**Energy (Barmer) Limited**
Village & Post : Bhadresh, Post Box No. 30,
Distt : Barmer – 344001 (Rajasthan)
CIN : U31102MH1996PLC185098
Phone : +91 2982 229100
Website: www.jsw.in

**Ref: JSWE(B)L/ENV/24-25/011** **Date: 14.06.2024**

**To,**

**Ministry of Environment Forests & Climate Change,**

**Integrated Regional Office,**

**A-209&218, Aranya Bhavan, M. G. Road,**

**Jaipur-304002, Rajasthan.**

**Sub: Compliance Report-Environmental Clearance for 1080 MW Lignite based Power Plant at Village-Bhadresh, District Barmer.**

Dear Sir,

With reference to your letter No. J-13011/58/2006-IA-II (T) dated 20.07.2007 and 19.11.2009, and followed by Letter no. IV/ENV/R/Th-39/679/08/273, we herewith submit half-yearly compliance report, for the period pertaining to **October- 2023 to March- 2024,** for the conditions stipulated in the Environmental clearance issued for this Power Project. Analysis Data has uploaded on JSWEBL website – http://www.jsw.in/energy/about-barmer-plant.

We have taken up the Project activity at proposed site incorporating the conditions stipulated in this environmental clearance.

Thanking you.

For JSW ENERGY (BARMER) Ltd**.**

Dipak Patil
GM (Operation, Environment & Chemistry)

**Enclosure:**

| | | |
|---|---|---|
| **1.** | Compliance Report | |
| **2.** | Water consumption Data | **-Annexure I** |
| **3.** | Effluent Water Data | **-Annexure II** |
| **4.** | Coal Analysis Data | **-Annexure III** |
| **5.** | CEMS & Stack Monitoring DATA | **-Annexure IV** |
| **6.** | Ash Utilization Data | **-Annexure V** |
| **7.** | Noise Monitoring | **-Annexure VI** |
| **8.** | AAQ Monitoring Data | **-Annexure VII** |
| **9.** | Environmental Expenditure | **- Annexure VIII** |
| **10.** | Last Compliance Report | **-Annexure IX** |

**C.C.**
The Member Secretary – Central Pollution Control Board, Delhi
The Member Secretary – RSPCB, Jaipur
The Regional Officer – RSPCB, Balotra.

# Compliance report for MOEF conditions stipulated in Environmental Clearance (dt. 20-07-2007 as amended on 19-11-2009) for 1080 MW Lignite-based power project of RWPL at Village-Bhadresh, District-Barmer

**Reporting Period: OCT, 2023- MAR-2024**

| S.N. | Condition | Status |
|---|---|---|
| i | No land in excess of 468 ha shall be acquired for any activity of the project. | Land acquisition has been carried at the time of setting up the Power Project. No additional land been acquired for this Project. |
| ii | The water requirement for the project shall not exceed 35.5 cusecs. No ground water shall be abstracted for any activity of the project. | Water in excess of the mandated 35.5 cusecs would not be drawn during the operation of the Project.<br><br>IGNP supplied water is being used for generation of electricity as per EC conditions. Water being used Records of Water received from IGNP is enclosed. **ANNEXURE-I** |
| iii | *Closed Circuit Cooling System with induced draft cooling towers shall be installed.* | Four numbers of closed-circuit cooling tower blocks with induced draft cooling towers have been erected and are in operation. |
| iv | *Treated effluents conforming to the prescribed standards shall be re-circulated and reused within the plant. No effluents shall be discharged outside the plant boundary.* | A common **ETP (Aeration – Clarifier – Filtration – Ultra Filtration – Reverse Osmosis)** to cater to all the 8 power generating units has erected. All the process effluents generated is being treated in this ETP and reused within the plant ensuring zero discharge outside the plant boundary. Effluent Water Quality Data – **Annexure – II** |
| v | *Lignite with ash content not exceeding 20% and sulphur content not exceeding 2.0% shall be used.* | Lignite with ash content less than 20% and Sulphur content less than 2% being used.<br><br>Third party analysis reports for the same are enclosed. **ANNEXURE-III** |
| vi | *Space provision for FGD shall be made, if required at a later stage.* | The Project is based on Circulating Fluidized Base Combustion technology for fuel firing and involves injection of lime, which absorbs Sulphur.<br><br>As such, there is no requirement for FGD. However, space provision has been made for FGD. |

| | | |
|---|---|---|
| **vii** | *Four stacks of 122 m height each with exit velocity of at least 20 m/s shall be provided with continuous online monitoring system.* | A total of four bi-flue stacks, each flue of 122 m height, shall release the flue gases to the atmosphere. All these stacks being equipped with Continuous Emission Monitoring Systems (CEMS), to ensure the emission of PM, SO2, NOx & CO to be within prescribed levels. **ANNEXURE-IV** |
| **viii** | *Low NOx burners shall be installed.* | The boiler is designed on Circulating Fluidized Bed Combustion, system attains to very low NOx generation. **ANNEXURE-IV** |
| **ix** | *High efficiency Electrostatic Precipitator (ESPs) having efficiency of 99.9% shall be installed so as to ensure that particulate emissions do not exceed 100 mg/Nm$^3$.* | High efficiency ESPs are installed to maintain PM emission levels at less than 100 mg/Nm$^3$. **ANNEXURE-IV** |
| **xi** | *Fly ash shall be collected in dry form and its 100% utilization shall be ensured within 3 years from the day of the commissioning of the plant. Ash to be disposed off in the ash pond shall be through HCSD system.* | Fly ash is being collected in dry form from the currently operational EIGHT Units and is being lifted by M/s Shree Cement, M/s. JK Lakshmi, M/s. Ambuja Cement Limited & M/s Binani Cements and many Local Brick and Tiles Block manufacturer. Unutilized ash, if any, would be disposed off to the emergency ash pond through HCSD system.<br>**Ash Utilization data ANNEXURE-V** |
| **xii** | *Ash pond shall be lined with 0.5 mm thick HDPE geo-membrane lining.* | The ash pond is lined with 0.5 mm thick HDPE geo-membrane, to avoid any leachate to the ground. |
| **xiii** | *Details of compensation to be paid to the land oustees along with number of land oustees shall be worked out and submitted to this Ministry within three months from the date of issue of this letter or before the start of work on the project whichever is earlier.* | Resettlement Action Plan (RAP) was compiled and submitted to the MOEF on 30-07-2007. |
| **xiv** | *Necessary prior clearance from NHAI shall be obtained before laying the pipeline.* | All necessary prior clearance from NHAI had obtained before laying the pipeline and a copy Submitted. |

