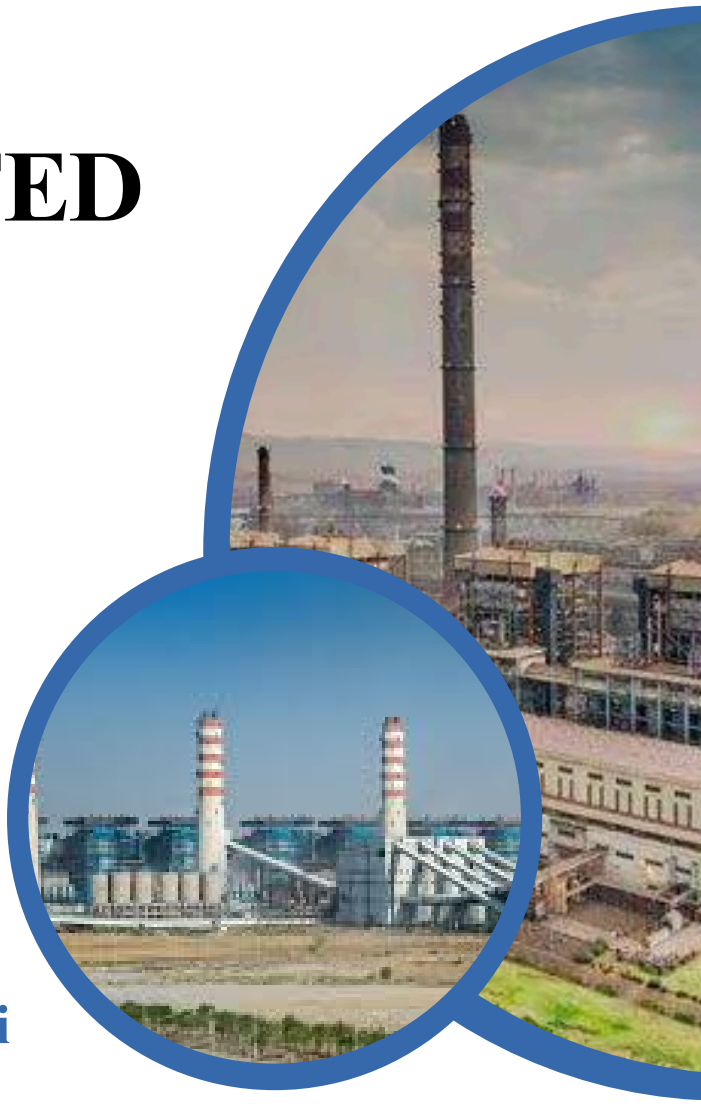
ANNUAL COMPLIANCE AUDIT OF FLY ASH GENERATION & UTILIZATION

FINANCIAL YEAR : APRIL 2024-MARCH 2025

JSW ENERGY (BARMER) LIMITED

Location: Village & PO:
Bhadresh, Barmer, Rajasthan



AUDITORS

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राष्ट्रीय प्रौद्योगिकी संस्थान दिल्ली

NATIONAL INSTITUTE OF TECHNOLOGY DELHI

(शिक्षा मंत्रालय, भारत सरकार के अधीन एक स्वायत्त संस्थान)

(An autonomous Institute under the aegis of Ministry of Education (Shiksha Mantralaya), Govt. of India)

Plot No. FA7, Zone P1, GT Karnal Road, Delhi-110036, INDIA

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Dated: November 27, 2025

The Member Secretary

Central Pollution Control Board

Parivesh Bhawan, East Arjun Nagar

Delhi-110032

Sub: Report on the compliance audit for ash utilization and disposal by JSW Energy (Barmer) Limited

Dear Sir,

This has reference to your office Memorandum dated 06.03.2023 (Ref No.IPC-II/TPP/CP-11/76/2022/406) and MOEF&CC Notification No. S.O. 5481 (E) dated 31.12.2021, and S.O. 6169 (E) dated 30.12.2022, regarding the compliance ash utilization from coal or lignite-based thermal power plants. The undersigned has completed the ash audit work for JSW Energy (Barmer) Limited

The report is prepared to the best of our knowledge and input data submitted by the representatives and our observations. Please find the enclosed copy for your kind consideration and reference.

Sincere thanks for providing the opportunity to be an authorized auditor for the Ash Utilization Audit of coal and lignite-based power plants and user agencies.

Yours Faithfully, 27/11/2025

Dr. Kapil Kumar

Copy to:

M/s JSW Energy (Barmer) Limited

Rajasthan Pollution Control Board

केंद्रीय प्रदूषण नियंत्रण बोर्ड
परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली-110032
28 NOV 2025
Central Pollution Control Board
Parivesh Bhawan, East Arjun Nagar, Delhi-110032

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CERTIFICATE FOR ASH COMPLIANCE AUDIT

I, Dr. Kapil Kumar is an authorised auditors as per OM dated 06.03.2023 (Ref No.IPC-II/TPP/CP-11/76/2023/1252) to undertake the ash compliance audit by the coal and lignite based thermal power plants and the user agencies as per Ash utilization Notification No. 548l (E) dated 31.12.2021, hereby declared that this compliance audit report for ash generation, utilisation and disposal of JSW Energy (Barmer) Limited is prepared as per the scope of work specified in the Para E(5) of the Ash Notification 31.12.2021 to ensure that the facility is in compliance with environmental regulations related to the disposal of ash from coal and lignite-based thermal power plants.

This audit has been carried out to the best of our knowledge and input data submitted by the representatives and our observations. It is further informed that the conclusions are arrived at following the best estimates based on the provided information and on site observations to the best extent possible.

Dr. Kapil Kumar

Acknowledgement

We wish to convey my sincere gratitude to Prof. Ajay K. Sharma, Director, NIT Delhi for granting the necessary approvals to carry out the consultancy work. We extend our sincere appreciation and gratitude to the Central Pollution Control Board (CPCB) for keeping faith in us as the authorized auditor for Ash Utilization Audit of Lignite and lignite-based power plants to conduct the audit work.

The audit work would not have been possible without the constant support, guidance, and technical inputs of Sh. Chandan Singh Deora. We wish to put on record our sincere thanks to all HODs for their valuable input, guidance, and full support in conducting the Annual compliance audit of ash disposal in a befitting manner.

We also express our special thanks to all JSW Energy (Barmer) Limited team members for offering untiring support and association with the audit team.

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1. INTRODUCTION

1.1 Description of the JSW Energy (Barmer) Limited

JSW Energy (Barmer) Limited, located in Rajasthan, India, is a significant and environmentally-conscious player in the power generation industry. This power plant is a crucial component of JSW Energy's diverse energy portfolio and has been designed and operated with a strong focus on sustainability and environmental responsibility.

The JSW Energy (Barmer) Limited (JSWEBL) plant is strategically situated in the Barmer district of Rajasthan, a region known for its arid climate and unique geographical characteristics. As a part of the broader energy landscape in India, this power plant plays a pivotal role in meeting the growing electricity demands of the region and the nation as a whole. JSW Energy's Barmer plant has the capacity to produce **1,080 MW of power**.

It is operated by a wholly owned subsidiary called JSW Energy (Barmer) Limited (Formerly known as: Raj West Power Limited). JSWEBL has a power purchase agreement with the Government of Rajasthan to sell its entire output.

The Barmer plant comprises of eight 135MW units to produce 1,080MW of power. The Barmer plant uses lignite as a fuel source. Lignite is a low-grade Lignite that JSWEBL, currently, sources from the captive mine at Kapurdi in Barmer. Barmer Lignite Mining Company Limited, a joint venture between JSWEBL and Rajasthan State Mines & Minerals Ltd. has two captive mines – Kapurdi and Jalipa.

The said plant uses CFBC Technology, which allows the use of low-grade fuel, such as lignite, sourced from neighbouring Jalipa and Kapurdi Mines. The water for the power plant is sourced from the IGNP canal at Mohangarh, which is at a distance of 185 Km from the power plant through an intermediate pumping station. The output from the plant is in the form of electricity, which is then sold to the Rajasthan DISCOM installed of Government through long-term Power Purchase Agreements.

The details of the power capacity of the Thermal Power Plant are mentioned below:

TABLE 1: UNIT WISE DETAILS OF TPP

Unit No.	Capacity (MWh)	COD	Grid connected (IPP) / Captive (CPP) plant	Operational Status during FY
Unit 1	135 MW	26/11/2009	IPP	Operational
Unit 2	135 MW	04/10/2010	IPP	Operational
Unit 3	135 MW	07/11/2011	IPP	Operational
Unit 4	135 MW	04/12/2011	IPP	Operational
Unit 5	135 MW	05/02/2013	IPP	Operational
Unit 6	135 MW	03/03/2013	IPP	Operational

Unit 7	135 MW	16/03/2013	IPP	Operational
Unit 8	135 MW	28/02/2013	IPP	Operational
Total	**1080 MW**			

- The **JSW Energy (Barmer)** LTD, operates as an **Independent Power Plant supplying electricity to the grid.** (The plant generates electricity and sale entire electricity to Rajasthan DISCOM).
  The plant holds valid **Environmental Clearance (EC)** and **Consent to Operate (CTO)** issued by the competent authorities. The **EC was issued on 20-July-2007 vide Ref. No. J-13011/58/2006-IA-II (T), and Amendment date 19-11-2009 (for change of configuration from8x125 MW to 8 x135 MW)** and the **CTO was issued with vide Ref. no. and validity date details as below**.

CTO details		
Units	**Order No.**	**Validity**
Unit 1&2	2023-2024/Power/3	31/12/2028
Unit 2&3	2023-2024/Power/4	30/11/2028
Unit 5&6	2021-2022/CPM/8556	31/10/2026
Unit 7&8	2021-2022/CPM/8557	31/10/2026

These approvals stipulate specific conditions related to **ash generation, utilization/disposal, storage, and transportation**, which have been reviewed as part of this audit. Compliance with these conditions has been verified against the records and operational practices of the plant. Copies of the EC, CTO, and relevant conditions are annexed to this report as **Annexure I.**

1.2 Location of the Thermal Power Plant

- Address of TPP: JSW Energy (Barmer) Ltd. Village & Post: Bhadresh, Dist: Barmer, Rajasthan, PIN-344001.
- Plant is located west part of Rajasthan and nearest railway station is Barmer 30KM, Airport is Jodhpur 200KM.
- Million plus cities, Non-attainment, Critically/Severely/Other Polluted Areas, major cities / towns / municipality, Eco-sensitive Zones (ESZ), Reservoirs, major rivers, etc. located around the plant and their distance (aerial as well as by road) from the plant's ash dyke(s) – NO any of above near more than 50KM

FIG.1: GOOGLE EARTH IMAGE OF THE TPP

1.3 Annual Compliance Audit

Dr. Kapil Kumar is enlisted in the list of Authorized Auditors for Ash Utilization Audit of Lignite and lignite-based power plants as per the CPCB Office Memorandum No. IPC- II/TPP/CP-1 1/76 /2023/1252 published on 06.03.2023 *(Ref. S. No. 54; Annexure 1 of CPCB OM dated 06.03.2023* (Copy attached as **Annexure II**).

JSW (Barmer) Limited has appointed **Dr. Kapil Kumar, Assistant Professor, Department of Civil Engineering, National Institute of Technology, Delhi,** for carrying out Annual compliance audit at the project site for the **Financial Year Period April 2024 – March 2025.**

The Annual Compliance Audit for fly ash utilization at **JSW Energy (Barmer) LTD** has been undertaken as per the work order issued by JSW Energy (Barmer) Limited (Name of issuing authority) vide **Ref. No.** RWPL-ENGY/2025-26/1630003994 dated 11.10.2025. A copy of the said work order has been annexed to this report for reference. **(Annexure- III)**

This report covers the Financial Year 2024-2025 for which the ash utilization compliance has been assessed. A copy of the Annual Implementation Report submitted by the plant to the concerned regulatory authorities (SPCB, MoEF&CC, CPCB, CEA) for the same financial year has been enclosed as an **Annexure IV.**

TABLE 2: STATUS OF REPORTS SUBMITTED

S.No.	Statutory Reports	Frequency/ Target	Date of Submission by TPP
1.	Submission of **Annual Ash Compliance Report (ACR)** to MoEF&CC/SPCB/ CPCB in compliance to Clause E (2) of MoEF&CC Notification dtd. 31.12.2021 (For period 1st April 2024 – 31st March, 2025)	Yearly	30-April-2025.
2.	MoEF&CC / CEA Return Submission by TPP	Half yearly & Yearly	12-07-2024 & 17-06-2025
3.	Submission of Data on CPCB Ash Portal	Monthly	5th of Every month.

To verify on-ground implementation and to review records, **physical visits to the plant** were undertaken on the following dates: 31-Oct-2025. Observations made during these visits, along with supporting documents and photographic evidence (where applicable), form the basis of this compliance audit.

The list of physical/digital records verified for comparing with the information provided by the power plant in the Annual Implementation Report, including the following:

- Lignite receipts and records of quantity of Lignite consumption during the period,
- Records for average ash content in Lignite during the period,
- Records for ash generation (fly ash and bottom ash) during the period,
- Records for capacity of dry fly ash silos in comparison to the prescribed capacity,
- Records for ash utilization (fly ash and bottom ash) during the period through ash dispatch records, receipts received from the ash receiving/user agencies/SPCBs prior consent, records of ash usage in the permitted avenues within the plant, etc.
- Records for ash disposal (fly ash and bottom ash) into the ash ponds/dykes and ash evacuated from the ash ponds/dykes for during the period,
- Records for assessment of total ash storage in i) Operational ash ponds/dykes, and ii) Un-operational ash ponds/dykes (ash to be utilized within 10-year time limit), iii) Un-operational ash

ponds/dykes (yet to be stabilized and reclaimed with green belt etc. and certified by SPCB), iv) Un-operational ash ponds/dykes (stabilized and reclaimed with green belt etc. and certified by SPCB),

- Records for assessment of ash slurry disposal (Ash/Water ratio, HCSD/LSD, Water quantity used for slurry preparation) and ash water re-circulation system (AWRS) used during the period
- Records for assessment of ash water discharged into environment, based on inspection of records provided by the power plant, including the condition of surrounding environment in respect of ash released or breached, and actions taken for restoration of environment and status of restoration.

1.4 Scope of the Annual Compliance Audit

The scope of the audit as mentioned in the office memorandum of the Central Pollution Control Board IPC-II/TPP/CP-11/76/2022/1252, dated March 06, 2023 is as follows.

1. Verification of ash generation data pertaining to the financial year based on inspection of records of Lignite receipt/consumption and average ash content in Lignite, and comparison of this data with the information provided by the power plant in the Annual Implementation Report.
2. Verification of fly ash and bottom ash utilization data pertaining to the financial year based on inspection of records of ash supplied to the user agencies covered under permitted uses/avenues, and comparison of this data with the information provided by the power plant in the annual implementation report.
3. Verification of net ash disposal into ash ponds data pertaining to the financial year 2024-25 (i.e., difference of ash generation and ash utilization, as above), and comparison of this data with the information provided by the power plant in the annual implementation report.
4. Assessment of total ash storage in operational and un-operational ash ponds and available storage capacity for further disposal at the end of financial year based on details and drawings of ash ponds provided by the power plant and ground verification of the information provided, and comparison of the storage and available storage capacity with the information provided by the power plant in the annual implementation report.
5. Assessment of ash slurry disposal and ash water re-circulation system used during the financial year, in respect ratio of water in the ash disposed to ash ponds, water used for ash slurry disposal to ash

ponds, ash water recycled through AWRS, and ash water discharged into environment, based on inspection of records provided by the power plant and ground verification, including the condition of surrounding environment in respect of ash released or breached, and comparison of the ground situation with the information provided by the power plant in the annual implementation report.

2. DETAILS OF AUDIT FINDINGS

2.1 Specifications of the Plant

The observations included in this report have been based on the findings of the test audit conducted during April 2024 to March 2025 by Dr. Kapil Kumar. The report contains results of the review of Fly Ash Management undertaken by M/s JSW ENERGY (BARMER) LIMITED at the project site.

TABLE 3: SPEICIFCATIONSOF THE PLANT

S.No.	Description	Details	
1.	Name of Power Plant	JSW Energy (Barmer) Limited	
2.	Type of station (Pithead / Non- Pithead)	Pithead	
3.	Name of the Company	JSW Energy (Barmer) Limited	
4.	District	Barmer	
5.	State	Rajasthan	
6.	Postal address for communication:	Village& PO: Bhadresh, Barmer, Rajasthan	
7.	E-mail:	energy.barmeroperationsupport@jsw.in	
8.	Power Plant installed capacity:	1080 MW	
	Unit wise Date of Commissioning	Unit 1	26/11/2009
		Unit 2	4/10/2010
		Unit 3	7/11/2011
		Unit 4	4/12/2011
		Unit 5	5/2/2013
		Unit 6	3/3/2013
		Unit 7	16/03/2013
		Unit 8	28/02/2013
9.	Plant Load Factor (PLF) during the reporting period:	71.46%	
10.	Electricity generation during the reporting period:	6760572 (MWh)	
11.	Total area under Power Plant:	468 hectares.	

	(including area under Ash Ponds)	
12.	Lignite consumption during reporting period (Metric ton per annum):	5907438
13.	Average Ash content during the reporting period:	13.671244 (Avg Ash content Lignite & Lime)
14.	Current Ash generation during reporting period: (MT per Annual) Fly Ash: (MT per Annual) Bottom Ash: (MT per Annual)	807620 605715 201905
15	Ash generation at installed capacity: Legacy/Pond Ash quantity (Stock as on 01.04.2025)	 119003 MT
16.	Dry Fly Ash storage silos capacity – Total (Available / Planned addition) Storage Capacity in terms of hours of Ash Generation at installed Capacity: (Available / Planned addition) Storage Capacity of Silos with Rail Loading Facility (Available / Planned addition) Storage Capacity of Silos with HCSD/bulker loading (Available / Planned addition)	12000 MT / 0.0 MT 85 Hrs / 0.0 MT 0 MT / 0 MT To be filled

17	Storage Capacity of Silos with Bagging Facility (Available / Planned addition) No. of Bagging Machines with Bag size and Bagging Capacity (Available / Planned addition) Daily Bagging Capacity (Available / Planned addition)	12000 MT NA
18	Status of In-house Fly Ash based products manufacturing facilities. Bricks / Blocks / Tiles Manufacturing Capacity: Ash Utilization Potential:	NA
19	Details of utilization of current ash generated during reporting period.	
(a)	Total quantity of current ash utilized (MTPA) during reporting period: -	836817
(b)	Quantity of fly ash utilized: -	
	i. Fly ash-based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels)	230331
	ii. Cement manufacturing: -	397282
	iii. Ready mix concrete (through domestic traders): -	--

	iv. Ash and Geo-polymer-based construction material	--
	v. Manufacturing of sintered or cold bonded ash aggregate: -	--
	vi. Construction of roads, road and fly over embankment	--
	vii. Construction of dams	--
	viii. Filling up of low-lying area	--
	ix. Filling of mine voids	--
	x. Use in overburden dumps	--
	xi. Agriculture	--
	xii. Construction of shoreline protection	--
	xiii. Structures in coastal districts	--
	xiv. export of ash to other countries	--
	xv. others (domestic traders)	--
(c)	Quantity of bottom ash utilized (MTPA)	
	i. Fly ash-based products (bricks or blocks or tiles or fibre cement sheets	76776
	ii. or pipes or boards or panels)	--
	iii. Cement manufacturing: -	132428

	iv. Ready mix concrete (through domestic traders): -	--
	v. Ash and Geo-polymer-based construction material	--
	vi. Manufacturing of sintered or cold bonded ash ooreoaEe :-	--
	vii. Construction of roads, road and fly over embankment	--
	viii. Construction of dams	--
	ix. Filling up of low-lying area	--
	x. Filling of mine voids	--
	xi. Use in overburden dumps	--
	xii. Agriculture	--
	xiii. Construction of shoreline protection structures in coastal districts	--
	xiv. Export of ash to other countries	--
	xv. Others (domestic traders)	--
20	Details of disposal of ash in ash pond	
	a) Total quantity of ash disposed in ash pond(s) (MT} as on 31st March (excluding reporting period): *(silo ash pond)	

	b) Quantity of ash disposed in ash pond(s) during reporting period (Metric Tons):	0.0 MT
	c) Total quantity of water consumption for slurry discharge into ash ponds during reporting period(m3):	0.0 M3
	d) Total number of ash ponds: i. Active: ii. Exhausted (yet to be reclaimed) iii. Reclaimed	 01 (Single Ash Pond) -- --
	e) Total area under ash ponds (ha)	20 ha
21	Ash pond-1,2, etc (please provide below mentioned details separately, if number of ash ponds is more than one)	NA
	(a) Status: Under construction or Active or Exhausted or Reclaimed	NA
	(b) Date of start of ash disposal in ash pond (DD/MM/YYYY or MM/YYYY):	11/2009
	(c) Date of stoppage of ash disposal in ash pond after completing its capacity (DD/MM/YYYY or MM/YYYY): **(Not applicable for active ash ponds)**	NA

	(d) area (hectares):	20
	(e) dyke height (m):	9m
	(f) volume ($m^{3)}$	18 lac m^3
	(g) quantity of ash disposed as on 31stMarch (Metric Tons): -	119003 MT
	(h) available volume in percentage (percent) and quantity of ash can be further disposed (Metric Tons):	93.38% and 1680997 MT
	(i) Expected life of ash pond (number of years and months):	30
	(j) co-ordinates (Lat and Long):	25°53'24.51"N 71°19'44.89"E 25°53'25.47"N 71°20'2.82"E 25°53'12.23"N 71°20'3.62"E 25°53'11.52"N 71°19'45.68"E
	(k) Type of lining carried in ash pond: HDPE lining or LDPE lining or clay lining or No lining	HDPE
	(l) Ratio of ash: water in slurry mix	NA
	(m) Ash water recycling system (AWRS) installed and functioning	NA
	(n) Quantity of wastewater from ash pond discharged into land or water body (m^3)	NA
	(o) Last date when the dyke stability study was conducted	30.04.2025

	and of the organization who conducted the study.	Dr. Kapil Kumar and Dr. Ajay Kumar, NIT Delhi
	(p) Last date when the audit was conducted and name of the organization who conducted the audit.	
21	Quantity of legacy ash utilization (MTPA): -	3360
	i. Fly ash-based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels)	3360
	ii. Cement manufacturing	--
	iii. Ready mix concrete	--
	iv. Ash and Geo-polymer-based construction material	--
	v. Manufacturing of sintered or cold bonded ash aggregate	--
	vi. Construction of roads, road and fly over	--
	vii. Filling up of low-lying area	--
	viii. Filling of mine voids	--
	ix. Use in overburden dump	--
	x. Agriculture	--
	xi. Construction of shoreline protection structures in coastal districts	--
	xii. Export of ash to other countries	--
	xiii. Others	--

- **Ash Handling System at JSW Energy Barmer**

The ash handling system is a critical component in thermal power plants, ensuring the efficient collection, transfer, and disposal of ash generated during combustion. It is designed to minimize environmental impact while maintaining smooth operational efficiency. The system begins with the collection of bed ash, a coarse residue from the combustion bed, in the Intermittent Bottom Ash (IBAS) silo. From there, the bed ash is systematically transferred to a centralized storage silo for further processing or disposal.

In parallel, fly ash, which consists of fine particulate matter produced during combustion, is meticulously collected using a highly efficient process. This is achieved using Air Preheater (APH) and Electrostatic Precipitator (ESP) hoppers, which boast an impressive collection efficiency of 99.99%. The captured fly ash is subsequently transported to the storage silo, where it is combined with other ash for centralized handling.

From Silo, the ash is transferred for utilization in cement and brick manufacturing.

These ponds or dykes are engineered to prevent environmental contamination and comply with strict regulatory standards. This systematic approach to ash management ensures that emissions and waste are controlled and facilitates the possibility of ash utilization in various industrial applications, contributing to a sustainable waste management strategy. Overall, the ash handling system is vital in maintaining operational safety, environmental stewardship, and adherence to regulatory guidelines in power plant operations.

- **Working of TPP**

1. Thermal power plants convert the energy stored in fuels to mechanical work and electric energy.
2. Energy released by fuel burning is transferred to water in the boiler to generate steam at high pressure and temperature, which then expands in the turbine to produce shaft work.
3. The steam leaving the turbine is condensed in the condenser, where circulating cooling water carries away the latent heat of condensation.
4. Condensate Water is again fed to the boiler by the pump, and the cycle repeats.

- **Ash Disposal System (ADS)**

The generated ash is disposed of in well-designed, constructed, and maintained ash ponds through a high-concentration slurry disposal system to reduce water requirements and prevent groundwater contamination. Water is recirculated through a dedicated ash water recirculation system.

A schematic flow chart for the Ash utilization and disposal at the facility is below.

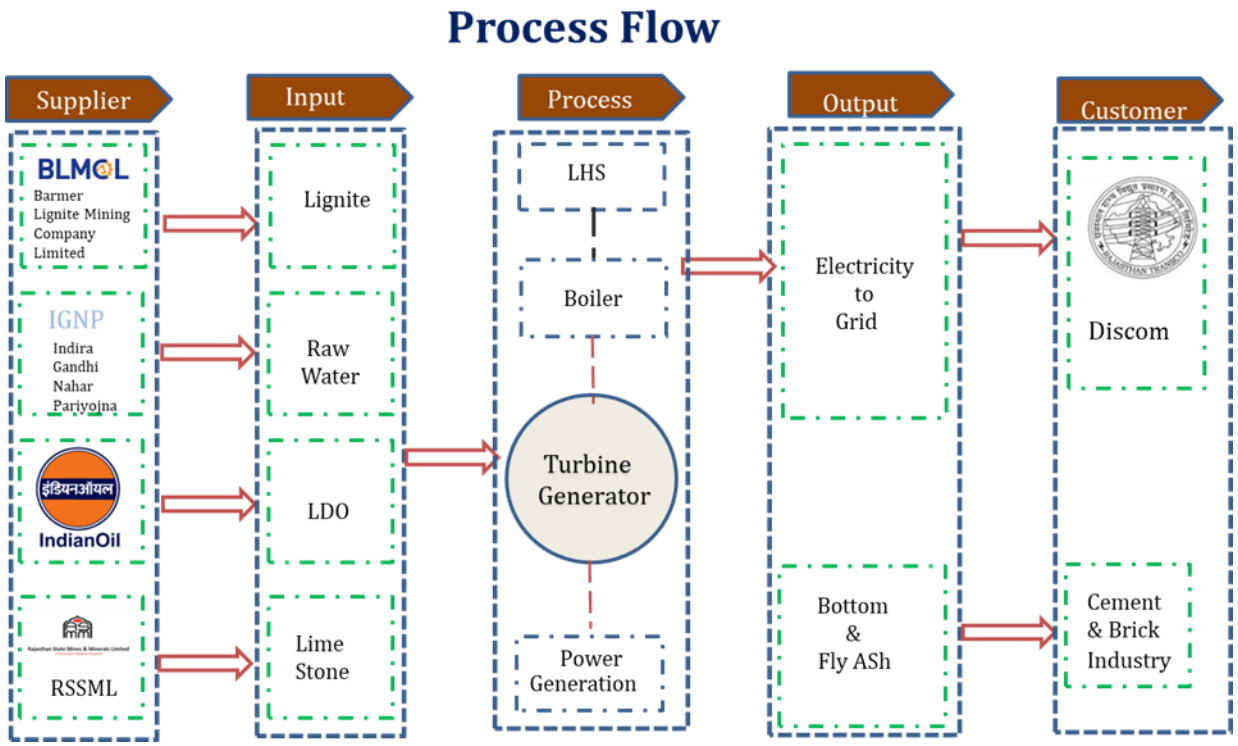

FIGURE 2: PROCESS FLOW OF JSW (BARMER) TPP

2.2 Lignite receipt/consumption, average ash content in Lignite and ash generation

During the financial year 2024–25, JSW Energy Barmer operated with an installed capacity of 1080 MW, comprising 6760572 generating units. All units were in operation, contributing to the total electricity generation. The plant achieved an **average Plant Load Factor (PLF)** of 71.46 %.

Lignite for the plant was primarily supplied by Barmer Lignite mine company Limited (BLMCL (names of companies). The **average Gross Calorific Value (GCV)** of the received Lignite was 2947.49 kcal/kg. The **specific Lignite consumption** during the year was 0.87 kg/kWh. The **actual Lignite consumption** stood at 59.07438 LMT.

The Annual data for ash content has been verified with Lignite consumption reports/sheets and random lab reports for Ash content in Lignite. The quarterly data report of Lignite consumption has been inspected, and it is in accordance with the Annual Implementation Report. The monthly data records are attached as **Annexure V.** The lab reports for Lignite analysis are attached as **Annexure- VI.**

The monthly average ash content and Lignite consumption from 01.04.2024 to 31.03.2025 is as below.

TABLE 4: ASH GENERATION DATA (APRIL 2024-MARCH 2025)

Month of FY2024-25	**Lignite Consumption as per monthly reports/database of industry**	**Average Ash Content in a month as per Chemistry dept. reports (%)**	**Total Lignite consumption as per monthly report of Fuel Management / Operation department Lignite combustion records**	**Total Lignite consumption as per ACR submitted.**	**Average Ash Content in FY2024-25 as per ACR submitted. (%)**
April'2024	473112	17.10	5907438	5907438	13.67124
May'2024	384902	17.84			
June'2024	553247	17.14			
July'2024	601369	17.37			
August'2024	505301	14.48			
September'2024	424834	11.62			
October'2024	460889	11.63			
November'2024	460086	11.45			
December'2024	522835	11.30			
January'2025	505810	11.59			
February'2025	479122	11.52			
March'2025	535931	10.64			
Total in FY (2024-25)					

Total Ash Generation (FY 2024-25) from monthly reports of Industry:

A = 807620 MT

Total Ash Generation submitted in ACR (2024-25): **B** = 807620 MT

The difference in annual ash generation as per records and ACR submitted to CPCB is (A-B) = Nil.

