

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 JSWE(B)L(RWPL) at Village-Bhadresh, District-Barmer

Reporting Period: OCT-2018 to MAR-2019

S.N.	Condition	Status
i	<i>No land in excess of 468 ha shall be acquired for any activity of the project.</i>	Land acquisition has been carried at the time of setting up the Power Project. No additional land been acquired for this Project.
ii	<i>The water requirement for the project shall not exceed 37.3 cusecs. No ground water shall be abstracted for any activity of the project.</i>	Water in excess of the mandated 37.3 cusecs would not be drawn during the operation of the Project. 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	<i>Closed Circuit Cooling System with induced draft cooling towers shall be installed.</i>	Four numbers of closed circuit cooling tower blocks with induced draft cooling towers have been erected and are in operation.
iv	<i>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.</i>	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	<i>Lignite with ash content not exceeding 20% and sulphur content not exceeding 2.0% shall be used.</i>	Lignite with ash content less than 20% and Sulphur content less than 2% being used. 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.	<p>The Project is based on Circulating Fluidized Base Combustion technology for fuel firing and involves injection of lime, which absorbs Sulphur.</p> <p>As such, there is no requirement for FGD. However space provision has been made for FGD.</p>
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, SO ₂ , NO _x & CO to be within prescribed levels. ANNEXURE-IV
viii	Low NO _x burners shall be installed.	The boiler is designed on Circulating Fluidized Bed Combustion, system attains to very low NO _x generation.
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 .
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.	<p>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.</p> <p>Ash Utilisation data ANNEXURE-V</p>
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	<p><i>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.</i></p>	<p>Resettlement Action Plan (RAP) was compiled and submitted to the MOEF on 30-07-2007.</p>
xiv	<p><i>Necessary prior clearance from NHAI shall be obtained before laying the pipeline.</i></p>	<p>All necessary prior clearance from NHAI had obtained before laying the pipeline and a copy Submitted.</p>
xv	<p><i>Necessary prior clearance from Indian Air Force shall be obtained for construction of stacks of requisite height before starting the work on the project.</i></p>	<p>Before commencing the civil work on the stacks, necessary clearance had obtained from the Indian Air Force.</p>
xvi	<p><i>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.</i></p>	<p>The Temple is outside the plant premises. In consultation with the local population, suitable developmental measures such as supply of lighting and electricity have been taken for this temple.</p>
xvii	<p><i>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.</i></p>	<p>There is hardly any ground water within 20 km of the Project area.</p>
xviii	<p><i>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.</i></p>	<p>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</p>
xix	<p><i>A greenbelt shall be developed all around the plant boundary and ash pond covering an area of 154 ha.</i></p>	<p>A total of 154 Ha area brought under green belt developed as designated greenbelt area. Mortality replacement work is continuous process and is being carried.</p>
xx	<p><i>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.</i></p>	<p>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</p>

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 minimise 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 VIII
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.
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.

IGNP WATER BILL**October-2018 To March-2019**

Month	Cuft/Month	Cum/Month	Cuft/day	Cusecs – Day
October	87181304.51	2468713.00	2812300.15	33.63
November	80444538.61	2277948.00	2681484.62	31.04
December	79582442.00	2253536.01	2567175.55	30.70
January	57320190.00	1623135.82	1849038.39	22.11
February	33843839.38	958356.00	1208708.549	13.06
March	73324186.88	2076321	2365296.351	28.29

Govt of Rajasthan
Indira Gandhi Nahar Project

Oct-18 (3)

SV. No :- $\frac{2217}{1/11-18}$

To :- The General manager
Raj West Power Project
Raywest town ship
near Sant Paul School
Barmer Rajasthan

Sub - Raw water Bill for industrial purpose for the month - 10/18

S.N	Particular	Reading on 30/9/18	Reading on 31/10/18	Diff. as per flow meter	Cft as per flow meter	Unit	Rate	Amount
1	Supply of water for Raywest Power Project from RD 1485=250 IG MN	72264195	74732908	2468713	87181304.5	1000 CFT	20	174362600
								174362600
								₹
								₹174362600
								₹174362600
								₹174362600

C.Rs - Seventeen Lakhs forty three thousand six hundred twenty six only

Say Rs - 174362600/- only

(Signature)

