

F. No. 11/3/2018- HSMD
Government of India
Ministry of Environment, Forest & Climate Change
(HSM Division)

Indira Paryavaran Bhawan
Jor Bag Road, Aliganj
New Delhi – 110003

Date: 19th July, 2024

OFFICE MEMORANDUM

Sub.: Minutes of the seventh meeting of 'Fly Ash Management and Utilization Mission' held on 26.06.2024 - reg.

The undersigned is directed to refer the seventh meeting of 'Fly Ash Management and Utilization Mission' held on 26.06.2024 at 03:00 PM at Indira Paryavaran Bhawan, New Delhi to review the status of actions taken based on the decisions made by the Mission in the meeting held on 31.01.2024.

2. In view of the above, minutes of the seventh meeting of 'Fly Ash Management and Utilization Mission' is enclosed herewith.

3. It is requested to kindly furnish the action taken report to Central Pollution Control Board.

This issues with the approval of the Competent Authority.

Encl.: As stated

Yours sincerely,


(Dr. Satyendra Kumar)
Director

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To:

1. Secretary (Coal), Ministry of Coal, New Delhi
2. Secretary (Power), Ministry of Power, New Delhi
3. Secretary (Mines), Ministry of Mines, New Delhi
4. Chairman, Ministry of Railways (Railway Board), New Delhi
5. Chief Secretary, State of Uttar Pradesh
6. Chief Secretary, State of Madhya Pradesh

7. Chairman, CPCB, New Delhi
8. Additional Chief Secretary/Principal Secretary, Energy, Government of Uttar Pradesh
9. Additional Chief Secretary/Principal Secretary, Energy, Government of Madhya Pradesh
10. Additional Chief Secretary/Principal Secretary, Industries, Government of Uttar Pradesh
11. Additional Chief Secretary/Principal Secretary, Industries, Government of Madhya Pradesh
12. Director General, Directorate General of Mines Safety, Jharkhand
13. Additional Chief Secretary/Principal Secretary, Environment Department, Government of Madhya Pradesh
14. Additional Chief Secretary/Principal Secretary, Environment Department, Government of Uttar Pradesh
15. Chairman, UPPCB, Uttar Pradesh
16. Chairman, MPPCB, Madhya Pradesh
17. District Magistrate, Sonbhadra, U.P. (for stone crushers and all private mines)
18. District Magistrate, Singrauli, M.P. (for stone crushers and all private mines)
19. Director, CSIR-NEERI, Nagpur
20. CMD, M/s NCL
21. CMD, M/s NTPC Limited
22. CMD, M/s Lanco Anpara Power Pvt. Ltd.
23. CMD, M/s Hindalco Industries Ltd.
24. CMD, M/s UPRVUNL
25. CMD, M/s Grasim Industries Limited, Chemical Division, Renukoot, Sonbhadra
26. CMD, M/s Birla Carbon India Pvt. Ltd., Renukoot, Sonbhadra
27. CMD, M/s Sasan Power Limited, Singrauli
28. CMD, M/s APMDC Ltd., Singrauli
29. Industries, Mines and Stone crushers concerned in Singrauli and Sonbhadra Region.

Copy to:-

1. PSO to Secretary (EF&CC)
2. PPS to AS(NPG)
3. SO, HSMD

Minutes of the 7th meeting of Fly Ash Management and Utilization Mission held on 26.06.2024 at 03:00 PM

The seventh meeting of 'Fly Ash Management and Utilization Mission' was convened on 26th June, 2024 at 03:00 PM to review the status of actions taken based on the recommendations/decisions made by the Mission in the meeting held on 31.01.2024. The list of participants is enclosed as Annexure.

2. At the outset, Secretary,EFCC welcomed all the participants. Additional Secretary, MoEF&CC briefed about the decisions taken by the Mission in last meeting held on 31.01.2024.

3. A presentation was made by the Madhya Pradesh Pollution Control Board on progress of implementation of action plans and environmental guidelines for stone crushing units published by CPCB for control of air pollution. The following details were presented:

- i. 05 Thermal Power Plants of capacity 12140 MW generated 158.96 LMT ash in Singrauli, Madhya Pradesh in FY 2023-24. Status of implementation of action plan for fly ash utilisation in the region were presented.

TPP name	Year 2021-22		Year 2022-23		Year 2023-24	
	Generation of ash (L MT)	Utilisation (%)	Generation of ash (L MT)	Utilisation (%)	Generation of ash (L MT)	Utilisation (%)
NTPC Vindhyachal Singrauli	82.38	53.05%	76.64	37.31%	66.83	56.2%
Sasan Power Limited	53.47	52.35%	45.99	109.5%	48.98	100%
Mahan Energen Limited	8.36	25.46%	9.08	100.2%	14.27	103.7%
Jaypee Nigrie Super TPP	15.79	89.55%	14.55	100.09%	18.06	89.1%

Vill. Nigrie, Singrauli						
Hindalco Industries Ltd, Mahan Aluminium, Singrauli	11.54	85.55%	11.82	79.4%	10.82	131.1%
Total	171.54 LMT	56.96%	158.08 LMT	70%	158.96 LMT	83.04 %

- ii. Status of ash utilisation by 15 TPPs in Madhya Pradesh including TPPs in Singrauli:

Year	Ash generation (LMT)	Ash utilisation (LMT)	Utilisation (%)
FY 2021-22	285.12	176.99	62.07%
FY 2022-23	303.06	223.8	73.84%
FY 2023-24	315.3	299.6	95%

- iii. 05 thermal power plants (TPPs) in the Singrauli region have utilized 132.01 lakh metric tonnes (LMT) of ash in FY 2023-24. This includes 4.45 LMT (3.3%) for brick production, 15.16 LMT (11.4%) for filling low-lying areas, 22.5 LMT (17%) for road construction, 26.5 LMT (20.1%) supplied to cement industries, and 63.3 LMT (47.9%) used for backfilling in abandoned mines, overburden (OB) mixing, stone quarry, and dyke raising activities.
- iv. 15 TPPs in Madhya Pradesh have utilized 299.6 LMT generated ash for backfilling in abandoned mines, overburden (OB) mixing, stone quarry, and dyke raising activities (32.9%), roads construction (25.7%), supplied to Cement industries (23.2%), filling low-lying areas (14.4%) and bricks manufacturing (3.6%).
- v. 02 TPPs in M.P. have utilized less than 80% ash in year 2023-24 namely, NTPC Vindhyachal, Singrauli (56.2%) and Sanjay Gandhi TPS, MPPGCL (69.01%). Further, ash utilization compliance cycle (03 year) of Jaypee Nigrie STPP was found non-satisfactory for year 2023-24.
- vi. STPSS, MPPGCL raised the concerns regarding difficulty in evacuation of current ash from operational ash as the ash pond is surrounded by hilly terrain

and there is absence of partition dyke. It was requested to consider the ash dumped in the low lying area of ash pond (up to El 481 M.) to create an operational platform and to construct a partition dyke for 2 lagoons for simultaneous operations.