2.3 Utilization of fly ash, bottom ash and legacy/previously stored ash

TABLE 5: ADEQUACY OF DRY FLY ASH/BOTTOM ASH COLLECTION AND UTILIZATION

S.No.	Description	Response
1.	Dry Fly Ash Collection Potential as per facility (DAETS)	12000 MT (Fly & Bottom Ash)
2.	Actual quantity collected during the period	807620 MT
2b.	Dry Fly Ash Utilization during the period (2024-2025)	836817 MT
2c.	Reason for under-utilization of Dry Fly Ash	NA

TABLE 6: FACILITIES AVAILABLE FOR ASH UTILIZATION

S.No.	Description	Details
I.	**Ash silo**	
	• Volume	12000 MT
	• Fly ash silo	8000 MT
	• Bottom of ash silo	4000 MT
	Quantity	4 nos. for Bed ash 8 nos. for fly ash
II.	In-motion rail weighbridge: Details, if available	Not applicable
III.	Weight bridge for Ash Bulkers:	
	No. of Weight Bridge	5 nos.
	Capacity	1 no. 60 MT and 4 nos. 100 MT
IV	Ash Bagging machines	Not applicable
V	Ash bag Storage Shed	Not applicable

VI	Ash bag Storage Shed	Yes, PTZ camera
VII.	Brick Plant	Not applicable




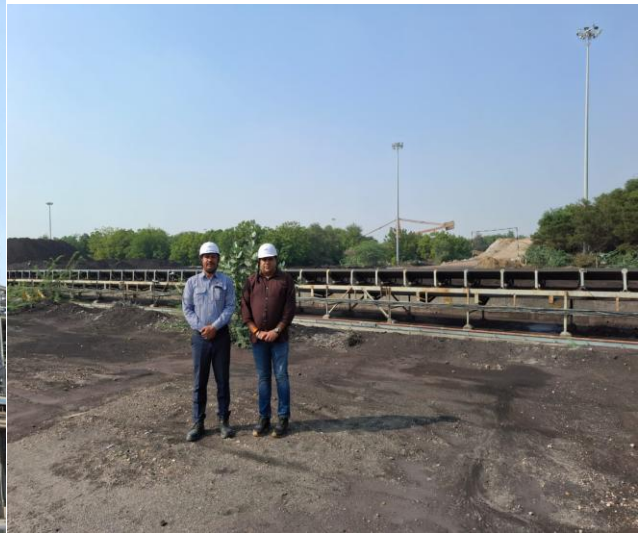

FIG 3: SITE INSPECTION

The utilization data of **fly ash, bottom ash and legacy/previously stored ash** generated at JSW (Barmer) Limited for the financial year 2024–25 has been verified against official records, SAP/database entries, tax invoices, and documentary evidence from user agencies. Random samples were also physically cross-checked with GST invoices, dispatch records, and on-site inspections to ensure accuracy.

- **Fly Ash Utilization**

The **fly ash utilization data** has been verified through tax invoices and the ash utilization database, SAP records and supporting documents from user agencies. Randomly selected GST invoices issued to user agencies have also been checked with the SAP/software system.

- **As per plant records (FY 2024–25):** 627613 MT
- **As per Annual Implementation Report (FY 2024–25):** 627613 MT

The verified quantity matches the quantity declared in the ACR. Fly ash has been dispatched to CPCB-prescribed sectors such as cement plants, brick manufacturing units and infrastructure projects.

- **Bottom Ash / Pond Ash Utilization**

Bottom/pond ash utilization has been verified with tax invoices for randomly selected months from the ash utilization database, SAP records and other documentary evidence from user agencies. Internal usage of bottom ash within the plant was confirmed through photographs and site inspections.

- **As per plant records (FY 2024–25):** 209204 MT
- **As per Annual Implementation Report submitted by the industry (FY 2024–25): 209204 MT**

- **Storage and Handling Capacity**

The plant has a dry fly ash collection capacity of 12000 MT, sufficient for approximately 85 hours of storage. In addition to individual silos, integrated ash silos are used for collection and

dispatch. The unutilized quantities of fly ash, bottom ash or legacy ash (if any) are stored or disposed of in designated ash ponds/dykes as per approved practices.

- **Summary of Ash Utilization and Compliance**

The total ash utilization from JSWEBL during FY 2024–25 was 840117 **MT**, which corresponds to **104.03% % utilization** against the prescribed annual target. This demonstrates compliance with MoEF&CC/CPCB guidelines

2.4 Ash Disposal into Ash Ponds/Dykes in the FY

TABLE 7: TECHNICAL SPECIFICATION OF ASH POND AND DYKE

S. No.	Description	Details
I.	Total quantity of ash disposed of in ash pond (01.04.2024)	151560 MT
II.	Total quantity of water consumption for slurry discharge into ash pond (cubic m)	---
a.	Total Ash Pond: Active, Exhausted, Reclaimed	Single Ash Pond
b.	Date of start and stop of ash pond	11/2009 to till active
i.	Area (hectares):	20 Ha
ii.	Dyke height (m)	9 M
iii.	Volume (m^3)	18 Lac M3
III.	Expected life of ash pond (number of years and months)	30 Year
IV.	Type of lining carried in ash pond: HDPE lining or LDPE lining or clay lining or No lining	HDPE with clay lining

During the financial year 2024–25, the disposal of ash into ash ponds/dykes at JSW Energy (Barmer) Ltd has been verified against plant records, SAP/database entries, and on-site inspections. **Bottom ash** generated from the units is evacuated through the ash handling system, with a total of 201905 MT produced during the FY. Out of this, 209204 MT was evacuated/transported to authorized users, and the **net bottom ash disposal** into the ash ponds/dykes in dry/slurry form during the year amounted to 0.00 MT.

Similarly, **fly ash** generated during the FY was primarily dispatched to authorized end users in dry form; however, a total of 0.00 MT of fly ash was disposed of into the ash ponds/dykes in slurry/wet conditioned form. The total fly ash generated was 605715 MT, of which 627613

MT was evacuated/utilized, leaving a **net disposal** of 0.00 MT into the ash ponds/dykes. The ash ponds and dykes have been maintained as per environmental and safety standards. Any minor variations in quantities between records and on-site observations were found operationally feasible.

2.5 Total ash storage in operational and un-operational ash ponds and available storage capacity for further disposal at the end of financial year

As per the requirements of Sl. No. 17 and 18 of the **MoEF&CC Ash Notification dated 31.12.2021**, details of ash storage in **operational** and **un-operational** ash ponds/dykes at JSWEBL Plant have been compiled and verified from plant records, disposal logs, and site inspections. A summary of the same is provided in **Table** below:

Sl. No.	Category	No. of Ponds/Dykes	Total Area (ha)	Ash Stored till FY-end (MT)	Available Capacity for Further Disposal (MT)	Status / SPCB Certification
1	Operational Ash Ponds/Dykes	One	20 Ha	119003	1680997	___
2	Un-operational Ash Ponds/Dykes (Ash to be utilized within 10 years)	NA	NA	NA	NA	NA
3	Un-operational Ash Ponds/Dykes (Yet to be stabilized/reclaimed with green belt & SPCB certification pending)	NA	NA	NA	NA	NA
4	Un-operational Ash Ponds/Dykes (Stabilized & reclaimed with green belt and certified by SPCB – certificate attached)	NA	NA	NA	NA	NA

2.6 Effects of Ash Ponds/dykes O&M, storage and transportation of ash on environment, condition of surrounding environment, and steps taken for improvement of environmental condition

Adequate measures have been taken at the site of the JSW Energy (Barmer) Limited to ensure the effective suppression of fugitive emissions at the facility. A consolidated summary of the emission mitigation measures observed at the site is given below:

TABLE 8: MITIGATION MEASURES AT THE FACILITY

Sr. No.	Description	Response
I.	**Ash Dyke Area**	
1.	Sprinklers in place	Yes
2.	Water spray through tanker	Yes
4.	Others Fugitive Dust Control Measures	-
6.	Compliance of Truck Covering	Yes
II.	**Ash Dyke Approach Road**	
1.	Water spray through tractor trolley	Yes
2.	No. of Water Tankers & Frequency of water spray	2 Tanker & 1 tractors, Frequency – Daily
III.	**Ash Silo Utility Area**	
1.	Fugitive emission prevention measures in Ash Silo Utility area and its effectiveness	Water Sprinklers, Water spray through tanker, Fogging Machine, Truck Covering
IV.	**Cleanliness of Ash Bulkers after loading**	
1.	Arrangement for Bulker body/ wheels cleaning before exit available	Yes (Automatic Bulker washing system in place)
1a.	Availability of above arrangement and its effectiveness	100%
2.	In case of top open body truck: - a. Ash conditioning arrangement b. Availability / Efficacy of HMDC	NA

	c. Tarpaulin covering arrangement	
3.	Any other measure	Plantation at site shows diverse, about 109 species are planted. Site inhabit 5 reptile species.
V.	**Brick Plant**	
1.	Fugitive emission prevention measures in raw material handling & storage area	NA
1a.	Availability / Efficacy of arrangement	NA

- **Ash Dyke Certification**

The plant has not reported any breach or structural failure in the current financial year, and the dyke was observed to be in stable condition during inspection. A valid stability certificate, issued by a competent and certified structural engineer, is attached for reference as **Annexure VII**.

- **Green Belt Development**

JSWEBL has developed very dense green belt all around the plant boundary, road corner and ash pond covering an area of more than 154 Ha (More than 33% of project land).

FIG 4: ONLINE CONTINUES MONITORING SYSTEM DISPLAY BOARD AT PLANT MAIN-GATE

FIG 5: GREEN BELT ALL AROUND THE PLANT SITE

Adequate water spray is carried out on road on regular basis though water tankers, Water fogging & sprinkling of water is being practiced to minimize the fugitive dust emissions.

FIGURE 6: SPRINKLER IN ASH DYKE AREA

FIGURE 7: WATER SPRAY THROUGH TANKER IN ASH DYKE AREA

FIGURE 8: ASH COLLECTION- ESP & HOPPER

FIG 9: TOP OF ASH SILO

FIURE 10: ASH GENERATION IBA (INTERMITTENT BOTOM ASH SILO

FIGURE 11: ASH STORAGE ONSITE SILOS- FLY ASH AND BOTTOM

FIGURE 12: ASH TRANSPORT SYSTEM

3. AUDIT SUMMARY/CONCLUSIONS

During the audit, various documents, records, and digital records of power plants were reviewed and verified with the TPP Team as the Annual Ash disposal compliance report (ACR). The power plant officials have cooperated with NIT Delhi, and various information as readily available to them has been provided. The conclusions of the audit are as below.

- Lignite consumption during FY 2024–25 as per plant records was 5907438MT, which matches the figures reported in the Annual Implementation Report submitted to the authorities. Fly ash generated during the year was 605715 MT, and bottom ash generated was201905 MT, which corresponds with the reported data in the AIR.
- Total fly ash utilized during FY 2024–25 was 627613 MT and bottom ash utilization was 209204 MT, resulting in a total ash utilization of 104.03% % against the prescribed minimum annual target, indicating compliance with the Ash Notification requirements.
- Ash has been supplied to major users including cement plants, brick manufacturers, infrastructure projects, and internal plant use, with transport mainly through covered road vehicles, ensuring environmentally sound handling.
- Cumulative ash utilization during the ongoing compliance cycle (FY 2022–23 to FY 2024–25) is 2659849 MT, achieving 102.82% of the cycle target as per the prescribed minimum utilization norms.
- Ash stored at the beginning of the FY 2024–25 was 151560 MT, and at the end of the FY was 119003 MT, managed in dry ash silos and ash ponds in accordance with environmental standards, with no spillage or environmental contamination observed.
- Monthly and annual ash data for the financial year were uploaded to CPCB/CEA portals as per guidelines, and no discrepancies were observed by the auditors during verification. The Annual Implementation Report for FY 2024–25 was submitted on dated 30-Apr-2025 to the concerned authorities.

4. RECOMMENDATIONS FOR IMPROVEMENT

Based on the observations and findings during the audit of JSW Energy (Barmer) Limited for FY 2024–25, the following recommendations are suggested to further improve the handling, storage, transportation, and utilization of fly and bottom ash in an environmentally sound manner. These measures aim to enhance compliance with the Ash Notification, reduce environmental impacts, and optimize ash management practices at the plant.

- The plant may consider further strengthening dust suppression measures such as enhancing sprinkler coverage or misting arrangements to reduce localised fugitive emissions in operational areas.
- Providing partial or full enclosures for ash handling areas, transfer points, or other dust-prone sections can significantly reduce wind-blown dust and improve overall fugitive emission control.

ANNEXURE I

Head Office Power

Rajasthan State Pollution Control Board

4, Institutional Area, Jhalana Doongari, Jaipur-302 004

Phone: 0141-2716804

Revised Consent

File No : F(Tech)/Barmer(Barmer)/5153(1)/2023-2024/5821-5823

Order No : 2023-2024/Power/3

Date: Dec 5 2023 2:58PM

Unit Id : 5276

M/s JSW Energy (Barmer) Ltd.(Old Name Raj West Power Private Limited)

Village- Bhadresh , Tehsil:Barmer
District:Barmer

Sub: **Consent to Operate** under Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under Section 21(4) of Air (Prevention & Control of Pollution) Act, 1981**.**

Ref: Your application for Consent to Operate dated 08/08/2023 and subsequent correspondence.

Sir,

Consent to Operate under the provisions of Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 (hereinafter to be referred as the Water Act) and under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981, (hereinafter to be referred as the Air Act) as amended to date and rules & the orders issued thereunder **is hereby granted** for your **Stage I (Unit I II) plant** situated at **Village- Bhadresh Bhadresh Tehsil:Barmer District:Barmer** , Rajasthan, subject to the following conditions:-

1 That this Consent to Operate is valid for a period from **01/01/2024** to **31/12/2028** .

2 That this Consent is granted for manufacturing / producing following products / by products or carrying out the following activities or operation/processes or providing following services with capacities given below:

Particular	Type	Quantity with Unit
Electricity	Activity	270.00 MW

3 That this Consent to Operate is for existing plant, process & capacity and separate Consent to Establish/Operate is required to be taken for any addition / modification / alteration in process or change in capacity or change in fuel.

4 That the quantity of effluent generation along with mode of disposal for the treated effluent shall be as under:

Rajasthan State Pollution Control Board

4, Institutional Area, Jhalana Doongari, Jaipur-302 004
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Revised Consent

File No : F(Tech)/Barmer(Barmer)/5153(1)/2023-2024/5821-5823
Order No : 2023-2024/Power/3
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Unit Id : 5276

Type of effluent	Max. effluent generation (KLD)	Recycled Qty of Effluent (KLD)	Disposed Qty of effluent (KLD)and mode of disposal
Domestic Sewage	7.500	NIL	7.500 Treated through STP & used in plantation
Trade Effluent	1750.000	1,750.000	NIL treated in effluent treatment plant and reuse/recycle in process

5 That the sources of air emissions along with pollution control measures and the emission standards for the prescribed parameters shall be as under:

Sources of Air Emissions	Pollution Control Measures	Prescribed	
		Parameter	Standard
Two D. G. Set(1000KVA EACH)	ACOUSTIC ENCLOSURE , ADEQUATE STACK HEIGHT	NOx (as NO2) (at 15% O2) day basis in ppmv	710 mg/Nm3
		NMHC (as C) (at 15% O2)	100 mg/Nm3
		PM (at 15% O2)	75 mg/Nm3
		CO (at 15% O2)	150 mg/Nm3
Two Lignite fired Boilers(440TPH EACH)	ADEQUATE STACK HEIGHT , ELECTROSTATIC PRECIPITATOR	SO2	600 mg/Nm3

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Revised Consent

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		Particulate Matter	50 mg/Nm3
		NOx	450 mg/Nm3
		Hg and its compounds	0.03 mg/Nm3

6 That the Trade Effluent shall be treated before disposal so as to conform to the standards prescribed under the Environvent (Protection) Act-1986for disposal **Into Inland Surface Water**. The main parameters for regular monitoring shall be as under:

Parameters	Standards
Total Suspended Solids	**Not to exceed 100 mg/l**
pH Value	**Between 5.5 to 9.0**
Oil and Grease	**Not to exceed 10 mg/l**
Total Residual Chlorine	**Not to exceed 1.0 mg/l**
Biochemical Oxygen Demand (3 days at 27°C)	**Not to exceed 30 mg/l**
Sulphide (as S)	**Not to exceed 2.0 mg/l**
Chlorides	**Not to exceed 1000 mg/l**
Chemical Oxygen Demand	**Not to exceed 250 mg/l**

7 That the Trade Effluent shall be treated before disposal so as to conform to the standards prescribed under the Environment (Protection) Act-1986 for disposal **Into Inland Surface Water .** The main parameters for regular monitoring shall be as under

Rajasthan State Pollution Control Board
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Revised Consent

File No : F(Tech)/Barmer(Barmer)/5153(1)/2023-2024/5821-5823
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Parameters	Standards
Total Suspended Solids	Not to exceed 100 mg/l
Phosphate	Not to exceed 5 mg/l
Free Available Chlorine	Not to exceed 0.5 mg/l
pH Value	Between 6.5 to 8.5
Oil and Grease	Not to exceed 20 mg/l
Copper as Cu)	Not to exceed 1.0 mg/l
Zinc (as Zn)	Not to exceed 1.0 mg/l
Iron (as Fe)	Not to exceed 1.0 mg/l
Chromium (total)	Not to exceed 0.2 mg/l

8 That the industry shall obtain all the necessary permissions from concern authority and district administration Barmer for operation of 270 MW lignite based power plant.

9 That this consent to operate is being issued for production capacity of 2 x 135 MW (Unit 1 & 2) thermal power plant.

10 That the total project cost of unit 1 & 2 is Rs. 1661.97 Crore. The industry shall take/obtain modification in consent to operate after paying fee as applicable.

11 That the Charter of Corporate Responsibility for Environment Protection specified for Thermal Power Plants shall be complied.

12 That the industry will comply with the standards as prescribed vide MOEF notification No. GSR 826(E) dated 16th Nov,2009 with respect of National Ambient Air Quality Standards.

13 That the unit shall provide and maintain adequate dust collection and extraction system to control fugitive dust emissions at lignite crusher, lignite transfer points and lignite handling and storage areas.

14 That the industry shall maintain opacity meter with each boiler stack to monitor the emission level of particulate matter. The monthly observation will be submitted to R.O office along with the reason/clarification for any recorded violation of the prescribed standards.

Rajasthan State Pollution Control Board

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Revised Consent

File No : F(Tech)/Barmer(Barmer)/5153(1)/2023-2024/5821-5823
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15 That low Nox burners shall be installed at the boiler feeding system. That the level of SPM within distance 3-10 M from dust generating source/plant shall not exceed to 600 mg/Nm^3 in ambient air.

16 That for the control fugitive emission guidelines /code of practice as issued by CPCB will be followed.

17 That the project proponent shall undertake measures and ensure that no fugitive fly ash emissions take place at any point of time.

18 That no industrial effluent will be discharged inside or outside from the factory premises in to a stream or well or sewer or on land and the effluent generated from power plant shall be re-used in the process.

19 The domestic effluent shall be treated up to prescribed standards and shall be used for plantation/ green belt development within the premises.

20 Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.

21 That the total fresh water requirement for unit-1 & 2 shall not exceed 21622.5 KLD (boiler/cooling-21000 KLD + domestic -22.5 KLD + industrial purpose- 600 KLD) which shall be met from IGNP Mohangarh.

22 That the trade effluent shall be treated in ETP comprising of CMB (Central Monitoring Basin) which has two basins of 4000 KLD capacity of each then through HRSCC (clarifier) of capacity 7440 KLD, followed by filters and eventually through RO system which is common for all the units.

23 That the domestic waste water shall be treated in STP of 100 KLD capacity which is common for all the units.

24 That no ground water shall be abstracted without prior permission from the State Board and the Central Ground Water Authority.

25 That suitable flow measuring devices/meters on the intake source of water, inlet and outlet of effluent treatment/sewage treatment plant shall be installed and maintained. Daily record of water consumption, effluent generation and its treatment and utilization shall be maintained.

26 That the industry shall undertake suitable measures for rain water harvesting for artificial recharge of ground water.

27 The industry shall comply with the MoEF, Government of India, Notification date 14th September 1999 with till the date amendments relating to fly ash management and shall update the details regarding utilization of fly ash on fly ash portal of CPCB.

Rajasthan State Pollution Control Board
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Revised Consent

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Order No : 2023-2024/Power/3 **Date:** Dec 5 2023 2:58PM

Unit Id : 5276

28 **That the industry shall carryout SO2 & NOx monitoring within 3 months from State Board's lab so that the adequacy of pollution control measures & compliance of MoEF & CC notification dated 05.09.2022 can be adjudged.**

29 **That the industry shall carry out waste water analysis of RO reject water from State Board's lab within 3 months so that possibility of direct water usage in ash quenching etc from RO reject can be ascertained.**

30 **That the unit shall submit details of solid waste generated from the plant to Regional Officer of the State Board, Balotra.**

31 **That the Thermal power plant shall meet the limits of Boiler as per the Notification dated 07.12.2015 and 05.09.2022 issued by the Ministry of Environment, Forest and Climate Change, Government of India.**

32 **That industry shall comply with the provisions of Hazardous & other Waste (Management & Transboundary movement) Rules, 2016 and record of daily hazardous waste generation and its disposal shall be maintained.**

33 **That the industry shall provide acoustic enclosure and adequate stack height of minimum 30 meters with two D.G. set of 1000 KVA (each).**

34 **That the Thermal power plant shall comply with water consumption limit as specified in the Notification dated 07/12/2015 issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC).**

35 **That the industry shall carryout effluent sampling/stack monitoring/ambient air quality monitoring and submit quarterly analysis report from the State Board laboratory/ laboratory recognized by Ministry of Environment & Forests (MoE&F), Government of India.**

36 **That the industry shall ensure compliance of ambient air quality standard in respect of noise as prescribed under Environment (Protection) Act & Rules made therein.**

37 **That the industry shall comply with the provisions of the Public Liability Insurance Act, 1991.**

38 **That suitable measure for rain water harvesting for artificial recharge of ground water shall be taken.**

39 **That cemented roads shall be provided & maintained inside the premises to minimize the fugitive emissions due to vehicular movements.**

40 **That the plantation in atleast 33% of total area of the project in and around the power plant shall be carried out & maintained.**

41 **That this consent to operate shall be subject to compliance of any direction or order passed by NGT/Hon'ble Court of Law in the matter.**

42 That this revised consent letter shall supercede the earlier consent letter no **F(Tech)/Barmer(Barmer)/5153(1)/2023-2024/5800-5802** dated **Dec 1 2023 5:20PM**

Rajasthan State Pollution Control Board

4, Institutional Area, Jhalana Doongari, Jaipur-302 004
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Revised Consent

File No : F(Tech)/Barmer(Barmer)/5153(1)/2023-2024/5821-5823
Order No : 2023-2024/Power/3 **Date:** Dec 5 2023 2:58PM

Unit Id : 5276

43 That, notwithstanding anything provided hereinabove, the State Board shall have the power and reserves its right, as contained **under Section 27(2) of the Water Act and under Section 21(6) of the Air Act** to review anyone or all of the conditions imposed here in above and to make such variation as it deems fit for the purpose of **Air Act & Water Act**.

44 That the grant of this **Consent to Operate** is issued from the environmental angle only, and does not absolve the project proponent from the other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with the conditions laid down in all other laws for the time-being in force, rests with the industry/ unit/ project proponent.

45 That the grant of this **Consent to Operate** shall not, in any way, adversely affect or jeopardize the legal proceeding, if any, instituted in the past or that could be instituted againt you by the State Board for violation of the provisions of the Water Act and Air Act or the Rules made thereunder.

46 That the Project Proponent shall comply with provisions of the E-waste (Management) Rules, 2016 and ensure that e-waste generated by them is channelized through collection centre or dealer of authorized producer or dismantler or recycler or through designated take back service provider of the producer to authorized dismantler or recycler.

47 That the Project Proponent shall maintain record of e-waste generated by them in Form-2 and make such records available for scrutiny by the Board.

48 That the Project Proponent shall file annual returns in Form-3, to the Board on or before the 30th day of June following the financial year to which that return relates.

49 That the transportation of e-waste shall be carried out as per the manifest system whereby the transporter shall be required to carry a document (three copies) prepared by the sender, giving the details as per Form-6.

50 That the Project Proponent shall comply with provisions of the Batteries (Management and Handling) Rules, 2001 (as amended) and submit half yearly returns (as bulk consumer, importer, auctioneer, recycler as the case may be) to the State Board as provided under Rule 10 (2) (ii) of the Battery (Management and Handling) Rules, 2001 (as amended). In case the Project Proponent is not a bulk consumer even then the used batteries shall be returned to the authorized dealers or recyclers only.

51 That the record of batteries purchased and sold/ returned to registered dealers and/ or authorized recyclers shall be maintained and made available to the officers of the Board during inspections.

Head Office Power

Rajasthan State Pollution Control Board

4, Institutional Area, Jhalana Doongari, Jaipur-302 004

Phone: 0141-2716804

Revised Consent

File No : **F(Tech)/Barmer(Barmer)/5153(1)/2023-2024/5821-5823**

Order No : **2023-2024/Power/3** **Date:** **Dec 5 2023 2:58PM**

Unit Id : 5276

This **Consent to Operate** shall also be subject, besides the aforesaid specific conditions, to the general conditions given in the enclosed Annexure. The Project Proponent will comply with the provisions of the **Water Act and Air Act** and to such other conditions as may, from time to time , be specified, by the State Board under the provisions of the aforesaid Act(s). Please note that, non compliance of any of the above stated conditions would tantamount to revocation of **Consent to Operate** and Project Proponent / occupier shall be liable for legal action under the relevant provisions of the said Act(s).

This bears approval of the competent authority.

Yours sincerely,

Group Incharge[Power]

(A): **Copy to:-**

1 Regional Officer, Regional Office, Rajasthan State Pollution Control Board,,for information and to monitor the compliance of the Consent to Operate conditions.

2 Master File.

Group Incharge[Power]

Head Office Power

Rajasthan State Pollution Control Board

4, Institutional Area, Jhalana Doongari, Jaipur-302 004

Phone: 0141-2716804

Registered

File No : F(Tech)/Barmer(Barmer)/5153(1)/2023-2024/5925-5927

Order No : 2023-2024/Power/4 **Date: Dec 8 2023 3:12PM**

Unit Id : 5276

M/s JSW Energy (Barmer) Ltd.(Old Name Raj West Power Private Limited)

Village- Bhadresh , Tehsil:Barmer
District:Barmer

Sub: **Consent to Operate** under Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under Section 21(4) of Air (Prevention & Control of Pollution) Act, 1981**.**

Ref: Your application for Consent to Operate dated 21/07/2023 and subsequent correspondence.

Sir,

Consent to Operate under the provisions of Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 (hereinafter to be referred as the Water Act) and under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981, (hereinafter to be referred as the Air Act) as amended to date and rules & the orders issued thereunder **is hereby granted** for your **Stage II (Unit III - IV) plant** situated at **Village- Bhadresh, Tehsil-Barmer, District-Barmer Barmer Tehsil:Barmer District:Barmer** , Rajasthan, subject to the following conditions:-

1 That this Consent to Operate is valid for a period from **01/12/2023** to **30/11/2028** .

2 That this Consent is granted for manufacturing / producing following products / by products or carrying out the following activities or operation/processes or providing following services with capacities given below:

Particular	Type	Quantity with Unit
Electricity	Activity	270.00 MW

3 That this Consent to Operate is for existing plant, process & capacity and separate Consent to Establish/Operate is required to be taken for any addition / modification / alteration in process or change in capacity or change in fuel.

4 That the quantity of effluent generation along with mode of disposal for the treated effluent shall be as under:

Rajasthan State Pollution Control Board

4, Institutional Area, Jhalana Doongari, Jaipur-302 004
Phone: 0141-2716804

Registered

File No : F(Tech)/Barmer(Barmer)/5153(1)/2023-2024/5925-5927
Order No : 2023-2024/Power/4 **Date:** Dec 8 2023 3:12PM

Unit Id : 5276

Type of effluent	Max. effluent generation (KLD)	Recycled Qty of Effluent (KLD)	Disposed Qty of effluent (KLD)and mode of disposal
Domestic Sewage	7.500	NIL	7.500 Treated through STP & used in plantation
Trade Effluent	1750.000	NIL	1,750.000 Treated in Effluent Treatment Plant and used in plantation and horticulture

5 That the sources of air emissions along with pollution control measures and the emission standards for the prescribed parameters shall be as under:

Sources of Air Emissions	Pollution Control Measures	Prescribed	
		Parameter	Standard
Two D. G Set(1000KVA EACH)	ACOUSTIC ENCLOSURE , ADEQUATE STACK HEIGHT	NOx (as NO2) (at 15% O2) day basis in ppmv	710 mg/Nm3
		NMHC (as C) (at 15% O2)	100 mg/Nm3
		PM (at 15% O2)	75 mg/Nm3
		CO (at 15% O2)	150 mg/Nm3
Two Lignite fired Boilers(440TPH EACH)	ADEQUATE STACK HEIGHT , ESP	SO2	600 mg/Nm3
		Particulate Matter	50 mg/Nm3

Rajasthan State Pollution Control Board
4, Institutional Area, Jhalana Doongari, Jaipur-302 004
Phone: 0141-2716804

Registered

File No : **F(Tech)/Barmer(Barmer)/5153(1)/2023-2024/5925-5927**
Order No : **2023-2024/Power/4** **Date:** **Dec 8 2023 3:12PM**

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		NOx	450 mg/Nm3
		Hg and its compounds	0.03 mg/Nm3

6 That the Trade Effluent shall be treated before disposal so as to conform to the standards prescribed under the Environvent (Protection) Act-1986for disposal **Into Inland Surface Water**. The main parameters for regular monitoring shall be as under:

Parameters	Standards
pH Value	**Between 6.5 to 9.0**
Biochemical Oxygen Demand (3 days at 27C)	**Not to exceed 10 mg/l**
Chemical Oxygen Demand	**Not to exceed 50 mg/l**
NH4 (N)	**5 mg/l**
N total	**10 mg/l**
Total Suspended Solids	**Not to exceed 20 mg/l**
Fecal Coliform (MPN per 100 ml)	**Not to exceed 100**

7 That the Trade Effluent shall be treated before disposal so as to conform to the standards prescribed under the Environment (Protection) Act-1986 for disposal **Into Inland Surface Water .** The main parameters for regular monitoring shall be as under

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4, Institutional Area, Jhalana Doongari, Jaipur-302 004
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Parameters	Standards
Total Suspended Solids	Not to exceed 100 mg/l
Phosphate	Not to exceed 5 mg/l
Free Available Chlorine	Not to exceed 0.5 mg/l
pH Value	Between 6.5 to 8.5
Oil and Grease	Not to exceed 20 mg/l
Copper as Cu)	Not to exceed 1.0 mg/l
Zinc (as Zn)	Not to exceed 1.0 mg/l
Iron (as Fe)	Not to exceed 1.0 mg/l
Chromium (total)	Not to exceed 0.2 mg/l

8 That the industry shall obtain all the necessary permissions from concern authority and district administration Barmer for operation of 270 MW lignite based power plant.

9 That this consent to operate is being issued for production capacity of 2 x 135 MW (Unit 3 & 4) thermal power plant.

10 That the total project cost of unit 3 & 4 is Rs. 1384.98 Crore. The industry shall take/obtain modification in consent to operate after paying fee as applicable.

11 That the industry shall comply with all the conditions as imposed by MOEF, Government of India vide its office letter no. F. No. J-13011/58/2006-IA II (I) dated 20/07/2007 while issuing EC to your project and also amendment made vide letter dated 19.11.2009 thereafter.

12 That the Charter of Corporate Responsibility for Environment Protection specified for Thermal Power Plants shall be complied.