(Signature)

Govt of Rajasthan
Indira Gandhi Nahar Project

Nov-18

SV. No :- $\frac{2372}{3/11/18}$

To :- The General manager
Raj West Power Project
Raywest town ship
near Sant Paul School
Barmer Rajasthan

Sub - Raw water Bill for industrial purpose for the month - 11/18

S.N	Particular	Reading on 31/10/18	Reading on 30/11/18	Diff. as per flow meter	Cft as per flow meter	Unit	Rate	Amount
1	Supply of water for Raywest Power Project from RD 1485=250 IG MN	71232908	77010856	2277948	80444532.61	1000 CFT	20	16088900
								16088900
								₹
								₹16088900
								₹16088900
								₹16088900

C.Rs - Sixteen Lakhs Eight thousand Eight hundred Ninety only

Say Rs - 16088900/- only

(Signature)

(Signature)

Dec-18

Govt. of Rajasthan
Intra Branch/Naaharpariyojan

No. 254
4-1-2018

Date

To,
The General Manager
Raywest power project
Raywest town ship
Near Sant Paul School
Barmer Rajasthan

Subject: Raw water bill for industrial purpose for the month of 12/2018

S NO	particulars	Reading on 31/12/18	Reading on 30/11/18	Difference as per Flowmeter	CF as per Flowmeter	Unit	Rate	Amount
1	Supply of Raw water For Industrial Purpose to Raywest power Project From RD 1489-25 OF I.B.M.N	79264392	77010556	2253536	79582112	/1000	20	1591648-80
Totals								1591648-80
Say Rs 1591648-80 only								

C Rupai - Fifteen Lakhs Sixty One thousand Six hundred Fourty nine and

अधिशासी अभियन्ता
 टी.एम.सी. खण्ड
 इ.ना. न.प. मोहनगढ़

अधिशासी अभियन्ता
 टी.एम.सी. खण्ड
 इ.ना. न.प. मोहनगढ़

Jan 19

Govt of Rajasthan
Intra Branch/Naaharpariyojan

No. 2227
31-1-2019

Date

To,
The General Manager
Raywest power project /
JSW Energy Limited.
Near Sant Paul School
Barmer, Rajasthan

Subject: Raw water bill for industrial purpose for the month of 1/2019

S NO	particulars	Reading on 30/1/19	Reading on 31/12/18	Difference as per Flowmeter	CF as per Flowmeter	Unit	Rate	Amount
1	Supply of Raw water For Industrial Purpose to JSW Energy From RD 1489-25 OF I.B.M.N	79264392	80887528	1623136	57320/90	/1000	20	1146403-9
Say Rs 1146404/-								

C Eleven Lakh Fourty Six thousand Four hundred and four

अधिशासी अभियन्ता
 टी.एम.सी. खण्ड
 इ.ना. न.प. मोहनगढ़

अधिशासी अभियन्ता
 टी.एम.सी. खण्ड
 इ.ना. न.प. मोहनगढ़

Feb-11

Government of Rajasthan
Indira Gandhi Nahar Project

No. 2451
1-3-19

To,
The General Manager
J.S.W Energy Limited,
Barmer, Rajasthan

Date

Subj: Raw water bill of a month - 2/19 For Industrial use

S NO	particular	Reading on 30/1/19	Reading on 28/2/19	Difference as per Flow meter	CFT as per Flow meter	unit	Rate	Amount
1	Supply of Raw water for Industrial purpose to JSW Energy from RD 1489-25 OPIUM N	80887528	81845864	958336	38488898	1000 CFT	20	676876
Total								676876
Say Ru - 676877/- only								

Rs. 676876/- only

[Signature]
General Manager
J.S.W Energy Limited

[Signature]
General Manager
J.S.W Energy Limited

[Signature]
J.S.W

Mar-19

Govt of Rajasthan
Indira Gandhi Nahar Project

No. -

To,
The General Manager
JSW Energy Limited
Near Sant Paul School
Barmer, Rajasthan