| | | |
|---|---|---|
| **xv** | *Necessary prior clearance from Indian Air Force shall be obtained for construction of stacks of requisite height before starting the work on the project.* | Before commencing the civil work on the stacks, necessary clearance had obtained from the Indian Air Force. |
| **xvi** | *Adequate measures shall be taken up to maintain the sanctity and protection from any adverse impact from the proposed power project to the temple of Sant Ishardas Samadhi.* | The Temple is outside the plant premises.<br><br>In consultation with the local population, suitable developmental measures such as supply of lighting and electricity have been taken for this temple. |
| **xvii** | *Regular monitoring of ground water quality including heavy metals shall be undertaken in the project area to ascertain the change, if any, in the water quality due to leaching of contaminants from the ash disposal area.* | There is hardly any ground water within 20 km of the Project area. |
| **xviii** | *Noise levels shall be limited to 75 dBA. For people working in the high noise area, protective devices such as earplugs etc. shall be provided.* | The machinery has been designed to limit the noise levels to 75 dB (A). All personnel working in the Plant have PPEs issued. **ANNEXURE-VI** |
| **xix** | *A greenbelt shall be developed all around the plant boundary and ash pond covering an area of 154 ha.* | A total of 154 Ha area brought under green belt developed as designated greenbelt area.<br>Mortality replacement work is continuous process and is being carried. |
| **xx** | *Regular monitoring of the air quality shall be carried out in and around the power plant and records shall be maintained. The location of monitoring stations and frequency of monitoring shall be finalized in consultation with SPCB. Six monthly reports shall be submitted to this Ministry.* | Regular monitoring of AAQ is being carried out in and around the power plant at locations and frequency finalized in consultation with the RSPCB and records are maintained. **ANNEXURE-VII** |
| **xxi** | *For controlling fugitive dust, regular sprinkling of water in lignite handling area and other vulnerable areas of the plant shall be ensured.* | Regular sprinkling of water is being practiced to minimize the fugitive dust emissions. |

| | | |
|---|---|---|
| **xxii** | *The project proponent should advertise at least in two local newspapers widely circulated in the region around the project, one of which should be in the vernacular language of the locality concerned, informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board/Committee and may also be seen in the Website of the Ministry of Environment and Forests in the http://envfor.nic.in.* | Published in Rajasthan Patrika Jodhpur Edition, Dt 19/08/2007 |
| **xxiii** | *A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.* | A dedicated environment monitoring cell with qualified staff has been established and is operative. |
| **xxiv** | *Half yearly report on the status of implementation of the conditions and environmental safeguards should be submitted to this Ministry, its Regional Office, CPCB and SPCB.* | Being complied with. Copy of Submission enclosed – **Annexure IX** |
| **xxv** | *Regional Office of the Ministry of Environment & Forests located at Lucknow will monitor the implementation of the stipulated conditions. Complete set of Environmental Impact Assessment Report and Management Plan along with additional information submitted to this Ministry should be forwarded to the Regional Office for their use during monitoring.* | Submitted. |
| **xxvi** | *Separate funds should be allocated for implementation of environmental protection measures along with item-wise break-up. These cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.* | The funds earmarked for environmental protection measures will not be diverted for other purposes. **Annexure VIII** |
| **xxvii** | *Full cooperation should be extended to the Scientists/Officers from the Ministry and its Regional Office at Lucknow /the CPCB/the SPCB during monitoring of the project.* | Being complied. |

**ANNEXURE - I**

# IGNP WATER BILL

## OCTOMBER- 2023 to MARCH- 2024

| Month | Cuft/Month | Cum/Month | Cuft/day | Cusecs – Day |
|---|---|---|---|---|
| OCTOBER-23 | 80243529 | 2272256 | 2588501 | 29.96 |
| NOVEMBER-23 | 25007169 | 708128 | 833572 | 9.65 |
| DECEMBER-23 | 51548398 | 1459696 | 1662852 | 19.25 |
| JANUARY-24 | 55126179 | 1561008 | 1778264 | 20.58 |
| FEBRUARY-24 | 61772645 | 1749216 | 2130091 | 24.65 |
| MARCH-24 | 53132182 | 1504544 | 1713941 | 19.84 |

**ANNEXURE-I**

Government of Rajasthan
Indira Gandhi Nahar Project

No. 384 Date: 01/11/2023

The General Manager
J.S.W Energy (Barmer) Limited
Near Saint paul school
Indira colony Barmer, Rajasthan

Sub: Raw water bill for industrial purpose for the period october/2023

| S.No. | Particular | Reading as on 30/09/2023 | Reading as on 31/10/2023 | Difference as per flow meter | Qty. in CFT | Unit | Rate | Amount |
|---|---|---|---|---|---|---|---|---|
| 1 | Supply of raw water from IGMN to JSW for industrial purpose | 168211664 | 170483920 | 2272256 | 80243528.62 | /1000 cft | 275 | 22066970.37 |
| | | | | | | | SAY RS | 22066970.00 |

**Rs.- Two Crore Twenty Lakh Sixty Six thousand Nine Hundred Seventy only**

Assistant Engineer
Sub dn. III 28th u/c tmc dn.
IGNP Mohangarh

Government of Rajasthan
Indira Gandhi Nahar Project

No. 441 Date: 01/12/2023

The General Manager
J.S.W Energy (Barmer) Limited
Near Saint paul school
Indira colony Barmer, Rajasthan

Sub: Raw water bill for industrial purpose for the period November/2023

| S. No. | Particular | Reading as on 31/10/2023 | Reading as on 30/11/2023 | Difference as per flow meter | Qty. in CFT | Unit | Rate | Amount |
|---|---|---|---|---|---|---|---|---|
| 1 | Supply of raw water from IGMN to JSW for industrial purpose | 170483920 | 171192048 | 708128 | 25007168.84 | /1000 cft | 275 | 6876971.43 |
| | | | | | | | SAY RS | 6876971.00 |

**Rs.–Sixty Eight Lakh Seventy Six thousand Nine Hundred Seventy one only**

S.No.
Xen tmc dn ignp mohangarh

Date:

Assistant Engineer
Sub dn. III 28th u/c tmc dn.
IGNP Mohangarh

सहायक अभियन्ता
उपखण्ड III 28 वां प्र.नि.
बी.एम.सी.खण्ड, इ.गा.न.प
मोहनगढ

Government of Rajasthan
Indira Gandhi Nahar Project

No. 524 Date: 01/01/2024

The General Manager
J.S.W Energy (Barmer) Limited
Near Saint paul school
Indira colony Barmer, Rajasthan