13 That the industry will comply with the standards as prescribed vide MOEF notification No. GSR 826(E) dated 16th Nov,2009 with respect of National Ambient Air Quality Standards.

14 That the unit shall provide and maintain adequate dust collection and extraction system to control fugitive dust emissions at coal crusher, coal crusher, coal transfer points and coal handling and storage areas.

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15 **That the industry shall maintain opacity meter with each boiler stack to monitor the emission level of particulate matter. The monthly observation will be submitted to R.O office along with the reason/clarification for any recorded violation of the prescribed standards.**

16 **That low Nox burners shall be installed at the boiler feeding system. That the level of SPM within distance 3-10 M from dust generating source/plant shall not exceed to 600 mg/Nm^3 in ambient air.**

17 **That for the control fugitive emission guidelines /code of practice as issued by CPCB will be followed.**

18 **That the project proponent shall undertake measures and ensure that no fugitive fly ash emissions take place at any point of time.**

19 **That no industrial effluent will be discharged inside or outside from the factory premises in to a stream or well or sewer or on land and the effluent generated from power plant shall be used for ash quenching, control of fugitive emissions and plantation.**

20 **The domestic effluent shall be treated up to prescribed standards and shall be used for plantation/ green belt development within the premises.**

21 **Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.**

22 **That the total fresh water requirement for unit-1 & 2 shall not exceed 21622.5 KLD (boiler/cooling-21000 KLD + domestic -22.5 KLD + industrial purpose- 600 KLD) which shall be met from ground water i.e.IGNP Mohangarh.**

23 **That no ground water shall be abstracted without prior permission from the State Board and the Central Ground Water Authority.**

24 **That the domestic waste water shall be treated in STP of 100 KLD capacity which is common for all the units.**

25 **That suitable flow measuring devices/meters on the intake source of water, inlet and outlet of effluent treatment/sewage treatment plant shall be installed and maintained. Daily record of water consumption, effluent generation and its treatment and utilization shall be maintained.**

26 **That the trade effluent shall be treated in ETP comprising of CMB (Central Monitoring Basin) which has two basins of 4000 KLD capacity of each then through HRSCC (clarifier) of capacity 7440 KLD, then it flows through filters and eventually through RO system, which is common for all the units.**

27 **That the domestic waste water shall be treated in STP of 100 KLD capacity which is common for all the units.**

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28 That the industry shall undertake suitable measures for rain water harvesting for artificial recharge of ground water.

29 The industry shall comply with the MoEF, Government of India, Notification date 14th September 1999 with till the date amendments relating to fly ash management and shall update the details regarding utilization of fly ash on fly ash portal of CPCB.

30 That the unit shall install flow meters at inlet and outlet of STP and at outlet of ETP.

31 That the unit shall submit details of solid waste generated from the plant to Regional Officer of the State Board, Balotra.

32 That the industry shall maintain Online Continuous Emission Monitoring System (OCEMS) (for stack and liquid) with proper connectivity with State Board OCEMS portal/CPCB server.

33 That the Thermal power plant shall meet the limits of Boiler as per the Notification dated 07.12.2015 and 05.09.2022 issued by the Ministry of Environment, Forest and Climate Change, Government of India.

34 That the industry shall maintain online continuous monitoring system at stack attached to boiler to monitor the emission level of particulate matter(PM), SO2, NOx, Hg along with for effluents and connectivity of the same shall be ensured with RSPCB/CPCB server whenever plant is operated.

35 That industry shall comply with the provisions of Hazardous & other Waste (Management & Transboundary movement) Rules, 2016 and record of daily hazardous waste generation and its disposal shall be maintained.

36 That the industry shall provide acoustic enclosure and adequate stack height of minimum 30 meters with two D.G. set of 1000 KVA.

37 That the Thermal power plant shall comply with water consumption limit as specified in the Notification dated 07/12/2015 issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC).

38 That the industry shall carryout effluent sampling/stack monitoring/ambient air quality monitoring and submit quarterly analysis report from the State Board laboratory/ laboratory recognized by Ministry of Environment & Forests (MoE&F), Government of India.

39 That the industry shall ensure compliance of ambient air quality standard in respect of noise as prescribed under Environment (Protection) Act & Rules made therein.

40 That the industry shall comply with the provisions of the Public Liability Insurance Act, 1991.

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41 **That suitable measure for rain water harvesting for artificial recharge of ground water shall be taken.**

42 **That cemented roads shall be provided & maintained inside the premises to minimize the fugitive emissions due to vehicular movements.**

43 **That the plantation in atleast 33% of total area of the project in and around the cement plant shall be carried out & maintained.**

44 **That this consent to operate shall be subject to compliance of any direction or order passed by NGT/Hon'ble Court of Law in the matter**

45 **That the industry shall carryout SO2 & NOx monitoring within 1 month from Board's lab so the adequacy of pollution control measures & compliance of MoEF & CC notification dated 05.09.2022 can be checked.**

46 **That the industry shall carry out waste water analysis of RO reject water from Board's lab within 1 month so that direct water usage in ash quenching etc from RO reject can be ascertained.**

47 **That the industry shall apply for CTO renewal before 2 months from the expiry of this consent.**

48 That, notwithstanding anything provided hereinabove, the State Board shall have the power and reserves its right, as contained **under Section 27(2) of the Water Act and under Section 21(6) of the Air Act** to review anyone or all of the conditions imposed here in above and to make such variation as it deems fit for the purpose of **Air Act & Water Act**.

49 That the grant of this **Consent to Operate** is issued from the environmental angle only, and does not absolve the project proponent from the other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with the conditions laid down in all other laws for the time-being in force, rests with the industry/ unit/ project proponent.

50 That the grant of this **Consent to Operate** shall not, in any way, adversely affect or jeopardize the legal proceeding, if any, instituted in the past or that could be instituted againt you by the State Board for violation of the provisions of the Water Act and Air Act or the Rules made thereunder.

51 That the Project Proponent shall comply with provisions of the E-waste (Management) Rules, 2016 and ensure that e-waste generated by them is channelized through collection centre or dealer of authorized producer or dismantler or recycler or through designated take back service provider of the producer to authorized dismantler or recycler.

Head Office Power

Rajasthan State Pollution Control Board

4, Institutional Area, Jhalana Doongari, Jaipur-302 004

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52 That the Project Proponent shall maintain record of e-waste generated by them in Form-2 and make such records available for scrutiny by the Board.

53 That the Project Proponent shall file annual returns in Form-3, to the Board on or before the 30th day of June following the financial year to which that return relates.

54 That the transportation of e-waste shall be carried out as per the manifest system whereby the transporter shall be required to carry a document (three copies) prepared by the sender, giving the details as per Form-6.

55 That the Project Proponent shall comply with provisions of the Batteries (Management and Handling) Rules, 2001 (as amended) and submit half yearly returns (as bulk consumer, importer, auctioneer, recycler as the case may be) to the State Board as provided under Rule 10 (2) (ii) of the Battery (Management and Handling) Rules, 2001 (as amended). In case the Project Proponent is not a bulk consumer even then the used batteries shall be returned to the authorized dealers or recyclers only.

56 That the record of batteries purchased and sold/ returned to registered dealers and/ or authorized recyclers shall be maintained and made available to the officers of the Board during inspections.

This **Consent to Operate** shall also be subject, besides the aforesaid specific conditions, to the general conditions given in the enclosed Annexure. The Project Proponent will comply with the provisions of the **Water Act and Air Act** and to such other conditions as may, from time to time , be specified, by the State Board under the provisions of the aforesaid Act(s). Please note that, non compliance of any of the above stated conditions would tantamount to revocation of **Consent to Operate** and Project Proponent / occupier shall be liable for legal action under the relevant provisions of the said Act(s).

This bears approval of the competent authority.

Yours sincerely,

Group Incharge[Power]

(A): **Copy to:-**

1 Regional Officer, Regional Office, Rajasthan State Pollution Control Board,,Balotra for information and to monitor the compliance of the Consent to Operate conditions within one month.

2 Master File.

Head Office Power

Rajasthan State Pollution Control Board

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Group Incharge[Power]

Head Office (CPM)

Rajasthan State Pollution Control Board

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File No : F(Tech)/Barmer(Barmer)/3(1)/2008-2009/6524-6526

Order No : 2021-2022/CPM/8556

Date: Feb 10 2022 10:51AM

Unit Id : 5276

M/s JSW Energy (Barmer) Ltd.(Old Name Raj West Power Private Limited)

Village- Bhadresh , Tehsil:Barmer
District:Barmer

Sub: **Consent to Operate** under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21(4) of Air (Prevention & Control of Pollution) Act, 1981**.**

Ref: Your application for Consent to Operate dated 25/06/2021 and subsequent correspondence.

Sir,

Consent to Operate under the provisions of section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 (hereinafter to be referred as the Water Act) and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981, (hereinafter to be referred as the Air Act) as amended to date and rules & the orders issued thereunder **is hereby granted** for your **Stage III (Unit V VI) plant** situated at **Village- Bhadresh , TehsilBarmer District -Barmer Bhadresh Tehsil:Barmer District:Barmer** , Rajasthan, subject to the following conditions:-

1 That this Consent to Operate is valid for a period from **01/11/2021** to **31/10/2026** .

2 That this Consent is granted for manufacturing / producing following products / by products or carrying out the following activities or operation/processes or providing following services with capacities given below.

Particular	Type	Quantity with Unit
ELECTRICITY	Product	270.00 MW

3 That this consent to operate is for existing plant, process & capacity and separate consent to establish/operate is required to be taken for any addition / modification / alteration in process or change in capacity or change in fuel.

4 That the quantity of effluent generation along with mode of disposal for the treated effluent shall be as under:

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Type of effluent	Max. effluent generation (KLD)	Recycled Qty of Effluent (KLD)	Disposed Qty of effluent (KLD)and mode of disposal
Domestic Sewage	75.000	NIL	75.000 On Land For Plantation/Horticulture
Trade Effluent	9800.000	NIL	9,800.000 Dust suppression/Plantation/Horticulture

5 That the sources of air emmissions along with pollution control measures and the emission standards for the prescribed parameters shall be as under:

Sources of Air Emmissions	Pollution Control Measures	Prescribed	
		Parameter	Standard
One D.G. Set(1000KVA)	ACOUSTIC ENCLOSURE , ADEQUATE STACK HEIGHT	NOx (as NO2) (at 15% O2) day basis in ppmv	710 mg/Nm³
		NMHC (as C) (at 15% O2)	100 mg/Nm³
		PM (at 15% O2)	75 mg/Nm³
		CO (at 15% O2)	150 mg/Nm³
Two Lignite fired Boilers(440TPH EACH)	ADEQUATE STACK HEIGHT , ESP	SO2	600 mg/Nm³
		Particulate Matter	50 mg/Nm³

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		NOx	450 mg/Nm³
		Hg and its compounds	0.03 mg/Nm³

6 That the domestic sewage shall be treated before disposal so as to conform to the standards prescribed under the Environvent (Protection) Act-1986for disposal **Into Inland Surface Water**. The main parameters for regular monitoring shall be as under.

Parameters	Standards
Total Suspended Solids	**Not to exceed 100 mg/l**
pH Value	**Between 5.5 to 9.0**
Oil and Grease	**Not to exceed 10 mg/l**
Total Residual Chlorine	**Not to exceed 1.0 mg/l**
Biochemical Oxygen Demand (3 days at 27°C)	**Not to exceed 30 mg/l**
Sulphide (as S)	**Not to exceed 2.0 mg/l**
Chlorides	**Not to exceed 1000 mg/l**
Chemical Oxygen Demand	**Not to exceed 250 mg/l**

7 That the trade effluent shall be treated before disposal so as to conform to the standards prescribed under the Environment (Protection) Act-1986 for disposal **Into Inland Surface Water .** The main parameters for regular monitoring shall be as under

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Parameters	Standards
Total Suspended Solids	Not to exceed 100 mg/l
Phosphate	Not to exceed 5 mg/l
Free Available Chlorine	Not to exceed 0.5 mg/l
pH Value	Between 6.5 to 8.5
Oil and Grease	Not to exceed 20 mg/l
Copper as Cu)	Not to exceed 1.0 mg/l
Zinc (as Zn)	Not to exceed 1.0 mg/l
Iron (as Fe)	Not to exceed 1.0 mg/l
Chromium (total)	Not to exceed 0.2 mg/l

8 That the industry shall obtain all the necessary permissions from concern authority and district administration Barmer for operation of 270 MW lignite coal based power plant.

9 That this consent to operate is being issued for production capacity of 2 x 135 MW (Unit 5 & 6) thermal power plant.

10 That the total project cost of unit 5 & 6 is Rs. 1362.89 Crore. The industry shall take/obtain modification in consent to operate after paying fee as applicable.

11 That the industry shall comply with all the conditions as imposed by MOEF, Government of India vide its office letter no. F. No. J-13011/58/2006-IA II (I) dated 20/07/2007 while issuing EC to your project and also amendment made vide letter dated 19.11.2009 thereafter.

12 That all the conditions imposed vide CPCB letter no B-33014/07/2017-2018/IPC-II/TPP/15934 dated 11.12.2017 shall be complied in future in letter & sprit.

13 That all the conditions imposed vide letter no F (HDF)/Barmer(Barmer)/12(1)/ 2017-2018/1223-1225 dated 25/06/2019 shall be complied

14 That the Charter of Corporate Responsibility for Environment Protection specified for Thermal Power Plants shall be complied.

15 That the industry will comply with the standards as prescribed vide MOEF notification No. GSR 826(E) dated 16th Nov,2009 with respect of National Ambient Air Quality Standards.

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16 That the unit shall provide and maintain adequate dust collection and extraction system to control fugitive dust emissions at coal crusher, coal crusher, coal transfer points and coal handling and storage areas.

17 That the particulate emissions from the stack of various sections of the power plant shall not exceed 50 mg/NM^3.

18 That the industry shall maintain opacity meter with each boiler stack to monitor the emission level of particulate matter. The monthly observation will be submitted to R.O office along with the reason/clarification for any recorded violation of the prescribed standards.

19 That low Nox burners shall be installed at the boiler feeding system.

20 That the level of SPM within distance 3-10 M from dust generating source/plant shall not exceed to 600 mg/Nm^3 in ambient air.

21 That for the control fugitive emission guidelines /code of practice as issued by CPCB will be followed.

22 That the project proponent shall undertake measures and ensure that no fugitive fly ash emissions take place at any point of time.

23 That no industrial effluent will be discharged outside from the factory premises in to a stream or well or sewer or on land and the effluent generated from power plant shall be used for ash quenching, control of fugitive emissions and plantation.

24 That the industrial effluents generated from R.O. rejects, DM plant & cooling tower shall be neutralized & be used for plantation, horticulture and ash quenching purpose. No industrial effluent will be discharged inside or outside the factory premises into a stream or well or sewer or on land.

25 The domestic effluent shall be treated up to prescribed standards and shall be used for plantation/ green belt development within the premises.

26 Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.

27 That the total fresh water requirement for unit-V & VI shall not exceed 21750.00 KLD (boiler/cooling-21000KLD + domestic -150KLD + industrial purpose- 600 KLD) which shall be met from ground water i.e.IGNP Mohangarh.

28 That no ground water shall be abstracted without prior permission from the State Board and the Central Ground Water Authority.

29 That suitable flow measuring devices/meters on the intake source of water, inlet and outlet of effluent treatment/sewage treatment plant shall be installed and maintained. Daily record of water consumption, effluent generation and its treatment and utilization shall be maintained.

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30 That the industry shall undertake suitable measures for rain water harvesting for artificial recharge of ground water.

31 The industry shall comply with the MoEF, Government of India, Notification date 14th September 1999 with till the date amendments relating to fly ash management and shall provide relevant details to the State Board, MoEF, Government of India and as per the Notification dated 25/01/2016 issued by MoEF & CC, the industry shall upload on their website the details of stock of each type of ash available with them and thereafter shall update the stock position at least once a Month. The industry shall also ensure compliance of the other provisions of the aforesaid Notification.

32 That the unit shall install flow meters at inlet and outlet of STP and at outlet of ETP.

33 That the unit shall submit details of solid waste generated from the plant to Regional Officer of the State Board, Balotra.

34 That the Thermal power plant shall meet the limits of Boiler (specified in condition no.5), as per the Notification dated 07.12.2015 issued by the Ministry of Environment, Forest and Climate Change, Government of India.

35 That industry shall comply with the provisions of Hazardous & other Waste(Management & Transboundary movement) Rules, 2016 and record of daily hazardous waste generation and its disposal shall be maintained.

36 That the industry shall provide acoustic enclosure and adequate stack height of minimum 30 meters with one D.G. set of 1000 KVA.

37 That the Thermal power plant shall comply with water consumption limit as specified in the Notification dated 07/12/2015 issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC).

38 That the industry shall carryout effluent sampling/stack monitoring/ambient air quality monitoring and submit quarterly analysis report from the State Board laboratory/ laboratory recognized by Ministry of Environment & Forests (MoE&F), Government of India.

39 That the industry shall comply with the standards as prescribed vide MOEF notification no. GSR 826(E) dated 16th November, 2009 with respect to National Ambient Air Quality.

40 That the industry shall ensure compliance of ambient air quality standard in respect of noise as prescribed under Environment (Protection) Act & Rules made therein.

41 That the industry shall comply with the provisions of the Public Liability Insurance Act, 1991.

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42 **That the industry shall complete all the works in the stipulated time as per your commitment letter dated 1.2.2022, failing which bank guarantee of Rs.20, 000/- shall be forfeited without further notice in the matter.**

43 **That suitable measure for rain water harvesting for artificial recharge of ground water shall be taken.**

44 **That cemented roads shall be provided & maintained inside the premises to minimize the fugitive emissions due to vehicular movements.**

45 **That the plantation in atleast 33% of total area of the project in and around the cement plant shall be carried out & maintained**

46 **That this consent to operate shall be subject to compliance of any direction or order passed by NGT/Hon'ble Court of Law in the matter.**

47 That, not withstanding anything provided hereinabove, the State Board shall have power and reserves its right, as contained **under section 27(2) of the Water Act and under section 21(6) of the Air Act** to review anyone or all the conditions imposed here in above and to make such variation as it deemed fit for the purpose of **Air Act & Water Act**.

48 That the grant of this **Consent to Operate** is issued from the environmental angle only, and does not absolve the project proponent from the other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with the conditions laid down in all other laws for the time-being in force, rests with the industry/ unit/ project proponent.

49 That the grant of this **Consent to Operate** shall not, in any way, adversely affect or jeopardize the legal proceeding, if any, instituted in the past or that could be instituted againt you by the State Board for violation of the provisions of the Act or the Rules made thereunder.

50 That the Project Proponent shall comply with provisions of the E-waste (Management) Rules, 2016 and ensure that e-waste generated by them is channelized through collection centre or dealer of authorized producer or dismantler or recycler or through designated take back service provider of the producer to authorized dismantler or recycler.

51 That the Project Proponent shall maintain record of e-waste generated by them in Form-2 and make such records available for scrutiny by the board.

52 That the Project Proponent shall file annual returns in Form-3, to the Board on or before the 30th day of June following the financial year to which that return relates

53 That the transportation of e-waste shall be carried out as per the manifest system whereby the transporter shall be required to carry a document (three copies) prepared by the sender, giving the details as per Form-6.

Head Office (CPM)

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File No : **F(Tech)/Barmer(Barmer)/3(1)/2008-2009/6524-6526**

Order No : **2021-2022/CPM/8556**

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Unit Id : 5276

54 That the Project Proponent shall comply with provisions of the Batteries (Management and Handling) Rules, 2001 (as amended) and submit half yearly returns (as bulk consumer, importer, auctioneer, recycler as the case may be) to the State Board as provided under Rule 10 (2) (ii) of the Battery (Management and Handling) Rules, 2001 (as amended). In Case the Project Proponent is not a bulk consumer even then the used batteries shall be returned to the authorized dealers or recyclers only.

55 That the record of batteries purchased and sold/ returned to registered dealers and/ or authorized recyclers shall be maintained and made available to the officers of the Board during inspections.

This **Consent to Operate** shall also be subject, besides the aforesaid specific conditions, to the general conditions given in the enclosed Annexure. The project proponent will comply with the provisions of the **Water Act and Air Act** and to such other conditions as may, from time to time , be specified, by the State Board under the provisions of the aforesaid Act(s). Please note that, non compliance of any of the above stated conditions would tantamount to revocation of **Consent to Operate** and project proponent / occupier shall be liable for legal action under the relevant provisions of the said Act(s).

This bears the approval of the competent authority.

Yours Sincerely

Group Incharge[CPM]

(A): **Copy To:-**

1 Regional Officer, Regional Office, Rajasthan State Pollution Control Board, Balotra to ensure the compliance.

2 Master File.

Group Incharge[CPM]

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Phone: 0141-5159600,5159695 Fax: 0141-5159697

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File No : F(Tech)/Barmer(Barmer)/3(1)/2008-2009/6527-6529
Order No : 2021-2022/CPM/8557
Date: Feb 10 2022 11:00AM
Unit Id : 5276

M/s JSW Energy (Barmer) Ltd.(Old Name Raj West Power Private Limited)

Village- Bhadresh , Tehsil:Barmer
District:Barmer

Sub: **Consent to Operate** under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21(4) of Air (Prevention & Control of Pollution) Act, 1981**.**

Ref: Your application for Consent to Operate dated 25/06/2021 and subsequent correspondence.

Sir,

Consent to Operate under the provisions of section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 (hereinafter to be referred as the Water Act) and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981, (hereinafter to be referred as the Air Act) as amended to date and rules & the orders issued thereunder **is hereby granted** for your **Stage IV (Unit VII & VIII) plant** situated at **village- Bhadresh Tehsil:Barmer District:Barmer** , Rajasthan, subject to the following conditions:-

1 That this Consent to Operate is valid for a period from **01/11/2021** to **31/10/2026** .

2 That this Consent is granted for manufacturing / producing following products / by products or carrying out the following activities or operation/processes or providing following services with capacities given below.

Particular	Type	Quantity with Unit
ELECTRICITY	Product	270.00 MW

3 That this consent to operate is for existing plant, process & capacity and separate consent to establish/operate is required to be taken for any addition / modification / alteration in process or change in capacity or change in fuel.

4 That the quantity of effluent generation along with mode of disposal for the treated effluent shall be as under:

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Rajasthan State Pollution Control Board
4, Institutional Area, Jhalana Doongari, Jaipur-302 004
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Type of effluent	Max. effluent generation (KLD)	Recycled Qty of Effluent (KLD)	Disposed Qty of effluent (KLD)and mode of disposal
Domestic Sewage	75.000	NIL	75.000 On Land For Plantation/Horticulture
Trade Effluent	9800.000	NIL	9,800.000 Dust suppression/Plantation/Horticulture

5 That the sources of air emmissions along with pollution control measures and the emission standards for the prescribed parameters shall be as under:

Sources of Air Emmissions	Pollution Control Measures	Prescribed	
		Parameter	Standard
One D.G. Set(1000KVA)	ACOUSTIC ENCLOSURE , ADEQUATE STACK HEIGHT	NOx (as NO2) (at 15% O2) day basis in ppmv	710 mg/Nm³
		NMHC (as C) (at 15% O2)	100 mg/Nm³
		PM (at 15% O2)	75 mg/Nm³
		CO (at 15% O2)	150 mg/Nm³
Two Lignite fired Boilers(440TPH EACH)	ADEQUATE STACK HEIGHT , ESP	SO2	600 mg/Nm3
		Particulate Matter	50 mg/Nm3

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		NOx	450 mg/Nm3
		Hg and its compounds	0.03 mg/Nm3

6 That the domestic sewage shall be treated before disposal so as to conform to the standards prescribed under the Environvent (Protection) Act-1986for disposal **Into Inland Surface Water**. The main parameters for regular monitoring shall be as under.

Parameters	Standards
Total Suspended Solids	**Not to exceed 100 mg/l**
pH Value	**Between 5.5 to 9.0**
Oil and Grease	**Not to exceed 10 mg/l**
Total Residual Chlorine	**Not to exceed 1.0 mg/l**
Biochemical Oxygen Demand (3 days at 27°C)	**Not to exceed 30 mg/l**
Sulphide (as S)	**Not to exceed 2.0 mg/l**
Chlorides	**Not to exceed 1000 mg/l**
Chemical Oxygen Demand	**Not to exceed 250 mg/l**

7 That the trade effluent shall be treated before disposal so as to conform to the standards prescribed under the Environment (Protection) Act-1986 for disposal **Into Inland Surface Water .** The main parameters for regular monitoring shall be as under

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Parameters	Standards
Total Suspended Solids	Not to exceed 100 mg/l
Phosphate	Not to exceed 5 mg/l
Free Available Chlorine	Not to exceed 0.5 mg/l
pH Value	Between 6.5 to 8.5
Oil and Grease	Not to exceed 20 mg/l
Copper as Cu)	Not to exceed 1.0 mg/l
Zinc (as Zn)	Not to exceed 1.0 mg/l
Iron (as Fe)	Not to exceed 1.0 mg/l
Chromium (total)	Not to exceed 0.2 mg/l

8 That the industry shall obtain all the necessary permissions from concern authority and district administration Barmer for operation of 270 MW lignite coal based power plant.

9 That this consent to operate is being issued for production capacity of 2 x 135 MW (Unit 7 & 8) thermal power plant.

10 That the total project cost of unit 5 & 6 is Rs. 1090.32 Crore. The industry shall take/obtain modification in consent to operate after paying fee as applicable.

11 That the industry shall comply with all the conditions as imposed by MOEF, Government of India vide its office letter no. F. No. J-13011/58/2006-IA II (I) dated 20/07/2007 while issuing EC to your project and also amendment made vide letter dated 19.11.2009 thereafter..

12 That all the conditions imposed vide CPCB letter no B-33014/07/2017-2018/IPC-II/TPP/15934 dated 11.12.2017 shall be complied in future in letter & sprit.

13 That all the conditions imposed vide letter no F (HDF)/Barmer(Barmer)/12(1)/ 2017-2018/1226-1228 dated 25/06/2019 shall be complied

14 That the Charter of Corporate Responsibility for Environment Protection specified for Thermal Power Plants shall be complied.

15 That the industry will comply with the standards as prescribed vide MOEF notification No. GSR 826(E) dated 16th Nov,2009 with respect of National Ambient Air Quality Standards.

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16 That the unit shall provide and maintain adequate dust collection and extraction system to control fugitive dust emissions at coal crusher, coal crusher, coal transfer points and coal handling and storage areas.

17 That the particulate emissions from the stack of various sections of the power plant shall not exceed 50 mg/NM^3.

18 That the industry shall maintain opacity meter with each boiler stack to monitor the emission level of particulate matter. The monthly observation will be submitted to R.O office along with the reason/clarification for any recorded violation of the prescribed standards.

19 That low Nox burners shall be installed at the boiler feeding system.

20 That the level of SPM within distance 3-10 M from dust generating source/plant shall not exceed to 600 mg/Nm^3 in ambient air.

21 That for the control fugitive emission guidelines /code of practice as issued by CPCB will be followed.

22 That the project proponent shall undertake measures and ensure that no fugitive fly ash emissions take place at any point of time.

23 That no industrial effluent will be discharged outside from the factory premises in to a stream or well or sewer or on land and the effluent generated from power plant shall be used for ash quenching, control of fugitive emissions and plantation.

24 That the industrial effluents generated from R.O. rejects, DM plant & cooling tower shall be neutralized & be used for plantation, horticulture and ash quenching purpose. No industrial effluent will be discharged inside or outside the factory premises into a stream or well or sewer or on land.

25 The domestic effluent shall be treated up to prescribed standards and shall be used for plantation/ green belt development within the premises.

26 Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.

27 That the total fresh water requirement for unit-V & VI shall not exceed 21750.00 KLD (boiler/cooling-21000KLD + domestic -150KLD + industrial purpose- 600 KLD) which shall be met from ground water i.e.IGNP Mohangarh.

28 That no ground water shall be abstracted without prior permission from the State Board and the Central Ground Water Authority.

29 That suitable flow measuring devices/meters on the intake source of water, inlet and outlet of effluent treatment/sewage treatment plant shall be installed and maintained. Daily record of water consumption, effluent generation and its treatment and utilization shall be maintained.

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30 That the industry shall undertake suitable measures for rain water harvesting for artificial recharge of ground water.

31 The industry shall comply with the MoEF, Government of India, Notification date 14th September 1999 with till the date amendments relating to fly ash management and shall provide relevant details to the State Board, MoEF, Government of India and as per the Notification dated 25/01/2016 issued by MoEF & CC, the industry shall upload on their website the details of stock of each type of ash available with them and thereafter shall update the stock position at least once a Month. The industry shall also ensure compliance of the other provisions of the aforesaid Notification.

32 That the unit shall install flow meters at inlet and outlet of STP and at outlet of ETP.

33 That the unit shall submit details of solid waste generated from the plant to Regional Officer of the State Board, Balotra.

34 That the Thermal power plant shall meet the limits of Boiler (specified in condition no.5), as per the Notification dated 07.12.2015 issued by the Ministry of Environment, Forest and Climate Change, Government of India.

35 That industry shall comply with the provisions of Hazardous & other Waste (Management & Transboundary movement) Rules, 2016 and record of daily hazardous waste generation and its disposal shall be maintained.

36 That the industry shall provide acoustic enclosure and adequate stack height of minimum 30 meters with one D.G. set of 1000 KVA.

37 That the Thermal power plant shall comply with water consumption limit as specified in the Notification dated 07/12/2015 issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC).

38 That the industry shall carryout effluent sampling/stack monitoring/ambient air quality monitoring and submit quarterly analysis report from the State Board laboratory/ laboratory recognized by Ministry of Environment & Forests (MoE&F), Government of India.

39 That the industry shall comply with the standards as prescribed vide MOEF notification no. GSR 826(E) dated 16th November, 2009 with respect to National Ambient Air Quality.

40 That the industry shall ensure compliance of ambient air quality standard in respect of noise as prescribed under Environment (Protection) Act & Rules made therein.

41 That the industry shall comply with the provisions of the Public Liability Insurance Act, 1991.

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42 That the industry shall complete all the works in the stipulated time as per your commitment letter dated 1.2.2022, failing which bank guarantee of Rs.20, 000/- shall be forfeited without further notice in the matter.

43 That suitable measure for rain water harvesting for artificial recharge of ground water shall be taken.

44 That cemented roads shall be provided & maintained inside the premises to minimize the fugitive emissions due to vehicular movements.

45 That the plantation in atleast 33% of total area of the project in and around the cement plant shall be carried out & maintained

46 That this consent to operate shall be subject to compliance of any direction or order passed by NGT/Hon'ble Court of Law in the matter.

47 That, not withstanding anything provided hereinabove, the State Board shall have power and reserves its right, as contained **under section 27(2) of the Water Act and under section 21(6) of the Air Act** to review anyone or all the conditions imposed here in above and to make such variation as it deemed fit for the purpose of **Air Act & Water Act**.