Date

Subject: Raw water bill for Industrial purpose for the month 3/19

S NO	particular	Reading on 28/2/19	Reading on 31/3/19	Difference as per Flow meter	CFT as per Flow meter	unit	Rate	Amount
1	Supply of Raw water for JSW Energy Limited from RD 1489-25 OPIUM N	81845864	83922205	2076321	733241888	1000 CFT	20	146648373
Total								146648373
Say Ru - 1466484/- only								

Rs. 1466484/- only

[Signature]
General Manager
J.S.W Energy Limited

ANNEXURE-II

Effluent Water Quality OCT-2018 To MAR-2019

SN	Parameters	UoM	CPCB Limits	Results					
				Oct	Nov	Dec	Jan	Feb	Mar
1.	pH		6.5-8.5	7	7.2	7	7.1	7	6.9
2.	Biochemical Oxygen Demand (BOD) @ 27Deg C for 3 days	mg/L	< 30.0	20.5	21	22.8	22	22	22.8
3.	Chemical Oxygen Demand (COD)	mg/L	< 250	71	72.3	75.5	74	74.3	79.5
4.	Total Kjeldhal Nitrogen as NH3	mg/L	< 100	9.1	8.5	8.3	8.6	8.5	8.5
5.	Free Available Chlorine	mg/L	< 0.5	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
6.	Oil & Grease	mg/L	< 20	2.6	3.2	2.2	3.1	2.5	1.6
7.	Copper as Cu	mg/L	< 1	0.017	0.047	0.014	0.015	0.02	0.013
8.	Zinc as Zn	mg/L	< 1	0.27	0.38	0.37	0.36	0.36	0.31
9.	Iron as Fe	mg/L	< 1	0.405	0.433	0.423	0.403	0.41	0.395
10.	Total Suspended Solid	mg/L	< 100	37.5	37.8	33.5	38.5	34.5	34
11.	Ammonical Nitrogen as N	mg/L	< 50	5.9	5.7	5.2	5.6	5.7	4.9
12.	Nitrate Nitrogen	mg/L	< 10	2.2	2	1.9	2.1	2.1	2
13.	Total Chromium as Cr	mg/L	< 1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

ANNEXURE-III

COAL ANALYSIS REPORT

COAL ANALYSIS REPORT OCT, 2018 – MAR, 2019

Month	AVERAGE					
	Total Moisture	Volatile Matter	Ash	Fix Carbon	Gross Calorific Value	Sulfur
	%	%	%	%	Kcal/Kg	%
OCTOBER - 18	43.97	10.91	23.83	21.29	2986.36	0.920
NOVEMEBR - 18	43.85	10.51	24.23	21.41	3023.64	0.910
DECEMBER - 18	43.9	11	24.02	21.09	2990.34	0.930
JANUARY-19	43.67	11.81	23.57	20.96	2923.48	0.930
FEBRUARY-19	43.55	11.89	24.82	19.74	2956.11	0.900
MARCH-19	43.64	12.36	24.09	19.91	2894.45	0.900

Mitra S. K. Private Limited

5/4, Shankar Colony,
Old Fatehpura, Udaipur - 313001 (Rajasthan)
CIN : U51909WB1956PTC023037

T : 0294 2451926
F : 0294 2451926
E : udaipur@mitrask.co.in



Certificate No.: - MSK/UDR/RWPL/2018-19/73

Date:- 05.11.2018

CERTIFICATE OF SAMPLING & ANALYSIS

This is to certify that we the under sign surveyor have carried out Conveyor Belt Coal sampling feeding to Unit # 1, 2, 3, 4, 5, 6, 7 & 8 Bunker and analysis for the same LIGNITE COAL sample and report as under

Date & Place of Attendance: At RWPL Plant, Bhadresh from 01.10.2018 to 31.10.2018

Sampling & Analysis: Continuous sampling was done during feeding of Lignite Coal in Bunker. 24 Hrs. sample thus collected sample was reduced to prepare the Moisture and General analysis sample