Sub: Raw water bill for industrial purpose for the period December/2023

| S.No. | Particular | Reading as on 30/11/2023 | Reading as on 31/12/2023 | Difference as per flow meter | Qty. in CFT | Unit | Rate | Amount |
|---|---|---|---|---|---|---|---|---|
| 1 | Supply of raw water from IGMN to JSW for industrial purpose | 171192048 | 172651744 | 1459696 | 51548398.49 | /1000 cft | 275 | 14175809.58 |
| | | | | | | | SAY RS | 14175810.00 |

**Rs.-One Crore forty one Lakh Seventy five thousand eight Hundred ten only**

S.No.
Xen tmc dn tmc mohangarh

Date:

Assistant Engineer
Sub dn. III 28th u/c tmc dn.
IGNP Mohangarh

सहायक अभियन्ता
उपखण्ड III 28 वां प्र.नि.
बी.एम.सी.खण्ड, इ.गा.न.प
मोहनगढ

**ANNEXURE-I**

Government of Rajasthan
Indira Gandhi Nahar Project

No. 553 Date: 01/02/2024

The General Manager
J.S.W Energy (Barmer) Limited
Near Saint paul school
Indira colony Barmer, Rajasthan

Sub: Raw water bill for industrial purpose for the period January /2024

| S.No. | Particular | Reading on 31/12/2023 | Reading as on 31/01/2024 | Difference as per flow meter | Qty. in CFT | Unit | Rate | Ammount |
|---|---|---|---|---|---|---|---|---|
| 1 | Supply of raw water from IGMN to JSW for industrial purpose | 172651744 | 174212752 | 1561008 | 55126178.62 | /1000 cft | 275 | 15159699.12 |
| | | | | | | | say Rs | 15159699.00 |

Rs.- One Crore Fifty One Lakhs Fifty Nine Thousand Six hundred Ninety nine only

S.No. 553- 554 Date 01/02/2024

Xen tmc dn ignp mohangarh

Assistant Engineer
Sub dn. III 28th u/c tmc dn.
IGNP Mohangarh

सहायक अभियन्ता
उपखण्ड III 28 वां प्र.मि.
टी.एम.सी.खण्ड, इ.गा.न.प
मोहनगढ

Government of Rajasthan
Indira Gandhi Nahar Project

No. 594 Date: 01/03/2024

The General Manager
J.S.W Energy (Barmer) Limited
Near Saint paul school
Indira colony Barmer, Rajasthan

Sub: Raw water bill for industrial purpose for the period February/2024

| S.No. | Particular | Reading as on 31/01/2024 | Reading as on 29/02/2024 | Difference as per flow meter | Qty. in CFT | Unit | Rate | Amount |
|---|---|---|---|---|---|---|---|---|
| 1 | Supply of raw water from IGMN to JSW for industrial purpose | 174212752 | 175961968 | 1749216 | 61772645.41 | /1000 cft | 275 | 16987477.49 |
| | | | | | | | SAY RS | 16987477.00 |

**Rs.-One Crore sixty nine Lakh eighty seven thousand four Hundred seventy seven only**

S.No.

Xen tmc dn ignp mohangarh

Date:

Assistant Engineer
Sub dn. III 28th u/c tmc dn.
IGNP Mohangarh

सहायक अभियन्ता
उपखण्ड III 28 वां प्र.मि.
टी.एम.सी.खण्ड, इ.गा.न.प
मोहनगढ

No. 60

Government of Rajasthan
Indira Gandhi Nahar Project

Date: 01/04/2024

The General Manager
J.S.W Energy (Barmer) Limited
Near Saint paul school
Indira colony Barmer, Rajasthan

Sub: Raw water bill for industrial purpose for the period March/2024

| S.No. | Particular | Reading as on 29/02/2024 | Reading as on 31/03/2024 | Difference as per flow meter | Qty. in CFT | Unit | Rate | Amount |
|---|---|---|---|---|---|---|---|---|
| 1 | Supply of raw water from IGMN to JSW for industrial purpose | 175961968 | 177466512 | 1504544 | 53132182.08 | /1000 cft | 275 | 14611350.07 |
| | | | | | | | SAY RS | 14611350.00 |

**Rs.-One Crore forty Six Lakh Elevan thousand three Hundred fifty only**

S.No.

Xen tmc dn ignp mohangarh

Date:

Assistant Engineer
Sub dn. III 28th u/c tmc dn.
IGNP Mohangarh

सहायक अभियन्ता
उपखण्ड III 28 वां प्र.मि.
टी.एम.सी.खण्ड, इ.गा.न.प
मोहनगढ

**ANNEXURE-II**

# Effluent Water Quality Oct– 2023 to Mar– 2024

| SN | Parameters | UoM | CPCB Limits | Results | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Oct | Nov | Dec | Jan | Feb | Mar |
| 1. | pH | | **6.5-8.5** | 7.68 | 7.46 | 7.49 | 7.64 | 7.65 | 7.58 |
| 2. | Biochemical Oxygen Demand (BOD) @ 27Deg C for 3 days | mg/L | **< 30.0** | 19.25 | 14.50 | 18.25 | 20.75 | 16.00 | 20.25 |
| 3. | Chemical Oxygen Demand (COD) | mg/L | **< 250** | 94.50 | 81.50 | 88.00 | 103.75 | 89.25 | 101.5 |
| 4. | Total Kjeldhal Nitrogen as NH3 | mg/L | **< 100** | 7.48 | 6.45 | 8.83 | 7.85 | 3.90 | 9.95 |
| 5. | Free Available Chlorine | mg/L | **< 0.5** | BDL<0.18 | BDL<0.18 | BDL<0.18 | BDL<0.18 | BDL<0.18 | BDL<0.18 |
| 6. | Oil & Grease | mg/L | **< 20** | BDL | 1.00 | 1.20 | 1.05 | 1.60 | 1.83 |
| 7. | Copper as Cu | mg/L | **< 1** | BDL | BDL | BDL | BDL | BDL | BDL |
| 8. | Zinc as Zn | mg/L | **< 1** | 0.121 | 0.134 | 0.124 | 0.127 | 0.135 | 0.12 |
| 9. | Iron as Fe | mg/L | **< 1** | 0.124 | 0.144 | 0.120 | 0.130 | 0.122 | 0.135 |
| 10. | Total Suspended Solid | mg/L | **< 100** | 29.0 | 28.50 | 28.50 | 32.25 | 24.25 | 37.00 |
| 11. | Ammonical Nitrogen as N | mg/L | **< 50** | 3.25 | 3.00 | 4.23 | 4.00 | 3.90 | 4.13 |
| 12. | Nitrate Nitrogen | mg/L | **< 10** | 1.25 | 0.965 | 1.30 | 1.37 | 1.16 | 1.65 |
| 13. | Total Chromium as Cr | mg/L | **< 1** | BDL<0.01 | BDL<0.01 | BDL<0.01 | BDL<0.01 | BDL<0.01 | BDL<0.01 |