48 That the grant of this **Consent to Operate** is issued from the environmental angle only, and does not absolve the project proponent from the other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with the conditions laid down in all other laws for the time-being in force, rests with the industry/ unit/ project proponent.

49 That the grant of this **Consent to Operate** shall not, in any way, adversely affect or jeopardize the legal proceeding, if any, instituted in the past or that could be instituted againt you by the State Board for violation of the provisions of the Act or the Rules made thereunder.

50 That the Project Proponent shall comply with provisions of the E-waste (Management) Rules, 2016 and ensure that e-waste generated by them is channelized through collection centre or dealer of authorized producer or dismantler or recycler or through designated take back service provider of the producer to authorized dismantler or recycler.

51 That the Project Proponent shall maintain record of e-waste generated by them in Form-2 and make such records available for scrutiny by the board.

52 That the Project Proponent shall file annual returns in Form-3, to the Board on or before the 30th day of June following the financial year to which that return relates

53 That the transportation of e-waste shall be carried out as per the manifest system whereby the transporter shall be required to carry a document (three copies) prepared by the sender, giving the details as per Form-6.

Head Office (CPM)

Rajasthan State Pollution Control Board

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File No : **F(Tech)/Barmer(Barmer)/3(1)/2008-2009/6527-6529**

Order No : **2021-2022/CPM/8557**

Date: **Feb 10 2022 11:00AM**

Unit Id : 5276

54 That the Project Proponent shall comply with provisions of the Batteries (Management and Handling) Rules, 2001 (as amended) and submit half yearly returns (as bulk consumer, importer, auctioneer, recycler as the case may be) to the State Board as provided under Rule 10 (2) (ii) of the Battery (Management and Handling) Rules, 2001 (as amended). In Case the Project Proponent is not a bulk consumer even then the used batteries shall be returned to the authorized dealers or recyclers only.

55 That the record of batteries purchased and sold/ returned to registered dealers and/ or authorized recyclers shall be maintained and made available to the officers of the Board during inspections.

This **Consent to Operate** shall also be subject, besides the aforesaid specific conditions, to the general conditions given in the enclosed Annexure. The project proponent will comply with the provisions of the **Water Act and Air Act** and to such other conditions as may, from time to time , be specified, by the State Board under the provisions of the aforesaid Act(s). Please note that, non compliance of any of the above stated conditions would tantamount to revocation of **Consent to Operate** and project proponent / occupier shall be liable for legal action under the relevant provisions of the said Act(s).

This bears the approval of the competent authority.

Yours Sincerely

Group Incharge[CPM]

(A): **Copy To:-**

1 Regional Officer, Regional Office, Rajasthan State Pollution Control Board, Balotra to ensure the compliance.

2 Master File.

Group Incharge[CPM]

ANNEXURE II

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA

IPC-II/TPP/CP-11/76/2022/406 September 09, 2024

OFFICE MEMORANDUM

Sub: Updated list of authorized auditors to undertake the compliance audit for ash disposal by the coal and lignite based thermal power plants and the users as per Ash Notification No. 5481(E) dated 31.12.2021.

Central Pollution Control Board (CPCB) issued the first list of authorized auditors to undertake the compliance audit for ash disposal by the coal and lignite based thermal power plants and the user agencies vide O.M. No. IPC-II/TPP/CP-11/76/2022/1252 dated 06.03.2023 and the updated list vide O.M. No. IPC-II/TPP/CP-11/76/2022/285 dated 17.07.2023, as per Para E(5) of the Ash Notification No. S.O. 5481(E) dated 31.12.2021 issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India (amended by notifications dated 30.12.2022 and 01.01.2024).

Subsequently, it has been observed that more authorized auditors will be required for annual compliance audit of coal or lignite based independent thermal power plants as well as captive power plants to ensure timely auditing and reasonable audit charges.

In view of the above, CPCB invited further nominations of experts as per the revised eligibility criteria from Council of Scientific & Industrial Research (CSIR), Indian Institutes of Technology/Science (IITs), National Institutes of Technology (NITs), other Institutes of National Importance, and other Central and State Government institutions related to Science/Technology/Research and Environment for authorization of more auditors to undertake the compliance audit of the thermal power plant as per Para E(5) of the Ash Notification (and subsequent amendments).

Accordingly, the nominated experts from the aforesaid institutes which are found to be fulfilling the prescribed eligibility criteria as per the attached list are authorized to undertake the annual compliance audit of ash disposal by the coal and lignite based thermal power plants and the users as per Para E(5) of the Ash Notification (and subsequent amendments). The scope of work shall be as per the O.M. dated 06.03.2023 (attached).

The authorization of the auditors shall be valid till their engagement with the institutes.

Thermal power plants shall approach the authorized auditors through the concerned organization/institute for undertaking the compliance audit. The auditor shall submit the compliance audit report directly to the concerned SPCB/PCC and CPCB.

(Bharat Kumar Sharma)
Member Secretary

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032
दूरभाष/Tel : 43102030. 22305792. वेबसाईट/Website : www.cpcb.nic.in

To,

Divisional Head - IT, CPCB : For updating the document on webpage "Fly Ash Management and Utilization" for information of SPCBs and TPPs.

Copy to:

1. The Additional Secretary (HSM Division),
   Ministry of Environment, Forest and Climate Change,
   Indira Paryavaran Bhawan, Jor Bagh Road,
   New Delhi - 110 003

2. The Additional Secretary (Thermal),
   Ministry of Power,
   Shram Shakti Bhawan,
   Rafi Marg, New Delhi

3. PA to CCB

Updated list of auditors to be authorised undertake the compliance audit for ash disposal by the coal and lignite based thermal power plants and the user agencies as per Ash Utilization Notification No. 5481(E) dated 31.12.2021

Part A: Authorized auditors to undertake compliance audit of thermal power plants of 'All Capacity'						
Sl. No.	**Name**	**DOB**	**Designation**	**Department**	**Organization/ Institute**	**Central/ State Institute**
1	S. Bhaskar	10-10-1969	Chief Scientist	Advanced Materials Laboratory	CSIR-SERC, Chennai	Central
2	P.S. Ambily	09-05-1979	Principal Scientist	Advanced Materials Laboratory	CSIR-SERC, Chennai	Central
3	T. Hemalatha	24-11-1976	Principal Scientist	Advance Concrete Testing & Evaluation Laboratory	CSIR-SERC, Chennai	Central
4	Manish Mudgal	18-07-1969	Chief Scientist Head	Centre for Advanced Radiation Shielding & Geopolymeric Materials	CSIR-AMPRI, Bhopal	Central
5	Sujit Kumar Mandal	04-11-1964	Chief Scientist	Mine, Planning & Economics Mine Survey & Subsidence Mine Back Filling	CSIR-CIMFR, Dhanbad	Central
6	Jai Krishna Pandey	05-09-1965	Chief Scientist	Mine Fire Ventilation and Miners' Health	CSIR-CIMFR, Dhanbad	Central
7	Santosh Kumar Ray	01-01-1967	Chief Scientist	Mine Fire, Ventilation, Miners' Health	CSIR-CIMFR, Dhanbad	Central
8	Prashant	06-04-1972	Sr. Principal Scientist	Mine Back Filling	CSIR-CIMFR, Dhanbad	Central
9	Arka Jyoti Das	16-10-1989	Sr. Scientist	Geomechanics & Numerical Simulation	CSIR-CIMFR, Dhanbad	Central
10	Santosh Kumar Behera	10-05-1990	Senior Scientist	Mine Back Filling Research Group	CSIR-CIMFR, Dhanbad	Central
11	Anil Kumar Sinha	01-08-1967	Sr. Principal Scientist	Geotechnical Engineering	CSIR-CRRI, New Delhi	Central
12	Manojit Samanta	25-04-1986	Principal Scientist	Geotechnical Engineering	CSIR-CBRI, Roorkee	Central
13	Dinakar Pasla	05-07-1976	Professor	School of Infrastructure	IIT Bhubaneswar	Central
14	Rajesh Roshan Dash	30-06-1977	Professor	School of Infrastructure	IIT Bhubaneswar	Central
15	B. Hanumantha Rao	01-05-1979	Associate Professor	School of Infrastructure	IIT Bhubaneswar	Central
16	Remya Neelancherry	30-05-1982	Associate Professor	School of Infrastructure	IIT Bhubaneswar	Central
17	Prabhat Kumar Singh Dikshit	15-08-1971	Professor & Head	Civil Engineering	IIT-BHU Varanasi	Central
18	Arun Prasad	10-10-1964	Professor	Civil Engineering	IIT-BHU Varanasi	Central
19	Anurag Ohri	07-08-1977	Associate Professor	Civil Engineering	IIT-BHU Varanasi	Central
20	Suresh Kumar	01-11-1976	Assistant Professor	Civil Engineering	IIT-BHU Varanasi	Central
21	Supriya Mohanty	01-01-1988	Assistant Professor	Civil Engineering	IIT-BHU Varanasi	Central
22	Suprakash Gupta	01-01-1969	Professor & Head	Mining Engineering	IIT-BHU Varanasi	Central
23	Sanjay Kumar Sharma	05-01-1966	Professor	Mining Engineering	IIT-BHU Varanasi	Central
24	Rajesh Rai	03-10-1978	Associate Professor	Mining Engineering	IIT-BHU Varanasi	Central
25	Amrendra Kumar	15-05-1976	Associate Professor	Mining Engineering	IIT-BHU Varanasi	Central
26	G.S.P. Singh	23-11-1971	Associate Professor	Mining Engineering	IIT-BHU Varanasi	Central
27	Tarun Verma	05-02-1983	Assistant Professor	Mining Engineering	IIT-BHU Varanasi	Central
28	D. N. Singh	28-06-1965	Professor	Civil Engineering	IIT Bombay	Central
29	Ashish Juneja	15-07-1971	Professor	Civil Engineering	IIT Bombay	Central
30	Munish K. Chandel	27-11-1976	Professor	Environmental Science and Engineering	IIT Bombay	Central
31	Abhishek Chakraborty	15-04-1984	Assistant Professor	Environmental Science and Engineering	IIT Bombay	Central
32	Arya V.	07-12-1988	Assistant Professor	Civil Engineering	IIT Delhi	Central
33	Shailesh R. Gandhi	19-08-1955	Visiting Professor	Civil Engineering	IIT Gandhinagar	Central
34	Amit Balasaheb Shelke	23-07-1984	Associate Professor	Civil Engineering	IIT-Guwahati	Central
35	Sarat Kumar Das	24-06-1968	Professor	Civil Engineering	IIT(ISM) Dhanbad	Central
36	D.P. Mishra	09-06-1975	Chair Professor & Head	Mining Engineering	IIT(ISM) Dhanbad	Central
37	R.K. Sinha	15-12-1973	Associate Professor	Mining Engineering	IIT(ISM) Dhanbad	Central
38	B.S. Choudhary	01-12-1975	Associate Professor	Mining Engineering	IIT(ISM) Dhanbad	Central

Updated list of auditors to be authorised undertake the compliance audit for ash disposal by the coal and lignite based thermal power plants and the user agencies as per Ash Utilization Notification No. 5481(E) dated 31.12.2021

Part A: Authorized auditors to undertake compliance audit of thermal power plants of 'All Capacity'						
Sl. No.	**Name**	**DOB**	**Designation**	**Department**	**Organization/ Institute**	**Central/ State Institute**
39	K. V. Harish	28-11-1981	Assistant Professor	Civil Engineering	IIT-Kanpur	Central
40	Brajesh Kumar Dubey	18-09-1974	Professor	Civil Engineering	IIT Kharagpur	Central
41	Aditya Kumar Patra	11-06-1970	Associate Professor	Mining Engineering	IIT Kharagpur	Central
42	Basanta Kumar Prusty	31-07-1973	Associate Professor	Mining Engineering	IIT Kharagpur	Central
43	Kranthi Kumar Kuna	06-08-1988	Assistant Professor	Civil Engineering	IIT Kharagpur	Central
44	Rajnish Sharma	11-06-1980	Associate Professor	Civil and Environmental Engineering	IIT Mandi	Central
45	Dericks P Shukla	02-01-1982	Associate Professor	Civil and Environmental Engineering	IIT Mandi	Central
46	Deepak Swami	23-06-1984	Associate Professor	Civil and Environmental Engineering	IIT Mandi	Central
47	Subrata Hait	25-10-1980	Associate Professor	Civil and Environmental Engineering	IIT-Patna	Central
48	Vaibhav Singhal	21-01-1983	Associate Professor and Head	Civil and Environmental Engineering	IIT-Patna	Central
49	Amarnath Hegde	07-04-1984	Assistant Professor	Civil and Environmental Engineering	IIT-Patna	Central
50	A. A. Kazmi	27-03-1972	Professor	Civil Engineering	IIT Roorkee	Central
51	Sudipta Sarkar	22-07-1972	Associate Professor	Civil Engineering	IIT Roorkee	Central
52	Bhanu Prakash Vellanki	06-01-1985	Associate Professor	Civil Engineering	IIT Roorkee	Central
53	Naveen James	25-08-1984	Assistant Professor	Civil Engineering	IIT Ropar	Central
54	Suresh Jain	12-07-1975	Professor	Civil and Environmental Engineering	IIT Tirupati	Central
55	Rakesh Chandra Vaishya	10-05-1962	Professor	Civil Engineering	NIT Allahabad	Central
56	Ram Pal Singh	01-03-1962	Professor	Civil Engineering	NIT Allahabad	Central
57	Kumar Venkatesh	07-07-1972	Associate Professor	Civil Engineering	NIT Allahabad	Central
58	Goutam Ghosh	05-07-0977	Associate Professor	Civil Engineering	NIT Allahabad	Central
59	Nekram Rawal	07-09-1977	Associate Professor	Civil Engineering	NIT Allahabad	Central
60	P.R. Pal	26-12-1977	Associate Professor	Civil Engineering	NIT Allahabad	Central
61	Shalinee Shukla	25-04-1978	Associate Professor	Civil Engineering	NIT Allahabad	Central
62	Anupam Rawat	14-11-1986	Associate Professor	Civil Engineering	NIT Allahabad	Central
63	Vijay Kumar	12-02-1982	Assistant Professor	Civil Engineering	NIT Allahabad	Central
64	Vishwajeet Pratap Singh	15-07-1983	Assistant Professor	Civil Engineering	NIT Allahabad	Central
65	S. Chandrakaran	11-02-1959	Professor (HAG)	Civil Engineering	NIT Calicut	Central
66	Santosh G Thampi	18-03-1963	Professor (HAG) & Head	Civil Engineering	NIT Calicut	Central
67	Kodi Ranga Swamy	04-06-1973	Associate Professor	Civil Engineering	NIT Calicut	Central
68	George K. Varghese	17-09-1975	Associate Professor	Civil Engineering	NIT Calicut	Central
69	Sathish Kumar D	30-01-1979	Associate Professor	Civil Engineering	NIT Calicut	Central
70	Ajay Kumar	05-06-1978	HOD and Associate Professor	Civil Engineering	NIT Delhi	Central
71	Kapil Kumar	21-04-1981	Assistant Professor	Civil Engineering	NIT Delhi	Central
72	Mahender Choudhary	04-01-1976	Professor & Head	Civil Engineering	NIT Jaipur	Central
73	Sudhir Kumar	05-02-1968	Professor	Civil Engineering	NIT Jaipur	Central
74	Mahesh Kumar Jat	15-12-1972	Professor	Civil Engineering	NIT Jaipur	Central
75	Sumit Khandelwal	05-08-1976	Professor	Civil Engineering	NIT Jaipur	Central
76	Amit Kumar	15-07-1981	Assistant Professor	Civil Engineering	NIT Jaipur	Central
77	Subhadeep Metya	28-06-1987	Assistant Professor	Civil Engineering	NIT Jamshedpur	Central
78	Susmita Sharma	27-05-1985	Assistant Professor	Civil Engineering	NIT Meghalaya	Central
79	Anirban Mandal	07-01-1976	Professor	Civil Engineering	NIT Nagpur	Central
80	Rahul V. Ralegaonkar	25-09-1976	Professor	Civil Engineering	NIT Nagpur	Central
81	Anjan Patel	14-06-1982	Associate Professor	Civil Engineering	NIT Nagpur	Central
82	A. B. Mirajkar	25-06-1979	Associate Professor	Civil Engineering	NIT Nagpur	Central
83	Mangesh V. Madurwar	20-07-1982	Associate Professor	Civil Engineering	NIT Nagpur	Central
84	Amit Padade	05-10-1985	Assistant Professor	Civil Engineering	NIT Nagpur	Central

Updated list of auditors to be authorised undertake the compliance audit for ash disposal by the coal and lignite based thermal power plants and the user agencies as per Ash Utilization Notification No. 5481(E) dated 31.12.2021

Part A: Authorized auditors to undertake compliance audit of thermal power plants of 'All Capacity'						
Sl. No.	**Name**	**DOB**	**Designation**	**Department**	**Organization/ Institute**	**Central/ State Institute**
85	Karthik Balasundaram	29-02-1984	Assistant Professor	Civil Engineering	NIT Nagpur	Central
86	Swapnil P. Wanjari	25-07-1975	Assistant Professor	Civil Engineering	NIT Nagpur	Central
87	Manoj Pradhan	30.06.1964	Professor	Mining Engineering	NIT Raipur	Central
88	Suresh Prasad Singh	08-05-1964	Professor & Head	Civil Engineering	NIT Rourkela	Central
89	C. R. Patra	25-02-1962	Professor	Civil Engineering	NIT Rourkela	Central
90	Rabi Narayan Behera	03-06-1982	Assistant Professor	Civil Engineering	NIT Rourkela	Central
91	Pradip Sarkar	31-10-1975	Professor	Civil Engineering	NIT Rourkela	Central
92	Mahabir Panda	02-06-1961	Professor	Civil Engineering	NIT Rourkela	Central
93	Amit Kumar Gorai	01-01-1977	Professor & Head	Mining Engineering	NIT Rourkela	Central
94	Manoj Kumar Mishra	29-09-1962	Professor	Mining Engineering	NIT Rourkela	Central
95	Singam Jayanthu	20-04-1964	Professor	Mining Engineering	NIT Rourkela	Central
96	Himanshu Bhusan Sahu	01-07-1974	Professor	Mining Engineering	NIT Rourkela	Central
97	Upendra Kumar	02-02-1972	Professor	Civil Engineering	NIT Silchar	Central
98	Shakeel Ahmad Waseem	27-08-1989	Assistant Professor	Civil Engineering	NIT Srinagar (J&K)	Central
99	R. A. Christian	31-08-1961	Professor & Head	Civil Engineering	NIT Surat	Central
100	M. M. Ahammed	18-01-1967	Professor	Civil Engineering	NIT Surat	Central
101	K. D. Yaday	29-11-1974	Professor	Civil Engineering	NIT Surat	Central
102	Bhaven Tandel	14-04-1974	Associate Professor	Civil Engineering	NIT Surat	Central
103	Namrata Jariwala	05-03-1975	Associate Professor	Civil Engineering	NIT Surat	Central
104	Arun Kumar Thalla	29-07-1978	Professor	Civil Engineering	NIT Surahtkal	Central
105	T. Palanisamy	17-05-1977	Associate Professor	Civil Engineering	NIT Surahtkal	Central
106	Aruna Mangalpady	17-05-1971	Professor	Mining Engineering	NIT Surathkal	Central
107	Karra Ram Chandar	05-12-1976	Professor	Mining Engineering	NIT Surathkal	Central
108	Kranti Jain	15-09-1977	Associate Professor	Civil Engineering	NIT Uttarakhand	Central
109	Aditya Kumar Anupam	03-02-1985	Assistant Professor	Civil Engineering	NIT Uttarakhand	Central
110	Amardeep	13-08-1985	Assistant Professor	Civil Engineering	NIT Uttarakhand	Central
111	Smita Kaloni	02-07-1988	Assistant Professor	Civil Engineering	NIT Uttarakhand	Central
112	Shashi Narayan	13-12-1989	Assistant Professor	Civil Engineering	NIT Uttarakhand	Central
113	Shashank Bhatra	25-11-1991	Assistant Professor	Civil Engineering	NIT Uttarakhand	Central
114	Bibhash Kumar	25-10-1992	Assistant Professor	Civil Engineering	NIT Uttarakhand	Central
115	P. Rathish Kumar	20-01-1969	Professor	Civil Engineering/ Sustainable Engineering	NIT Warangal	Central
116	P. Venkateswara Rao	06-05-1978	Professor	Civil Engineering/ Sustainable Engineering	NIT Warangal	Central
117	Ajey Kumar Patel	07-11-1977	Associate Professor	Civil Engineering/ Sustainable Engineering	NIT Warangal	Central
118	P. Hari Prasad Reddy	19-06-1980	Associate Professor	Civil Engineering/ Sustainable Engineering	NIT Warangal	Central
119	Sridhar	20-10-1982	Assistant Professor	Civil Engineering/ Sustainable Engineering	NIT Warangal	Central
120	Chinthala Sumanth	04-08-1986	Assistant Professor	Civil Engineering/ Sustainable Engineering	NIT Warangal	Central

Updated list of auditors to be authorised undertake the compliance audit for ash disposal by the coal and lignite based thermal power plants and the user agencies as per Ash Utilization Notification No. 5481(E) dated 31.12.2021

Part B: Authorized auditors to undertake compliance audit of thermal power plants of 'Total Installed Capacity < 100 MW'						
Sl. No.	**Name**	**DOB**	**Designation**	**Department**	**Organization/ Institute**	**Central/ State Institute**
1	M. Chandra Sekhar	28-11-1963	Director & Professor (HAG)	Civil/Environmental Engineering	Rajiv Gandhi Univ. of Knowledge Tech.	State
2	Manjeet Bansal	29-02-1972	Professor	Civil Engineering	Maharaja Ranjit Singh Punjab Tech. Univ.	State
3	N. Raveendhar	03-08-1959	Consultant (Technical)	EEM&EQM	EPTRI Hyderabad	State
4	Shaik Allavali	18-12-1980	Environmental Engineer	EEM	EPTRI Hyderabad	State

IPC-II/TPP/CP-11/76/2022/1252 March 06, 2023

OFFICE MEMORANDUM

Sub: Authorization of auditors to undertake the compliance audit for ash disposal by the coal and lignite based thermal power plantsandthe user agenciesas per Ash Utilization Notification No.5481(E) dated 31.12.2021.

Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of Indiahas issued NotificationNo. S.O. 5481(E) dated 31.12.2021regarding ash utilisation from coal or lignite based thermal power plants which has been amended by notification dated 30.12.2022. The permitted areas of ash utilizations are mentioned in Para A (1)&(2), the permitted storage conditions in operational and un-operational ash ponds are mentioned in Para A (6)&(8), and the requirement of submitting annual implementation report to CPCB, concerned SPCB/PCC, CEA and concerned IRO of MoEF&CC by 30th April, with information in the prescribed Annexure, is mentioned in Para E(2) of the Notification.

Further, as per ParaE(5) of the notification, *"the compliance audit for ash disposal by the thermal power plants and the user agency shall be conducted by auditors, authorized by Central Pollution Control Board (CPCB) and audit report shall be submitted to Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) by 30th November every year. Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall initiate action against non-compliant thermal power plants within fifteen days of receipt of audit report".*

CPCB invited nominations of experts from Council of Scientific & Industrial Research (CSIR), Indian Institutes of Technology (IITs) and National Institutes of Technology (NITs)for authorization of auditors to undertake the compliance audit of the thermal power plant as per Para E(5) of the notification. The nominated experts from the aforesaid organizations/institutes which are found to be fulfilling the eligibilitycriteria as per list attached (Annexure-I) are authorized as auditors to undertake the annual compliance audit of the thermal power plantas per Para E(5) of the notification.

Thermal power plants shall approach authorized auditors through concerned organization/institute for undertaking the audit as per Para E(5) of the notification. Scope of Work to carry out the auditas per Para E(5) of the notification is attached. The auditor shall submit the audit report directly to CPCB and SPCB/PCC.

(Prashant Gargava)
Member Secretary

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
दिल्ली
दिनांक 06/03/2023

O/C

To,

Divisional Head - IT, CPCB : For uploading on webpage "Fly Ash Management and Utilization" for information of SPCBs and TPPs.

Copy to:

1. The Additional Secretary (HSM Division),
   Ministry of Environment, Forest and Climate Change,
   Indira Paryavaran Bhawan, Jor Bagh Road,
   New Delhi - 110 003

2. The Additional Secretary (Thermal),
   Ministry of Power,
   Shram Shakti Bhawan,
   Rafi Marg, New Delhi

3. PA to CCB

Scope of Work to carry out the audit as per Para E(5) of the Ash Notification 31.12.2021

1. Verification of ash generation data pertaining to the financial year based on inspection of records of coal receipt/consumption and average ash content in coal and comparison of this data with the information provided by the power plant in the annual implementation report / prescribed Annexure.

2. Verification of fly ash and bottom ash utilization data pertaining to the financial year based on inspection of records of ash supplied to the user agencies covered under permitted uses/avenues, and comparison of this data with the information provided by the power plant in the annual implementation report / prescribed Annexure

3. Verification of net ash disposal into ash ponds data pertaining to the financial year (i.e. difference of ash generation and ash utilization, as above), and comparison of this data with the information provided by the power plant in the annual implementation report / prescribed Annexure.

4. Assessment of total ash storage in operational and un-operational ash ponds and available storage capacity for further disposal at the end of financial year based on details and drawings of ash ponds provided by the power plant and ground verification of the information provided, and comparison of the storage and available storage capacity with the information provided by the power plant in the annual implementation report / prescribed Annexure.

5. Assessment of ash slurry disposal and ash water re-circulation system used during the financial year, in respect ratio of water in the ash disposed to ash ponds, water used for ash slurry disposal to ash ponds, ash water recycled through AWRS, and ash water discharged into environment, based on inspection of records provided by the power plant and ground verification, including the condition of surrounding environment in respect of ash released or breached, and comparison of the ground situation with the information provided by the power plant in the annual implementation report / prescribed Annexure.

रजिस्ट्री सं. डी.एल.- 33004/99 REGD. No. D. L.-33004/99

भारत का राजपत्र
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असाधारण
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)
PART II—Section 3—Sub-section (ii)

प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

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पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 31 दिसम्बर, 2021

का.आ. 5481(अ).—केन्द्रीय सरकार ने भारत सरकार के तत्कालीन पर्यावरण और वन मंत्रालय की अधिसूचना सं. का.आ. 763 (अ) तारीख 14 सितम्बर, 1999 द्वारा कोयला या लिग्नाइट आधारित ताप विद्युत संयंत्रों से तीन सौ किलोमीटर के विनिर्दिष्ट व्यास के भीतर ईंटों के विनिर्माण के लिए उपजाऊ मिट्टी के उत्खनन को प्रतिबंधित करने के लिए और भवन निर्माण सामग्री के विनिर्माण में और संनिर्माण क्रियाकलाप में फ्लाई-राख के उपयोग को बढ़ावा देने के लिए निदेश जारी किए हैं;

और, प्रदूषणकर्ता भुगतान सिद्धांत (पीपीपी) के आधार पर, ऐसा करके कोयला या लिग्नाइट आधारित ताप विद्युत संयंत्रों द्वारा फ्लाई-राख का 100 प्रतिशत उपयोग सुनिश्चित करते हुए और फ्लाई-राख प्रबंधन प्रणाली की संधारणीयता के लिए पूर्वोक्त अधिसूचना को और अधिक प्रभावकारी ढंग से कार्यान्वित करने हेतु, केंद्रीय सरकार ने मौजूदा अधिसूचना की समीक्षा की;

और प्रदूषणकर्ता भुगतान सिद्धांत के आधार पर पर्यावरणीय प्रतिकर निर्धारित किए जाने की आवश्यकता है;

और, विनिर्माण को बढ़ावा देकर तथा निर्माण कार्य के क्षेत्र में राख आधारित उत्पादों तथा भवन निर्माण सामग्रियों के प्रयोग को अनिवार्य करके उपजाऊ मिट्टी को संरक्षित करने की आवश्यकता है;

और, सड़क बनाने, सड़क एवं फ्लाई ओवर के रेलिंग बनाने, तटरेखा की सुरक्षा का उपाय करने, अनुमोदित परियोजनाओं के निचले क्षेत्रों को भरने, खनित स्थलों को फिर से भरने में मिट्टी की सामग्रियों से भरने के विकल्प के रूप में राख उपयोग को बढ़ावा देकर उपजाऊ मिट्टी और प्राकृतिक संसाधनों को संरक्षित करने की आवश्यकता है;

और, पर्यावरण को सुरक्षित करना तथा कोयला अथवा लिग्नाइट आधारित ताप विद्युत संयंत्रों से सृजित फ्लाई राख के निक्षेपण तथा निपटान की रोकथाम करना आवश्यक है;

और, उक्त अधिसूचना में जो 'राख' शब्द का प्रयोग किया गया है उसमें कोयला या लिग्नाइट आधारित ताप विद्युत संयंत्रों से सृजित फ्लाई-राख और बॉटम-राख दोनों शामिल हैं;

और, केंद्रीय सरकार प्रदूषणकर्ता भुगतान सिद्धांत के आधार पर, पर्यावरणीय प्रतिकर की प्रणाली सहित राख के उपयोग के लिए एक व्यापक ढांचा लाना चाहती है;

अत: पर्यावरण (संरक्षण) नियम, 1986 के नियम (5) के उप-नियम (3) के खंड (घ) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3 की उप-धारा (1) और उप-धारा (2) के खंड (v) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, भारत सरकार के पर्यावरण एवं वन मंत्रालय की अधिसूचना जो का.आ. 763 (अ) तारीख 14 सितम्बर, 1999 द्वारा भारत के राजपत्र, असाधारण भाग ।।, खंड 3, उप खंड (i) में प्रकाशित का अधिक्रमण करते हुए, कोयला या लिग्नाईट आधारित ताप विद्युत संयंत्रों द्वारा राख के उपयोग के संबंध में प्रारूप अधिसूचना जो सा.का.नि. 285 (अ) तारीख 22 अप्रैल, 2021 द्वारा भारत के राजपत्र, असाधारण, भाग-2, धारा 3, उप धारा (i) में प्रकाशित की गई थी जिसमें उन सभी व्यक्तियों से जिनका इससे प्रभावित होना सामान्य है उस तारीख से, जिसको उक्त प्रारूप उपबंधों की शासकीय राजपत्र में अंतर्विष्ट प्रतियां जनता को उपलब्ध करा दी गई थी, साठ दिनों के अवसान से पूर्व आक्षेप और सुझाव आमंत्रित किए गए थे।

और उक्त प्रारूप अधिसूचना के संबंध में उससे संभावित तौर पर प्रभावित होने वाले सभी व्यक्तियों से प्राप्त आक्षेपों और सुझावों पर केंद्रीय सरकार द्वारा सम्यक रूप से विचार कर लिया गया है;