- vii. CPCB has clarified that as per Ash Utilization Notification, 2021, operational ash pond/dyke cannot be treated as both active ash pond and low-lying area for ash utilization.
- viii. MoU between NTPC Vindhyanchal and CIL was signed on 31.05.2024 for Gorbi Pit 2 for ash filling. Contract signed for supply of ash to NHAI for road construction projects, which expected to increase ash utilization. Rail infrastructure to be constructed for transportation of ash from TPP to Gorbi mine. Creation of platform surrounding mine void for ash backfilling in progress. CTO to be obtained from MPPCB within a month. MoU was signed for development of infrastructure for backfilling activities.
- ix. It was informed that lease rent will be applicable to fly ash dumping, however it will be charged if any, on infrastructure requirement to be built on the land and nominal lease rent will be applicable to the extent the policy approved by the Cabinet. MoU has been signed for 6 road projects 15 LMT. NCL was requested to allow more than 15,000 tonnes per day against 3000 tonnes per day dumping of fly ash in existing pit in Gorbi mine. NCL informed that conditions will be accepted as per SOP and asked them to apply for the permission. Also, MPPCB is requested to permit transportation of ash from thick tarpaulin polythene covered truck from pond to NHAI for 20-30 kms distance only. Expected to achieve 80% ash utilization.
- x. Mines have been allocated to Amarkantak TPS and MoU has been signed.
- xi. Vindhyanchal TPS indigenous pilot plant for carbon capture unit commissioned since year 2022, it captures CO₂ from flue gas. Methanol fuel can be generated as fuel. Operationalization of methanol will be done by Aug 2024.
- xii. NCL operates 08 coal mines in Singrauli, which produced 126.8 million tonnes of coal in FY 2023-24. Details of mode of coal transportation are as follows:

S. No.	Coal mine	Coal production (Million tonnes) (FY 2023-24)	Mode of Coal Transportation (Million tonnes)		CHP Capacity (MTPA)	
			Rail/ Marry-Go-Round	Road	Existing	Under Construction
1.	Amlohri OCP	15	14.68	0.91	10	2
2.	Bina OCP	10.5	7.52	3.07	4.5	9.5
3.	Block-B OCP	5.47	4.44	1.03	3.5	4.5
4.	Dudhichuwa OCP	25	18.88	3.96	20	5
5.	Jayant OCP	30	28.81	1.29	25	-
6.	Jhingurda OCP	3.34	2.71	0.61	2.5	-
7.	Khadia OCP	15	11.96	3.79	10	4
8.	Nigahi OCP	22.5	20.81	1.96	15	10
	Total	126.81	109.81 (86%)	16.62 (16.6%)	90.5	35

xiii. Action plans have been submitted by 05 Thermal Power Plants, 08 NCL coal mines, 04 private mines, 56 stone crushers and 08 railway sidings (03 ECR; 03 ECR; 02 NCL) for implementation of pollution control measures.

xiv. The following activities form action plan of various industries in M.P. have been reported under progress:

a. M/s NTPC Vindhyanchal STPP, Singrauli (13 units)

- FGD installation for SO₂ in 12 units by June, 2025
- NOX emission control measures
- % increase in fly ash utilisation (non-satisfactory for FY 2023-24)
- Renovation & modernization of ESP by Oct., 2024

- Installation of Mechanized cleaning system by May, 2024
 - Inventorization study for industries operating around the Rihand reservoir (contract awarded for 2 years)
- b. M/s Sasan Power Limited
- FGD installation for SO₂ by Dec. 2026
 - Construction of pipeline for fly ash transportation by Dec., 2024. Orders issued for procurement of equipment.
 - Gawaiya/Garra nallah- Some deposit is still there (Verification to be done by RO)
- c. M/s Mahan Energen limited
- FGD installation for SO₂ by Dec., 2026
 - Development work of railway siding. Railway's approval is pending.
 - Transportation by Merry go round by Dec., 2026
- d. M/s Hindalco Industries Ltd.: Installation of FGD installation for SO₂ in Unit-1,2,3,4,5 by Dec. 2026 and construction of RCC road by Aug. 2024.
- e. Jaypee Nigrie STPP: Installation of FGD installation for SO₂ by Dec., 2026 and % increase in fly ash utilisation (non-satisfactory for FY 2023-24).
- f. Northern Coalfields Ltd., Singrauli: Submission of final report on study conducted by CIMFR on backfilling of fly ash in OB in Nigahi Mine by October, 2024.
- g. NCL, Khadia Project
- Carrying capacity of Mine & traffic study (EC Condition) by Dec., 2024
 - Installation of CEQMS (EC Condition) by May, 2024
 - Installation of Automatic wheel washing system (Added on 01.06.2024) by Dec., 2024
- h. NCL, Amlori Project
- Installation of 01 CAAQMS (EC Cond.) by Sep., 2024

- Transportation of material by rail/conveyor belt (EC Cond.) by Dec., 2024
 - Installation of Automatic wheel washing system (Added on 01.06.2024) by Dec., 2024
 - Carrying capacity of Mine & traffic study (EC Cond.)
- i. NCL, Nigahi
- Additional 10 MTPA CHP by Dec., 2024
 - Construction of CC Road (Nigahi wharf wall to Central workshop) by Dec., 2024
 - Installation of CEQMS at ETP (EC Cond.) (Connectivity is pending)
 - Deployment of trucks based on Hybrid Fuel Technology/ CNG/ EVs (EC Cond.) by Dec., 2024
 - Installation of Automatic wheel washing system (Added on 01.06.2024) by Dec., 2024
- j. NCL, Jayant Project
- Installation of CWQMS
 - Deployment of trucks based on Hybrid Fuel Technology/ CNG/ EVs (EC Cond.). Timelines not given.
 - Installation of fixed type fog canon (EC Cond.) by July, 2024
 - Fixed type water sprinkler along haul road till CHP, Rly siding & OB dump area (EC Cond.) by August, 2024
 - Eco park will be developed (EC Cond.) by March 2025
 - Carrying capacity of Mine & traffic study (EC Cond.) by Dec., 2024
 - Action plan for cleaning of balliya nallah. Timelines not given.
 - Installation of Automatic wheel washing system (Added on 01.06.2024) by Dec., 2024
- k. NCL, Block-B Project
- 4.5 MT coal handling plant by Oct., 2024

