4 th raising and then 3 rd raising	Ash evacuation/ slurry	NTPC Kahalgaon is planning for	31.03.2024	The height of the ash dyke shall be

	in lagoon IIIAB & IIIC to meet the demand of ash to NHAI road projects.	discharge is being done from lagoons in a strategic manner by ensuring overall safety/ stability of dyke and meeting the NHAI road project demands.	lifting from 3 rd raising in Lagoon III AB & C after suitable modification in ash dyke bund to meet the demand of NHAI road projects.		reduced by dismantling the Topmost (4 th) raising thereby reducing the fugitive emission under high speed wind condition. This ash will be sent to NHAI project sites. Proposal for dismantling of Lagoon 3ABC 4 th raising has been initiated and is under approval process. It is likely to be completed by March 2024.
(h)	Install adequate no. of CCTV cameras at different locations of ash dyke to monitor the activities involving ash lifting and transportation with covered vehicles.	Proposal initiated for installation of 12 no's CCTV cameras at strategic location.	NTPC Kahalgaon will install 12 nos. of CCTV across different locations of Ash dyke to monitor the activities involving ash lifting and transportation with covered vehicles.	31.10.2023	At present 2 nos. of CCTV cameras have been installed. Contract proposal has been initiated for procurement and installation of additional 12 CCTV cameras. file is under process of approval through Procurement Group. this is

					likely to be completed by 31.03.2024. This time is likely to be taken since necessary IT infrastructure has to be created in and around Ash dyke area [approx.. 1500 acres] for recording and storage of the data. Further infrastructure for power supply around the periphery of Ash Dykes also needs to be augmented in order to support the CCTV cameras and IT infrastructure.
(i)	Ensure installation of adequate number of high mast lighting in and around ash dyke area	Total 06 no's lighting mast installed and is operational at different locations of Ash Dyke.	Additional 08 nos. high mast light will be installed in ash dyke area.	31.03.2024	Work Contract has been awarded. Drawings related to installation of High Mast Lights have been sent to NTPC Engineering Department for approval.
(j)	Expand dry ash collection system by	Present Dry Fly Ash Silo	Total capacity after	31.12.2024	Unit-3&4 – Commissioning

	installing more dedicated silos for storage of dry fly ash for at least 16 hours of ash based on installed capacity.	capacity is 5200 MT after recent commissioning of two new ash silo for Unit 3&4. Construction of new silos of 1000 MT capacity is in progress for additional ESP passes of Stage-I.	installation of all silo's will be 6200 MT, which will cater the storage requirement of 16 Hours of dry fly ash. (Note: Considering Sp. Coal of 0.75 kg/kWh, Avg. PLF-75% (last four years) and Avg. ash content 35%, total DFA produced in 16 hours shall be approx. 5900 MT.		of New Silo of capacity 2*750 T is completed & is presently in service. Now total capacity of silo is 5200 MT. Silo—8 of capacity 1000 MT erection work is in progress. Target date: 31.12.2024.
(k)	Submit Future plan on ash utilization with MoEF&CC Govt. of India notification	Attached as Annexure-A to status report dated 04.03.2023.			Same as submitted along with the status report dated 04.03.2023.
(l)	Ensure regular inspection by dedicated supervisor on use of water sprinkling system for dust suppression/control of fugitive emission	1. Cross functional team constituted and headed by AGM-AUD for daily monitoring of fugitive ash suppression/control activities in Ash Dyke. 2. A cross	Additionally, 03 No's of dedicated supervisor have been deployed for monitoring/control of fugitive dust emission.	Regular in progress.	Work awarded for monitoring/control of fugitive dust emission at the site. Activity Log book is maintained at site by the NTPC contractor.”

		<i>functional team comprising of HOD's of various department and headed by HOD-ADM for site visit/ monitoring of Ash dyke on fortnightly basis.</i>			
		<i>3. 02 no's- Civil supervisors, Watch and Ward-03 no's Ash dyke Civil supervisors and 21 no's Ash handling -Patrolling guard deployed by ADM department on daily basis.</i>			

8. In the Inspection Report of 09.02.2023 the inadequacies in compliance of the environmental regime by the NTPC are of main concern which we find in paragraphs k, l & m of the Report which have already been extracted hereinabove. The Report mentions that there was high fugitive emission at ash dyke no. IIIAB due to lifting, excavation of ash with the help of Poclain and JCBs and movement of vehicles carrying ash; there was no static/permanent water

sprinkler around ash dykes or arrangement for dust suppression/control of fugitive emission. The Unit uses mobile water on peripheral roads. In spite of the above arrangements, there was no proper control of fugitive emission around the ash dyke no. IIIAB; the vehicles carrying ash, passing through nearby Ekachari end are also causing air pollution in nearby area in addition to the ash lifting activities from ash dyke no. IIIAB.