अत: पर्यावरण (संरक्षण) नियम, 1986 के नियम (5) के उप-नियम (3) के खंड (घ) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3 की उप-धारा (1) और उप-धारा (2) के खंड (v) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए और अधिसूचना का.आ. 763 (अ) तारीख 14 सितम्बर, 1999 का उन बातों के सिवाय अधिकांत करते हुए जिन्हें ऐसे अधिक्रमण से पूर्व किया गया है या करने का लोप किया गया है, केन्द्रीय सरकार कोयलों या लिग्नाईट आधारित ताप विद्युत संयंत्रों से राख के उपयोग के संबंध में निम्नलिखित अधिसूचना जारी करती है, जो इस अधिसूचना के प्रकाशन की तिथि से प्रवृत्त होगी, अर्थात्

क. फ्लाई-राख और बॉटम-राख का निपटान करने हेतु ताप विद्युत संयंत्रों (टीपीपी) के उत्तरदायित्व.-

(1) प्रत्येक कोयला या लिग्नाइट आधारित ताप विद्युत संयंत्र (जिनमें कैप्टिव और/या सह-उत्पादन केंद्र शामिल हैं या दोनों) की यह प्राथमिक जिम्मेदारी होगी कि वह अपने द्वारा सृजित राख (फ्लाई-राख और बॉटम-राख) का उप पैरा (2) में दिए गए पारि-अनुकूल तरीके से 100 प्रतिशत उपयोग सुनिश्चित करे;

(2) कोयला या लिग्नाइट आधारित ताप विद्युत संयंत्रों से सृजित राख का उपयोग केवल निम्नलिखित पारि-अनुकूल प्रयोजनों के लिए किया जाएगा, अर्थात्:-

(i) फ्लाई राख पर आधारित उत्पाद अर्थात्: ईंट ब्लॉक टाइल, फाइबर सीमेंट शीट, पाइप, बोर्ड, पैनल का विनिर्माण;

(ii) सीमेंट विनिर्माण, रेडी-मिक्स कंक्रीट;

(iii) सड़क निर्माण और फ्लाई-ओवर के रेलिंग का निर्माण, राख और जिओ-पॉलीमर आधारित निर्माण सामग्री;

(iv) बांध का निर्माण;

(v) निचले क्षेत्र को भरना;

(vi) खनन कार्य से रिक्त हुए स्थान को भरना;

(vii) सिंटर्ड या शीत–बद्ध राख संचय का विनिर्माण;

(viii) मृदा परीक्षण के आधार पर नियंत्रित तरीके से कृषि;

(ix) तटीय जिलों में तटरेखा संरक्षण संरचनाओं का निर्माण;

(x) अन्य देशों को राख का निर्यात;

(xi) समय-समय पर यथाधिसूचित किसी अन्य पारि-अनुकूल प्रयोजन के लिए।

(3) अध्यक्ष, केंद्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) की अध्यक्षता में एक समिति गठित की जाएगी जिसमें पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय (एमओईएफसीसी), विद्युत मंत्रालय, खान मंत्रालय, कोयला मंत्रालय, सड़क परिवहन और राजमार्ग मंत्रालय, कृषि अनुसंधान एवं शिक्षा विभाग, सड़क कांग्रेस संस्थान तथा राष्ट्रीय सीमेंट एवं भवन सामग्री परिषद के प्रतिनिधियों को सदस्यों के रूप में शामिल किया जाएगा, जिसका प्रयोजन राख के उपयोग के पारि-अनुकूल तौर-तरीकों की जांच करना, उनकी समीक्षा एवं अनुशंसा करना तथा प्रौद्योगिकीय विकासों तथा पणधारी से प्राप्त अनुरोधों के आधार पर उप-पैरा (2) में यथोल्लिखित ऐसे तौर-तरीकों की सूची में समिति द्वारा सुझाए गए तौर-तरीकों को शामिल करना या किसी तौर-तरीके को सूची से हटाना या उसमें संशोधन करना है। जब भी इस प्रयोजन के लिए अपेक्षित हो, यह समिति राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति, ताप विद्युत संयंत्र और खानों के प्रचालकों को आमंत्रित कर सकती है। इस समिति सिफारिश के आधार पर, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय ऐसे पारि-अनुकूल प्रयोजन प्रकाशित करेगा।

(4) प्रत्येक कोयला या लिग्नाइट आधारित ताप विद्युत संयंत्र उस वर्ष के दौरान सृजित राख (फ्लाई-राख और बॉटम-राख) का 100 प्रतिशत उपयोग करने हेतु उत्तरदायी होगा; तथापि, किसी भी स्थिति में, किसी वर्ष में राख का उपयोग 80 प्रतिशत से नीचे नहीं होगा और साथ ही, उस ताप विद्युत संयंत्र को तीन वर्ष की अवधि में 100 प्रतिशत औसत राख के उपयोग का लक्ष्य प्राप्त करना होगा :

परंतु, यह और कि पहली बार के लिए लागू तीन वर्ष के चक्र को ऐसे ताप विद्युत संयंत्रों, जहां राख का उपयोग 60-80 प्रतिशत के बीच होता है, एक वर्ष के लिए और ऐसे संयंत्रों, जहां राख का उपयोग 60 प्रतिशत से कम है, दो वर्ष के लिए बढ़ाया जा सकता है, और राख के उपयोग की प्रतिशतता की गणना के प्रयोजन के लिए वर्ष 2021-2022 में उपयोग की प्रतिशत प्रमात्रा को नीचे दी गई तालिका के अनुसार ध्यान में रखा जाएगा:

तापीय विद्युत संयंत्रों के उपयोग की प्रतिशतता	100 प्रतिशत उपयोगिता प्राप्त करने के लिए प्रथम अनुपालन चक्र	100 प्रतिशत उपयोगिता प्राप्त करने के लिए द्वितीय अनुपालन चक्र
>80 प्रतिशत	3 वर्ष	3 वर्ष
60-80 प्रतिशत	4 वर्ष	3 वर्ष
<60 प्रतिशत	5 वर्ष	3 वर्ष

परन्तु, ताप विद्युत संयंत्रों के लिए 80 प्रतिशत न्यूनतम उपयोग प्रतिशतता, क्रमश: 60-80 प्रतिशत और <60 प्रतिशत की उपयोगिता की श्रेणी के तहत आने वाले ताप विद्युत संयंत्रों के लिए प्रथम अनुपालन चक्र के पहले वर्ष और पहले दो वर्षों पर लागू नहीं होगी।

परन्तु, अनुपालन चक्र के अंतिम वर्ष में सृजित 20 प्रतिशत राख को अगले चक्र में भी ले जाया जाएगा जिसका उपयोग उस अनुपालन चक्र के दौरान सृजित राख के साथ अगले तीन वर्षों में किया जाएगा।

(5) अप्रयुक्त संचित राख अर्थात् लीगेसी राख, जिसका इस अधिसूचना के प्रकाशन से पहले भंडारण किया गया है, को ताप विद्युत संयंत्र (टीपीपी) द्वारा इस रीति से क्रमिक रूप से उपयोग में लाया जाएगा, कि लीगेसी राख को इस अधिसूचना के प्रकाशन की तिथि से दस वर्षों के भीतर पूरी तरह उपयोग कर लिया जाएगा और यह उस विशिष्ट वर्ष के चालू संचालनों के माध्यम से राख उत्सर्जन के लिए निर्धारित उपयोग लक्ष्यों से अतिरिक्त होगा।

परन्तु, निम्नलिखित प्रतिशतताओं में यथा उल्लिखित लीगेसी राख की न्यूनतम मात्रा का उपयोग तास्थानी वर्ष के दौरान कर लिया जाएगा और लीगेसी राख की न्यूनतम मात्रा की ताप विद्युत संयंत्र की संस्थापित क्षमता के अनुसार वार्षिक राख उत्सर्जन के आधार पर की जानी है।

प्रकाशन की तिथि से वर्ष	पहला	दूसरा	तीसरा-दसवां
लीगेसी राख का उपयोग (वार्षिक राख की प्रतिशतता)	कम से कम 20 प्रतिशत	कम से कम 35 प्रतिशत	कम से कम 50 प्रतिशत

परन्तु, यह और कि लीगेसी राख का उपयोग वहां अपेक्षित नहीं है, जहां राख के तालाब या डाइक स्थिर हो गए हैं और हरित पट्टी के निर्माण या पौध रोपण से पुनरूद्धार किया गया है और संबंधित राज्य प्रदूषण नियंत्रण बोर्ड इस संबंध में प्रमाणित करेगा। किसी राख तालाब या डाइक के स्थिरीकरण और भूमि-उद्धार का कार्य, जिसमें केन्द्रीय प्रदूषण नियंत्रण बोर्ड या राज्य प्रदूषण नियंत्रण बोर्ड द्वारा प्रमाणन शामिल है, इस अधिसूचना के प्रकाशन की तारीख से एक वर्ष के भीतर किया जाएगा। अन्य सभी राख के कुंड या डाइक में शेष बचे राख का उपयोग ऊपर उल्लिखित समय-सीमाओं के अनुसार क्रमिक रूप से किया जाएगा।

टिप्पण: राख के उपयोग के लक्ष्यों को हासिल करने के लिए उप पैरा (4) और (5) के अधीन दायित्व 01 अप्रैल, 2022 की तारीख से लागू होंगे।

(6) किसी भी नए तापीय विद्युत संयंत्र (टीपीपी) में 0.1 हेक्टेयर प्रति मेगावाट (एमडब्ल्यू) क्षेत्रफल के साथ आपातकालीन या अस्थायी राख कुंड की अनुमति दी जा सकती है। राख के तालाब या डाइकों का तकनीकी विर्निदेश, केन्द्रीय विद्युत प्राधिकरण (सीईए) के परामर्श से केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा बनाए गए दिशानिर्देशों के अनुसार होगा और ये दिशानिर्देश राख के कुंड या डाइक के संबंध में इसकी सुरक्षा, पर्यावरणीय प्रदूषण, उपलब्ध प्रमात्रा, निपटान का तरीका, निपटान में जल की खपत या संरक्षण, राख जल पुनर्चक्रण और ग्रीन बेल्ट आदि के वार्षिक प्रमाणन के लिए कार्यविधि भी निर्धारित करेंगे और इस अधिसूचना के प्रकाशन की तारीख से तीन महीनों के भीतर प्रस्तुत किए जाएंगे।

(7) प्रत्येक कोयला या लिग्नाईट आधारित ताप विद्युत संयंत्र यह सुनिश्चित करेगा कि राख की लदाई, उतराई, ढुलाई, भंडारण और निपटान पर्यावरणीय दृष्टि से अनुकूल रीति से किया गया है और वायु और जल प्रदूषण की रोकथाम के लिए सभी ऐहितयात किए गए हैं और इस संबंध में स्थिति की सूचना इस अधिसूचना में संलग्न अनुबंध में संबंधित राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) को दी जाएगी।

(8) प्रत्येक कोयला या लिग्नाइट आधारित तापीय विद्युत संयंत्र, संस्थापित क्षमता पर आधारित राख के कम से कम 16 घंटों के भंडारण के लिए समर्पित शुष्क फ्लाई राख साइलोस प्रतिष्ठापित करेगा, जिनके पास पृथक पहुंच मार्ग होंगे, जिससे कि राख पहुंचाने के कार्य को सुगम बनाया जा सके। इसकी सूचना संबंधित राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) को उपाबंध में दी जाएगी और केन्द्रीय प्रदूषण नियंत्रण

बोर्ड (सीपीसीबी) या राज्य केन्द्रीय प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति द्वारा समय-समय पर निरीक्षण किया जाएगा।

(9) प्रत्येक कोयला या लिग्नाईट आधारित तापीय विद्युत संयंत्र (जिसके अंतर्गत कैप्टिव या सह उत्पादन केन्द्र भी है या दोनों), वास्तविक उपयोगकर्ता (उपयोगकर्ताओं) के हित के लिए केन्द्रीय प्रदूषण नियंत्रण बोर्ड के वेब पोर्टल या मोबाईल फोन एप्प का लिंक उपलब्ध कराकर ताप विद्युत संयंत्र के पास राख की उपलब्धता के वास्तविक आंकड़े प्रदान करेगा।

(10) राख के 100 प्रतिशत उपयोग का वैधानिक दायित्व, जहां भी लागू हो, विधि में बदलाव के रूप में माना जाएगा।

ख. राख के उपयोग के प्रयोजनार्थ, उत्तरवर्ती उप पैराग्राफ लागू होंगे .-

(1) ऐसे सभी अभिकरण (सरकारी, अर्द्धसरकारी और निजी), जो सड़क बिछाने, सड़क और फ्लाई ओवर के किनारों, तटीय जिलों में तटरेखा की सुरक्षा संरचनाओं और लिग्नाईट या कोयला आधारित ताप विद्युत संयंत्र से 300 किमी के भीतर बांधों जैसे निर्माण संबंधी कार्यकलापों में लगे हुए हैं, इन कार्यकलापों में अनिवार्य रूप से राख का उपयोग करेंगे :

परंतु इसको परियोजना स्थल पर निशुल्क पहुंचाया जाए और परिवहन लागत, ऐसे कोयला या लिग्नाईट आधारित ताप विद्युत संयंत्रों द्वारा वहन की जाए।

परंतु यह और कि ताप विद्युत संयंत्र पारस्परिक सहमत हुई शर्तों के अनुसार राख की लागत और परिवहन के लिए शुल्क ले सकता है उस मामले में जहां ताप विद्युत संयंत्र अन्य माध्यम से राख का निपटान करने में समर्थ है और ये अभिकरण इसके लिए प्रर्थाना कर सकते हैं और बिना लागत और बिना परिवहन शुल्क के राख उपलब्ध कराने के प्रावधान तभी लागू होंगे यदि उसके लिए ताप विद्युत संयंत्र उस निर्माण अभिकरण को नोटिस जारी करता है।

(2) उक्त कार्यकलापों में राख का उपयोग भारतीय मानक ब्यूरो, भारतीय रोड कांग्रेस, केन्द्रीय भवन अनुसंधान संस्थान, रूड़की, केन्द्रीय सड़क अनुसंधान संस्थान, दिल्ली, केन्द्रीय लोक निर्माण विभाग, राज्य लोक निर्माण विभागों और अन्य केन्द्रीय और राज्य सरकार के अभिकरणों द्वारा निर्धारित किए गए विनिर्देशों और दिशानिर्देशों के अनुसार किया जाएगा।

(3) तापीय विद्युत संयंत्र की 300 किलोमीटर की परिधि के भीतर अवस्थित सभी खानों के लिए विस्तारित उत्पादक उत्तरदायित्व (ईपीआर) के तहत खुली आवर्त खानों में राख का पृष्ठ भंडारण करना या अधिक भार के ढेरों के साथ राख का मिश्रण करना बाध्यकारी होगा। सभी खान के स्वामी या प्रचालक (चाहे सरकारी, सार्वजनिक और निजी क्षेत्र के हो) कोयला या लिग्नाईट आधारित तापीय विद्युत संयंत्रों से तीन सौ किलोमीटर (सड़क द्वारा) के भीतर, महानिदेशक, खान सुरक्षा (डीजीएमएस) के दिशानिर्देशों के अनुसार ओवर बर्डन के बाह्य निक्षेप खान की बैकफिलिंग अथवा स्टोविंग (प्रचालित या छोड़ी गई खानों, जैसा भी मामला हो) के लिए उपयोग की गई सामग्रियों के भार-दर-भार के आधार पर कम से कम 25 प्रतिशत राख को मिश्रित करने के लिए उपाय करेंगे :

परंतु ऐसे तापीय विद्युत केन्द्र नि:शुल्क राख प्रदान करके और परिवहन की लागत को वहन करके या पारस्परिक सहमत हुई शर्तों पर लिए गए निर्णय के अनुसार लागत या परिवहन व्यवस्था करके राख की अपेक्षित मात्रा की उपलब्धता को सुकर बनायेंगे और खानों के खाली स्थानों और ढेरो में अधिकभार के साथ राख को मिश्रित करना, सृजित अधिभार के लिए इस अधिसूचना के प्रकाशन की तिथि से लागू होगा और उक्त कार्यकलापों में राख का उपयोग, केंद्रीय प्रदूषण नियंत्रण बोर्ड, महानिदेशक खान सुरक्षा और भारतीय खदान ब्यूरो द्वारा निर्धारित दिशा-निर्देशों के अनुसार किया जाएगा।

स्पष्टीकरण .- इस उप-पैरा के प्रयोजन के लिए यह भी स्पष्ट किया जाता है कि लागत मुक्त राख और नि:शुल्क परिवहन के उपबंध केवल तभी लागू होंगे यदि ताप विद्युत संयंत्र इसके लिए खान मालिक को नोटिस देते हैं और अधिभार वाले ढेर के साथ मिश्रित करने और खान में खाली स्थान को भरने के लिए राख के 25 प्रतिशत हिस्से के उपयोग का अधिदेश तब तक लागू नहीं होगा जब तक कि ताप विद्युत संयंत्र द्वारा खान मालिक को नोटिस न दिया गया हो।

(5) (i) सभी खान मालिकों को खान में खाली स्थानों में राख को समायोजित करने के लिए खान बंद योजना (प्रगामी और अंतिम) तैयार करनी होगी और खान में खाली स्थान में राख के निपटान और अधिभार वाले ढेर के साथ राख को मिश्रित करने के लिए खान योजनाओं को संबंधित प्राधिकारी अनुमोदित करेगा। पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय द्वारा ताप विद्युत संयंत्रों और कोयला खदानों की पर्यावरणीय मंजूरी की अपेक्षा से छूट देने के साथ-साथ ऐसे निपटान के लिए अपनाए जाने वाले दिशानिर्देशों के संबंध में तारीख 28 अगस्त, 2019 को दिशानिर्देश जारी किए गए।

(ii) मंत्रालय, केन्द्रीय प्रदूषण नियंत्रण बोर्ड, महानिदेशक, खान सुरक्षा (डीजीएमएस) और भारतीय खान ब्यूरो (आईबीएम) के साथ परामर्श करके, खानों में खाली स्थानों में राख के निपटान करने तथा अधिभार वाले ढेरो में इसे मिश्रित करना सुगम बनाने के लिए समय-समय पर आगे भी दिशानिर्देश जारी कर सकता है और यह खान मालिकों की जिम्मेदारी होगी कि वे ऐसी खानों को अभिज्ञात करने की तिथि से एक वर्ष के भीतर विभिन्न विनियामक प्राधिकरणों द्वारा जारी की गई अनुमतियों में आवश्यक संशोधन या परिवर्तन प्राप्त करेंगे।

(6) (i) पर्यावरणीय प्रदूषण के संदर्भ में सुरक्षा, व्यवहार्यता (आर्थिक व्यवहार्यता नहीं) और पहलुओं की जांच सहित राख से खान में खाली स्थान को वापस भरने/अधिभार वाले ढेर के साथ राख को मिश्रित करने के लिए खानों की पहचान करने के लिए पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, विद्युत मंत्रालय, खान मंत्रालय, कोयला मंत्रालय, महानिदेशक खान सुरक्षा और भारतीय खान ब्यूरो से प्रतिनिधियों को शामिल करते हुए अध्यक्ष, केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) की अध्यक्षता में एक समिति का गठन किया जाएगा और यह समिति पणधारी मंत्रालयों या विभागों के लिए अभिज्ञात खानों (भूमिगत और खुली, दोनों) के संबंध में तैयार की गई तिमाही रिपोर्टों को अद्यतन करेगी और यह समिति, इस अधिसूचना के प्रकाशन के तुरंत पश्चात उपयुक्त खानों की पहचान करना आरंभ करेगी।

(ii) ताप विद्युत संयंत्र या खानें, उपरोक्त अनुसार अधिदेशित उपयोग लक्ष्यों को पूरा करने के लिए उपर्युक्त समिति द्वारा पहचान किए जाने तक राख के निपटान हेतु प्रतीक्षा नहीं करेंगी।

(7) राख से निचले क्षेत्र को भरने का कार्य, अनुमोदित परियोजनाओं के लिए राज्य प्रदूषण नियंत्रण बोर्ड की पूर्व अनुमति से और केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा निर्धारित दिशा-निर्देशों के अनुसार किया जाएगा और राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति द्वारा अनुमोदित स्थलों, अवस्थान, क्षेत्र और अनुमत मात्रा को अपनी वेबसाइट पर प्रतिवर्ष प्रकाशित किया जाएगा।

(8) केन्द्रीय प्रदूषण नियंत्रण बोर्ड, संगत पणधारी के साथ मिलकर, राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) द्वारा अनुमति प्रदान करने के लिए समयबद्ध ऑनलाइन आवेदन प्रक्रिया प्रस्तुत करने के साथ-साथ इस अधिसूचना के अधीन परिकल्पित सभी प्रकार के कार्यकलापों के लिए एक वर्ष के भीतर दिशानिर्देश प्रस्तुत करेगा।

(9) कोयला या लिग्नाइट आधारित तापीय ऊर्जा संयंत्र से तीन सौ किलोमीटर के दायरे में स्थित सभी भवन निर्माण परियोजनाएं (केंद्रीय, राज्य और स्थानीय प्राथिकरणों सरकारी उपक्रमों, अन्य सरकारी अभिकरणों तथा सभी निजी अभिकरणों) राख की ईटों, टाईल्स, धातुमल राख अथवा अन्य राख आधारित उत्पादों का उपयोग करेंगी बशर्ते कि वे वैकल्पिक उत्पादों की कीमत से अधिक कीमत पर उपलब्ध न हो।

(10) राख आधारित उत्पादों के विनिर्माण और ऐसे उत्पादों में राख के उपयोग में भारतीय मानक ब्यूरो, भारतीय सड़क कांग्रेस और केंद्रीय प्रदूषण नियंत्रण बोर्ड द्वारा निर्धारित विनिर्देशों और दिशानिर्देशों की अनुपालना होगी।

ग. गैर-अनुपालन के लिए पर्यावरणीय प्रतिकर .-

(1) तीन वर्ष के चक्र के प्रथम दो वर्षों में, यदि कोयला या लिग्नाइट आधारित तापीय ऊर्जा संयंत्र (कैप्टिव और/ या सह-उत्पादक स्टेशनों या दोनों सहित) ने कम-से-कम 80 प्रतिशत राख (फ्लाई-राख और बॉटम-राख) उपयोग नहीं की है तो ऐसे गैर-अनुपालन ताप विद्युत संयंत्रों पर प्रस्तुत की गई वार्षिक रिपोर्टों के आधार पर वित्तीय वर्ष के

अंत में अप्रयुक्त राख पर 1000 रुपए प्रति टन की दर से पर्यावरणीय प्रतिकर लगाया जाएगा और यदि यह तीन वर्ष के चक्र के तीसरे वर्ष में 100 प्रतिशत राख का उपयोग करने में असमर्थ रहता है, तो वह अप्रयुक्त मात्रा पर 1000 रुपए प्रति टन की दर से पर्यावरणीय प्रतिकर के भुगतान का पात्र होगा, जिस पर पहले पर्यावरणीय प्रतिकर नहीं लगायी गयी है।

परंतु पर्यावरणीय प्रतिकर को पैरा क के उप-पैरा (4) में उल्लिखित विभिन्न उपयोगी श्रेणियों के अनुसार प्रथम अनुपालन चक्र के अंतिम वर्ष के अंत में अनुमान लगाया जाएगा और अधिरोपित किया जाएगा।

(2) अधिकारियों द्वारा एकत्रित पर्यावरणीय प्रतिकर को केन्द्रीय प्रदूषण नियंत्रण बोर्ड के निर्दिष्ट खाते में जमा किया जाएगा।

(3) लैगेसी राख के मामले में, यदि कोयला या लिग्नाइट आधारित तापीय ऊर्जा संयंत्र (कैप्टिव या सह-उत्पादक स्टेशनों या दोनों सहित) ने स्थापित क्षमता पर आधारित उत्पन्न राख का कम-से-कम 20 प्रतिशत (प्रथम वर्ष के लिए), 35 प्रतिशत (द्वितीय वर्ष के लिए), 50 प्रतिशत (तीसरे से दसवें वर्ष तक) उपयोग के बराबर लक्ष्य प्राप्त नहीं किया है तो उस वित्तीय वर्ष के दौरान अप्रयुक्त लैगेसी राख पर 1000 रुपए प्रति टन की दर से पर्यावरणीय प्रतिकर लगाया जाएगा और यदि 10 वर्ष के अंत में लैगेसी राख का उपयोग नहीं किया जाता है तो 1000 रुपए प्रति टन की दर से शेष अप्रयुक्त मात्रा पर पर्यावरणीय प्रतिकर लगाया जाएगा जिस पर पहले पर्यावरणीय प्रतिकर नहीं लगाया गया है।

(4) अधिकृत खरीददारों या उपभोक्ता अभिकरणों तक राख भेजने की जिम्मेदारी परिवाहकों या वाहन मालिक की जिम्मेदारी है और यदि इसका अनुपालन नहीं किया जाता है, तो अनधिकृत उपयोगकर्ताओं अथवा गैर-अधिकृत उपयोगर्ताओं को ऐसी मात्रा गलत तरीके से वितरित करने पर 1500 रूपए प्रति टन की दर से पर्यावरणीय प्रतिकर लगायी, इसके अतिरिक्त राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) द्वारा गैर अनुपालनकर्ता परिवाहकों पर अभियोजन लागू होगा।

(5) इस अधिसूचना के पैरा ख में विहित पर्यावरण अनुकूल तरीके में राख के उपयोग की जिम्मेदारी खरीददार या उपभोगकर्ता एजेंसियों की है और ऐसा नहीं करने पर केन्द्रीय प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) द्वारा 1500 रूपए प्रति टन की दर से पर्यावरणीय प्रतिकर लगाया जाएगा।

(6) यदि उपयोगकर्ता अधिकरण पैरा ख के अधीन निर्धारित सीमा तक अथवा पैरा घ के उप-पैरा (1) के अधीन, दिए गए नोटिस के माध्यम से सूचित की गई सीमा, इनमें से जो भी कम हो, तक राख का उपयोग नहीं करती है, वे अतिरिक्त राख की मात्रा का 1500 रूपए प्रति टन की दर से भुगतान करने के लिए उत्तरदायी होंगी।

परंतु भवन निर्माण के संबंध में पर्यावरणीय प्रतिकर निर्मित क्षेत्र के 75 रूपये प्रति वर्ग फीट की दर से वसूल किया जाएगा।

(7) (i) ताप विद्युत संयंत्रों अन्य बकायादारों से केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा लगायी गई का पर्यावरणीय प्रतिकर उपयोग अप्रयुक्त राख के सुरक्षित निपटान हेतु किया जाएगा और राख आधारित उत्पादों सहित राख के उपयोग के संबंध में और अधिक अनुसंधान करने के लिए भी निधि का उपयोग किया जा सकता है।

(ii) अप्रयुक्त मात्रा पर लगाए गए पर्यावरणीय प्रतिकर के पश्चात भी राख के उपयोग का उत्तरदायित्व ताप विद्युत संयंत्रों की होगी और यदि पश्चातवती चक्रों में पर्यावरणीय प्रतिकर लगाने के पश्चात ताप विद्युत संयंत्र, किसी विशेष चक्र की राख के उपयोग के लक्ष्य को प्राप्त करता है तो अगले चक्र के दौरान अप्रयुक्त मात्रा पर एकत्र की गई पर्यावरणीय प्रतिकर में 10 प्रतिशत कटौती के पश्चात उक्त रकम ताप विद्युत संयंत्र को वापस कर दी जाएगी और पश्चातवती चक्रों में राख के उपयोग के मामले में एकत्र की गई पर्यावरणीय प्रतिकर की 20 प्रतिशत, 30 प्रतिशत और उसी क्रम में कटौती की जानी है।

घ. राख या राख आधारित उत्पादों की आपूर्ति हेतु प्रक्रिया ._

(1) ताप विद्युत संयंत्रों के स्वामी अथवा राख की ईटों या टाईल्स या धातुमल आधारित राख के विनिर्माता उन व्यक्तियों या अभिकरणों को लिखित सूचना देंगे जो बिक्री या परिवहन या दोनों के लिए प्रस्तुत राख या राख आधारित उत्पादों के उपयोग के लिए उत्तरदायी हैं।

(2) ऐसे व्यक्ति या उपयोगकर्ता अभिकरणों जिन्हें ताप विद्युत संयंत्रों के स्वामी द्वारा या राख की ईंटों या टाईल्स या धातुमल आधारित राख के उत्पादकों द्वारा सूचना दी गई है, यदि वे पहले ही राख या राख उत्पादों के उपयोग के प्रयोजन से अन्य अभिकरणों के साथ जुड़े हुए हैं, यदि वे किसी भी राख/राख उत्पादों का उपयोग नहीं कर सकते हैं अथवा कम मात्रा का उपयोग कर सकते हैं, तदनुसार ताप विद्युत संयंत्र को सूचित करेंगे।

ड. प्रवर्तन, निगरानी, लेखा परीक्षा और प्रतिवेदन करना

(1) केंद्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) और संबंधित राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी), उपबंधों के अनुपालना सुनिश्चित करने के लिए प्रवर्तन और निगरानी प्राधिकरण होंगे। सीपीसीबी या एसपीसीबी या पीसीसी तिमाही आधार पर राख के उपयोग की निगरानी करेंगे और सीपीसीबी इस प्रयोजन के लिए अधिसूचना की प्रकाशन की तारीख से छ: माह के भीतर एक पोर्टल विकसित करेगा। संबंधित जिला अधिकारी के पास इस अधिसूचना के उपबंधों को लागू करने और निगरानी करने के लिए समवर्ती अधिकारिता होगी।

(2) (i) ताप विद्युत संयंत्र, राख उत्सर्जन और उपयोग से संबंधित मासिक सूचना वेब पोर्टल पर अगले महीने की 5 तारीख तक अपलोड करेगा। कोयला या लिग्नाइट आधारित ताप ऊर्जा संयंत्रों द्वारा केंद्रीय प्रदूषण नियंत्रण बोर्ड, संबंधित राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति (पीसीसी), केंद्रीय विद्युत प्राधिकरण (सीईए) और पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय के संबंधित एकीकृत क्षेत्रीय कार्यालयों को इस अधिसूचना के उपबंधों के अनुपालन संबंधी सूचना उपलब्ध कराते हुए वार्षिक कार्यान्वयन रिपोर्ट प्रत्येक वर्ष (1 अप्रैल से 31 मार्च तक की अवधि के लिए) अप्रैल माह के 30वें दिन तक प्रस्तुत की जाएगी। सीपीसीबी और सीईए द्वारा सभी ताप विद्युत संयंत्रों द्वारा प्रस्तुत वार्षिक रिपोर्टों का समेकन किया जाएगा और उसे पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय को 31 मई तक प्रस्तुत किया जाएगा।