- Other roads by June 2024
 - Installation of Automatic wheel washing system (Added on 01.06.2024) by Dec., 2024
- I. NCL, Dudhichua Project
- Approach road in front of GM office (500 m) (Completed, verification awaited)
 - Study of existing ETP (Oversight committee observation). Report awaited.
 - Action plan for cleaning of baliya nallah. Timeline not given.
 - Installation of Automatic wheel washing system (Added on 01.06.2024) by Dec., 2024.
- m. NCL, Bina ext.
- Construction of CHP of 9.5 MTPA Capacity by June, 2024
 - ETP upgradation by July, 2024
 - Installation of CEQMS (connectivity to CPCB server)
 - Installation of Automatic wheel washing system (Added on 01.06.2024) by Dec., 2024
 - Carrying capacity of Mine & traffic study (EC Cond.) by Dec., 2024
- n. NCL, Jhingurda: Plantation over an area of 60 Ha within a period of 02 year (EC Condition) by FY 2025-26 and installation of automatic wheel washing system (Added on 01.06.2024) by Dec., 2024.
- o. APMDC Ltd.-Sulyari Open Cast Project
- Fly ash utilization in OB. Timeline not given
 - Immediate Installation of CHP (EC Cond.) by March 2025
 - Railway siding construction without delay (EC Cond.) by March 2025
 - Crusher and in-pit belt conveyor with mist type sprinkler (EC Condition). Timeline not given
 - CWQMS in ETP/STP (EC Condition). Timeline not given.

- ETP for workshop & CHP (added on 01.06.2024). Timeline not given.
- p. Sasan Power Limited (Moher & Moher Amlohri extension coal mine)
- Utilizing fly ash in OB Dumps
 - Procurement of mist canon by March 2024
 - Rehabilitation & resettlement of affected people – Silt removal is going on, planning to erect barriers by May, 2024
- q. Jaiprakash Power Ventures Ltd., Amelia (North) Coal Mine
- Fly ash utilization in OB dumps will be done according to CIMFR study. Report awaited.
 - Plantation on dump area towards kanchan river (EC Cond.) by Monsoon 2024
 - Fixed water sprinklers near railway siding (EC Cond.) by Aug., 2024
 - Dedicated road for coal transportation within ML & Outside ML up to NH with air pollution measures like Fog canons, wind barrier & green belt (EC Cond.). Timelines not given.
- r. THDC India Ltd., Amelia Coal Block (New mine)
- Fly ash utilization in OB dumps will be done according to CIMFR study. Timelines not given.
 - Construction of CHP with RLS – under progress for 10.68 km out of 14 km by Nov., 2024
 - Construction of Permanent railway siding- Land not allotted by year 2026
 - Ultra sonic Flow meter in ETP/STP (EC Cond.) by Sep., 2024
 - Installation of 03 No. Of CAAQMS. (EC Cond.). 01 operational and 01 proposed.
 - Installation of STP for township (CTO Cond.). Timelines not given.
- s. East Central Railway, Spur III & X
- Fixed water sprinklers by Sep., 2024
 - Work as per CPCB Guidelines by Dec., 2024

- Status of control of dust found un- satisfactory
- t. East Central Railway, Mahedaiya
- Fixed water sprinklers by Sept 2024
 - Wind breaking wall by Sept 2024
 - Construction of approach road by Sept 2024
 - Work as per CPCB Guidelines by Dec 2024
 - Status of control of dust found un- satisfactory
- u. West Central Railway, Gondawali showed no substantial progress w.r.t. the following activities:
- Green belt around coal siding area by Sep., 2024
 - Dust Protection walls by Dec., 2024
 - Water sprinkling system or tankers by Dec., 2024
 - Drainage facility by Dec., 2024
 - A pucca circulating handling area by Dec., 2024
 - All weather approach Road by Dec., 2024
- v. West Central Railway, Bargawan showed no substantial progress w.r.t. the following activities:
- Dust Protection walls (1300 m) by Dec., 2024
 - Water sprinkling system -1000 m by Aug., 2024
 - A pucca circulating handling area by Aug., 2024
 - Drainage facility by Aug., 2024
 - All weather approach Road by Aug., 2024
 - Green belt around the coal siding area by Sep., 2024
- w. West Central Railway: Gajra Bahra
- Dust Protection walls (1.5 m height extension). No timeline reported.
 - Water sprinkling system -500 m- Wall mounted sprinkling system- Material received. No timeline reported

- Water sprinkling system -700 m- Movable sprinkling system. No timeline reported
 - Pucca circulating handling area
 - All weather approach Road. No timeline reported
 - Green belt around the coal siding area. No timeline reported
- xv. Action plans have been submitted by 56 stone crushers. 48 stone crushers have installed dust containment system, 41 installed wind breaking wall, 48 have arrangements for regular cleaning and wetting. 08 stones crushers are closed by Collector, Singrauli.
- xvi. Direction issued to Collector, Singrauli & RO vide dated 18.04.2024 to submit action plan for stone crushers as per CPCB Guidelines. RO, Singrauli issued directions to crushers vide dated 30.04.2024 to install air pollution control equipment as per CPCB Guidelines. Closure notices were issued to 15 stone crushers (capacity 200 TPH) by RO, Singrauli for non-installation of air pollution control equipment.
- xvii. Notices were issued to 23 TPPs, industries, coal mines and railway sidings for non-compliances of action plan in May, 2024. Environmental compensation of approximately Rs. 138.7 crore have been levied on 13 TPPs/coal mines/railway sidings for non-compliance. The order of NGT dated 18.01.2022 has been quashed by Hon'ble Supreme Court.
- xviii. MS, CPCB chaired a review meeting held on 30.04.2024. The following recommendations were made:
- TPPs having low ash utilization were directed to submit monthly action plan for achieving 100% ash utilization. All TPPs and coal mines to complete pending activities listed under action plans and submit time-bound action plan to comply with the conditions mentioned in EC and Water/ air consent.
 - Sasan Power Ltd. to remove fly ash flowing into Gawaiya and Garra drain and construction of pipeline for ash transportation.
 - Mahan Energen to hold meeting with WCR, Jabalpur for non-availability of space for rail transportation of ash.