COMPOSITE OF UNIT 1, 2, 3, 4, 5, 6, 7 & 8

Date	TM% (ARB)	ASH% (ARB)	VM% (ARB)	FC% (ARB)	GCV (Kcal/kg) (ARB)	Sulfur% (ARB)
01.10.18	44.38	10.74	23.71	21.17	2960	0.95
02.10.18	44.28	10.65	23.93	21.14	2945	0.89
03.10.18	43.64	10.78	23.57	22.01	2969	0.90
04.10.18	43.97	11.05	24.09	20.89	2975	0.91
05.10.18	43.60	10.89	23.72	21.79	2970	0.91
06.10.18	44.17	11.24	23.99	20.60	2963	0.93
07.10.18	44.22	11.00	23.96	20.82	2960	0.93
08.10.18	43.69	11.09	23.71	21.51	2977	0.92
09.10.18	43.87	11.10	23.61	21.42	2970	0.91
10.10.18	43.89	10.94	23.78	21.39	2984	0.93
11.10.18	43.74	11.08	23.82	21.36	2989	0.88
12.10.18	44.33	10.74	23.73	21.20	2975	0.92
13.10.18	44.19	10.78	24.06	20.97	2987	0.91
14.10.18	43.55	10.73	24.14	21.58	2995	0.90
15.10.18	43.57	10.76	23.80	21.87	2981	0.93
16.10.18	43.87	10.83	23.88	21.42	2974	0.94
17.10.18	44.10	10.85	23.83	21.22	2988	0.92
18.10.18	43.88	10.81	23.56	21.75	2971	0.93
19.10.18	44.22	10.73	23.64	21.41	2976	0.94
20.10.18	44.39	11.08	23.62	20.91	2969	0.91
21.10.18	44.29	10.83	23.79	21.09	2974	0.93

H.O.: Shraichi Centre (5th Floor), 74B, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India
T: 91 33 22172249 / 4014 3000 / 2265 0006 / 2265 0007 F: 91 33 2265 0008 E: info@mitrask.com W: www.mitrask.com



Mitra S. K. Private Limited



5/4, Shankar Colony,
Old Fatehpura, Udaipur - 313001 (Rajasthan)
CIN : U51909WB1956PTC023037

T : 0294 2451926
F : 0294 2451926
E : udaipur@mitrask.co.in

Certificate No.: - MSK/UDR/RWPL/2018-19/73

Date:- 05.11.2018

Date	TM% (ARB)	ASH% (ARB)	VM% (ARB)	FC% (ARB)	GCV (Kcal/kg) (ARB)	Sulfur% (ARB)
22.10.18	44.63	11.34	24.08	19.95	2969	0.94
23.10.18	44.08	10.91	23.64	21.37	2967	0.91
24.10.18	44.34	10.84	23.63	21.19	2990	0.93
25.10.18	44.79	10.91	24.03	20.27	2960	0.91
26.10.18	44.68	10.88	23.96	20.48	2965	0.94
27.10.18	44.15	10.86	23.73	21.26	3015	0.95
28.10.18	44.02	11.06	23.56	21.36	3021	0.94
29.10.18	44.07	10.98	24.07	20.88	3001	0.93
30.10.18	42.81	10.92	23.97	22.30	3084	0.91
31.10.18	41.52	10.99	24.12	23.37	3159	0.93

Note :-

1. These Samples were collected by Mitra S. K. Pvt. Ltd. from RWPL, Bhadresh & analyzed at our NABL accredited Gandhidham Lab.

2. This report reflects our findings at the date and place of Inspection only and does not refer to any other matter.

Checked By:

Authorized Signatory

For Mitra S. K. Private Limited

Authorized Signatory

H.O.: Shrachi Centre (5th Floor), 74B, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India
T: 91 33 22172249 / 4014 3000 / 2265 0006 / 2265 0007 F: 91 33 2265 0008 E: info@mitrask.com W: www.mitrask.com

Mitra S. K. Private Limited



5/4, Shankar Colony,
Old Fatehpura, Udaipur - 313001 (Rajasthan)
CIN : U51909WB1956PTC023037

T : 0294 2451926
F : 0294 2451926
E : udaipur@mitrask.co.in

Certificate No.: - MSK/UDR/RWPL/2018-19/85

Date:- 05.12.2018

CERTIFICATE OF SAMPLING & ANALYSIS

This is to certify that we the under sign surveyor have carried out Conveyor Belt Coal sampling feeding to Unit # 1, 2, 3, 4, 5, 6, 7 & 8 Bunker and analysis for the same LIGNITE COAL sample and report as under