(ii) सभी अन्य उपयोगकर्ता अधिकरण पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय या राज्य स्तरीय पर्यावरण प्रभाव आकलन प्राधिकरण (एसईआईएए) द्वारा जारी पर्यावरणीय मंजूरी (ईसी) अथवा राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) द्वारा जारी संचालन की सहमति (सीटीओ), जो भी लागू हो, की अनुपालना रिपोर्ट में इस अधिसूचना में आज्ञापकता के अनुसार राख के उपभोग या उपयोग या निस्तारण तथा राख आधारित उत्पादों के उपयोग संबंधी सूचना प्रस्तुत करेंगे। केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) या राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) अधिसूचना के उपबंधों के प्रभावी कार्यान्वयन की समीक्षा करने हेतु ताप विद्युत संयंत्रों के अतिरिक्त अन्य सभी अधिकरणों की राख उपयोग की वार्षिक रिपोर्ट प्रकाशित करेंगे।

(3) इस अधिसूचना के उपबंधों की निगरानी और कार्यान्वयन के प्रयोजन के लिए केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) की अध्यक्षता में एक समिति का गठन किया जाएगा जिसके सदस्य विद्युत मंत्रालय, कोयला मंत्रालय, खनन मंत्रालय, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, सड़क परिवहन और राजमार्ग मंत्रालय और भारी उद्यम विभाग से होने के साथ-साथ समिति के अध्यक्ष द्वारा नामित किए जाने वाले कोई संबंधित पणधारी होंगे। यह समिति संगत पणधारी को आमंत्रित कर सकती है। यह समिति इस अधिसूचना के उपबंधों के प्रभावी और दक्ष कार्यान्वयन के लिए सिफारिशें कर सकती है। यह समिति छ: माह में कम से कम एक बार एक बैठक करेगी और वार्षिक कार्यान्वयन रिपोर्टों की समीक्षा करेगी और यह समिति, इस अधिसूचना द्वारा आजापक किए गए अनुसार छ: महीनों में कम से कम एक बार संगत पणधारी (को) को आमंत्रित करके राख के उपयोग की निगरानी करने के लिए पणधारी से साथ परामर्शदात्री बैठकें आयोजित करेगी। यह समिति पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय (एमओईएफसीसी) को छ: मासिक रिपोर्ट प्रस्तुत करेगी।

(4) ताप विद्युत संयंत्रों और राख के उपयोगकर्ताओं या राख आधारित उत्पादों के विनिर्माताओं के बीच के विवाद का समाधान करने के प्रयोजन से राज्य सरकारें या संघ राज्यक्षेत्र की सरकारें इस अधिसूचना के प्रकाशन की तारीख से तीन माह के भीतर राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) की अध्यक्षता में एक समिति का गठन करेंगी जिसमें विद्युत विभाग के प्रतिनिधि और एक प्रतिनिधि उस विभाग का होगा, जो विवाद वाले संबंधित अभिकरण का कार्य देख रहे हैं।

(5) केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) द्वारा प्राधिकृत लेखा परीक्षकों द्वारा ताप विद्युत संयंत्रों और उपयोगकर्ता अभिकरणों द्वारा किए गए राख के निपटान की अनुपालन लेखा परीक्षा संचालित की जाएगी और लेखा परीक्षा की रिपोर्ट प्रत्येक वर्ष 30 नवम्बर तक केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) और संबंधित राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) को प्रस्तुत की जाएगी। केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) और संबंधित राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी) या प्रदूषण नियंत्रण समिति (पीसीसी) लेखा परीक्षा की रिपोर्ट प्राप्त होने के पंद्रह दिनों के भीतर अनुपालन न करने वाले ताप विद्युत संयंत्रों के विरूद्ध कार्रवाई प्रारंभ करेगें।

[फा. सं. एचएसएम-9/1/2019-एचएसएम]

नरेश पाल गंगवार, संयुक्त सचिव

उपाबंध

31 मई तक अथवा उससे पहले प्रस्तुत की जाने वाली राख संबंधी उपबंधों की अनुपालन रिपोर्ट (01 अप्रैल से 31 मार्च की अवधि के लिए)।

क्र.सं.	**ब्यौरा**	
1.	विद्युत संयंत्र का नाम	
2.	कंपनी का नाम	
3.	जिला	
4.	राज्य	
5.	पत्राचार के लिए डाक का पता :	
6.	ई-मेल :	
7.	विद्युत संयंत्र की संस्थापित क्षमता (मेगा वॉट) :	
8.	संयंत्र लोड फैक्टर (पीएलएफ) :	
9.	उत्पादित यूनिटों की संख्या (एमडब्ल्यूएच) :	
10.	विद्युत संयंत्र के अंतर्गत कुल क्षेत्र (हेक्टेयर) (राख कुंडों के अधीन क्षेत्र सहित) :	
11.	रिपोर्टिंग की अवधि के दौरान कोयला खपत की मात्रा (प्रति वर्ष मीट्रिक टन) :	
12.	औसत राख सामग्री प्रतिशतता में (%) :	
13.	रिपोर्टिंग की अवधि के दौरान वर्तमान में उत्पादित राख की मात्रा (प्रति वर्ष मीट्रिक टन) : फ्लाई राख (प्रति वर्ष मीट्रिक टन) : बॉटम राख (प्रति वर्ष मीट्रिक टन) :	
14.	ड्राई फ्लाई राख भंडारण गड्ढा (गड्ढों) की क्षमता (मीट्रिक टन) :	
15.	**रिपोर्टिंग की अवधि के दौरान वर्तमान में उत्पादित राख के उपयोग का ब्यौरा:** (क) रिपोर्टिंग की अवधि के दौरान वर्तमान में उपयोग की गई राख की	

	कुल मात्रा (एमटीपीए) : (ख) उपयोग की गई फ्लाई राख की मात्रा (एमटीपीए) : i. फ्लाई-एश आधारित उत्पाद (ईंट या ब्लॉक या टाइल्स या फाइबर सीमेंट शीट या पाइप या बोर्ड/पैनल) : ii. सीमेंट विनिर्माण : iii. रेडी मिक्स कंक्रीट : iv. राख और जीओ-पॉलिमर आधारित निर्माण सामग्री : v. सिंटर्ड या कोल्ड बॉन्डेड राख एग्रीगेट का निर्माण : vi. सड़कों, सड़क और फ्लाई ओवर के पुश्तों का निर्माण : vii. बांधों का निर्माण : viii. निम्न भू-क्षेत्र का भराव : ix. खनिज क्षेत्रों का भराव : x. अधिभार वाले डम्पों में उपयोग : xi. कृषि : xii. तटीय जिलों में तटरेखा सुरक्षा संरचनाओं का निर्माण : xiii. अन्य देशों को राख का निर्यात : xiv. अन्य (कृपया विनिर्दिष्ट करें) : (ग) उपयोग किए गए तल के राख की मात्रा (एमटीपीए) : i. फ्लाई-एश आधारित उत्पाद (ईंट या ब्लॉक या टाइल्स या फाइबर सीमेंट शीट या पाइप या बोर्ड या पैनल) : ii. सीमेंट विनिर्माण : iii. रेडी मिक्स कंक्रीट : iv. राख और जीओ-पॉलिमर आधारित निर्माण सामग्री : v. सिंटर्ड या कोल्ड बॉन्डेड राख एग्रीगेट का निर्माण : vi. सड़कों, सड़क और फ्लाईओवर के पुश्तों का निर्माण : vii. बांधों का निर्माण : viii. निम्न भू-क्षेत्र का भराव : ix. खनिज क्षेत्रों का भराव : x. अधिभार वाले डम्पों में उपयोग : xi. कृषि : xii. तटीय जिलों में तटरेखा सुरक्षा संरचनाओं का निर्माण : xiii. अन्य देशों को राख का निर्यात : xiv. अन्य (कृपया विनिर्दिष्ट करें) : रिपोर्टिंग की अवधि के दौरान वर्तमान में अप्रयुक्त राख की कुल मात्रा (एमटीपीए :	
16.	रिपोर्टिंग की अवधि के दौरान वर्तमान में उत्पादित राख का प्रतिशतता उपयोग (%) :	
17.	**राख कुंडों में राख के निपटान का ब्यौरा** क) तारीख 31 मार्च तक (रिपोर्टिंग की अवधि को छोड़कर) राख कुण्ड (कुण्डों) में निपटान किए गए राख की कुल मात्रा (मीट्रिक टन):	

	ख) रिपोर्टिंग की अवधि के दौरान राख कुण्ड (कुण्डों) में निपटान किए गए राख की मात्रा (मीट्रिक टन): ग) रिपोर्टिंग की अवधि के दौरान राख कुण्डों में गारा निस्सरण हेतु खपत हुए जल की कुल मात्रा (मी^{3}): घ) राख कुण्डों की कुल संख्या: (i) सक्रिय: (ii) खाली किए गए (पुन: भरा जाना है) (iii) पुन: भरे गए: ड.) राख कुण्डों के अधीन कुल क्षेत्र (हेक्टेयर):	
18.	**अलग-अलग राख कुण्ड का ब्यौरा** *राख कुण्ड 1,2 आदि (यदि राख कुण्डों की संख्या एक से अधिक हो, तो कृपया निम्नलिखित ब्यौरा अलग से उपलब्ध कराएं)* क) स्थिति: निर्माणाधीन या सक्रिय या खाली किया गया या पुन: भरा गया ख) राख कुण्ड में राख का निपटान शुरू करने की तारीख/महीना/वर्ष या महीना/वर्ष): ग) राख कुण्ड की क्षमता पूर्ण किए जाने के पश्चात् उसमें राख निपटान रोकने की तारीख (तारीख/महीना/वर्ष या महीना/वर्ष): (सक्रिय राख कुण्डों के लिए लागू नहीं) ग) क्षेत्र (हेक्टेयर): घ) डाइक की ऊंचाई (मी.): घ) आयतन (मी^{3}): ड.) तारीख 31 मार्च तक निपटान किए गए राख की मात्रा (मीट्रिक टन): च) उपलब्ध आयतन का प्रतिशत (%) और आगे निपटान किए जा सकने वाले राख की मात्रा (मीट्रिक टन): छ) राख कुण्ड के भरे जाने की अनुमानित अवधि (वर्षों और महीनों की संख्या): ड.) निर्देशांक (अक्षांश और देशान्तर): (कृपया न्यूनतम 4 निर्देशांकों को विनिर्दिष्ट करें) ज) राख कुण्ड में की गई लाइनिंग का प्रकार: एचडीपीई लाइनिंग या एलडीपीई लाइनिंग या क्ले लाइनिंग या कोई लाइनिंग नहीं छ) निपटान की विधि: शुष्क निपटान या नम गारा (नम गारा के मामले में कृपया विनिर्टिष्ट करें कि क्या एचसीएसडी या एमसीएसडी या एलसीएसडी है) ज) राख का अनुपात: गारा मिश्रण में जल (1:____): झ) संस्थापित और कार्यशील राख जल पुनर्चक्रण प्रणाली (एडब्ल्यूआरएस): हां या नहीं ञ) जमीन के अंदर या जल निकाय में राख कुण्ड से निस्सरित अपशिष्ट जल की मात्रा (मी^{3}): ट) डाइक की स्थिरता का अध्ययन कराए जाने की पिछली तारीख और उस संगठन का नाम जिसने अध्ययन किया: ठ) लेखा-परीक्षा किए जाने की पिछली तारीख और उस संगठन का नाम जिसने लेखा-परीक्षा की:	
19.	उपयोग किए गए पुराने राख की मात्रा (एमटीपीए): i. फ्लाई-एश आधारित उत्पाद (ईंट या ब्लॉक या टाइल्स या फाइबर	

	सीमेंट शीट या पाइप या बोर्ड या पैनल): ii. सीमेंट विनिर्माण: iii. रेडी मिक्स कंक्रीट: iv. राख और जीओ-पॉलिमर आधारित निर्माण सामग्री: v. सिंटर्ड या कोल्ड बॉन्डेड राख एग्रीगेट का निर्माण: vi. सड़कों, सड़क और फ्लाई ओवर के पुश्तों का निर्माण: vii. बांधों का निर्माण: viii. निम्न भू-क्षेत्र का भराव: ix. खनिज क्षेत्रों का भराव: x. अधिभार वाले डम्पों में उपयोग: xi. कृषि: xii. तटीय जिलों में तटरेखा सुरक्षा संरचनाओं का निर्माण: xiii. अन्य देशों को राख का निर्यात xiv. अन्य (कृपया विनिर्दिष्ट करें):			
20.	**सार :**			
	ब्यौरा	सृजित मात्रा (एमटीपी)	उपयोग की गई मात्रा (एमटीपी) और (%)	शेष मात्रा (एमटीपी)
	रिपोर्टिंग की अवधि के दौरान राख			
	पुरानी राख			
	कुल			
21.	कोई अन्य सूचना : वार्षिक अनुपालन रिपोर्ट, और विद्युत संयंत्रों और राख कुण्डों की शेष फाइलों की सॉफ्ट कॉपी ई-मेल:- moefcc-coalash@gov.in पर भेजी जाए।			
22.	प्राधिकृत हस्ताक्षरकर्ता के हस्ताक्षर			

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 31st December, 2021

S.O. 5481(E).—Whereas by notification of the Government of India in the erstwhile Ministry of Environment and Forests *vide* S.O.763 (E), dated the 14th September, 1999, as amended from time to time, the Central Government, issued directions for restricting the excavation of top soil for manufacturing of bricks and promoting the utilisation of fly ash in the manufacturing of building materials and in construction activity within a specified radius of three hundred kilometres from the coal or lignite based thermal power plants;

And whereas, to implement the aforesaid notification more effectively based on the polluter pays principle (PPP) thereby ensuring 100 per cent utilisation of fly ash by the coal or lignite based thermal power plants and for the sustainability of the fly ash management system, the Central Government reviewed the existing notification; and whereas environmental compensation needs to be introduced based on the polluter pays principle;

And whereas, there is a need to conserve top soil by promoting manufacture and mandating use of ash based products and building materials in the construction sector;

And whereas, there is a need to conserve top soil and natural resources by promoting utilisation of ash in road laying, road and flyover embankments, shoreline protection measures, low lying areas of approved projects, backfilling of mines, as an alternative for filling of earthen materials;

And whereas, it is necessary to protect the environment and prevent the dumping and disposal of fly ash discharged from coal or lignite based thermal power plants on land;

And whereas, in the said notification the phrase 'ash', has been used which includes both fly ash as well as bottom ash generated from the Coal or Lignite based thermal power plants;

And whereas, the Central Government intends to bring out a comprehensive framework for ash utilisation including system of environmental compensation based on polluter pays principle;

And whereas, a draft notification on ash utilisation by coal or lignite thermal power plants in supersession of the notification of the Government of India, Ministry of Environment and Forests published in the Gazette of India, Extra Ordinary part II, section 3, sub-section (i) *vide* S.O.763 (E), dated the 14th September, 1999, by notification in exercise of the powers conferred under sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule (5) of the Environment (Protection) Rules, 1986, was published in the Gazette of India, Extraordinary, Part II, section 3, sub-section (i), *vide* G.S.R. 285(E), dated the 22nd April, 2021 inviting objections and suggestions from all persons likely to be affected thereby before the expiry of sixty days from the date on which copies of the Gazette containing the said draft provisions were made available to the public;

And, whereas all the objections and suggestions received from all persons likely to be affected thereby in respect of the said draft notification have been duly considered by the Central Government;

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule (5) of the Environment (Protection) Rules, 1986, and in supersession of the Notification S.O.763 (E), dated the 14th September, 1999 except as respect things done or omitted to be done before such supersession, the Central Government hereby issues the following notification on ash utilisation from coal or lignite thermal power plants which shall come into force on the date of the publication of this notification, namely:-

A. Responsibilities of thermal power plants to dispose fly ash and bottom ash.—

(1) Every coal or lignite based thermal power plant (including captive or co-generating stations or both) shall be primarily responsible to ensure 100 per cent utilisation of ash (fly ash, and bottom ash) generated by it in an eco-friendly manner as given in sub-paragraph (2);

(2) The ash generated from coal or lignite based thermal power plants shall be utilised only for the following eco-friendly purposes, namely:-

(i) Fly ash based products viz. bricks, blocks, tiles, fibre cement sheets, pipes, boards, panels;

(ii) Cement manufacturing, ready mix concrete;

(iii) Construction of road and fly over embankment, Ash and Geo-polymer based construction material;

(iv) Construction of dam;

(v) Filling up of low lying area;

(vi) Filling of mine voids;

(vii) Manufacturing of sintered or cold bonded ash aggregate;

(viii) Agriculture in a controlled manner based on soil testing;

(ix) Construction of shoreline protection structures in coastal districts;

(x) Export of ash to other countries;

(xi) Any other eco-friendly purpose as notified from time to time.

(3) A committee shall be constituted under the chairmanship of Chairman, Central Pollution Control Board (CPCB) and having representatives from Ministry of Environment, Forest and Climate Change (MoEFCC), Ministry of Power, Ministry of Mines, Ministry of Coal, Ministry of Road Transport and Highways, Department of Agricultural Research and Education, Institute of Road Congress, National Council for Cement and Building Materials, to examine and review and recommend the eco-friendly ways of utilisation of ash and make inclusion or exclusion or modification in the list of such ways as mentioned in Sub-paragraph (2) based on technological developments and requests received from stakeholders. The committee may invite State Pollution Control Board or Pollution Control Committee, operators of thermal power plants and mines, cement plants and other stakeholders as and when required for this purpose. Based on the recommendations of the Committee, Ministry of Environment, Forest and Climate Change (MoEFCC) may publish such eco-friendly purpose.

(4) Every coal or lignite based thermal power plant shall be responsible to utilise 100 per cent ash (fly ash and bottom ash) generated during that year, however, in no case shall utilisation fall below 80 per cent in any year, and the thermal power plant shall achieve average ash utilisation of 100 per cent in a three years cycle:

Provided that the three years cycle applicable for the first time is extendable by one year for the thermal power plants where ash utilisation is in the range of 60-80 per cent, and two years where ash utilisation is below 60 per cent and for the purpose of calculation of percentage of ash utilisation, the percentage quantity of utilisation in the year 2021- 2022 shall be taken into account as per the table below:

Utilisation percentages of thermal power plants	First compliance Cycle to meet 100 per cent utilisation	Second compliance cycle onwards, to meet 100 per cent utilisation
>80 per cent	3 years	3 years
60-80 per cent	4 years	3 years
<60 per cent	5 years	3 years

Provided further that the minimum utilisation percentage of 80 per cent shall not be applicable to the first year and first two years of the first compliance cycle for the thermal power plants under the utilisation category of 60-80 per cent and <60 per cent, respectively.

Provided also that 20per cent of ash generated in the final year of compliance cycle may be carried forward to the next cycle which shall be utilised in the next three years cycle along with the ash generated during that cycle.

(5) The unutilised accumulated ash i.e. legacy ash, which is stored before the publication of this notification, shall be utilised progressively by the thermal power plants in such a manner that the utilization of legacy ash shall be completed fully within ten years from the date of publication of this notification and this will be over and above the utilisation targets prescribed for ash generation through current operations of that particular year:

Provided that the minimum quantity of legacy ash in percentages as mentioned below shall be utilised during the corresponding year and the minimum quantity of legacy ash is to be calculated based on the annual ash generation as per installed capacity of thermal power plant.

Year from date of publication	1st	2nd	3rd -10th
Utilisation of legacy ash (in percentage of Annual ash)	At least 20 per cent	At least 35 per cent	At least 50 per cent

Provided further that the legacy ash utilisation shall not be required where ash pond or dyke has stabilised and the reclamation has taken place with greenbelt or plantation and the concerned State Pollution Control Board shall certify in this regard. Stabilisation and reclamation of an ash pond or dyke including certification by the Central Pollution Control Board (CPCB) or State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall be carried out within a year from the date of publication of this notification. The ash remaining in all other ash ponds or dykes shall be utilised in progressive manner as per the above mentioned timelines.

Note: The obligations under sub-paragraph (4) and (5) above for achieving the ash utilisation targets shall be applicable from 1st April, 2022.

(6) Any new as well as operational thermal power plant may be permitted an emergency or temporary ash pond with an area of 0.1 hectare per Mega Watt (MW). Technical specifications of ash ponds or dykes shall be as per the guidelines of Central Pollution Control Board (CPCB) made in consultation with Central Electricity Authority (CEA) and these guidelines shall also lay down a procedure for annual certification of the ash pond or dyke on its safety, environmental pollution, available volume, mode of disposal, water consumption or conservation in disposal, ash water recycling and greenbelt, etc., and shall be put in place within three months from the date of publication of this notification.

(7) Every coal or lignite based thermal power plant shall ensure that loading, unloading, transport, storage and disposal of ash is done in an environmentally sound manner and that all precautions to prevent air and water pollution are taken and status in this regard shall be reported to the concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) in Annexure attached to this notification.

(8) Every coal or lignite based thermal power plant shall install dedicated silos for storage of dry fly ash silos for at least sixteen hours of ash based on installed capacity and it shall be reported upon to the concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) in the Annexure and shall be inspected by Central Pollution Control Board (CPCB) or State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) from time to time.

(9) Every coal or lignite based thermal power plant (including captive or co-generating stations or both) shall provide real time data on daily basis of availability of ash with Thermal Power Plant (TPP), by providing link to Central Pollution Control Board's web portal or mobile phone App for the benefit of actual user(s).

(10) Statutory obligation of 100 per cent utilisation of ash shall be treated as a change in law, wherever applicable.

B. **For the purpose of utilisation of ash, the subsequent sub-paras shall apply**.—

(1) All agencies (Government, Semi-government and Private) engaged in construction activities such as road laying, road and flyover embankments, shoreline protection structures in coastal districts and dams within 300 kms from the lignite or coal based thermal power plants shall mandatorily utilise ash in these activities:

Provided that it is delivered at the project site free of cost and transportation cost is borne by such coal or lignite based thermal power plants.

Provided further that thermal power plant may charge for ash cost and transportation as per mutually agreed terms, in case thermal power plant is able to dispose the ash through other means and those agencies makes a request for it and the provisions of ash free of cost and free transportation shall be applicable, if thermal power plant serves a notice on the construction agency for the same.

(2) The utilisation of ash in the said activities shall be carried out in accordance with specifications and guidelines laid down by the Bureau of Indian Standards, Indian Road Congress, Central Building Research Institute, Roorkee, Central Road Research Institute, Delhi, Central Public Works Department, State Public Works Departments and other Central and State Government Agencies.

(3) It shall be obligatory on all mines located within 300 kilometres radius of thermal power plant, to undertake backfilling of ash in mine voids or mixing of ash with external Overburden dumps, under Extended Producer Responsibility (EPR). All mine owners or operators (Government, Public and Private Sector) within three hundred kilometres (by road) from coal or lignite based thermal power plants, shall undertake measures to mix at least 25 per cent of ash on weight to weight basis of the materials used for external dump of overburden, backfilling or stowing of mine (running or abandoned as the case may be) as per the guidelines of the Director General of Mines Safety (DGMS):

Provided that such thermal power stations shall facilitate the availability of required quantity of ash by delivering ash free of cost and bearing the cost of transportation or cost or transportation arrangement decided on mutually agreed terms and mixing of ash with overburden in mine voids and dumps shall be applicable for the overburden generated from the date of publication of this notification and the utilisation of ash in the said activities shall be carried out in accordance with guidelines laid down by the Central Pollution Control Board, Director General of Mines Safety and Indian Bureau of Mines.

Explanation.- For the purpose of this sub-paragraph, it is also clarified that the provisions of ash free of cost and free transportation shall be applicable, if thermal power plants serve a notice on the mine owner for the same and the mandate of using 25 per cent of ash for mixing with overburden dump and filling up of mine voids shall not be applicable unless a notice is served on the mine owner by thermal power plant.

(4) (i) All mine owners shall get mine closure plans (progressive and final) to accommodate ash in the mine voids and the concerned authority shall approve mine plans for disposal of ash in mine voids and mixing of ash with overburden dumps. The Ministry of Environment, Forest and Climate Change (MoEFCC) has issued guidelines on 28th August, 2019 regarding exemption of requirement of Environmental Clearance of thermal power plants and coal mines along with the guidelines to be followed for such disposal.

(ii) The Ministry in consultation with Central Pollution Control Board (CPCB), Director General of Mine Safety (DGMS) and Indian Bureau of Mines (IBM) may issue further guidelines time to time to facilitate ash disposal in mine voids and mixing with overburden dumps and it shall be the responsibility of mine owners to get the necessary amendments or modifications in the permissions issued by various regulatory authorities within one year from the date of identification of such mines.

(5) (i) There shall be a committee headed by Chairperson, Central Pollution Control Board (CPCB) with representatives from Ministry of Environment, Forest and Climate Change, Ministry of Power, Ministry of Mines, Ministry of Coal, Director General of Mine Safety and Indian Bureau of Mines for identification of mines for backfilling of mine voids with ash or mixing of ash with overburden dump including examination of safety, feasibility (not economic feasibility) and aspects of environmental contamination and the committee shall get updated quarterly reports prepared regarding identified mines (both underground and opencast) for the stakeholder Ministries or Departments and the committee shall start identifying the suitable mines immediately after the publication of this notification.

(ii) Thermal power plants or mines shall not wait for disposal of ash till the identification is done by the above mentioned committee, to meet the utilisation targets mandated as above.

(6) Filling of low lying areas with ash shall be carried out with prior permission of the State Pollution Control Board or Pollution Control Committee for approved projects, and in accordance with guidelines laid down by Central Pollution Control Board (CPCB) and the State Pollution Control Board or Pollution Control Committee (PCC) shall publish approved sites, location, area and permitted quantity annually on its website.

(7) Central Pollution Control Board after engaging relevant stakeholders, shall put in place the guidelines within one year for all types of activities envisaged under this notification including putting in place time bound online application process for the grant permission by State Pollution Control Boards (SPCBs) or Pollution Control Committees (PCCs).

(8) All building construction projects (Central, State and Local authorities, Govt. undertakings, other Govt. agencies and all private agencies) located within a radius of three hundred kilometres from a coal or lignite based thermal power plant shall use ash bricks, tiles, sintered ash aggregate or other ash based products, provided these are made available at prices not higher than the price of alternative products.

(9) Manufacturing of ash based products and use of ash in such products shall be in accordance with specifications and guidelines laid down by the Bureau of Indian Standards, Indian Road Congress, and Central Pollution Control Board.

C. Environmental compensation for non-compliance.—

(1) In the first two years of a three years cycle, if the coal or lignite based thermal power plant (including captive or co-generating stations or both) has not achieved at least 80 per cent ash (fly ash and bottom ash) utilisation, then such non-compliant thermal power plants shall be imposed with an environmental compensation of Rs. 1000 per ton on unutilised ash during the end of financial year based on the annual reports submitted and if it is unable to utilise 100 per cent of ash in the third year of the three years cycle, it shall be liable to pay an environmental compensation of Rs. 1000 per ton on the unutilised quantity on which environmental compensation has not been imposed earlier:

Provided that the environmental compensation shall be estimated and imposed at the end of last year of the first compliance cycle as per the various utilisation categories as mentioned in sub-paragraph (4) of Para A.

(2) Environmental compensation collected by the authorities shall be deposited in the designated account of Central Pollution Control Board.

(3) In case of legacy ash, if the coal or lignite based thermal power plant (including captive or co-generating stations or both) has not achieved utilisation equivalent to at least 20 per cent (for the first year), 35 per cent (for the second year), 50 per cent (for third to tenth year) of ash generated based on installed capacity, an environmental compensation of Rs. 1000 per ton of unutilised legacy ash during that financial year shall be imposed and if the utilization of legacy ash is not completed at the end of 10 years, an environmental compensation of Rs.1000 per ton shall be imposed on the remaining unutilised quantity which has not been imposed earlier.

(4) It shall be the responsibility of the transporters or vehicle owner to deliver ash to authorised purchaser or user agency and if it is not complied, then an environmental compensation of Rs. 1500 per ton on such quantity as mis-delivered to unauthorised users or non- delivered to authorised users will be imposed besides prosecution of such non-compliant transporters by State Pollution Control Board (SPCB) or Pollution Control Committee (PCC).

(5) It is the responsibility of the purchasers or user agencies to utilise ash in an eco-friendly manner as laid down at para B of this notification and if it is not complied, then an environmental compensation of Rs. 1500 or per ton shall be imposed by State Pollution Control Board (SPCB) or Pollution Control Committee (PCC).

(6) If the user agencies do not utilise ash to the extent obligated under para B or the extent to which they have been intimated through Notice(s) served under sub-paragraph (1) of para D, whichever is lower, they shall be liable to pay Rs. 1500 per ton of ash for the quantity they fall short off:

Provided that the environmental compensation on building constructions shall be levied at Rs.75/- per square feet of built up area of construction.

(7) (i) The environmental compensation collected by Central Pollution Control Board from the thermal power plants and other defaulters shall be used towards the safe disposal of the unutilised ash and the fund may also be utilised for advancing research on use of ash including ash based products.

(ii) The liability of ash utilisation shall be with thermal power plants even after imposition of environmental compensation on unutilised quantities and in case thermal power plant achieves the ash utilisation of any

particular cycle after imposition of environmental compensation in subsequent cycles, the said amount shall be returned to thermal power plant after deducting 10 per cent of the environmental compensation collected on the unutilised quantity during the next cycle and deduction of 20 per cent, 30 per cent, and so on, of the environmental compensation collected is to be made in case of utilisation of ash in subsequent cycles.

D. Procedure for supply of ash or ash based products.—

(1) The owner of thermal power plants or manufacturers of ash bricks or tiles or sintered ash aggregate shall serve written notice to persons or agencies who are liable to utilise ash or ash based products, offering for sale, or transport or both.

(2) Persons or user agencies who have been served notices by owner of thermal power plants or manufacturers of ash bricks or tiles or sintered ash aggregate, if they have already tied up with other agencies for the purpose of utilisation of ash or ash products, shall inform the thermal power plant accordingly, if they cannot use any ash or ash products or use reduced quantity.

E. Enforcement, Monitoring, Audit and Reporting.—

(1) The Central Pollution Control Board (CPCB) and the concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall be the enforcing and monitoring authority for ensuring compliance of the provisions and shall monitor the utilisation of ash on quarterly basis. Central Pollution Control Board shall develop a portal for the purpose within six months of date of publication of the notification. The concerned District Magistrate shall have concurrent jurisdiction for enforcement and monitoring of the provisions of this notification.

(2) (i) Thermal power plants shall upload monthly information regarding ash generation and utilisation by 5th of the next month on the web portal. Annual implementation report (for the period 1st April to 31st March) providing information about the compliance of provisions in this notification shall be submitted by the 30th day of April, every year to the Central Pollution Control Board, concerned State Pollution Control Board or Pollution Control Committee (PCC), Central Electricity Authority (CEA), and concerned Integrated Regional Office of Ministry of Environment, Forest and Climate Change by the coal or lignite based thermal power plants. Central Pollution Control Board and Central Electricity Authority shall compile the annual reports submitted by all the thermal power plants and submit to Ministry of Environment, Forest and Climate Change by 31st May.