**ANNEXURE-III**

# COAL ANALYSIS REPORT

## COAL ANALYSIS REPORT OCT, 2023 – MARCH, 2024

| | AVERAGE | | |
|---|---|---|---|
| **Month** | **Total Moisture** | **Gross Calorific Value** | **Sulfur** |
| | **%** | **Kcal/Kg** | **%** |
| OCTOBER-23 | 41.79 | 3129.07 | 0.45 |
| NOVEMBER-23 | 42.01 | 3203.49 | 0.40 |
| DECEMBER-23 | 41.27 | 3248.68 | 0.35 |
| JANUARY-24 | 41.61 | 3232.46 | 0.22 |
| FEBRUARY-24 | 41.13 | 3089.36 | 0.38 |
| MARCH-24 | 41.76 | 2871.19 | 0.39 |

**ANNEXURE-III**

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

**Report ID:** QCI/COAL/JSW/SH/MR/108 **Date:** 09th November'2023
**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" |
| October'2023 | 465459.000 | 41.79 | 0.45 | 3129.07 |

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-III**

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/111 **Date: 12th December'2023**
**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" |
| November'2023 | 444439.000 | 42.01 | 0.40 | 3203.49 |

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-III**

भारतीय गुणवत्ता परिषद्
द्वितीय तल, इंस्टीट्यूशन ऑफ इंजीनियर्स भवन,
2, बहादुर शाह जफर मार्ग, नई दिल्ली – 110002
**Quality Council of India**
2nd Floor, Institution of Engineers Building,
2, Bahadur Shah Zafar Marg, New Delhi - 110 002

**Report ID:** QCI/COAL/JSW/SH/MR/114
**Source Name:** Screenhouse (As Fired)
**Consumer Name:** JSW Energy, Barmer Limited

Date: 09th January'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" |
| December'2023 | 496422.000 | 41.27 | 0.35 | 3248.68 |

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-III**

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/117
**Source Name:** Screenhouse (As Fired)
**Consumer Name:** JSW Energy, Barmer Limited

**Date: 09th February'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" |
| January'2024 | 338275.000 | 41.61 | 0.22 | 3232.46 |

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-III**

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/120 **Date: 11th March'2024**
**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" |
| February'2024 | 535899.000 | 41.13 | 0.38 | 3089.36 |

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

**ANNEXURE-III**

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/123
**Source Name:** Screenhouse (As Fired)
**Consumer Name:** JSW Energy, Barmer Limited

**Date: 09th April'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" |
| March'2024 | 565396.000 | 41.76 | 0.39 | 2871.19 |

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-IV**

## STACK EMISSION MONITORING RESULTS OCT – 2023 to MARCH – 2024

### Month: Oct' 2023

| SN | Parameters | UOM | Unit-I | Unit-II | Unit-III | Unit-IV | Unit-V | Unit-VI | Unit-VII | Unit-VIII |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Average Velocity | m/Sec | 17.93 | 18.33 | 18.02 | 18.26 | 17.79 | 17.98 | 17.96 | 18.31 |
| 2 | Flow | $Nm^3/Sec$ | 137.0 | 141.0 | 140.5 | 137.3 | 133.7 | 135.8 | 138.1 | 138.9 |
| 3 | Stack Exit Temp. | $^0C$ | 165 | 162 | 156 | 172 | 172 | 170 | 162 | 168 |
| 4 | Particulate Matter | $mg/Nm^3$ | 36.8 | 37.6 | 35.2 | 33.6 | 39.1 | 36.4 | 40.4 | 40.1 |
| 5 | Sulphur Dioxide | $mg/Nm^3$ | 471.8 | 476.4 | 462.0 | 456.8 | 510.8 | 502.2 | 475.4 | 481.5 |
| 6 | Oxides of Nitrogen | $mg/Nm^3$ | 169.4 | 156.6 | 169.0 | 157.8 | 183.4 | 160.7 | 166.4 | 157.5 |

### Month: NOV' 2023

| SN | Parameters | UOM | Unit-I | Unit-II | Unit-III | Unit-IV | Unit-V | Unit-VI | Unit-VII | Unit-VIII |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Average Velocity | m/Sec | 15.18 | 15.36 | 15.79 | 15.70 | 15.67 | 15.83 | 15.32 | 15.70 |
| 2 | Flow | $Nm^3/Sec$ | 117.0 | 115.7 | 120.6 | 120.5 | 119.1 | 118.0 | 116.0 | 119.6 |
| 3 | Stack Exit Temp. | $^0C$ | 161 | 171 | 165 | 163 | 167 | 176 | 169 | 166 |
| 4 | Particulate Matter | $mg/Nm^3$ | 35.2 | 38.3 | 39.9 | 40.3 | 34.0 | 35.7 | 38.9 | 38.7 |
| 5 | Sulphur Dioxide | $mg/Nm^3$ | 475.2 | 464.4 | 470.1 | 476.4 | 483.7 | 490.7 | 492.9 | 493.6 |
| 6 | Oxides of Nitrogen | $mg/Nm^3$ | 136.1 | 133.0 | 133.0 | 129.8 | 125.9 | 162.8 | 149.3 | 146.3 |

### Month: DEC' 2023

| SN | Parameters | UOM | Unit-I | Unit-II | Unit-III | Unit-IV | Unit-V | Unit-VI | Unit-VII | Unit-VIII |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Average Velocity | m/Sec | 15.67 | 15.56 | 16.15 | 15.97 | 16.56 | 16.11 | 17.36 | 16.47 |
| 2 | Flow | $Nm^3/Sec$ | 119.1 | 116.7 | 121.1 | 120.9 | 125.1 | 120.6 | 134.1 | 125.8 |
| 3 | Stack Exit Temp. | $^0C$ | 167 | 173 | 173 | 169 | 170 | 174 | 160 | 165 |
| 4 | Particulate Matter | $mg/Nm^3$ | 36.9 | 39.3 | 41.3 | 38.3 | 37.4 | 39.9 | 40.7 | 36.3 |
| 5 | Sulphur Dioxide | $mg/Nm^3$ | 460.0 | 458.2 | 479.3 | 467.2 | 503.9 | 467.2 | 509.7 | 480.8 |
| 6 | Oxides of Nitrogen | $mg/Nm^3$ | 120.1 | 130.0 | 136.0 | 126.8 | 131.8 | 126.8 | 156.8 | 142.2 |