- Instructions to ECR & WCR for storing coal inside the premises and imposition of penalties against non-compliance.
 - ECR and WCR to submit time-bound action plan to comply with the conditions mentioned in Water/ air consent.
- xix. A review meeting was held by Collector, Singrauli on 12.06.2024.
- xx. Sasan Plant has shifted from pipeline to road for fly ash transportation from ash dyke to its mine for mixing with overburden. Currently, it is generating 4 Lakh MT per month. For transporting through pipeline, change in law was claimed in CERC and the petition is pending for hearing (Regulatory approval is in progress). Approval for Conveyor belt of 18 km from their plant to mine for ash transportation, was obtained from DGMS. At present, 5100 MT per day (~200 trips per day) of ash is being transported.
- xxi. Mahan Energen proposed railway sidings for ash transportation. Coal transportation from Singrauli and Suliyari mines will be done through conveyer belt to the TPP. Forest (Stage 2) clearance will be obtained by July 2024 and construction will start afterwards.
- xxii. Timelines for deployment of trucks not available due to non-availability of CNG and EV trucks in mining areas by Jayant Project. Request for modification in EC conditions will be placed.
- xxiii. Pollution control measures earlier were being implemented in stone crushers as per MPPCB guidelines. After CPCB published guidelines in 2023, it is being implemented as per CPCB guidelines which mandate every stone crushers for installation of dust control equipment.
4. A presentation was made by the Uttar Pradesh Pollution Control Board on the progress of implementation of action plans and environmental guidelines for stone crushing units published by CPCB for control of air pollution. The following details were presented:
- i. 06 TPPs in Sonbhadra namely, M/s UPRVUNL, Anpara TPS, M/s UPRVUNL, Obra TPS, M/s NTPC Shaktinagar TPS, M/s NTPC Rihand Nagar, M/s Hindalco Industries Ltd. (Renusagar) and M/s Lanco Anpara Power Ltd have submitted 5-year action plan for 100% utilisation of ash.

- ii. 06 TPPs of capacity 10670 MW produced 160.7 LMT ash in FY 2023-24. Status of fly ash utilization by 06 TPPs in Sonbhadra, U.P. were reported as below:

Financial Year	Total quantity of ash generated (LMT)	Total quantity of ash utilised (LMT)	% ash utilisation
2021-22	151.1	57.9	38.3%
2022-23	161.9	56.8	35.08%
2023-24	160.7	101.8	63.3%

- iii. 03 TPPs in Sonbhadra region have low ash utilisation level namely, Lanco Anpara (23.6%), Anpara, UPRVUNL (51.67%), NTPC Shaktinagar (40.4%). Anpara 51.67%, published 2 EOIs for establishment of cement plants and transportation of ash, discussed with various vendors and will be finalized and low lying areas have been identified. Shaktinagar (2 million tonnes) and Vindhyanchal (8 Million tonnes) are at same location and are adjacent to each other has been facing difficulty in utilisation. It was informed that Ash will be supplied to NHAI and road construction projects. NTPC Singrauli is also signing agreements for gorbi mine and utilization in road project. Lanco (23.6%), orders were given for 15 LMT ash, NCL has been requested for allocation of mine void for ash disposal. NCL informed that mine closed to the TPP will be closed in 1.5 yr and will be allocated accordingly.
- iv. Out of 101.8 LMT ash generation in FY 2023-24, 46.9 LMT ash was filled in low lying areas, 38.69 LMT was utilised in construction of roads and highways, 13.3 LMT ash supplied to cement industries, 2.33 LMT supplied to brick manufacturers and 0.43 LMT ash were used for construction of geo polymer roads.
- v. Sonbhadra region has 05 NCL coal mines and had produced total 59.48 MTPA coal in FY 2023-24. Details of mode of coal transportation are as follows:

S. No.	Coal mine	Coal production (Million tonnes) (FY 2023-24)	Mode of Coal Transportation (Million tonnes)			CHP Capacity (MTPA)	
			Rail/ Marry- Go- Round	Road	BPC	Existing	Under Construction
1.	Bina OCP	10.5	7.52	3.07	-	4.5	9.5
2.	Dudhichuwa OCP	25	18.88	3.96	-	20	5
3.	Kakri OCP	1.84	0.98	1	-	-	-
4.	Khadia OCP	15	11.96	3.79	-	10	4
5.	Krishnashila OCP	7.5	4.96	1.67	2.68	4	-
	Total	59.84	44.3 (74%)	13.49 (22.5%)	2.68	38.5	18.5

- vi. Action plans have been submitted by 06 TPPs, 03 industries, 05 coal mines (NCL), and 313 stone crushers for implementation of air pollution control measures. The following activities form action plan of various industries in U.P. have been reported under progress:
- a. M/s NTPC SSTPS, Shaktinagar to install FGD in all 7 units and expand AWRS capacity by March, 2025.
 - b. In M/s NTPC Rihandnagar SSTP, commissioning of FGD and DAES (Stage I & III) by 31.12.2025 and commissioning of Cold Fog Dust Suppression System in Stage I in progress.

- c. M/s Lanco Anpara Power Limited, Anpara - FGD installation by December, 2025
- d. M/s U.P. Rajya Vidyut Utpadan Nigam Ltd. (Anpara A, B & D TPS), Anpara-
- Re-tendering for ESPs installation at ATPS by Dec., 2026
 - Renovation work under progress at BTPS by October, 2024
 - FGD installation at A, B & D TPS by Dec., 2026
 - Constructing Bio-methanation plant by Dec., 2026
- e. M/s Hindalco Industries Limited, Renusagar Power Division- FGD installation by March, 2025.
- f. M/s U.P. Rajya Vidyut Utpadan Nigam Ltd. (Obra A, B - TPS), Obra- FGD installation by March, 2025.
- g. M/s NCL Ltd., Bina Project, Bina- Construction of new CHP (9.5 MTPA) by Dec., 2024 and upgradation of ETP & STP by July, 2024.
- h. M/s NCL, Dudhichua Project- Tyre washing system/mechanism of Coal transporting vehicles on Road by August, 2024. Construction of new CHP (10 MTPA) by Dec., 2024.
- i. M/s NCL Ltd., Kakri Project- Tyre washing system/mechanism of Coal transporting vehicles on Road. Tender under progress.
- j. M/s NCL Ltd., Khadia Project
- ETP upgradation by July, 2024
 - Tyre washing system/mechanism for Coal transporting vehicles on Road by Dec., 2024. Tender under progress.
 - Construction of Wharf wall / Railway Siding by August, 2024. Rail connectivity to wharf wall to be done by ECR railway siding.
- k. M/s NCL Ltd., Krishnashila Project- Construction of sedimentation ponds and green belt under progress. EC conditions to be included in action plan.
- l. Aluminium Smelter: M/s HINDALCO Industries Ltd, Renukoot- Procurement of equipment for segregation of waste category under progress.