Date & Place of Attendance: At RWPL Plant, Bhadresh from 01.11.2018 to 30.11.2018

Sampling & Analysis: Continuous sampling was done during feeding of Lignite Coal in Bunker. 24 Hrs. sample thus collected sample was reduced to prepare the Moisture and General analysis sample

COMPOSITE OF UNIT 1, 2, 3, 4, 5, 6, 7 & 8

Date	TM% (ARB)	ASH% (ARB)	VM% (ARB)	FC% (ARB)	GCV (Kcal/kg) (ARB)	Sulfur% (ARB)
01.11.18	42.78	11.77	23.80	21.70	3100	0.95
02.11.18	43.14	10.08	25.23	21.60	3075	0.94
03.11.18	43.07	10.28	24.30	22.40	3090	0.85
04.11.18	43.25	9.89	25.24	21.60	3095	0.93
05.11.18	43.42	11.19	23.41	22.00	3071	0.93
06.11.18	44.12	10.47	24.51	20.90	3056	0.90
07.11.18	43.75	10.88	23.80	21.60	3050	0.95
08.11.18	42.61	11.57	23.90	21.90	3049	0.92
09.11.18	43.74	11.45	23.98	20.80	3060	0.92
10.11.18	43.52	9.68	24.49	22.30	3066	0.93
11.11.18	43.33	10.88	25.13	20.70	3070	0.94
12.11.18	43.71	10.14	24.62	21.50	3065	0.86
13.11.18	43.68	10.47	24.54	21.30	3040	0.90
14.11.18	43.56	10.75	22.99	22.70	3030	0.92
15.11.18	43.84	10.30	25.38	20.50	2990	0.87
16.11.18	43.26	9.93	24.56	22.30	2995	0.84
17.11.18	44.60	10.22	24.60	20.60	2964	0.88
18.11.18	44.54	10.33	23.20	21.90	2941	0.95
19.11.18	44.65	11.49	24.20	19.70	2965	0.95
20.11.18	44.05	10.10	23.39	22.50	2970	0.88
21.11.18	44.73	11.00	25.27	19.00	2965	0.94

H.O.: Shrachi Centre (5th Floor), 74B, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India
T: 91 33 22172249 / 4014 3000 / 2265 0006 / 2265 0007 F: 91 33 2265 0008 E: info@mitrask.com W: www.mitrask.com



Mitra S. K. Private Limited



5/4, Shankar Colony,
Old Fatehpura, Udaipur - 313001 (Rajasthan)
CIN : U51909WB1956PTC023037

T : 0294 2451926
F : 0294 2451926
E : udaipur@mitrask.co.in

Certificate No.: - MSK/UDR/RWPL/2018-19/85

Date:- 05.12.2018

Date	TM% (ARB)	ASH% (ARB)	VM% (ARB)	FC% (ARB)	GCV (Kcal/kg) (ARB)	Sulfur% (ARB)
22.11.18	44.17	11.25	23.45	21.10	2992	0.93
23.11.18	44.18	10.93	23.84	21.10	3005	0.85
24.11.18	43.90	9.89	23.99	22.20	3010	0.93
25.11.18	44.09	10.56	24.60	20.80	3012	0.88
26.11.18	44.07	9.13	25.00	21.80	3035	0.94
27.11.18	44.20	9.44	24.40	22.00	3040	0.94
28.11.18	43.98	10.94	23.11	22.00	3030	0.89
29.11.18	44.12	9.85	24.00	22.00	3001	0.92
30.11.18	45.43	11.15	23.46	20.00	2900	0.94

Note :-

1. These Samples were collected by Mitra S. K. Pvt. Ltd. from RWPL, Bhadresh & analyzed at our NABL accredited Gandhidham Lab.
2. This report reflects our findings at the date and place of Inspection only and does not refer to any other matter.