**ANNEXURE-IV**

## Month: JAN' 2024

| SN | Parameters | UOM | Unit-I | Unit-II | Unit-III | Unit-IV | Unit-V | Unit-VI | Unit-VII | Unit-VIII |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Average Velocity | m/Sec | 16.96 | 18.05 | 18.99 | 17.81 | 18.19 | 17.39 | 17.05 | 17.65 |
| 2 | Flow | $Nm^3/Sec$ | 126.7 | 136.0 | 144.1 | 135.7 | 136.4 | 131.6 | 130.5 | 134.8 |
| 3 | Stack Exit Temp. | $^0C$ | 175 | 171 | 168 | 166 | 173 | 169 | 164 | 165 |
| 4 | Particulate Matter | $mg/Nm^3$ | 37.6 | 34.4 | 33.2 | 33.8 | 39.0 | 36.4 | 31.2 | 35.3 |
| 5 | Sulphur Dioxide | $mg/Nm^3$ | 490.0 | 463.3 | 459.2 | 467.8 | 494.4 | 450.1 | 433.4 | 435.6 |
| 6 | Oxides of Nitrogen | $mg/Nm^3$ | 135.0 | 125.0 | 136.0 | 131.9 | 143.2 | 126.8 | 127.8 | 127.9 |

## Month: FEB' 2024

| SN | Parameters | UOM | Unit-I | Unit-II | Unit-III | Unit-IV | Unit-V | Unit-VI | Unit-VII | Unit-VIII |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Average Velocity | m/Sec | 16.85 | 17.73 | 17.68 | 17.67 | 18.04 | 18.93 | 18.77 | 17.50 |
| 2 | Flow | $Nm^3/Sec$ | 127.5 | 136.4 | 138.8 | 135.3 | 137.5 | 144.6 | 142.4 | 135.8 |
| 3 | Stack Exit Temp. | $^0C$ | 169 | 162 | 153 | 164 | 166 | 165 | 168 | 158 |
| 4 | Particulate Matter | $mg/Nm^3$ | 37.5 | 38.5 | 35.3 | 36.1 | 38.2 | 33.9 | 34.0 | 37.4 |
| 5 | Sulphur Dioxide | $mg/Nm^3$ | 447.7 | 461.5 | 436.9 | 456.3 | 442.3 | 456.3 | 463.3 | 458.2 |
| 6 | Oxides of Nitrogen | $mg/Nm^3$ | 154.5 | 145.2 | 163.1 | 156.6 | 159.8 | 148.4 | 151.2 | 158.4 |

## Month: MAR' 2024

| SN | Parameters | UOM | Unit-I | Unit-II | Unit-III | Unit-IV | Unit-V | Unit-VI | Unit-VII | Unit-VIII |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Average Velocity | m/Sec | 19.66 | 17.84 | 18.07 | 18.84 | 17.71 | 17.05 | 18.37 | 17.99 |
| 2 | Flow | $Nm^3/Sec$ | 151.6 | 139.1 | 144.3 | 146.6 | 136.5 | 132.0 | 141.9 | 140.0 |
| 3 | Stack Exit Temp. | $^0C$ | 161 | 156 | 146 | 157 | 161 | 159 | 160 | 157 |
| 4 | Particulate Matter | $mg/Nm^3$ | 34.5 | 40.7 | 32.2 | 34.5 | 40.2 | 32.8 | 35.6 | 39.0 |
| 5 | Sulphur Dioxide | $mg/Nm^3$ | 433.0 | 471.2 | 429.9 | 466.0 | 456.3 | 449.3 | 481.5 | 464.9 |
| 6 | Oxides of Nitrogen | $mg/Nm^3$ | 149.3 | 150.1 | 154.3 | 161.0 | 162.8 | 141.1 | 161.6 | 162.8 |

**ANNEXURE-IV**

## Unit # 1 - Continuous Emission Monitoring System-CEMS DATA

| Month | | SOX mg/m3 | NOX mg/m3 | SPM mg/m3 |
|---|---|---|---|---|
| Oct-23 | Average | 494.48 | 166.53 | 35.53 |
| | Max | 518.53 | 185.91 | 44.41 |
| | | | | |
| Nov-23 | Average | 494.89 | 189.66 | 37.37 |
| | Max | 518.62 | 217.89 | 45.45 |
| | | | | |
| Dec-23 | Average | 505.94 | 181.52 | 39.01 |
| | Max | 527.63 | 227.75 | 46.13 |
| | | | | |
| Jan-24 | Average | 492.91 | 218.34 | 37.42 |
| | Max | 518.44 | 236.50 | 45.68 |
| | | | | |
| Feb-24 | Average | 450.53 | 207.09 | 35.25 |
| | Max | 513.29 | 252.51 | 46.16 |
| | | | | |
| Mar-24 | Average | 454.86 | 160.15 | 35.54 |
| | Max | 510.16 | 184.35 | 43.12 |

## Unit # 2 - Continuous Emission Monitoring System-CEMS DATA

| Month | | SOX mg/m3 | NOX mg/m3 | SPM mg/m3 |
|---|---|---|---|---|
| Oct-23 | Average | 428.26 | 165.44 | 29.24 |
| | Max | 460.41 | 180.55 | 38.49 |
| | | | | |
| Nov-23 | Average | 403.13 | 172.19 | 31.44 |
| | Max | 451.55 | 188.34 | 44.05 |
| | | | | |
| Dec-23 | Average | 435.70 | 157.51 | 32.88 |
| | Max | 448.79 | 189.91 | 46.33 |
| | | | | |
| Jan-24 | Average | 428.48 | 168.64 | 38.60 |
| | Max | 497.79 | 188.78 | 45.72 |
| | | | | |
| Feb-24 | Average | 407.89 | 145.08 | 38.55 |
| | Max | 512.22 | 234.00 | 43.58 |
| | | | | |
| Mar-24 | Average | 400.16 | 142.93 | 37.76 |
| | Max | 493.90 | 171.62 | 44.36 |

**ANNEXURE-II**

## Unit # 3 - Continuous Emission Monitoring System-CEMS DATA

| Month | | SOX mg/m3 | NOX mg/m3 | SPM mg/m3 |
|---|---|---|---|---|
| Oct-23 | Average | 480.47 | 187.48 | 36.52 |
| | Max | 518.04 | 213.56 | 40.75 |
| | | | | |
| Nov-23 | Average | 482.60 | 188.45 | 39.13 |
| | Max | 519.68 | 210.25 | 41.72 |
| | | | | |
| Dec-23 | Average | 444.51 | 143.02 | 38.22 |
| | Max | 514.23 | 170.29 | 42.35 |
| | | | | |
| Jan-24 | Average | 455.55 | 169.14 | 39.57 |
| | Max | 520.18 | 187.70 | 42.08 |
| | | | | |
| Feb-24 | Average | 457.35 | 161.11 | 40.42 |
| | Max | 508.58 | 187.61 | 44.71 |
| | | | | |
| Mar-24 | Average | 441.11 | 153.18 | 41.33 |
| | Max | 503.32 | 174.39 | 43.54 |