- m. It was informed that a tripartite agreement was signed between the UP Forest Department, IIFM Bhopal, and AAI 18.08.2023 to conduct a pilot study assessing the impact of filling abandoned mine voids in 0.55 hectares forest areas (Dalla Range, Obra Forest Division) with red mud and/or fly ash. IIFM has prepared the DPR for this project. DFO Obra has obtained the CTO from 12.12.2023. Dewatering and wall grouting work has been completed, however, surface water seepage was observed resulting in water accumulation at the site. Committee visited the site to assess the situation and suggested that this issue could be resolved by filling natural soil up to a height of approximately 5 meters. IIFM issued a letter on 07.06.2024 to commence backfilling. AAI has shared the work execution schedule with IIFM and DFO Obra, w.e.f. 15.06.2024 to 04.06.2025. On-site work execution will begin after the monsoon season.
- n. M/s Grasim Industries Limited Chemical Division, Renukoot and M/s Birla Carbon India Pvt. Ltd., Renukoot- Miyawaki Plantation outside plant premises will be done.
- vii. 313 nos. of Stone Crusher units inspected. 215 Stone crushers have adequate APCS such as covered conveyer system, covered jaw crusher, water sprinkling arrangement, wind breaking wall, green belt, pucca roads etc. 98 Stone Crushers had not installed adequate APCS.
- viii. Based on the inspections carried out by Joint Committee, Show cause notices were issued to 70 stone crushers (50 are revoked, 20 are effective) and closures were issued to 28 stone crushers (15 revoked, 13 effective) for non-installation of APCS out of total 98 stone crushers in the region. An action plan and checklist were provided to the stone crushers, and the units have made commitments. The status will be verified by the Joint Committee after the monsoon season.
- ix. In Sonbhadra region, ambient air quality was analysed to assess, the impact of implementation measures by various TPPs. PM10 level has slightly increased to 160 µg/m³ in 2023-24 from 159 µg/m³ in 2022-23. AQI has slightly increased to 140 in 2023-24 as compared to 139 in 2022-23.

- x. For Assessment of CEPI Score in pre monsoon, sampling of Ground, Surface Water and monitoring of ambient air quality/ air quality has been done by UPPCB. Evaluation of CEPI Score is under progress.
5. A presentation was made by Ministry of Power/ CEA on status of implementation of the provisions of Ash Utilization Notification, 2021 for mandatory 100% utilisation of ash by TPPs:
- i. Ministry of Power has issued guidelines regarding streamlined procedure for ash disposal on 15.03.2024. These guidelines also include the special provisions for MSEs, in line with amendment to Ash Utilization Notification, 2021 dated 01.01.2024. The Guidelines have been circulated to all TPPs and other concerned stakeholders.
 - ii. The above guidelines lay down the general procedure for TPPs to invite bids on annual basis/longer period (not more than 3 years), limited auction to reserve quantity of ash for supply to MSEs at reserved price, open auction for all users, environmental safety issues, monitoring for entire ash disposal station, post closure reclamation of site etc.
 - iii. MoP vide its OM dated 01.05.2024 has requested MoC to align the draft SOPs with the steps for ash disposal outlined in the MoP guidelines dated 15.03.2024, to be followed by all TPPs as a regulatory requirement. MoP has stated that their comments are yet to be confirmed by MoC for finalising the draft SOPs.
 - iv. So far, 145 TPPs have submitted annual compliance report the FY 2023-24.
 - v. Compliance report of TPPs for the first year (FY 2022-23) of the first compliance cycle submitted by CPCB on 20.02.2024, the TPPs listed therein having ash utilization above 80% has been shared with all TPPs vide email dated 21.05.2024. CPCB has been requested to share the compliance report for the second year (FY 2023-24) of the first compliance cycle.
 - vi. Contracts for supply of ash to users of road construction projects from NTPC Vindhyachal and other TPPs of NTPC are in place and ash is being supplied as per demand and availability at NHAI / MoRTH end. It was also informed that that from either end, ash transportation panel/mechanism as per the MoP Guidelines & Secretary, Power meeting decision dated 18.01.2023 is in place.

6. A presentation was made by Ministry of Coal on finalisation of SOPs for backfilling of ash in mine voids and mixing of ash in overburden dumps by Thermal Power Plants:

- i. Central Working Group on 03.05.2024 under chairmanship of AS, Ministry of Coal allotted the following mines to TPPs-
 - a. CCL- Dakra- Bukbukamine allocated to NTPC and Hindalco Industries Ltd.
 - b. ECL-Spot 1, 2 & 3 of Madhabpur OC allocated to DVC- DSTPS
 - c. SECL Minni OCM-Dry Patch & Minni OCM near SISF Base camp of Govinda Mine allocated to MB Power (Madhya Pradesh) Limited
 - d. ECL-Parbelia Colliery (UG), Dubeswari (UG) and Nasramuda (UG) allocated to DVC-RTPS (Fly ash is already being supplied)
 - e. WCL- Sarni (UG) allocated to MPPGCL- STPS
 - f. ECL- Kunustoria, Ningha Mines, Pandebeshwar Mines allocated to DVC-DSTPS
 - g. ECL- Satgram Incline Colliery allocated to DVC-MTPS
- ii. MoC as on date have allocated 38 mines voids to 31 TPPs. Ash filling has been started in 12 mines and 295 lakh cum out of 1800 lakh cum allocated mine void have been dumped in the mine void.
- iii. Central Level Working Group recommended that coal companies and TPPs ensure the signing of MoUs for the allotment of mine voids within 2 months. Further, coal companies were requested to identify abandoned mines on a monthly basis and provide the list to the CEA, which will publish it, and TPPs will respond accordingly.
- iv. Draft SOPs have been communicated to all the stakeholders including TPPs and SPCBs. The format for TPPs to request mine allocation from the CEA has been circulated to all TPPs.
- v. It was informed that different coal companies will identify mines and circulate the information to the committee and all TPPs. TPPs will submit their requests through the CEA, which will examine the requests and communicate them to the committee. The committee will meet monthly to decide on allocations of

mine voids to TPPs. For operational opencast mines, various studies have concluded that it is unsafe to consider fly ash dumping unless the plants and mines are owned by the same organization. It was mentioned that the closed or abandoned opencast mine, closed or abandoned void of working opencast mine and closed or working underground mines (coal extraction by stowing method) may be considered for allotment for the purpose of fly ash filling/stowing.

- vi. Lease rent which has been paid to the State Government by coal companies is to be recovered from TPPs. Further, policy guidelines for use of land acquired under the Coal Bearing Areas (A&D) Act, 1987, vide MoC OM no. 43022/1/2020-LAIR dt: 22-04-2022 may be followed.
- vii. The guidelines regarding responsibility of mine owners and TPPs after the site is handed over to TPPs for fly ash disposal have been issued on 15.03.2024.