Checked By:



Authorized Signatory

For Mitra S. K. Private Limited



Authorized Signatory

Mitra S.K. Private Limited

5/4, Shankar Colony
Old Fatehpura, Udaipur-313001(Rajasthan)
CIN: U51909WB1956PTC023037

T: 0294 2451926
F: 0294 2451926
E: udaipur@mitrask.co.in



Certificate No.: - MSK/UDR/RWPL/2018-19/97

Date:- 04.01.2019

CERTIFICATE OF SAMPLING & ANALYSIS

This is to certify that we the under sign surveyor have carried out Conveyor Belt Coal sampling feeding to Unit # 1, 2, 3, 4, 5, 6, 7 & 8 Bunker and analysis for the same LIGNITE COAL sample and report as under

Date & Place of Attendance: At RWPL Plant, Bhadresh from 01.12.2018 to 31.12.2018

Sampling & Analysis: Continuous sampling was done during feeding of Lignite Coal in Bunker. 24 Hrs. sample thus collected sample was reduced to prepare the Moisture and General analysis sample

COMPOSITE OF UNIT 1, 2, 3, 4, 5, 6, 7 & 8

Date	TM% (ARB)	ASH% (ARB)	VM% (ARB)	FC% (ARB)	GCV (Kcal/kg) (ARB)	Sulfur% (ARB)
01.12.18	44.96	11.00	23.85	20.19	2901	0.92
02.12.18	44.29	10.55	24.41	20.75	2995	0.93
03.12.18	44.57	11.13	23.31	20.99	2990	0.92
04.12.18	44.49	10.65	24.51	20.35	3002	0.96
05.12.18	44.33	11.04	24.48	20.15	3005	0.95
06.12.18	43.29	10.90	24.06	21.75	3004	0.91
07.12.18	43.28	11.05	24.33	21.34	3007	0.90
08.12.18	43.94	11.51	24.29	20.26	2988	0.96
09.12.18	44.35	11.19	23.40	21.06	2996	0.94
10.12.18	44.23	11.12	24.54	20.11	2997	0.91
11.12.18	43.76	10.77	25.16	20.31	3000	0.95
12.12.18	44.03	10.76	24.10	21.11	3020	0.91
13.12.18	43.53	11.12	23.73	21.62	3025	0.94
14.12.18	44.54	11.56	23.76	20.14	3030	0.93
15.12.18	42.95	10.90	24.28	21.87	3010	0.95
16.12.18	45.08	10.66	24.03	20.23	3011	0.91
17.12.18	43.90	10.71	23.94	21.45	3020	0.94
18.12.18	43.79	11.09	23.33	21.79	3031	0.96
19.12.18	43.86	10.85	24.01	21.28	3020	0.94
20.12.18	43.46	10.96	24.11	21.47	3009	0.91
21.12.18	44.06	10.15	23.69	22.10	3005	0.96

H.O.:Sharchi Centre (5th Floor), 74B, Acharya Jagadish Chandra Bose Road, Kolkata – 700016, West Bengal, India
T: 91 33 4014 3000/ 2265 0006 / 2265 0007 F: 91 33 2265 0008 E: info@mitrask.com W: www.mitrask.com



Mitra S.K. Private Limited

5/4, Shankar Colony
Old Fatehpura, Udaipur-313001(Rajasthan)
CIN: U51909WB1956PTC023037

T: 0294 2451926
F: 0294 2451926
E: udaipur@mitrask.co.in



Certificate No.: - MSK/UDR/RWPL/2018-19/97

Date:- 04.01.2019

Date	TM% (ARB)	ASH% (ARB)	VM% (ARB)	FC% (ARB)	GCV (Kcal/kg) (ARB)	Sulfur% (ARB)
22.12.18	43.30	10.79	24.69	21.22	3022	0.93
23.12.18	43.03	11.26	23.91	21.80	3016	0.96
24.12.18	43.36	11.47	24.41	20.76	3030	0.94
25.12.18	42.91	11.41	23.21	22.47	3025	0.94
26.12.18	42.61	11.33	23.73	22.33	3080	0.93
27.12.18	42.09	11.07	23.98	22.86	3095	0.97
28.12.18	42.55	10.39	23.81	23.25	3056	0.90
29.12.18	43.23	11.23	24.14	21.40	3008	0.91
30.12.18	45.74	11.15	23.72	19.39	2725	0.93
31.12.18	45.71	11.46	23.82	19.01	2742	0.95

Note :-

1. These Samples were collected by Mitra S. K. Pvt. Ltd. from RWPL, Bhadresh & analyzed at our NABL accredited Gandhidham Lab.