## Unit # 4 - Continuous Emission Monitoring System-CEMS DATA

| Month | | SOX mg/m3 | NOX mg/m3 | SPM mg/m3 |
|---|---|---|---|---|
| Oct-23 | Average | 390.22 | 240.22 | 31.54 |
| | Max | 446.87 | 248.71 | 37.31 |
| | | | | |
| Nov-23 | Average | 253.59 | 156.71 | 34.56 |
| | Max | 373.68 | 195.16 | 40.69 |
| | | | | |
| Dec-23 | Average | 432.65 | 135.40 | 34.90 |
| | Max | 517.87 | 160.05 | 39.56 |
| | | | | |
| Jan-24 | Average | 451.18 | 195.37 | 37.62 |
| | Max | 525.33 | 244.61 | 41.84 |
| | | | | |
| Feb-24 | Average | 490.24 | 209.07 | 39.61 |
| | Max | 523.55 | 275.34 | 45.68 |
| | | | | |
| Mar-24 | Average | 411.43 | 183.77 | 39.20 |
| | Max | 256.14 | 273.52 | 40.78 |

**ANNEXURE-II**

## Unit # 5 - Continuous Emission Monitoring System-CEMS DATA

| Month | | SOX mg/m3 | NOX mg/m3 | SPM mg/m3 |
|---|---|---|---|---|
| Oct-23 | Average | 452.78 | 164.11 | 35.07 |
| | Max | 513.48 | 196.98 | 41.19 |
| | | | | |
| Nov-23 | Average | 420.76 | 150.10 | 36.97 |
| | Max | 501.12 | 177.82 | 42.82 |
| | | | | |
| Dec-23 | Average | 410.04 | 153.26 | 34.44 |
| | Max | 511.05 | 192.68 | 46.38 |
| | | | | |
| Jan-24 | Average | 455.63 | 175.07 | 39.45 |
| | Max | 520.18 | 196.29 | 42.08 |
| | | | | |
| Feb-24 | Average | 464.56 | 158.96 | 35.49 |
| | Max | 510.94 | 219.88 | 44.71 |
| | | | | |
| Mar-24 | Average | 426.31 | 176.99 | 35.54 |
| | Max | 501.73 | 226.98 | 39.87 |

## Unit # 6 - Continuous Emission Monitoring System-CEMS DATA

| Month | | SOX mg/m3 | NOX mg/m3 | SPM mg/m3 |
|---|---|---|---|---|
| Oct-23 | Average | 473.31 | 203.49 | 40.64 |
| | Max | 558.41 | 285.04 | 46.35 |
| | | | | |
| Nov-23 | Average | 412.61 | 226.56 | 34.18 |
| | Max | 531.72 | 271.91 | 45.43 |
| | | | | |
| Dec-23 | Average | 398.16 | 131.69 | 37.51 |
| | Max | 511.31 | 166.54 | 43.84 |
| | | | | |
| Jan-24 | Average | 471.26 | 179.20 | 41.57 |
| | Max | 533.98 | 217.49 | 45.97 |
| | | | | |
| Feb-24 | Average | 500.04 | 213.47 | 38.55 |
| | Max | 531.73 | 264.80 | 45.60 |
| | | | | |
| Mar-24 | Average | 502.70 | 187.96 | 39.54 |
| | Max | 526.99 | 266.45 | 45.54 |

**ANNEXURE-II**

## Unit # 7 - Continuous Emission Monitoring System-CEMS DATA

| Month | | SOX mg/m3 | NOX mg/m3 | SPM mg/m3 |
|---|---|---|---|---|
| Oct-23 | Average | 480.80 | 237.01 | 30.51 |
| | Max | 511.16 | 285.08 | 35.35 |
| | | | | |
| Nov-23 | Average | 477.08 | 209.56 | 36.44 |
| | Max | 499.85 | 252.06 | 42.66 |
| | | | | |
| Dec-23 | Average | 458.02 | 178.90 | 29.88 |
| | Max | 488.73 | 265.53 | 46.31 |
| | | | | |
| Jan-24 | Average | 411.22 | 203.86 | 34.75 |
| | Max | 484.88 | 254.66 | 42.09 |
| | | | | |
| Feb-24 | Average | 450.37 | 200.44 | 35.57 |
| | Max | 484.49 | 242.44 | 40.77 |
| | | | | |
| Mar-24 | Average | 420.45 | 172.18 | 36.35 |
| | Max | 495.61 | 239.88 | 39.91 |

## Unit # 8 - Continuous Emission Monitoring System-CEMS DATA

| Month | | SOX mg/m3 | NOX mg/m3 | SPM mg/m3 |
|---|---|---|---|---|
| Oct-23 | Average | 502.26 | 222.93 | 36.63 |
| | Max | 533.15 | 296.61 | 45.05 |
| | | | | |
| Nov-23 | Average | 476.98 | 160.17 | 41.28 |
| | Max | 540.25 | 239.38 | 45.03 |
| | | | | |
| Dec-23 | Average | 489.48 | 143.33 | 39.98 |
| | Max | 551.72 | 172.53 | 45.44 |
| | | | | |
| Jan-24 | Average | 500.68 | 206.27 | 35.85 |
| | Max | 540.53 | 252.44 | 44.17 |
| | | | | |
| Feb-24 | Average | 506.66 | 222.73 | 42.37 |
| | Max | 522.12 | 246.86 | 43.74 |
| | | | | |
| Mar-24 | Average | 464.36 | 149.82 | 39.32 |
| | Max | 525.70 | 179.67 | 44.95 |

**Energy (Barmer) Limited**
Village & Post : Bhadresh, Post Box No. 30,
Distt : Barmer – 344001 (Rajasthan)
CIN : U31102MH1996PLC185098
Phone : +91 2982 229100
Website: www.jsw.in

**ANNEXURE-V**

# Ministry of Environment, Forest and Climate Change
# Monthly Abstract of Ash Generation and Utilisation

(For the Period from **Oct, 2023 to March, 2024**)