(ii) All other user agencies shall submit consumption or utilisation or disposal of ash and use of ash based products as mandated in this notification in the compliance report of Environmental Clearance (EC) issued by Ministry of Environment, Forest and Climate Change or State Level Environment Impact Assessment Authority (SEIAA) or Consent to Operate (CTO) issued by State Pollution Control Board (SPCB) or Pollution Control Committee (PCC), whichever is applicable. The Central Pollution Control Board (CPCB) or State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall publish annual report of ash utilisation of all other agencies except thermal power plants to review the effective implementation of the provisions of the notification.

(3) For the purpose of monitoring the implementation of the provisions of this notification, a committee shall be constituted under the Chairperson, Central Pollution Control Board (CPCB), with members from Ministry of Power, Ministry of Coal, Ministry of Mines, Ministry of Environment, Forest and Climate Change, Ministry Road Transportation and Highways, Department of Heavy Industry as well as any concerned stakeholder(s), to be nominated by the Chairman of the committee. The committee may make recommendations for effective and efficient implementation of the provisions of the notification. The committee shall meet at least once in six months and review annual implementation reports and the committee shall also hold stakeholder consultations for monitoring of ash utilisation as mandated by this notification by inviting relevant stakeholder(s) at least once in six months. The committee shall submit the six monthly report to Ministry of Environment, Forest and Climate Change (MoEFCC).

(4) For the purpose of resolving disputes between thermal power plants and users of ash or manufacturer of ash based products, the State Governments or Union territory administration constitute a Committee within three months from the date of publication of this notification under the Chairman, State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) with representatives from Department of Power, and one representative from the Department which deals with the subject of concerned agency with which dispute is made.

(5) The compliance audit for ash disposal by the thermal power plants and the user agency shall be conducted by auditors, authorised by Central Pollution Control Board (CPCB) and audit report shall be submitted to Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) by 30th November every year. Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall initiate action against non-compliant thermal power plants within fifteen days of receipt of audit report.

[F. No. HSM-9/1/2019-HSM]

NARESH PAL GANGWAR, Jt. Secy.

Annexure

Ash Compliance Report (for the period 1st April-31st March) to be submitted on or before 31st May.

Sl. No.	Details	
1.	Name of Power Plant	
2.	Name of the company	
3.	District	
4.	State	
5.	Postal address for communication:	
6.	E-mail:	
7.	Power Plant installed capacity (MW):	
8.	Plant Load Factor (PLF):	
9.	No. of units generated (MWh):	
10.	Total area under power plant (ha): (including area under ash ponds)	
11.	Quantity of coal consumption during reporting period (Metric Tons per Annum):	
12	Average ash content in percentage (per cent):	
13.	Quantity of current ash generation during reporting period (Metric Tons per Annum): Fly ash (Metric Tons per Annum): Bottom ash (Metric Tons per Annum):	
14.	Capacity of dry fly ash storage silo(s) (Metric Tons) :	
15	Details of utilisation of current ash generated during reporting period (a) Total quantity of current ash utilised (MTPA) during reporting period: (b) Quantity of fly ash utilised (MTPA): (i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels) (ii) Cement manufacturing:	

	(iii) Ready mix concrete: (iv) Ash and Geo-polymer based construction material: (v) Manufacturing of sintered or cold bonded ash aggregate: (vi) Construction of roads, road and fly over embankment: (vii) Construction of dams: (viii) Filling up of low lying area: (ix) Filling of mine voids: (x) Use in overburden dumps: (xi) Agriculture: (xii) Construction of shoreline protection structures in coastal districts; (xiii) Export of ash to other countries: (xiv) Others (please specify): (c) Quantity of bottom ash utilised (MTPA): (i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels): (ii) Cement manufacturing: (iii) Ready mix concrete: (iv) Ash and Geo-polymer based construction material: (v) Manufacturing of sintered or cold bonded ash aggregate: (vi) Construction of roads, road and flyover embankment: (vii) Construction of dams: (viii) Filling up of low lying area: (ix) Filling of mine voids: (x) Use in overburden dumps: (xi) Agriculture: (xii) Construction of shoreline protection structures in coastal districts: (xiii) Export of ash to other countries: (xiv) Others (please specify): Total quantity of current ash unutilised (MTPA) during reporting period:	
16.	Percentage utilisation of current ash generated during reporting period (per cent):	
17.	Details of disposal of ash in ash ponds (a) Total quantity of ash disposed in ash pond(s) (Metric Tons) as on 31st March (excluding reporting period): (b) Quantity of ash disposed in ash pond(s) during reporting period (Metric Tons): (c) Total quantity of water consumption for slurry discharge into ash ponds during reporting period (m^3): (d) Total number of ash ponds: (i) Active: (ii) Exhausted (yet to be reclaimed): (iii) Reclaimed: (e) total area under ash ponds (ha):	
18.	Individual ash pond details *Ash pond-1,2, etc (please provide below mentioned details separately, if number of ash ponds is more than one)* (a) Status: Under construction or Active or Exhausted or	

	Reclaimed (b) Date of start of ash disposal in ash pond (DD/MM/YYYY or MMYYYY): (c) Date of stoppage of ash disposal in ash pond after completing its capacity (DD/MM/YYYY or MM/YYYY): (Not applicable for active ash ponds) (c) area (hectares): (d) dyke height (m): (d) volume (m^3): (e) quantity of ash disposed as on 31st March (Metric Tons): (f) available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons): (g) expected life of ash pond (number of years and months): (e) co-ordinates (Lat and Long): (please specify minimum 4 co-ordinates) (f) type of lining carried in ash pond: HDPE lining or LDPE lining or clay lining or No lining g) mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD) (h) Ratio of ash: water in slurry mix (1:___): (i) Ash water recycling system (AWRS) installed and functioning: Yes or No (j) Quantity of wastewater from ash pond discharged into land or water body (m3): (k) Last date when the dyke stability study was conducted and name of the organisation who conducted the study: (l) Last date when the audit was conducted and name of the organisation who conducted the audit:	
19.	Quantity of legacy ash utilised (MTPA): i. Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels): ii. Cement manufacturing: iii. Ready mix concrete: iv. Ash and Geo-polymer based construction material: v. Manufacturing of sintered or cold bonded ash aggregate: vi. Construction of roads, road and flyover embankment: vii. Construction of dams: viii. Filling up of low lying area: ix. Filling of mine voids: x. Use in overburden dumps: xi. Agriculture: xii. Construction of shoreline protection structures in coastal districts; xiii. Export of ash to other countries: xiv. Others (please specify):	
20.	Summary:	

Details	Quantity generated (MTP)	Quantity utilised (MTP) and (per cent)	Balance quantity (MTP)

	Current ash during reporting period			
	Legacy ash			
	Total			
21.	Any other information: Soft copy of the annual compliance report, and shape files of power plant and ash ponds may be e-mailed to:- moefcc-coalash@gov.in			
22.	Signature of Authorised Signatory			

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असाधारण
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)
PART II—Section 3—Sub-section (ii)

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पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 30 दिसम्बर, 2022

का.आ. 6169(अ).—पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय में भारत सरकार ने पर्यावरण (संरक्षण) नियम, 1986 के नियम (5) के उप-नियम (3) के खंड (घ) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3 की उप-धारा (1) और उप-धारा (2) के खंड (v) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए भारत के राजपत्र, असाधारण, भाग II, खंड 3 उप खंड (ii) का.आ. 5481(अ), तारीख 31 दिसंबर, 2021 द्वारा एक अधिसूचना जारी की थी (जिन्हें इसमें इसके पश्चात इसे राख के उपयोग से संबंधित अधिसूचना कहा गया है);

और, राख के उपयोग से संबंधित अधिसूचना के उपबंधों के कार्यान्वयन के संबंध में विद्युत मंत्रालय, ताप विद्युत संयंत्रों और विभिन्न हितधारकों से अनुरोध प्राप्त हुए हैं;

और, राख के उपयोग से संबंधित अधिसूचना के कार्यान्वयन में सुचारू परिवर्तन लाने हेतु उक्त अधिसूचना के कतिपय उपबंधों में संशोधन लाना उचित है;

अत: अब, केन्द्रीय सरकार पर्यावरण (संरक्षण) नियम, 1986 के नियम (5) के उप-नियम (1), (2) और (4) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3 की उप-धारा (1) और उप-धारा (2) के खंड (v) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, जारी राख के उपयोग संबंधी अधिसूचना में निम्नलिखित संशोधन करती है, अर्थात्:-

जारी राख के उपयोग से संबंधित अधिसूचना में संशोधन –

1. पैरा क में, -

(i) उप पैरा क (4) में, तीसरे परंतुक के पश्चात निम्नलिखित परन्तुक अंतर्विष्ट किया जाएगा, अर्थात् :

''परन्तु, यह भी कि इस अधिसूचना के प्रकाशन की तारीख को अथवा उसके पश्चात् स्थापित नए ताप विद्युत संयंत्र सारणी में यथा विनिर्दिष्ट 60 प्रतिशत से कम ताप विद्युत संयंत्रों के लिए विनिर्दिष्ट अनुपालन चक्र के समान प्रथम अनुपालन चक्र का अनुसरण करेंगे।

टिप्पण : लागू अनुपालन चक्र के अनुसार उपयोग के लक्ष्य 1 अप्रैल, 2022 से प्रभावी होंगे।''

(ii) उप पैरा 5 में, -

(क) आरंभिक पैरा में, "इस अधिसूचना के प्रकाशन की तारीख" शब्दों के स्थान पर "1 अप्रैल, 2022" उक्त अक्षर और शब्द रखे जाएंगे;

(ख) दूसरे परंतुक में, -

(i) ''हरित पट्टी या पौधरोपण'' के पश्चात, "या उप पैरा (6) में यथा विनिर्दिष्ट केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) द्वारा जारी मार्गदर्शी सिद्धांतों के अनुसार सौर ऊर्जा संभव या पवन ऊर्जा संयंत्र" शब्द कोष्ठकों और अक्षरों को अंत:स्थापित किए जाएंगे;

(ii) ''केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीब) या" शब्द कोष्ठक और अक्षर हटा दिया जाएंगे।

(iii) "एक वर्ष" शब्दों के स्थान पर "तीन वर्ष" शब्दों को रखा जाएगा।

(iv) "इस अधिसूचना के प्रकाशन की तारीख" शब्दों के स्थान पर "1 अप्रैल, 2022" उक्त अक्षर और शब्द रखे जाएंगे;

(ग) दूसरे परंतुक के पश्चात निम्नलिखित उपलब्ध अंत:स्थापित किया जाएगा, अर्थात् :

"परंतु कि पैरा क (6) में यथाविनिर्दिष्ट राख के अस्थायी भंडारण हेतु अभिहीत किए गए संचालित राख कुंड या डाइक के सिवाय सभी राख कुंडों या डाइक में संग्रहीत राख में पुरानी राख एकत्रित होगी और या तो इसे पुनःप्राप्त या स्थिर या उपयोग करना होगा।"

(iii) उप पैरा (6) के स्थान, उप पैरा रखा जाएगा, अर्थात्:

"(6) किसी भी नए और साथ ही चालू थर्मल पावर प्लांट को 0.1 हेक्टेयर प्रति मेगा वाट (मेगावाट) के क्षेत्र में राख के अस्थायी भंडारण के लिए परिचालन राख तालाब या डाइक की अनुमति दी जा सकती है। केन्द्रीय विद्युत प्राधिकरण के परामर्श से बनाए गए केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) के दिशा-निर्देशों के अनुसार परिचालन के साथ-साथ स्थिर और पुन: दावा किए गए राख तालाबों या बांधों की तकनीकी विशिष्टताओं के अनुसार होंगे और ये दिशानिर्देश वार्षिक प्रमाणन के लिए एक प्रक्रिया भी निर्धारित करेंगे। परिचालन के साथ-साथ राख तालाब या डाइक को उसकी सुरक्षा, पर्यावरण प्रदूषण, उपलब्ध मात्रा, निपटान के तरीके, पानी की खपत या निपटान में संरक्षण, राख जल पुनर्चक्रण और हरित पट्टी, आदि पर परिचालन के साथ-साथ स्थिर और पुन: प्राप्त किया जाएगा और इस अधिसूचना के प्रकाशन की तारीख से तीन महीने भीतर रखा जाएगा :

परंतु कि 31 दिसंबर, 2021 से पहले चालू किए गए ताप विद्युत संयंत्रों के लिए 1600 मेगावाट से कम या उसके बराबर स्थापित क्षमता वाले दो परिचालन राख तालाबों या डाइकों तक और 1600 से अधिक स्थापित क्षमता वाले ताप विद्युत संयंत्रों के लिए चार परिचालन राख तालाबों या बांधों तक MW, मौजूदा राख तालाबों या बांधों से निर्दिष्ट क्षेत्र के भीतर कई लैगून होने पर, निर्देशांक के साथ स्पष्ट सीमांकन के साथ नामित किया जा सकता है, और केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) और संबंधित राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी)/प्रदूषण को सूचित करेगा। नियंत्रण समिति (पीसीसी) 31 मार्च, 2023 तक :

परंतु आगे कि नए थर्मल पावर प्लांट या मौजूदा थर्मल पावर प्लांट के विस्तार के मामले में केवल एक ऐश पोंड या डाइक की अनुमति दी जाएगी 31 दिसंबर, 2021 को या उसके बाद, जो केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) और संबंधित राज्य प्रदूषण नियंत्रण बोर्ड (एसपीसीबी)/प्रदूषण नियंत्रण समिति (पीसीसी) को कमीशन की तारीख से 3 महीने के भीतर निर्देशांक के साथ सीमांकन के विवरण की सूचना देगा। थर्मल पावर प्लांट या 31 मार्च, 2023 तक, जो भी बाद में हो :

परंतु यह और कि कोयला और लिग्नाइट आधारित तापीय विद्युत संयंत्रों को आगे किसी भी नए कार्यशील राख कुंड या डाइक को स्थापित करने या नाम निर्दिष्ट करने की अनुमति नहीं दी जाएगी।

परंतु यह और कि कार्यशील राख कुंड या डाइक की 0.1 हे./मेगावॉट (एमडब्ल्यू) का विनिर्देशन तारीख 3 नवम्बर, 2009 से पूर्व चालू तापीय विद्ययुत संयंत्रों पर लागू नहीं होंगे।"

2. पैरा ख में, -

(i) उप पैरा (1) में, "300 कि.मी. के भीतर" शब्दों कोष्ठकों और आंकड़ों के स्थान पर "300 कि.मी. के रेडियस के भीतर" शब्द कोष्ठक और आंकड़े रखें जाएंगे।

(ii) उप पैरा (8) में, उच्चतर "वैकल्पिक उत्पादों के मूल्य से अधिक" शब्दों के स्थान पर "केन्द्रीय लोक कार्य विभाग (सीपीडब्ल्यूडी) या संबंधित लोक कार्य विभाग (पीडब्ल्यूडी) द्वारा विनिर्दिष्ट दरों की अनुसूची में उल्लिखित मूल्य या दरों की अनुसूची के अधीन निर्धारित न होने परल वैकल्पिक उत्पादों का मूल्य" शब्द रखे जाएंगे।

3. पैरा घ में, -

(i) उप पैरा (2) के स्थान, उप पैरा रखा जाएगा, अर्थात्:

''(2) जिन व्यक्तियों या उपयोगकर्ता या एजेंसियों को थर्मल पावर प्लांट के मालिक द्वारा नोटिस दिया गया है, अगर वे राख के उपयोग के उद्देश्य से पहले से ही अन्य एजेंसियों के साथ करार कर चुके हैं तो थर्मल पावर प्लांट को तदनुसार सूचित करेंगे और यदि वे उपयोग नहीं कर सकते हैं कोई राख या कम मात्रा का उपयोग कर सकता है।''

(ii) उप-पैरा (2) के पश्चात्, निम्नलिखित उप-पैरा अंत:स्थापित किया जाएगा, अर्थात्:

"(3) जिन व्यक्तियों या उपभोकता अभिकरणों को, यदि वे राख आधारित उत्पादों के उपयोग के उद्देश्य से अन्य अभिकरणों के साथ पहले से जुड़े हुए हैं, ऐश ब्रिक्स या टाइल्स या सिंटर्ड ऐश ऐग्रीगेट या अन्य राख आधारित उत्पादों के विनिर्माताओं के द्वारा नोटिस दिया गया है तो उन्हें ऐश ब्रिक्स या आइल्स या सिंटर्ड ऐश ऐग्रीगेट या अन्य राख आधारित उतपादों के विनिर्माताओं को सूचित करना होगा, तद्नुसार, यदि वे राख आधारित उत्पादों का उपयोग नहीं कर सकते या कम प्रमात्रा में उपयोग कर सकते हैं।"

2. यह अधिसूचना राजपत्र में प्रकाशन की तारीख से प्रवृत होगी।

[फा. सं. एचएसएम - 9/1/2019- एचएसएम]

नरेश पाल गंगवार, अपर सचिव

टिप्पण : मूल अधिसूचना भारत के राजपत्र, असाधारण, भाग-II, खंड 3, उप-खंड (ii) सं. एस 5481(अ) तारीख 31 दिसम्बर, 2021 के द्वारा में प्रकाशित की गई।

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 30th December, 2022

S.O. 6169(E).—Whereas, the Government of India, Ministry of Environment, Forest and Climate Change, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule (5) of the Environment (Protection) Rules, 1986, issued a notification published in the Gazette of India, Extraordinary, Part II, Section 3, sub-section (ii) *vide* S.O.5481(E), dated the 31st December, 2021 (herein after referred to as the ash utilisation notification);

And whereas, requests have been received from Ministry of Power, thermal power plants and various stakeholders regarding implementation of provisions of the ash utilisation notification;

And whereas, it is expedient to make amendments to certain provisions of the said notification to have smooth transitioning in implementation of the ash utilisation notification;

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with of sub-rule (1), (2) and (4) of rule (5) of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following amendments in the ash utilisation notification namely:-

In the ash utilisation notification,-

(1) in paragraph A,-

(i) in sub-paragraph (4), after the third proviso, the following shall be inserted, namely,-

"Provided also that new thermal power plants commissioned on or after the date of publication of this notification shall follow the first compliance cycle similar to the compliance cycle specified for thermal power plants having utilisation per cent. less than 60 per cent. as specified in the table.

Note: The utilisation targets as per the applicable compliance cycle shall commence from 1st April, 2022.".

(ii) in sub- paragraph (5),-

(a) in the opening paragraph, for the words "the date of publication of this notification", the figures, letters and word "1st April, 2022" shall be substituted;

(b) in the second proviso, -

(i) after the words "green belt or plantation", the words, brackets, letters and figure "or solar power plant or wind power plant as per the guidelines issued by the Central Pollution Control Board (CPCB) as specified in sub-para (6)" shall be inserted,

(ii) the words, brackets and letters "Central Pollution Control Board (CPCB) or" shall be deleted,

(iii) for the words "a year", the words "three years" shall be substituted,

(iv) for the words "the date of publication of this notification", the figures, letters and word "1st April, 2022" shall be substituted.

(c) after the second proviso, the following proviso shall be inserted, namely:

"Provided that ash stored in all ash ponds or dykes other than operational ash pond or dyke designated for temporary storage of ash as specified in sub-para (6) shall constitute the legacy ash and either to be reclaimed or stabilised or utilised.".

(iii) for sub- paragraph (6), the following sub-para shall be substituted, namely,-

"(6) Any new as well as operational thermal power plant may be permitted operational ash pond or dyke for temporary storage of ash within an area of 0.1 hectare per Mega Watt (MW). Technical specifications of operational as well as stabilised and reclaimed ash ponds or dykes shall be as per the guidelines of the Central Pollution Control Board (CPCB) made in consultation with the Central Electricity Authority (CEA) and these guidelines shall also lay down a procedure for annual certification of the operational as well as stabilised and reclaimed ash pond or dyke on its safety, environment pollution, available volume, mode of disposal, water consumption or conservation in disposal, ash water recycling and green belt, etc. and shall be put in place within three months from the date of publication of this notification:

Provided that up to two operational ash ponds or dykes for thermal power plants commissioned before 31st December, 2021, having installed capacity less than or equal to 1600 MW, and up to four operational ash ponds or dykes for thermal power plants having installed capacity more than 1600 MW, having multiple lagoons, within the specified area from the existing ash ponds or dykes, may be designated with clear demarcation along with coordinates, and shall inform to Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) by 31st March, 2023:

Provided further that one ash pond or dyke shall be permitted in case of new thermal power plants or expansion of existing thermal power plants commissioned on or after 31st December, 2021, which shall inform the details of demarcation along with coordinates to Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) within 3 months from the date of commissioning of thermal power plant or by 31st March, 2023, whichever is later:

Provided also that coal and lignite based thermal power plants shall not be allowed to further establish or designate any new operational ash pond or dyke:

Provided also that specification of 0.1 hectare per Mega Watt (MW) of an operational ash pond or dyke shall not be applicable for the thermal power plants commissioned before 03rd November, 2009.".

(2) in paragraph B,-

(i) in sub- paragraph (1), for the words, figures and letters "within 300 kms", the words, figures and letters "within a radius of 300 kms" shall be substituted,

(ii) in sub- paragraph (8), for the words "higher than the price of alternative products", the words, brackets and letters "more than the price mentioned in the Schedule of Rates as specified by Central Public Works Department (CPWD) or concerned Public Works Department (PWD) or price of alternative products, if not mentioned in the Schedule of Rates." shall be substituted.

(3) in paragraph -D, -

(i) for sub- paragraph (2), the following sub- paragraph shall be substituted, namely,-

"(2) Persons or user agencies who have been served notice by owner of thermal power plants, if they have already tied up with other agencies for the purpose of utilisation of ash, shall inform the thermal power plant accordingly, and if they cannot use any ash or may use reduced quantity.".

(ii) after sub- paragraph (2), the following sub-para shall be inserted, namely,-

"(3) Persons or user agencies who have been served notice by manufacturers of ash bricks or tiles or sintered ash aggregate or other ash based products, if they have already tied up with other agencies for the purpose of utilisation of ash based products, shall inform the manufacturer of ash bricks or tiles or sintered ash aggregate or other ash based products, accordingly, and if they cannot use ash based products, or may use reduced quantity.".

2. This notification shall come into force on the date of its publication in the Official Gazette.

[F. No. HSM-9/1/2019-HSM]

NARESH PAL GANGWAR, Addl. Secy.

Note : The principal notification was published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (ii), dated the 31st December, 2021, *vide* number S.O.5481 (E), dated the 31st December, 2021.

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असाधारण
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)
PART II—Section 3—Sub-section (ii)

प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

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पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 1 जनवरी, 2024

का.आ. 05(अ).—केन्द्रीय सरकार ने पर्यावरण (संरक्षण) नियम, 1986 के नियम (5) के उप-नियम (3) के खंड (घ) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3 की उपधारा (1) और उपधारा (2) के खंड (v) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, भारत के राजपत्र, असाधारण भाग II, खंड 3, उप-खंड (ii) में प्रकाशित *संख्या का. आ.* 5481(अ), दिनांक 31 दिसंबर, 2021 द्वारा एक अधिसूचना जारी की गई थी;

और, उक्त अधिसूचना के उपबंधों के कार्यान्वयन के संबंध में विद्युत मंत्रालय और अन्य हितधारकों से अनुरोध प्राप्त हुए हैं;

और, पर्यावरण-अनुकूल उद्देश्यों के लिए राख के उपयोग को बढ़ावा देने के लिए उक्त अधिसूचना के कुछ उपबंधों में संशोधन करना समीचीन है, जिसमें राख-आधारित उत्पाद निर्माण में लगे सूक्ष्म और लघु उद्यमों द्वारा निर्मित राख-आधारित उत्पादों में राख का उपयोग सम्मिलित है;

अत: अब, पर्यावरण (संरक्षण) नियम, 1986 के नियम (5) के उप-नियम (1), उप-नियम (2) और उप-नियम (4) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3 की उपधारा (1) और उपधारा (2) के खंड (v) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, केन्द्रीय सरकार राख के उपयोग से संबंधित अधिसूचना में निम्नलिखित संशोधन करती है, अर्थात्: -

राख के उपयोग से संबंधित अधिसूचना के,-

(1) पैरा ख में,-

(i) उप-पैरा (1) में, दोनों परंतुकों के स्थान पर, निम्नलिखित परंतुक रखा जाएगा, अर्थात्: -

"परंतु कोयला या लिग्नाइट आधारित थर्मल पावर प्लांट ने ऐसी एजेंसियों को राख उपलब्ध कराने के लिए नोटिस दिया हो, जिसके लिए राख और परिवहन की लागत कोयला या लिग्नाइट आधारित थर्मल पावर प्लांट द्वारा वहन की जाएगी।"

(ii) उप-पैरा (8) में, निम्नलिखित को रखा जाएगा, अर्थात्:

"कोयला या लिग्नाइट आधारित थर्मल पावर प्लांट से 300 किलोमीटर के दायरे में स्थित सभी भवन निर्माण परियोजनाएं (केंद्रीय, राज्य और स्थानीय प्राधिकरण, सरकारी उपक्रम, अन्य सरकारी एजेंसियां और सभी निजी एजेंसियां) राख की ईंटों, टाइल्स, सिंटर्ड राख समुच्चय या अन्य राख आधारित उत्पाद का उपयोग करेंगी, परन्तु इन्हें केंद्रीय लोक निर्माण विभाग (सीपीडब्ल्यूडी) या संबंधित राज्य के लोक निर्माण विभाग (पीडब्ल्यूडी) द्वारा निर्दिष्ट दरों की अनुसूची में उल्लिखित कीमत से अनधिक कीमत पर उपलब्ध कराया जाएगा या दरों की अनुसूची के आधीन निर्धारित न होने पर वैकल्पिक उत्पादों के मूल्य पर उपलब्ध कराया जाएगा.

परंतु केंद्रीय लोक निर्माण विभाग और संबंधित राज्य के लोक निर्माण विभाग 01 जनवरी, 2024 से छह महीने के भीतर निर्दिष्ट दरों की अनुसूची प्रकाशित करेंगे।"

(iii) उप-पैरा (9) के पश्चात, निम्नलिखित उप-पैरा अंत:स्थापित किया जाएगा, अर्थात्:

"(10) सभी स्थानीय प्राधिकरण राख और राख-आधारित उत्पादों अर्थात् इमारतों, सड़कों, तटबंधों या किसी अन्य संबंधित निर्माण गतिविधि के निर्माण में ईंटें, ब्लॉक, टाइलें, सिंटर्ड या कोल्ड बॉन्डेड राख समुच्चय, फाइबर सीमेंट शीट, पाइप, बोर्ड, पैनल के उपयोग के लिए अपने संबंधित भवन उपनियमों और अन्य सुसंगत विनियमों में उपबंध करेंगे।"

(2) पैरा घ में,-

(i) पैरा (1) के स्थान पर, निम्नलिखित को रखा जाएगा, अर्थात्:

"(1) ताप विद्युत संयंत्रों के मालिक उन व्यक्तियों या एजेंसियों को, जिन्हें पैरा ख के उप-पैरा (1) और (3) के अधीन राख का उपयोग करने की आवश्यकता है, परिवहन की लागत को वहन करते हुए राख की मुफ्त आपूर्ति करने के लिए संबंधित राज्य प्रदूषण नियंत्रण बोर्ड को एक प्रति के साथ एक लिखित नोटिस देंगे।

(1क) राख की ईंटों या टाइलों या सिंटर्ड राख समुच्चय या अन्य राख-आधारित उत्पादों के निर्माता उन व्यक्तियों या एजेंसियों को जिन्हें पेशकश के लिए पैरा ख के उप- पैरा (8) के अधीन राख-आधारित उत्पादों का उपयोग करना आवश्यक है, ऐसे उत्पादों की बिक्री के लिए एक लिखित नोटिस देने सहित संबंधित राज्य प्रदूषण नियंत्रण बोर्ड को उसकी एक प्रति देंगें।"

(ii) उप-पैरा (3) के पश्चात, निम्नलिखित उप-पैरा अंत:स्थापित किए जाएंगे, अर्थात्:

"(4) कोयला या लिग्नाइट आधारित थर्मल पावर प्लांट इस अधिसूचना के अधीन राख का उपयोग करते समय, राख का एक निश्चित प्रतिशत राख आधारित उत्पादों अर्थात् ईंटों, ब्लॉकों, टाइलों, सिंटर्ड या कोल्ड बॉन्डेड राख समुच्चय, फाइबर सीमेंट शीट, पाइप, बोर्ड, पैनल के निर्माण में लगे सभी सूक्ष्म और लघु उद्यमों को केंद्र सरकार के विद्युत मंत्रालय द्वारा जारी दिशानिर्देशों के अनुसार रियायती मूल्य पर या सीमित नीलामी के माध्यम से आपूर्ति के लिए आरक्षित रखेंगे।"

[फा. सं. 09/01/2019-एचएसएमडी]

नरेश पाल गंगवार, अपर सचिव

टिप्पण: मूल अधिसूचना भारत के राजपत्र, असाधारण, भाग II, खंड 3, उप-खंड (ii) में संख्या का.आ. 5481 (अ), दिनांक 31 दिसंबर, 2021 द्वारा प्रकाशित की गई थी और संख्या का.आ. 6169 (अ) दिनांक 30 दिसम्बर, 2022 द्वारा अंतिम संशोधन किया गया था।

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 1st January, 2024

S.O. 05(E).—Whereas, the Central Government in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule (5) of the Environment (Protection) Rules, 1986, issued a notification published in the Gazette of India, Extraordinary, Part II, Section 3, sub-section (ii) *vide* number S.O.5481(E), dated the 31st December, 2021;

AND WHEREAS, requests have been received from Ministry of Power and other stakeholders regarding implementation of provisions of the said notification;

AND WHEREAS, it is expedient to amend certain provisions of the said notification to promote use of ash for eco-friendly purposes, including use of ash in ash-based products manufactured by micro and small enterprises engaged in ash-based product manufacturing;

NOW, THEREFORE, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with of sub-rule (1), (2) and (4) of rule (5) of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following amendments in the ash utilisation notification, namely:-

In the ash utilisation notification,-

(1) In paragraph B,-

(i) in sub-paragraph (1), for both the provisos, the following proviso shall be substituted, namely: -

"Provided that the coal or lignite based thermal power plant has given a notice to such agencies for making available ash to such agencies for which cost of ash and transportation shall be borne by the coal or lignite based thermal power plant."

(ii) in sub-paragraph (8), the following shall be substituted, namely:

"All building construction projects (Central, State and Local authorities, Govt. undertakings, other Govt. agencies and all private agencies) located within a radius of 300 kms from a coal or lignite based thermal power plant shall use ash bricks, tiles, sintered ash aggregate or other ash based products, provided these are made available at prices not more than the price mentioned in the Schedule of Rates as specified by the Central Public Works Department (CPWD) or Public Works Department (PWD) of the State concerned or price of alternative products, if not mentioned in the Schedule of Rates.