5. A presentation was made by Indian Bureau of Mines (IBM), Ministry of Mines on finalisation of SOPs for backfilling of ash in mine voids and mixing of ash in overburden dumps by Thermal Power Plants:

- i. NTPC is doing pilot study for mixing of ash with overburden in Dulanga coal mine. IBM is monitoring the ultimate impact whether slope moving vertically or horizontally.
- ii. Further, list of 197 abandoned non-coal mines and 7 working mines with 12 pits have been shared.
- iii. SOP provides a detailed procedure for allocating mines for ash filling in mine voids or mixing of ash with the overburden, prescribing the roles of different authorities and the steps involved for Thermal Power Plants (TPPs).
- iv. District Collector and Directorate of State Mines and Geology (DGM) will be the appropriate authority for abandoned mines and operational mines, respectively for overseeing environmental conditions for TPPs. District Collector and DGM to assess the mine voids and conduct a survey within 15 days, respective TPP to borne the cost of survey. TPPs to approach the concerned authority, under whose jurisdiction is the mine to be utilized, for disposal of ash. The identified volume of mine void / OB to be communicated to the TPP within 30 days of receipt of application by TPPs and upload on ash portal, simultaneously SPCB,

MoEFCC, District Collector (for transportation of fly ash) and CGWA/ CGWB to grant NOC within 30 days.

- v. In case of operational mines, a scientific / geo-technical stability study is to be furnished by TPP to DGMS within 30 days from the date of application. The Director Mines Safety shall furnish their comments on the said study. After the receiving the comments, appropriate authority to grant final approval for backfilling of ash in allotted mine voids. Further, before starting the backfilling work a comprehensive scheme for fly ash filling is to be prepared by the TPPs covering specified scientific aspects and other allied issues. SOP/ guidelines for MoU has been prepared to establish a formal agreement between the TPP and the designated Mine/s.
 - vi. IBM emphasized the importance of safety aspects in regard to ash backfilling and the need for a model code to be approved by an agency.
 - vii. Permission form DGMS is required only for ash filling in operational mine.
6. A presentation was made by Railway Board on status of implementation of air pollution control measures at East Central Railway and West Central Railway in Singrauli and Sonbhadra regions:
- i. Following pollution control measures have been reported under progress by ECR and WCR:
 - a. Singrauli region, M.P.
 - ECR-Spur III & X: Installation of fixed water sprinklers (Sep., 2024) and Work as per CPCB Guidelines (Dec., 2024).
 - ECR- Mahedaiya: Installation of fixed water sprinklers, work as per CPCB Guidelines and construction of wind breaking wall by Sep., 2024, and approach road by Dec., 2024.
 - WCR- Gajra Bahra: Dust Protection walls (no timelines given), water sprinkling system (wall mounted and movable), Ppucca circulating handling area, all weather approach road (no timelines given) and green belt around the coal siding area (status to be updated).
 - WCR- Gondawali: Dust Protection walls , water sprinkling system or tankers, drainage facility, pucca circulating handling area, all weather

approach road by Dec., 2024 and green belt around the coal siding area by Sep., 2024.

- WCR- Bargawan: Dust Protection walls by Dec., 2024, water sprinkling system, drainage facility, pucca circulating handling area, all weather approach road by Aug., 2024 and green belt around the coal siding area (Sep., 2024).

b. Sonbhadra region, U.P.

- ECR- Krishanshila Project: Construction of wind breaking wall, plantations all along the boundary wall, construction of garland drain, installation of water sprinklers and construction of rain water harvesting–cum-ground water recharge system (approval in process under current budget).
- ECR- Salaibanwa: Construction of wind breaking wall, Plantations all along the boundary wall, construction of garland drain, installation of water sprinklers, construction of rain water harvesting–cum-ground water recharge system, construction of approach road, construction of wharf (approval in process under current budget).

ii. It was informed that Vindhyanchal TPS, in principle, was allowed to transport fly ash through rail to MHDA goods shed from where fly ash shall be transported upto Gorbi mines for back filling. Approval from Railway Board has been given to VTPS for construction of individual conveyor belt or silos for ash transportation. IPA issued on 09-04-2024.

iii. Action has been initiated to use fly ash from CTPS power plant for stowing/backfilling for stabilization of one of the fire affected zone near railway track at Sonardih station in Dhanbad division.

7. CPCB presented the status of actions taken on various decisions of the Mission:

- i. Status of action taken on decisions of 1st, 2nd, 3rd, 4th, and 5th meetings of the Mission obtained from the stakeholders are as follows:

Meeting	No. of Decisions	Complied	Regular activities	Time-bound / Yet to comply
1st	11	7	3	1
2nd	18	13	3	2
3rd	23	13	4	6
4th	21	10	8	3
5th	22	12	7	3

*Actual 'time bound / yet to comply' decisions are related to - Feasibility study for OB in Nigahi mines , Health risk assessment studies by SPCBs , Desiltation, reclamation and stabilization of ash by UPRVUNL plants and its verification by Forest Dept. , GIS mapping of TPPs and coal mine pits by MoC , Review of EC condition of non-coal mines , Cost-benefit analysis on non-compliance by TPPs , Backfilling of ash in Gorbi mine pit 3 by Anpara TPS

- ii. Implementation status has been compiled and updated on CPCB's website.
- iii. Instructions have been issued to MPPCB and UPPCB to create a system/mechanism for third-party audit/evaluation for compliance verification of industries by SPCB-authorized technical institutions/ agencies.
- iv. Brief status of implementation of action plans by 18 TPPs// coal mines/ industries were presented as under:
 - a. 07 industries (NTPC Vindhyachal, NTPC Rihand, Lanco Anpara C, Birla Carbon India Pvt. Ltd., M.P. Power Generating Co. Ltd. (MPPGCL), Mahan Energen Ltd. and Grasim Industries Ltd. Chemical Division) have implemented their action plans (except for FGD installation in case of Lanco Anpara C and NTPC Rihand, having FGD implementation time limit up to Dec 2025 and Dec 2026, respectively, and one remaining point of Grasim Industries Ltd which is sub-judice in the Hon'ble Supreme Court and is presently under stay.
 - b. HINDALCO Aluminum Smelter also reported implementation of action plans. However, the Oversight Committee has observed partial implementation of action plans (w.r.t. ZLD for domestic effluent and control of fugitive emissions).
 - c. 10 TPPs/ coal mines (NTPC Singrauli, Renusagar TPP, UPRVUNL Anpara TPS, UPRVUNL Obra TPS, Sasan Power Ltd., NCL Dudhichuwa Mine, NCL Kakri Mine, NCL Khadia Mine, NCL Bina and NCL Krishnashila) have submitted extended tentative time limits for implementation of few points (mainly related to tyre washing facility, 25% mixing of ash with OB, transportation of coal in

environmentally sound manner, management of municipal solid waste, and OCEMS relocation).