**Name of Thermal Power Plant:** JSW Energy (Barmer) Limited – Jalipa - Kapurdi Thermal Plant Lignite Coal Base Thermal Plant

| Sl. No. | ASH GENERATION AND UTILIZATION | | | | | | | Mode of Ash Utilization and Utilization in Each Mode (IN LAKH TON) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Month | Coal consumed (Lakh Ton) | Lime Coal Consumed (Lakh Ton) | Ash content of coal (%) | Total Ash content Coal + lime (%) | Ash Generation (Lakh Ton) | Ash Utilization (Lakh Ton) | % Age Utilization | In making of Fly Ash based/ Bricks/ Blocks/ Tiles etc. (Lakh Ton) | In manufacture of Portland Pozzolana Cement (Lakh Ton) | In Mine filling (Lakh Ton) | In Agriculture/ Waste land Development (Lakh Ton) | Others |
| (1) | (2) | (3) | | (4) | | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| 1 | OCTOBER | 4.65459 | 0.04523 | 12.25 | 13.11 | 0.61016 | 0.68365 | 112.04 | 0.20340 | 0.48024 | 0.0000 | 0.0000 | 0.0000 |
| 2 | NOVEMBER | 4.44439 | 0.04286 | 11.33 | 12.18 | 0.54134 | 0.50862 | 93.96 | 0.16204 | 0.34658 | 0.0000 | 0.0000 | 0.0000 |
| 3 | DECEMBER | 4.96422 | 0.04620 | 11.89 | 12.71 | 0.63080 | 0.70702 | 112.08 | 0.20867 | 0.49835 | 0.0000 | 0.0000 | 0.0000 |
| 4 | JANUARY | 5.38275 | 0.08123 | 12.59 | 13.92 | 0.74903 | 0.81571 | 108.90 | 0.26840 | 0.54731 | 0.0000 | 0.0000 | 0.0000 |
| 5 | FEBRUARY | 5.35899 | 0.08113 | 15.19 | 16.52 | 0.88528 | 0.85755 | 96.87 | 0.28363 | 0.57391 | 0.0000 | 0.0000 | 0.0000 |
| 6 | MARCH | 5.65396 | 0.06081 | 16.78 | 17.72 | 1.00206 | 0.81482 | 81.31 | 0.26337 | 0.55145 | 0.0000 | 0.0000 | 0.0000 |
| | TOTAL | **30.4589** | **0.35746** | **13.47** | **14.51** | **4.41867** | **4.38737** | **99.29** | **1.38951** | **2.99784** | **0.0000** | **0.0000** | **0.0000** |

**Energy (Barmer) Limited**
Village & Post : Bhadresh, Post Box No. 30,
Distt : Barmer – 344001 (Rajasthan)
CIN : U31102MH1996PLC185098
Phone : +91 2982 229100
Website: www.jsw.in

**ANNEXURE-VI**

# Noise Level Monitoring- Oct'2023 – Mar' 2024

| SN | Month | Oct-23 | | Nov-23 | | Dec-23 | | Jan-24 | | Feb-24 | | Mar-24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Noise Levels dB (A) | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night |
| 1 | MAIN GATE INSIDE | 67.4 | 62.1 | 69.5 | 60.8 | 68.6 | 58.5 | 65.7 | 60.2 | 68.1 | 59.6 | 68.2 | 65.5 |
| 2 | COOLING TOWER END | 68.6 | 63.4 | 67.0 | 62.5 | 64.9 | 60.9 | 65.7 | 63.2 | 68.9 | 61.6 | 70.0 | 60.8 |
| 3 | NORTH WEST CORNER | 66.0 | 63.4 | 64.1 | 62.5 | 66.0 | 61.7 | 65.8 | 62.0 | 66.3 | 63.6 | 68.1 | 64.9 |
| 4 | Bhadresh Village | 48.4 | 43.0 | 51.4 | 43.1 | 52.7 | 44.2 | 52.1 | 44.2 | 49.5 | 43.3 | 52.4 | 42.1 |
| 5 | Isharpura Village | 52.1 | 42.6 | 51.0 | 41.3 | 51.9 | 42.4 | 52.9 | 42.5 | 52.9 | 39.8 | 53.3 | 41.1 |
| 6 | Chuli Village | 50.6 | 41.6 | 49.9 | 40.5 | 50.7 | 40.2 | 50.9 | 43.3 | 47.5 | 38.6 | 51.8 | 42.3 |

**ANNEXURE-VII**

# Ambient Air Quality Data- OCT, 2023 – MARCH, 2023

## Month – Oct' 2023

| SN | Location (Avg. 24 Hrs.) | PM-10 (µg/m³) | SO2 (µg/m³) | NO2 (µg/m³) | CO (mg/m³) | PM-2.5 (µg/m³) |
|---|---|---|---|---|---|---|
| 1 | Reservoir Area | 38.65 | 18.60 | 28.74 | 0.16 | 14.93 |
| 2 | Main Gate | 55.78 | 5.93 | 36.27 | 0.46 | 37.67 |
| 3 | Ash pond | 19.22 | 10.65 | 35.17 | 0.76 | 14.72 |
| 4 | Bhardesh Village | 73.90 | 17.02 | 33.89 | 0.49 | 42.10 |
| 5 | Ishrpura Village | 73.45 | 17.53 | 34.77 | 0.49 | 36.64 |
| 6 | Chuli Village | 75.70 | 18.64 | 37.16 | 0.47 | 42.52 |

## Month – Nov' 2023

| SN | Location (Avg. 24 Hrs.) | PM-10 (µg/m³) | SO2 (µg/m3) | NO2 (µg/m3) | CO (mg/m3) | PM-2.5 (µg/m3) |
|---|---|---|---|---|---|---|
| 1 | Resevoir Area | 41.41 | 18.14 | 28.74 | 0.17 | 18.66 |
| 2 | Main Gate | 47.11 | 5.97 | 36.25 | 0.48 | 32.16 |
| 3 | Ash pond | 47.17 | 14.75 | 28.74 | 0.78 | 30.11 |
| 4 | Bhardesh Village | 72.08 | 16.65 | 32.89 | 0.23 | 35.35 |
| 5 | Ishrpura Village | 78.92 | 20.54 | 37.45 | 0.49 | 41.84 |
| 6 | Chuli Village | 75.13 | 20.50 | 35.60 | 0.23 | 35.76 |

## Month – Dec' 2023

| SN | Location (Avg. 24 Hrs.) | PM-10 (µg/m³) | SO2 (µg/m3) | NO2 (µg/m3) | CO (mg/m3) | PM-2.5 (µg/m3) |
|---|---|---|---|---|---|---|
| 1 | Resevoir Area | 35.88 | 18.01 | 39.67 | 0.27 | 15.99 |
| 2 | Main Gate | 34.96 | 5.87 | 36.22 | 0.41 | 24.13 |
| 3 | Ash pond | 38.91 | 15.82 | 35.78 | 0.98 | 35.09 |
| 4 | Bhardesh Village | 78.74 | 20.05 | 36.88 | 0.59 | 41.53 |
| 5 | Ishrpura Village | 77.60 | 19.89 | 38.28 | 0.54 | 42.05 |
| 6 | Chuli Village | 75.46 | 19.60 | 36.89 | 0.55 | 42.25 |