9. The Committee, therefore, recommended that the Unit shall expand its dry ash collection system by installing more silos for storage or dry ash for at least 16 hours of ash based on installed capacity. The Unit was also required to submit future plan on ash utilization consistent with the Ministry of Environment, Forest and Climate Change notification. The Unit was further directed to ensure water sprinkling system is put in place for dust suppression/control of fugitive emission. The Unit was also directed to ensure lifting of 4th raising and then 3rd raising in Lagoon IIIAB and IIC to meet the demand of ash to the National Highways Authority of India road projects. The Unit was also required to provide water jacketing sprinkling facility all around the ash dyke for control of fugitive dust emission and construct 100% Water Bound Macadam (WBM) road around all lagoons/ash dykes. The Unit was also required to ensure installation of adequate number of lifting mast around ash dyke area. The Unit was also required to use anti smog gun/truck mounted mist cannon for control of fugitive emission/air pollution due to excavation, loading of ash from ash dykes.

10. The Inspection Report of the inspection carried out on 22.07.2023 has noted the compliance status, which has already been extracted hereinabove, shows compliance of water jacketing pipelines along lagoon IIIAB; construction of WBM road along Lagoon II; construction of GSB road at 1st raising of lagoon IIIAB and IIIC in progress; installation and commissioning of two silos (1500 MT each). It is mentioned that erection work started for construction of proposed 1 new silo of capacity 1000 MT; future plan for fly ash utilization for five years has been submitted, purchase requisition has been placed for purchase of 12 CCTV; 12000 litres and one 20000 litres water tankers have been deployed through transporting agency for water sprinkling around lifting/excavation area; flexible hose pipes have been deployed at lagoon IIID for dust suppression near lifting/excavation area and water sprinklers have been installed in lagoon IIID, cover of vegetation was also observed, water ponding is being done in lagoon IIIAB, IIIC, and IIID.

11. The NTPC, Respondent No.6, in its Status Report dated 04.03.2023 Annexure-R-6/F to the affidavit, has also given the same information as noted in the Inspection Report of the inspection dated 22.07.2023. The Inspection Report of 22.07.2023 shows that the steps taken by the NTPC with reference to the recommendations of the Committee in the NTPC Status Report dated 04.03.2023 have been complied.

12. However, the learned Counsel for the NTPC, Respondent No.6, submitted that all the recommendations made by the Committee in its report have been complied with by the NTPC which also confirmed in the subsequent inspection of 22.07.2023 and, therefore, the NTPC has been sincere in its efforts towards amelioration of the environment and cannot be held to be a violator.

13. However, the fact remains that the Inspection Report of inspection carried out on 09.02.2023 showed several violations which have been extracted hereinabove, and therefore, recommendations had to be made to the NTPC to take remedial measures.

14. We are, therefore, of the opinion that the NTPC would be liable for environmental violations between the period when the violations have been noticed and the subsequent inspection report showing compliances/part compliances of the recommendations for which the Respondent No.6 would be liable for payment of Environmental Compensation for causing damage to the environment.

15. We, therefore, dispose of the present Original Application with a direction to the Respondent No.4, Bihar State Pollution Control Board, to compute Environmental Compensation against the Respondent No.6, NTPC, for its past violations after putting the Respondent No.6 to notice with regard to the computation made and thereafter pass appropriate orders in accordance with law giving an opportunity of being heard to the said Respondent.

16. I.As. if any, stands disposed of accordingly.

17. There shall be no order as to costs.

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B. AMIT STHALEKAR, JM

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DR. ARUN KUMAR VERMA, EM

**Kolkata,
February 12th, 2024,
Original Application No.115/2023/EZ
(Earlier O.A. No.769/2022/PB)
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