- d. UPRVUNL Obra TPS has stopped ash pond overflow water carrying ash into the river Renu.
 - e. UPRVUNL Anpara TPS has implemented ZLD by commissioning new ETP of 30 MLD capacity in Anpara A & B plants.
 - f. UPRVUNL Anpara TPS has issued LOI to M/s CWPRS, Pune for study of diversion of Morcha Nala, and the study work is likely to be completed up to July, 2024.
 - g. NTPC Singrauli is implementing measures to completely stop the discharge of ash pond overflow into Rihand reservoir.
 - h. Trucks transporting coal from coal mines to TPPs are found covered with thin LDPE sheets/ green net only, instead of tarpaulin or other proper means, due to which spillages occur at several locations and fine coal dust is found along the public road (Auri Mode-Shakti Nagar) and the black powder is also visible on the houses built along the roadsides as well as vehicles parked.
 - v. CEPI score calculated by UPPCB and MPPCB has been re-validated in February 2024. CEPI score of Singrauli was 60.49 (2024) as compared to 61.38 in 2022. CEPI score of Sonbhadra was 67.86 (2024) as compared to 67.88 in 2022. Both Singrauli and Sonbhadra region are under Severely Polluted Areas category. A portal has been developed for monitoring of progress of CEPI Action Plan & CEPI Score of concern critically and severely polluted areas.
 - vi. Jadavpur University has commenced the study for value added utilization of bottom ash as partial substitute of natural sand in concrete in April, 2024. Samples of bottom ash from 5 out of 10 TPPs have been collected, and analysis has started. Additional bottom ash samples from 3 more TPPs will be collected between June, 2024, and July, 2024.
8. A presentation was made by CSIR-NEERI on stabilization of fly ash dumps with bamboo plantation:
- i. NEERI has highlighted the potential long-term environmental concerns associated with fly ash if not managed properly, citing the presence of non-

essential heavy metals like Cd, As, Pb, Hg, and Cr. In response, NEERI has developed Eco-Rejuvenation Technology aimed at stabilizing fly ash dumps by utilizing site-specific plant species (Bamboo sp.) to foster biodiversity on degraded land. NEERI has utilized consortia of microorganisms (bacteria and fungi) and organic waste material to enhance plant growth in the rhizosphere. It was informed that selection of plant species is crucial and varies depending on local environmental conditions.

- ii. NEERI collaborated with M/s Mahagenco to achieve 20-ft plant growth in fly ash dump areas using commercial bamboo species, requiring only a tenth of the typical investment. This approach effectively reduced soil and air pollution (PM₁₀) as well as metal leaching into groundwater within two years. It significantly increased belowground biomass and transformed 31 acres into forest, mirroring successful outcomes near Nagpur and at NEERI's own facilities, where 20 acres were reforested with a similar approach.
 - iii. A case study was presented wherein, over 03 years, the initiative yielded 74.04 tonnes per hectare of total biomass, releasing 98.84 tonnes per hectare of oxygen and sequestering 37.02 tonnes per hectare of CO₂. It also boosted biodiversity by enhancing flora and fauna. A significant reduction in the concentration of heavy metals in the fly ash dumpsite was observed. India boasts 137 bamboo species covering 16 million hectares. According to the specified guidelines, species that enter the food chain should be avoided when restoring degraded land.
8. It was informed that TPPs are required to submit annual compliance report in the format prescribed in Ash Utilization Notification, 2021. However, ACRs or compliance reports received are not completely filled by TPPs.
 9. Concerns with respect to air pollution control measures at ECR and WCR railway sidings, were forwarded to Secretary (Railway Board) on 02.5.2024.
 10. ACS, Dept. of Energy, Govt. of U.P. was requested to review the status of low ash utilization by Lanco Anpara, UPRVUNL (15.8%), NTPC, Shaktinagar (40.5%) and NTPC Rihandnagar (70.02%) and issue necessary direction for 100% ash utilization.
 11. Notices were issued to M/s Jaypee Nigrie, M/s Mahan Energen, M/s APMDC Ltd.& THDC Ltd. and other TPPs and industries for non-participation in the Mission

meeting. Concerned SPCBs were requested to direct respective TPPs, Industries, coal mines to ensure participation of one representative from each organisation in the Mission meetings.

12. After detailed deliberations, the **following decisions were made:**

- i. SOPs formulated for allocation of mines, signing of MoUs and feasibility studies for mixing of ash with OB/ backfilling of ash in opencast and underground mines to be finalized within one month. Ministry of Coal may convene a meeting with Ministry of Power to consider the views of M/o Power for finalising SOPs.

(Action: M/o Coal and M/o Power)

- ii. Status of allocation of identified mines voids to the thermal power plants along with the timelines may be presented in next meeting of the Mission.

(Action: M/o Coal)

- iii. Allocation of mine void to NTPC Lanco Anpara for backfilling of ash into the mine void to achieve 100% ash utilization target.

(Action: M/o Coal and NCL)

- iv. NCL to establish a system for the advance allocation of mines approaching for closure in 3-5 years to thermal power plants to ensure timely initiation of ash backfilling into the mine voids. A list of these mines should be shared with TPPs, enabling them to approach the mines based on geographical location.

(Action: NCL and M/o Coal)

- v. CEA to compile legacy dumpsite which are being stabilized by TPPs.

(Action: M/o Power and CEA)

- vi. SOPs may be revised stating that NOCs are required exclusively from SPCBs for backfilling of ash in the mine void and mixing of ash with overburden dump in abandoned mines, and from DGMS only for backfilling activities in working underground mine. A standardized format for NOCs should be established to streamline the process of seeking necessary permissions by TPPs from concerned authorities for allocation of mine voids, thereby eliminating the

necessity for diverse information requests from different entities. Updated list of identified abandoned non-coal mines may be shared with MoP.

(Action: Ministry of Mines)

- vii. Verification and monitoring of implementation of action plans against the specified timelines in regard to EC conditions and Consent to Operate (CTO) requirements. CTO may be granted once all EC conditions are satisfactorily met, aiming to avoid discrepancies for effective implementation of the action plan. Status regarding pending activities along with the revised timelines to be presented in next meeting of the Mission.

(Action: MPPCB and UPPCB)

- viii. Submission of action plan indicating timelines for completion of activities in respect of ash utilisation in overburden dumps and implementing air pollution control measures as per EC conditions.

(Action: MPPCB and APMDC Suliyari project)

- ix. All stone crushers to ensure implementation of action plan and installation of air pollution control equipment in line with the environmental guidelines published by CPCB for stone crushers. Compliance status may be furnished by SPCB and CPCB.