That the Central Public Works Department and Public Works Department of the State concerned shall publish the Schedule of Rates specified within six months from the 1st January, 2024."

(iii) after sub-paragraph (9), the following sub-paragraph shall be inserted, namely:

"(10) All local authorities shall make provisions in their respective building bye-laws and other relevant regulations for the use of ash and ash-based products, such as bricks, blocks, tiles, sintered or cold bonded ash aggregates, fibre cement sheets, pipes, boards, panels in construction of buildings, roads, embankments or for any other related construction activity."

(2) In paragraph D,-

(i) for paragraph (1), the following shall be substituted, namely:

"(1) The owner of thermal power plants shall give a written notice to persons or agencies who are required to utilise ash under sub-paragraph (1) & (3) of paragraph B for offering the supply of ash free of cost and bearing cost of transportation, with a copy to concerned State Pollution Control Board.

(1A) The manufacturers of ash bricks or tiles or sintered ash aggregate or other ash-based products shall give a written notice to persons or agencies who are required to utilise ash-based products under sub-paragraph (8) of paragraph B for offering for sale of such products with a copy to concerned State Pollution Control Board."

(ii) after sub-paragraph (3), the following sub-paragraphs shall be inserted, namely:

"(4) The coal or lignite based thermal power plants, while utilising ash under this notification shall reserve certain percentage of ash for supply to all micro and small enterprises engaged in ash-based product manufacturing namely, bricks, blocks, tiles, sintered or cold bonded ash aggregates, fibre

cement sheets, pipes, boards, panels for sale at concessional price or through limited auction in accordance with the guidelines issued by the Central Government in the Ministry of Power."

[F. No. 09/01/2019-HSMD]

NARESH PAL GANGWAR, Addl. Secy.

Note : The principal notification was published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (ii), *vide* number S.O.5481 (E), dated the 31st December, 2021 and last amended, *vide* number S.O. 6169 (E) dated the 30th December, 2022.

Uploaded by Dte. of Printing at Government of India Press, Ring Road, Mayapuri, New Delhi-110064
and Published by the Controller of Publications, Delhi-110054.

ANNEXURE III

SERVICE ORDER

JSW Energy (Barmer) Limited
Village - Bhadresh

Barmer-344001
Barmer-Rajasthan (India)
Tel No: +91-2982-229100
Fax No: +91- 2982-229222
CIN No: U31102MH1996PLC185098

Vendor Code	:	0020067267
Name	:	NATIONAL INSTITUTE OF TECHNOLOGY DELHI
Address	:	INSTITUTIONAL AREA, IAMR CAMPUS, NARELA DELHI-110040-Delhi
Ph.No	:	01133861065
E-mail	:	KAPILKUMAR@NITDELHI.AC.IN
PAN NO	:	AABAN5913H
Vendor GST	:	07AABAN5913H2ZN

P.O.No.:RWPL-ENGY/2025-26/1630003994
P.O.Date:11.10.2025
Type:ESRD/K/ECH/4401001051
Service type:NBC
Buyer Name:Jitendra Choudhary
Buyer Email:jitendra.choudhary@jsw.in
PR.No/Date:7200011100/27.09.2025

Dear Sir/Madam,

We are pleased to place order against your Ref. Quote No. Dated: & Subsequent Negotiation , as per below mentioned Price, terms & conditions.

ALL THE PRICES MENTIONED BELOW ARE IN INR

SR. NO.	SERVICE SHORT DESCRIPTION	UOM	QTY.	TOTAL VALUE	COMPLETION DATE
1	Annual Ash Audit & Pond Satability study	AU	[redacted]		31.12.2025

The above work contains following Services:

SR.NO.	SERVICE CODE SERVICE DESCRIPTION	QTY.	UoM	UNIT PRICE	TOTAL BASIC VALUE
1.1	00SCR8010150800413 PRVD:CONSLTNCY SERVS;ENVIRONMENTAL CLC SAC Code:	1.000	EA	[redacted]	

D/ T/C: I/P 18% GST_ND - 45000.00

2	Annual Ash Audit & Pond Satability study	AU	[redacted]		31.12.2025

The above work contains following Services:

SR.NO.	SERVICE CODE SERVICE DESCRIPTION	QTY.	UoM	UNIT PRICE	TOTAL BASIC VALUE
2.1	00SFI8411150500117 PAY:FEES;OUT OF POCKET EXPENSES,VENDOR SAC Code:	1.000	EA	[redacted]	

D/ T/C:

Total Duties/Taxes & Charges: I/P 18% GST_ND - 45000.00

UOM Description :
AU - Activity unit , EA - each ,

Total PO Basic Value: [redacted]

Total PO Value (In Figures): [redacted]

PRICE BASIS:FOR JSW Energy Barmer Site

Contract Period
Start Date:15.10.2025 to End Date :31.12.2025

Delivery Address:
Main Store,
JSW Energy (Barmer) Limited
Village - Bhadresh

Barmer-344001
Barmer-Rajasthan (India)

ANNEXURE IV(a)

Outlook

JSWE(B)L_ Submission of Ash Compliance Report for FY 2024-25

From Chandan Deora <chandan.deora@jsw.in>
Date Wed 4/30/2025 2:49 PM
To Power, CPCB <power.cpcb@gov.in>
Cc maheshduttpurohit@gmail.com <maheshduttpurohit@gmail.com>; pet coke <petcoke.rpcb@gmail.com>; RO RSPCB Balotara <ro.balotara@gmail.com>; ceet-cea@gov.in <ceet-cea@gov.in>; Vijay Chintala <vijay.chintala@jsw.in>; Sharad Chandra Totla <sharad.totla@jsw.in>; Energy Barmer Operation Support <energy.barmeroperationsupport@jsw.in>

2 attachments (1 MB)
003_Ash Compliance Report FY_2024-25.pdf; 003A_Addendum to Annual Implementation Report (ACR) format FY-2024-25.pdf;

Dear Sir,

Please find the enclosed Ash Compliance Report along with addendum sheet for the FY 2024-25 in prescribed format for JSW Energy (Barmer) Ltd, Plant at Bhadresh.

...
With Regards

Chandan Deora
JSW Energy- Barmer

Energy (Barmer) Limited
Village & Post : Bhadresh, Post Box No. 30,
Distt : Barmer – 344001 (Rajasthan)
Phone : +91 2982 229100
Fax : +91 2982 229222
Website : www.jsw.in

Ref: JSWE(B)L/ENV/25-26/003

Dated: 29.04.2025

To,
Mr. Nazimuddin,
Divisional Head- IPC-II,
Central Pollution Control Board
East Arjun Nagar, Shahadara,
Delhi-110032

Sub: Submission of Ash Compliance Report for the period of 1st April-2024 to 31st March-2025 of 1080 MW Lignite based Power Plant at Village-Bhadresh, District Barmer.

Ref: - 1. MoEF&CC Notification S.O. 5481(E) dated 31.12.2021
2. MoEF&CC Notification S.O. 6169(E) dated 30.12.2022

Dear Sir,

This is with reference to above subject matter, please find the enclosed Annexure of the Ash compliance report in prescribed format for the period of April-2024 to March-2025.

Thanking you.

For JSW Energy (BARMER) Ltd

(S. C. TOTLA)

(Environment & Chemistry)

Enclosure:

- Ash Compliance Report in Prescribed format.

C.C.

The Integrated Regional Officer – MoEF&CC, Jaipur.
The Member Secretary – RSPCB, Jaipur.
The Regional Officer – RSPCB, Balotra.

Annexure

Ash Compliance Report (for the period 1st April-31st March) to be submitted on or before 31st May.

Sl. No.	Details	
1.	Name of Power Plant	JSW Energy (Barmer) Limited
2.	Name of the company	JSW Energy Limited
3.	District	Barmer
4.	State	Rajasthan
5.	Postal address for communication:	JSW Energy (Barmer) Limited. Village- Bhadresh, Tehsil- Barmer. Dist.- Barmer-344 001
6.	E-mail:	energy.barmeroperationsupport@jsw.in
7.	Power Plant installed capacity (MW):	1080
8.	Plant Load Factor (PLF):	71.46 %
9.	No. of units generated (MWh):	6760572
10.	Total area under power plant (ha): (including area under ash ponds)	468
11.	Quantity of coal consumption during reporting period (Metric Tons per Annum):	5907438
12	Average ash content in percentage (per cent):	13.671244 (Avg Ash content Lignite & Lime)
13.	Quantity of current ash generation during reporting period (Metric Tons per Annum): Fly ash (Metric Tons per Annum): Bottom ash (Metric Tons per Annum):	807620 605715 201905
14.	Capacity of dry fly ash storage silo(s) (Metric Tons):	12000
15	Details of utilization of current ash generated during reporting period (a) Total quantity of current ash utilized (MTPA) during reporting period: (b) Quantity of fly ash utilized (MTPA): (i) Fly ash-based products (bricks or blocks or tiles or fiber cement sheets or pipes or boards or panels) (ii) Cement manufacturing:	 836817 230331 397282

	(iii) Ready mix concrete:	-
	(iv) Ash and Geo-polymer-based construction material:	-
	(v) Manufacturing of sintered or cold bonded ash aggregate:	-
	(vi) Construction of roads, road and fly over embankment:	-
	(vii) Construction of dams:	-
	(viii) Filling up of low-lying area:	-
	(ix) Filling of mine voids:	-
	(x) Use in overburden dumps:	-
	(xi) Agriculture:	-
	(xii) Construction of shoreline protection structures in coastal districts;	-
	(xiii) Export of ash to other countries:	
	(xiv) Others (please specify):	
	(c) Quantity of bottom ash utilized (MTPA):	
	(i) Fly ash- based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels):	76776
	(ii) Cement manufacturing:	132428
	(iii) Ready mix concrete:	-
	(iv) Ash and Geo-polymer-based construction material:	-
	(v) Manufacturing of sintered or cold bonded ash aggregate:	-
	(vi) Construction of roads, road and flyover embankment:	-
	(vii) Construction of dams:	-
	(viii) Filling up of low lying area:	-
	(ix) Filling of mine voids:	-
	(x) Use in overburden dumps:	-
	(xi) Agriculture:	-
	(xii) Construction of shoreline protection structures in coastal districts:	-
	(xiii) Export of ash to other countries:	
	(xiv) Others (please specify):	0
	Total quantity of current ash un-utilised (MTPA) during reporting period:	0
16.	Percentage utilization of current ash generated during reporting period (per cent):	104.03 %
17.	Details of disposal of ash in ash ponds	
	Total quantity of ash disposed in ash pond(s) (Metric Tons) as on 31st March (excluding reporting period):	151560
	Quantity of ash disposed in ash pond(s) during reporting period (Metric Tons):	0
	Total quantity of water consumption for slurry discharge into ash ponds during reporting period (m3):	0
	Total number of ash ponds:	1
	Active:	1
	Exhausted (yet to be reclaimed):	0
	Reclaimed:	0
	total area under ash ponds (ha):	20
18.	Individual ash pond details *Ash pond-1,2, etc (please provide below mentioned details separately, if number of ash ponds is more than one)* (a) Status: Under construction or Active or Exhausted or	Active (Single ash pond)

	Reclaimed	
	(b). Date of start of ash disposal in ash pond (DD/MM/YYYY or MMYYYY):	11/2009
	(c). Date of stoppage of ash disposal in ash pond after completing its capacity (DD/MM/YYYY or MM/YYYY): (Not applicable for active ash ponds)	-
	(c). area (hectares):	20
	(d). dyke height (m):	9 m
	(d). volume (m3):	18 Lac m3
	(e). quantity of ash disposed as on 31st March (Metric Tons):	119003 MT
	(f). available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons):	93.38 % and 1680997 MT
	(g). expected life of ash pond (number of years and months):	30 years
	co-ordinates (Lat and Long): (please specify minimum 4 co-ordinates)	25°53'24.51"N 71°19'44.89"E 25°53'25.47"N 71°20'2.82"E 25°53'12.23"N 71°20'3.62"E 25°53'11.52"N 71°19'45.68"E
	(f). type of lining carried in ash pond: HDPE lining or LDPE lining or clay lining or No lining	HDPE
	(g). mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)	Dry Ash
	(h). Ratio of ash: water in slurry mix (1: _):	-
	(i). Ash water recycling system (AWRS) installed and functioning: Yes, or No	-
	(j). Quantity of wastewater from ash pond discharged into land or water body (m3):	-
	(k). Last date when the dyke stability study was conducted and name of the organization who conducted the study:	-

19.	Quantity of legacy ash utilized (MTPA):	
	i. Fly ash-based products (bricks or blocks or tiles or fiber cement sheets or pipes or boards or panels):	3360
	ii. Cement manufacturing:	-
	iii. Ready mix concrete:	
	iv. Ash and Geo-polymer-based construction material:	-
	v. Manufacturing of sintered or cold bonded ash aggregate:	-
	vi. Construction of roads, road and flyover embankment:	-
	vii. Construction of dams:	
	viii. Filling up of low-lying area:	-
	ix. Filling of mine voids:	-
	x. Use in overburden dumps:	-
	xi. Agriculture:	-
	xii. Construction of shoreline protection structures in coastal districts;	-
	xiii. Export of ash to other countries:	-
	xiv. Others (please specify):	-

20. Summary:

Detail	Quantity generated (MTP)	Quantity utilized (MTP) and (per cent)	Balance quantity (MTP)
Current ash during reporting period	807620	836817 103.61 %	0
Legacy ash	-	3360	119003
Total	807620	840177 104.03 %	119003

21.	Any other information: Soft copy of the annual compliance report, and shape files of power plant and ash ponds may be e-mailed to:- MoEFCC-coalash@gov.in	
22.	Signature of Authorized Signatory	

ANNEXURE IV(b)

Outlook

MOeF Half Yearly Compliance report Apr-2024 to Sep-2024.

From Chandan Deora <chandan.deora@jsw.in>
Date Sat 12/7/2024 3:39 PM
To maheshduttpurohit@gmail.com <maheshduttpurohit@gmail.com>
Cc pet coke <petcoke.rpcb@gmail.com>; RO RSPCB Balotara <ro.balotara@gmail.com>; Vijay Chintala <vijay.chintala@jsw.in>; Sharad Chandra Totla <sharad.totla@jsw.in>

1 attachment (2 MB)
024_MOEF_Half Yearly_EC_Compliance_ Apr'24- Sep'2024..pdf;

Dear Sir,

Please find enclosed herewith MOeF Half Yearly Compliance Report for the period of April-2024 to September-2024 with reference to EC issued for JSW Energy (Barmer) Ltd - Bhadresh.

With Regards

Chandan Deora
JSW Energy- Barmer

ANNEXURE IV(c)

Outlook

MOeF Half Yearly Compliance report Oct-2024 to Mar-2025.

From Chandan Deora <chandan.deora@jsw.in>
Date Tue 6/17/2025 6:16 PM
To maheshduttpurohit@gmail.com <maheshduttpurohit@gmail.com>
Cc pet coke <petcoke.rpcb@gmail.com>; RO RSPCB Balotara <ro.balotara@gmail.com>; Vijay Chintala <vijay.chintala@jsw.in>; Sharad Totla <sharad.totla@jsw.in>

1 attachment (2 MB)
010_MOEF_Half Yearly_EC_Compliance_ Oct'24- Mar'2025.pdf;

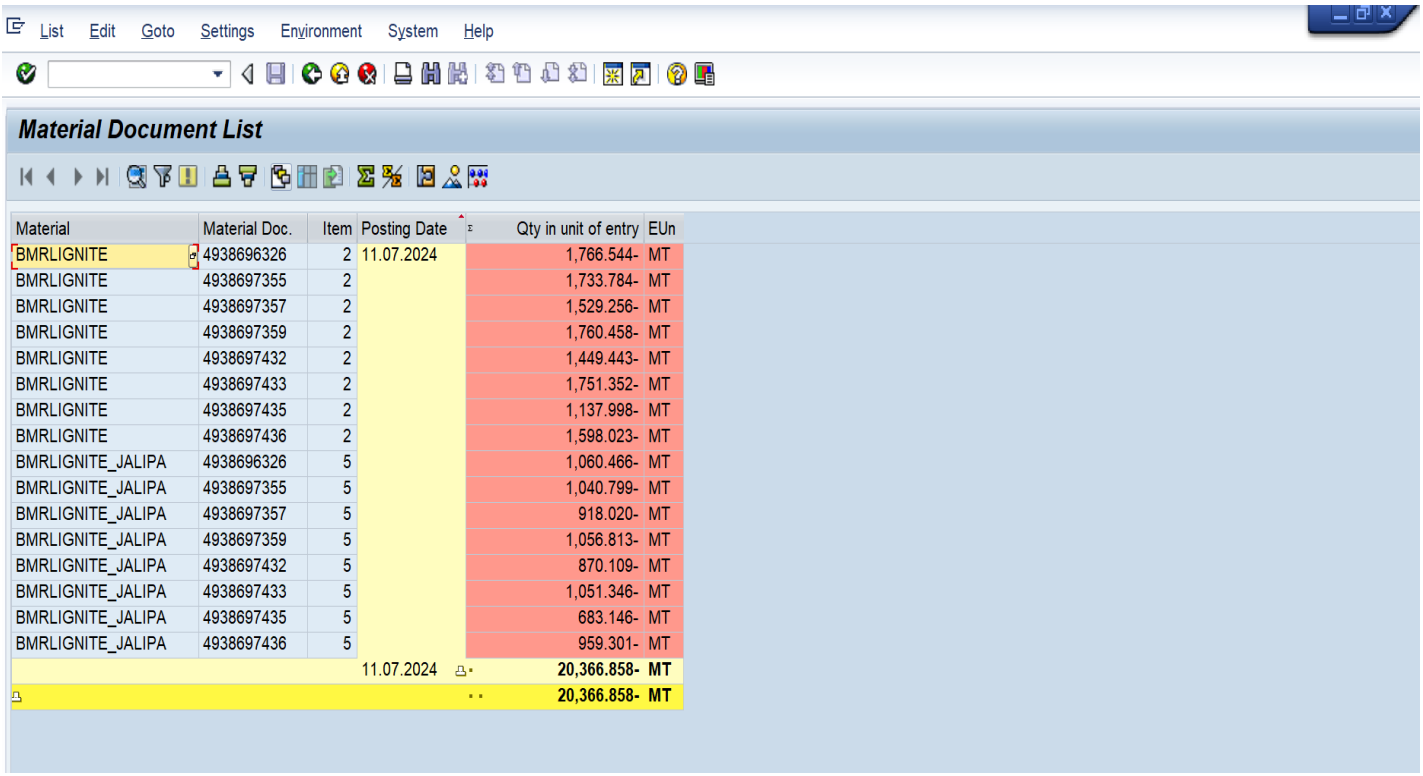
Dear Sir,

Please find enclosed herewith MOeF Half Yearly Compliance Report for the period of Oct-2024 to March-2025 with reference to EC issued for JSW Energy (Barmer) Ltd - Bhadresh.

With Regards

Chandan Deora
JSW Energy- Barmer

ANNEXURE V



List Edit Goto Settings Environment System Help

Material Document List

Material	Material Doc.	Item	Posting Date	Qty in unit of entry	EUn
BMRLIGNITE	4938696326	2	11.07.2024	1,766.544-	MT
BMRLIGNITE	4938697355	2		1,733.784-	MT
BMRLIGNITE	4938697357	2		1,529.256-	MT
BMRLIGNITE	4938697359	2		1,760.458-	MT
BMRLIGNITE	4938697432	2		1,449.443-	MT
BMRLIGNITE	4938697433	2		1,751.352-	MT
BMRLIGNITE	4938697435	2		1,137.998-	MT
BMRLIGNITE	4938697436	2		1,598.023-	MT
BMRLIGNITE_JALIPA	4938696326	5		1,060.466-	MT
BMRLIGNITE_JALIPA	4938697355	5		1,040.799-	MT
BMRLIGNITE_JALIPA	4938697357	5		918.020-	MT
BMRLIGNITE_JALIPA	4938697359	5		1,056.813-	MT
BMRLIGNITE_JALIPA	4938697432	5		870.109-	MT
BMRLIGNITE_JALIPA	4938697433	5		1,051.346-	MT
BMRLIGNITE_JALIPA	4938697435	5		683.146-	MT
BMRLIGNITE_JALIPA	4938697436	5		959.301-	MT
			11.07.2024	**20,366.858-**	**MT**
				20,366.858-	**MT**

ANNEXURE VI

Quality Council of India
2nd Floor, Institution of Engineers Building,
Bahadur Shah Zafar Marg,
New Delhi – 110 002, India

Report ID: QCI/COAL/JSW/SH/MR/144
Source Name: Screenhouse (As Fired)
Consumer Name: JSW Energy, Barmer Limited

Date: 09th November'2024

This is to certify that the weighted average analysis parameters of Lignite Coal (As Received basis) collected from Conveyor belt feeding to Unit# 1, 2, 3, 4, 5,6,7 and 8 is mentioned below:

Month	Quantity (in Metric Tonnes)	Analysis Parameters (As Received Basis) on weighted average		
		Total Moisture %	Sulphur %	GCV "Kcal/Kg"
October'2024	460889.00	41.72	0.39	3045.57

Mr. F.C. Srivastava
Deputy Director
Finance & Accounts Division, QCI

Note:
Sampling and analysis done by Quality Council of India (QCI) with the help of its technical service provider. Weighted Average Report is based on the basis Daily analysis report analyzed by QCI.
GCV analysis has been done in accordance to BIS specification, IS 1350 (Part-II), 1970 Reaffirmed: 2017
Testing and analysis performed at NABL accredited lab.
#Total Moisture determination has been done by QCI with the help of its third-party agency at JSW Energy (Barmer) limited laboratory in accordance to BIS specification, IS 1350 (Part-I), 1984 reaffirmed:2013

Quality Council of India
2nd Floor, Institution of Engineers Building,
Bahadur Shah Zafar Marg,
New Delhi – 110 002, India

Report ID: QCI/COAL/JSW/SH/MR/147
Source Name: Screenhouse (As Fired)
Consumer Name: JSW Energy, Barmer Limited

Date: 06th December'2024

This is to certify that the weighted average analysis parameters of Lignite Coal (As Received basis) collected from Conveyor belt feeding to Unit# 1, 2, 3, 4, 5,6,7 and 8 is mentioned below:

Month	Quantity (in Metric Tonnes)	Analysis Parameters (As Received Basis) on weighted average		
		Total Moisture %	Sulphur %	GCV "Kcal/Kg"
November'2024	460086.00	41.18	0.40	2975.91

Quality Council of India Barmer

Mr. F.C. Srivastava
Deputy Director
Finance & Accounts Division, QCI

Note:
Sampling and analysis done by Quality Council of India (QCI) with the help of its technical service provider. Weighted Average Report is based on the basis Daily analysis report analyzed by QCI.
GCV analysis has been done in accordance to BIS specification, IS 1350 (Part-II), 1970 Reaffirmed: 2017
Testing and analysis performed at NABL accredited lab.
#Total Moisture determination has been done by QCI with the help of its third-party agency at JSW Energy (Barmer) limited laboratory in accordance to BIS specification, IS 1350 (Part-I), 1984 reaffirmed:2013

Quality Council of India
2nd Floor, Institution of Engineers Building,
Bahadur Shah Zafar Marg,
New Delhi – 110 002, India

Report ID: QCI/COAL/JSW/SH/MR/150 Date: 11th January'2025
Source Name: Screenhouse (As Fired)
Consumer Name: JSW Energy, Barmer Limited

This is to certify that the weighted average analysis parameters of Lignite Coal (As Received basis) collected from Conveyor belt feeding to Unit# 1, 2, 3, 4, 5,6,7 and 8 is mentioned below:

Month	Quantity (in Metric Tonnes)	Analysis Parameters (As Received Basis) on weighted average		
		Total Moisture %	Sulphur %	GCV "Kcal/Kg"
December'2024	522835.00	41.66	0.38	2987.05

Mr. F.C. Srivastava
Deputy Director
Finance & Accounts Division, QCI

Note:
Sampling and analysis done by Quality Council of India (QCI) with the help of its technical service provider. Weighted Average Report is based on the basis Daily analysis report analyzed by QCI.
GCV analysis has been done in accordance to BIS specification, IS 1350 (Part-II), 1970 Reaffirmed: 2017
Testing and analysis performed at NABL accredited lab.
#Total Moisture determination has been done by QCI with the help of its third-party agency at JSW Energy (Barmer) limited laboratory in accordance to BIS specification, IS 1350 (Part-I), 1984 reaffirmed:2013

Quality Council of India
2nd Floor, Institution of Engineers Building,
Bahadur Shah Zafar Marg,
New Delhi – 110 002, India

Report ID: QCI/COAL/JSW/SH/MR/153
Source Name: Screenhouse (As Fired)
Consumer Name: JSW Energy, Barmer Limited

Date: 07th Feburary'2025

This is to certify that the weighted average analysis parameters of Lignite Coal (As Received basis) collected from Conveyor belt feeding to Unit# 1, 2, 3, 4, 5,6,7 and 8 is mentioned below:

Month	Quantity (in Metric Tonnes)	Analysis Parameters (As Received Basis) on weighted average		
		Total Moisture %	Sulphur %	GCV "Kcal/Kg"
January'2025	505810.00	41.50	0.38	2981.11

Quality Council of India

Mr. F.C. Srivastava
Deputy Director
Finance & Accounts Division, QCI

Note:
Sampling and analysis done by Quality Council of India (QCI) with the help of its technical service provider. Weighted Average Report is based on the basis Daily analysis report analyzed by QCI.
GCV analysis has been done in accordance to BIS specification, IS 1350 (Part-II), 1970 Reaffirmed: 2017
Testing and analysis performed at NABL accredited lab.
#Total Moisture determination has been done by QCI with the help of its third-party agency at JSW Energy (Barmer) limited laboratory in accordance to BIS specification, IS 1350 (Part-I), 1984 reaffirmed:2013

Quality Council of India
2nd Floor, Institution of Engineers Building,
Bahadur Shah Zafar Marg,
New Delhi – 110 002, India

Report ID: QCI/COAL/JSW/SH/MR/156
Source Name: Screenhouse (As Fired)
Consumer Name: JSW Energy, Barmer Limited

Date: 07th March'2025

This is to certify that the weighted average analysis parameters of Lignite Coal (As Received basis) collected from Conveyor belt feeding to Unit# 1, 2, 3, 4, 5,6,7 and 8 is mentioned below:

Month	Quantity (in Metric Tonnes)	Analysis Parameters (As Received Basis) on weighted average		
		Total Moisture %	Sulphur %	GCV "Kcal/Kg"
February'2025	479122.00	41.88	0.37	2982.89

Quality Council of India

Mr. F.C. Srivastava
Deputy Director
Finance & Accounts Division, QCI

Note:
Sampling and analysis done by Quality Council of India (QCI) with the help of its technical service provider. Weighted Average Report is based on the basis Daily analysis report analyzed by QCI.
GCV analysis has been done in accordance to BIS specification, IS 1350 (Part-II), 1970 Reaffirmed: 2017
Testing and analysis performed at NABL accredited lab.
#Total Moisture determination has been done by QCI with the help of its third-party agency at JSW Energy (Barmer) limited laboratory in accordance to BIS specification, IS 1350 (Part-I), 1984 reaffirmed:2013

Quality Council of India
2nd Floor, Institution of Engineers Building,
Bahadur Shah Zafar Marg,
New Delhi – 110 002, India

Report ID: QCI/COAL/JSW/SH/MR/159
Source Name: Screenhouse (As Fired)
Consumer Name: JSW Energy, Barmer Limited

Date: 08th April'2025

This is to certify that the weighted average analysis parameters of Lignite Coal (As Received basis) collected from Conveyor belt feeding to Unit# 1, 2, 3, 4, 5,6,7 and 8 is mentioned below:

Month	Quantity (in Metric Tonnes)	Analysis Parameters (As Received Basis) on weighted average		
		Total Moisture %	Sulphur %	GCV "Kcal/Kg"
March'2025	535931.00	41.61	0.37	2977.55

Mr. F.C. Srivastava
Deputy Director
Finance & Accounts Division, QCI

Note:
Sampling and analysis done by Quality Council of India (QCI) with the help of its technical service provider. Weighted Average Report is based on the basis Daily analysis report analyzed by QCI.
GCV analysis has been done in accordance to BIS specification, IS 1350 (Part-II), 1970 Reaffirmed: 2017
Testing and analysis performed at NABL accredited lab.
#Total Moisture determination has been done by QCI with the help of its third-party agency at JSW Energy (Barmer) limited laboratory in accordance to BIS specification, IS 1350 (Part-I), 1984 reaffirmed:2013

ANNEXURE VII

Regd. No.: 080152100218

MONI'S GROSAM ENGINEERING DESIGN & RESEARCH CONSULTANSY

An ISO 9001 : 2015 Certified Company

B-39, Industrial Estate, New Power House Road, JODHPUR - 342 003 (Raj.)
Telefax : 0291-2633401 • Mobile No. : 94141-33401, 76655-92929
E-mail : guru_moni20@yahoo.com • Website : www.monisengineering.com

ICS JAS-ANZ RQ91/6237

Ref. No.: - MGED&RC/F&B/STAB/23-24/092 **DATE: 05.03.2024**

CERTIFICATE OF STABILITY

ISO Reg. No. RQ 91/6237

(Under Section 6 and Rule 3 (C)

1.	Name of the Factory	:	**M/s. JSW ENERGY (BARMER) LIMITED**
2.	Village, Two and District in	:	BARMER
3.	Full postal address of the Factory	:	Village: Bhadresh BARMER
4.	Name of the Occupier of the Factory	:	-
5	Nature of Structure/Building Process to be carried on in the factory	:	Power Generation
6.	Name and description of building/ Block of building	:	Effected as per Govt. of Rajasthan
7.	Year of Construction	:	-
8.	Manufacturing process to be carried out in the building/block of building	:	Power
9.	Number of floors on which workers Will be employed.	:	Ground Floor and more
10.	Area of Stability	:	Ash Dyke wall.

I certify that, I have inspected the building/block of building and carried out the required tests, the plans of which have been approved by and examined the various parts including the foundations with special reference to the machine, plant etc., that have been installed, I am of the opinion that the building/block of building which have been constructed reconstructed/extended taken to be use is/are in accordance with the plans and IS Standard that it/ they/ is/are structurally sound and that its/their stability will not be endangered by its/their use as factory/part of factory for the manufactures of power Generation , for which the machinery, plant etc. installed are intended.

Signature of the Competent Person :

Name of the Competent Person : O.D. BISSA S/O Sh. S.D. BISSA

Qualification : Competent person U/S 6 vide certificate No. CMP-530/2023 Dtd. 01.01.2024

Address : M/S. MONI'S GROSAM ENGINEERING DESIGN & RESEARCH CONSULTANCY
B-39, Industrial Estate, New Power House Road
Jodhpur – 342 003 (Rajasthan)

Lic. No. CMP-530/2023