**ANNEXURE-VII**

## Month – Jan' 2024

| SN | Location (Avg. 24 Hrs.) | PM-10 (µg/m³) | SO2 (µg/m³) | NO2 (µg/m³) | CO (mg/m³) | PM-2.5 (µg/m³) |
|---|---|---|---|---|---|---|
| 1 | Resevoir Area | 35.18 | 18.13 | 51.33 | 0.32 | 18.18 |
| 2 | Main Gate | 45.28 | 6.54 | 36.25 | 0.45 | 28.94 |
| 3 | Ash pond | 44.81 | 18.13 | 53.91 | 0.57 | 42.63 |
| 4 | Bhardesh Village | 75.10 | 17.34 | 36.56 | 0.42 | 42.28 |
| 5 | Ishrpura Village | 76.46 | 16.29 | 35.45 | 0.49 | 43.37 |
| 6 | Chuli Village | 76.64 | 18.97 | 36.63 | 0.56 | 43.87 |

## Month – Feb' 2024

| SN | Location (Avg. 24 Hrs.) | PM-10 (µg/m³) | SO2 (µg/m³) | NO2 (µg/m³) | CO (mg/m³) | PM-2.5 (µg/m³) |
|---|---|---|---|---|---|---|
| 1 | Resevoir Area | 34.47 | 17.94 | 28.78 | 0.81 | 15.61 |
| 2 | Main Gate | 39.65 | 6.04 | 36.24 | 0.41 | 26.20 |
| 3 | Ash pond | 30.31 | 17.94 | 24.15 | 0.74 | 23.82 |
| 4 | Bhardesh Village | 74.45 | 18.96 | 34.67 | 0.61 | 41.40 |
| 5 | Ishrpura Village | 74.80 | 19.38 | 35.82 | 0.43 | 42.90 |
| 6 | Chuli Village | 76.40 | 18.75 | 38.37 | 0.40 | 43.56 |

## Month – Mar' 2024

| SN | Location (Avg. 24 Hrs.) | PM-10 (µg/m³) | SO2 (µg/m³) | NO2 (µg/m³) | CO (mg/m³) | PM-2.5 (µg/m³) |
|---|---|---|---|---|---|---|
| 1 | Resevoir Area | 37.86 | 6.34 | 28.77 | 0.49 | 14.00 |
| 2 | Main Gate | 38.91 | 6.44 | 36.25 | 0.58 | 25.12 |
| 3 | Ash pond | 34.90 | 23.97 | 37.56 | 0.58 | 21.19 |
| 4 | Bhardesh Village | 73.43 | 15.88 | 31.13 | 0.56 | 38.41 |
| 5 | Ishrpura Village | 77.34 | 21.08 | 37.43 | 0.50 | 42.00 |
| 6 | Chuli Village | 76.48 | 19.37 | 36.27 | 0.68 | 41.42 |

**ANNEXURE-VIII**

# Environmental Expenditure

## Actual anticipated - As per WO issued

| Environmental Expenditure Detail (FY_2022-23 & 2023-24) | | | |
|---|---|---|---|
| **Sr. No.** | **Particulars** | **Amount (Lacs) Rs.** | |
| | | **2022-23** | **2023-24** |
| 1 | Effluent Treatment Plant (ETP) | 46.82 | 44.8 |
| 2 | Sewage Treatment Plant (STP) | 32.32 | 33.2 |
| 3 | Green Belt Development | 87.0 | 94.0 |
| 4 | Continuous Emission Monitoring System (CEMS) 8Nos.<br><br>-(AMC, Spares & Monitoring)) | 26.64 | 26.03 |
| 5 | Continuous Ambient Air Quality Monitoring System (CAAQMS) 6 Nos.<br>-(Rent and Electricity bills for surrounding plant outside installed Three station) | 10.12 | 10.80 |
| 6 | Environmental Monitoring (annual)& Instruments | 8.50 | 14.90 |
| 7 | ESP Modification | 1765.00 | 588.52 |
| **Total (Lacs) Rs.** | | **2300.56** | **812.25** |

**ANNEXURE-IX**

**JSW Energy (Barmer) Limited**
Village & Post : Bhadresh, Post Box No. 30,
Distt : Barmer – 344001 (Rajasthan)
CIN : U31102MH1996PLC185098
Phone : +91 2982 229100
Website : www.jsw.in

Ref: JSWE(B)L/ENV/23-24/023 Date: 13.12.2023

**To,**

**Ministry of Environment Forests & Climate Change,**
**Integrated Regional Office,**
**A-209&218, Aranya Bhavan, M. G. Road,**
**Jaipur-304002, Rajasthan.**

**Sub: Compliance Report-Environmental Clearance for 1080 MW Lignite based Power Plant at Village-Bhadresh, District Barmer.**

Dear Sir,

With reference to your letter No. J-13011/58/2006-IA-II (T) dated 20.07.2007 and 19.11.2009, and followed by Letter no. IV/ENV/R/Th-39/679/08/273, we herewith submit half-yearly compliance report, for the period pertaining to **APRIL- 2023 to September- 2023**, for the conditions stipulated in the Environmental clearance issued for this Power Project. Analysis Data has uploaded on JSWEBL website – http://www.jsw.in/energy/about-barmer-plant.

We have taken up the Project activity at proposed site incorporating the conditions stipulated in this environmental clearance.

Thanking you.

For JSW ENERGY (BARMER) Ltd.

Dipak Patil
GM (Operation, Environment & Chemistry)

Enclosure:

| | | |
|---|---|---|
| 1. | Compliance Report | |
| 2. | Water consumption Data | -**Annexure I** |
| 3. | Effluent Water Data | -**Annexure II** |
| 4. | Coal Analysis Data | -**Annexure III** |
| 5. | CEMS & Stack Monitoring DATA | -**Annexure IV** |
| 6. | Ash Utilization Data | -**Annexure V** |
| 7. | Noise Monitoring | -**Annexure VI** |
| 8. | AAQ Monitoring Data | -**Annexure VII** |
| 9. | Environmental Expenditure | - **Annexure VIII** |
| 10. | Last Compliance Report | -**Annexure IX** |

**C.C.**
The Member Secretary – Central Pollution Control Board, Delhi
The Member Secretary – RSPCB, Jaipur
The Regional Officer – RSPCB, Balotra.