2. This report reflects our findings at the date and place of Inspection only and does not refer to any other matter.

Checked By:

Authorized Signatory

For Mitra S. K. Private Limited

Authorized Signatory

H.O.:Sharchi Centre (5th Floor), 74B, AcharyaJagadish Chandra Bose Road, Kolkata – 700016, West Bengal, India
T: 91 33 4014 3000/ 2265 0006 / 2265 0007 F: 91 33 2265 0008 E: info@mitrask.comW: www.mitrask.com

Mitra S. K. Private Limited

5/4, Shankar Colony,
Old Fatehpura, Udaipur - 313001 (Rajasthan)
CIN : U51909WB1956PTC023037

T: 0294 2451926
F: 0294 2451926
E: udaipur@mitrask.co.in



Certificate No.: - MSK/UDR/RWPL/2018-19/109

Date:- 05.02.2019

CERTIFICATE OF SAMPLING & ANALYSIS

This is to certify that we the under sign surveyor have carried out Conveyor Belt Coal sampling feeding to Unit # 1, 2, 3, 4, 5, 6, 7 & 8 Bunker and analysis for the same LIGNITE COAL sample and report as under

Date & Place of Attendance: At JSW Energy (Barmer) Ltd. Plant, Bhadresh from 01.01.2019 to 31.01.2019

Sampling & Analysis: Continuous sampling was done during feeding of Lignite Coal in Bunker. 24 Hrs. sample thus collected sample was reduced to prepare the Moisture and General analysis sample

COMPOSITE OF UNIT 1, 2, 3, 4, 5, 6, 7 & 8

Date	TM% (ARB)	ASH% (ARB)	VM% (ARB)	FC% (ARB)	GCV (Kcal/kg) (ARB)	Sulfur% (ARB)
01.01.19	43.63	11.80	22.65	21.92	2963	0.94
02.01.19	44.36	11.20	23.02	21.42	2970	0.94
03.01.19	43.32	11.60	23.19	21.89	2965	0.96
04.01.19	43.41	11.90	22.55	22.14	2970	0.98
05.01.19	43.73	12.10	23.17	21.00	2950	0.99
06.01.19	44.13	11.90	23.20	20.77	2944	0.91
07.01.19	43.21	11.80	23.41	21.58	2955	0.94
08.01.19	43.13	11.70	24.95	20.22	2940	0.91
09.01.19	42.83	11.80	23.30	22.07	2950	0.95
10.01.19	42.81	11.10	24.48	21.61	2977	0.91
11.01.19	43.22	11.70	23.50	21.58	2973	0.94
12.01.19	43.42	12.30	23.94	20.34	2975	0.95
13.01.19	43.50	11.90	23.07	21.53	2980	0.99
14.01.19	42.61	11.50	24.19	21.70	2978	0.97
15.01.19	43.01	11.20	23.86	21.93	2970	0.99
16.01.19	43.21	11.80	23.95	21.04	2975	0.98
17.01.19	43.51	11.50	24.10	20.89	2930	0.93
18.01.19	43.30	12.10	24.22	20.38	2941	0.82
19.01.19	43.61	11.90	22.82	21.67	2890	0.89
20.01.19	44.51	12.10	22.31	21.08	2811	0.96
21.01.19	44.74	12.10	23.69	19.47	2816	0.84

H.O. : Shraichi Centre (5th Floor), 74B, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India
T : 91 33 22172249 / 4014 3000/ 2265 0006 / 2265 0007 F : 91 33 2265 0008 E : info@mitrask.com W : www.mitrask.com



Mitra S. K. Private Limited

5/4, Shankar Colony,
Old Fatehpura, Udaipur - 313001 (Rajasthan)
CIN : U51909WB1956PTC023037