(Action: MPPCB, UPPCB and all stone crushers in Singrauli and Sonbhadra region)

- x. Evaluation of CEPI score for pre-monsoon (April-May) season in Singrauli and Sonbhadra is to be completed and share the report with CPCB. CPCB to monitor progress of implementation of CEPI Action Plan & CEPI Score of concern critically and severely polluted areas.

(Action: MPPCB, UPPCB and CPCB)

- xi. Scrupulous implementation of action plans to achieve 100% ash utilization as per the compliance cycle prescribed under Ash Utilization Notification, 2021.

(Action: M/ UPRVUNL Anpara TPS, Obra TPS and all TPPs)

- xii. Coal companies to use conveyor belt or dedicated roads for coal transportation to control coal dust emission. The condition of roads used for coal

transportation should be mapped to control fugitive coal dust emissions in the region. Coal transportation via conveyor belts and tire washing mechanisms should also be included in the mapping. The concerned authority should be responsible for maintaining these roads, with regular monitoring conducted to verify their condition. SPCBs to map the responsibility of each segment of coal/ash/material transportation in the region.

(Action: All Coal mines in Singrauli and Sonbhadra region, MPPCB & UPPCB)

- xiii. A team of officials from CPCB, MPPCB and representatives from MPPGCL shall carry out inspection of ash pond of Sanjay Gandhi TPS, Birsinghpur to ascertain localized/ terrain specific solution for evacuation of current ash from operational ash dyke of SGTPS, Birsinghpur.

(Action: CPCB, MPPCB and Sanjay Gandhi TPS, MPPGCL)

- xiv. Compliance verification to be carried out in regard to ash utilization levels of M/s Jaypee Nigrie STPP, which was reported at 89 % in FY 2023-24 as against the compliance cycle of 100% utilisation, as prescribed under Ash Utilisation Notification, 2021.

(Action: CPCB)

- xv. Railway Board may be communicated for expeditious implementation of action plans in respect of pollution control measures at the railway sidings of ECR and WCR in Singrauli and Sonbhadra Region. Status in this regard may be presented during the next meeting of the Mission.

(Action: CPCB)

- xvi. IIFM may be requested to communicate to Hindalco industries for initiation of backfilling of mine voids of abandoned stone quarries with fly ash and red mud in Dalla region based on pilot study conducted by IIFM in association with Aluminium Association of India (AAI) and State Forest Department, Govt. of U.P.

(Action: CPCB)

- xvii. Stipulation of conditions for stabilization of mine voids filled with fly ash and restoration of biodiversity.

(Action: CSIR-NEERI)

- xviii. Inclusion of stabilization conditions formulated by NEERI for fly ash dumpsites as part of Environmental Clearance of TPPs, Coal and non-coal mines.

(Action: CPCB)

- xix. Commencement of backfilling of mine voids of abandoned stone quarries in Dalla region with fly ash and red mud under as per the DPR submitted by IIFM under the pilot study.

(Action: Hindalco Industries Ltd, Renukoot)

- xx. Submission of action plan and timelines for commencing backfilling activities in the allotted pit of Gorbi mine. Action plan shall also include steps to be taken for backfilling activities and status of actual utilization target. CTO to be obtained from MPPCB and initiation of backfilling activities to be undertaken. Action taken report in this regard shall be submitted to CPCB/Concerned SPCB.

(Action: NTPC Vindnyanchal)

- xxi. CSIR-NEERI's expertise may be leveraged for stabilizing and ecologically rejuvenating ash dumpsites through bamboo plantation or suitable site-specific plant species within the stipulated timeline under Ash Utilization Notification, 2021. NEERI may be involved in the consultative meetings with concerned stakeholder for implementation of stabilization or rejuvenation technologies/models developed by them. A list of fly ash dumpsites stabilized by TPPs and actions taken may be shared with SPCBs and CPCB. Coal mines to prioritize stabilization of mine voids filled with ash, focusing on biodiversity restoration.

(Action: All TPPs and Coal mines)

- xxii. All the pending/ ongoing activities in respect of implementation of decisions made during 1st, 2nd, 3rd, 4th, 5th and 6th meeting of the Mission shall be undertaken and action taken report shall be furnished. Progress to be updated on the website on monthly basis. Necessary formats may be put up on the

website to enable all stakeholders to upload the progress online. Login and passwords for all stakeholders to be generated immediately.

(Action: Concerned Ministry/ CPCB/ State Govts./ SPCBs/ Organisation)

List of Participants

1. Smt. Leena Nandan, Secretary, EF&CC- Chairperson
2. Shri Tanmay Kumar, Chairman, CPCB
3. Shri Naresh Pal Gangwar, Additional Secretary, MoEFCC
4. Shri Bharat K Sharma, Member Secretary, CPCB
5. Shri Marapally Venkateshwarlu, Director, Ministry of Coal
6. Shri H.K. Sharma, Director (Technology), MPPCB
7. Shri R.K. Gupta, S.E., MPPCB
8. Shri Sanjeev Kumar Singh, MS, UPPCB
9. Shri Umesh Kumar Gupta, RO, Sonbhadra, UPPCB
10. Shri Nazimuddin, Scientist F, CPCB
11. Shri N. Subrahmanyam, Scientist E, MoEF&CC
12. Shri Mohammed Niyazi, Dir. (S&T), DGMS
13. Shri Satish Kumar, Director, Ministry of Power
14. Shri Manish K. Maindiratta, Regional Controller of Mines, IBM, Ministry of Mines
15. Shri P. N. Sharma, CCOM, Indian Bureau of Mines, Ministry of Mines
16. Shri Ajay Jha, Director/ EnHM, Railway Board
17. Shri Jasbir Singh, Dy. Director, M/o Railways
18. Shri Abhishek Vishal, DTM Chopar, M/o Railways
19. Shri Sanjay Gupta, Dy CEM (FM), Railways
20. Shri Neeraj Pathak, SCI, Railways
21. Shri S. K. Tanti, GEnHM, ECR, Indian Railways
22. Shri Ajit Kumar, AEnHM /DHN ECR, East Central Railways
23. Shri Utkarsh Tripathi, DMO, UP-DGM
24. Shri Praveen Gupta, Member (Thermal), CEA

25. Shri Kamal Kumar Jangid, Director, CEA
26. Shri P. S. Mohan Kumar, Deputy Director, CEA
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41. Shri Manoj Pradhan, Vice President, Reliance Power Ltd.
42. Shri Amit Soni, Head-Env, Sasan Power Ltd.
43. Shri Himanshu Verma, Sr. Manager (HSE), Lanco Anpara Power Ltd.
44. Shri Vivek Gupta, Sr. G.M., Grasim Industries Ltd., Renukoot
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