T : 0294 2451926
F : 0294 2451926
E : udaipur@mitrask.co.in



Certificate No.: - MSK/UDR/RWPL/2018-19/109

Date:- 05.02.2019

Date	TM% (ARB)	ASH% (ARB)	VM% (ARB)	FC% (ARB)	GCV (Kcal/kg) (ARB)	Sulfur% (ARB)
22.01.19	45.21	12.30	23.34	19.15	2821	0.93
23.01.19	44.33	11.60	22.70	21.37	2829	0.99
24.01.19	44.80	11.90	23.78	19.52	2850	0.94
25.01.19	44.30	11.80	23.19	20.71	2857	0.90
26.01.19	43.61	12.10	23.84	20.45	2855	0.95
27.01.19	44.24	12.20	24.10	19.46	2868	0.93
28.01.19	43.41	11.40	25.00	20.19	2925	0.90
29.01.19	43.33	12.10	24.33	20.24	2945	0.91
30.01.19	42.82	11.90	23.73	21.55	2971	0.88
31.01.19	45.04	11.90	23.43	19.63	2801	0.92

Note :-

1. These Samples were collected by Mitra S. K. Pvt. Ltd. from JSW Energy (Barmer) Ltd. Plant, Bhadresh & analyzed at our NABL accredited Gandhidham Lab.

2. This report reflects our findings at the date and place of Inspection only and does not refer to any other matter.

Checked By:

Authorized Signatory

For Mitra S. K. Private Limited



Authorized Signatory

Mitra S. K. Private Limited

5/4, Shankar Colony,
Old Fatehpura, Udaipur - 313001 (Rajasthan)
CIN : U51909WB1956PTC023037

T: 0294 2451926
F: 0294 2451926
E: udaipur@mitrask.co.in



Certificate No.: - MSK/UDR/RWPL/2018-19/121

Date:- 05.03.2019

CERTIFICATE OF SAMPLING & ANALYSIS

This is to certify that we the under sign surveyor have carried out Conveyor Belt Coal sampling feeding to Unit # 1, 2, 3, 4, 5, 6, 7 & 8 Bunker and analysis for the same LIGNITE COAL sample and report as under

Date & Place of Attendance: At JSW Energy (Barmer) Ltd. Plant, Bhadresh from 01.02.2019 to 28.02.2019

Sampling & Analysis: Continuous sampling was done during feeding of Lignite Coal in Bunker. 24 Hrs. sample thus collected sample was reduced to prepare the Moisture and General analysis sample

COMPOSITE OF UNIT 1, 2, 3, 4, 5, 6, 7 & 8

Date	TM% (ARB)	ASH% (ARB)	VM% (ARB)	FC% (ARB)	GCV (Kcal/kg) (ARB)	Sulfur% (ARB)
01.02.19	42.99	12.01	24.70	20.30	2912	0.94
02.02.19	43.49	12.14	25.78	18.60	2910	0.88
03.02.19	43.41	11.83	24.10	20.70	2900	0.90
04.02.19	44.71	12.32	25.07	17.90	2916	0.94
05.02.19	44.63	12.93	24.30	18.10	2901	0.91
06.02.19	43.95	10.64	25.00	20.40	2915	0.95
07.02.19	44.14	11.02	24.80	20.00	2910	0.94
08.02.19	43.57	11.13	25.73	19.60	2916	0.94
09.02.19	43.46	11.53	25.45	19.60	2920	0.92
10.02.19	43.57	12.63	24.57	19.20	2928	0.89
11.02.19	43.99	15.08	23.20	17.70	2935	0.92
12.02.19	43.20	14.14	24.04	18.60	2909	0.90
13.02.19	43.68	11.06	24.18	21.10	2916	0.91
14.02.19	43.48	13.14	24.48	18.90	2900	0.93
15.02.19	45.02	12.31	24.40	18.30	2910	0.92
16.02.19	43.49	13.30	24.60	18.60	2898	0.89
17.02.19	44.60	12.09	25.80	17.50	2895	0.88
18.02.19	44.95	11.50	24.89	18.70	2890	0.85
19.02.19	43.46	11.89	24.90	19.80	2896	0.93
20.02.19	44.03	11.87	24.87	19.20	2866	0.92
21.02.19	41.34	11.43	24.25	23.00	3101	0.90

H.O. : Shrichi Centre (5th Floor), 74B, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India
T : 91 33 22172249 / 4014 3000/ 2265 0006 / 2265 0007 F : 91 33 2265 0008 E : info@mitrask.com W : www.mitrask.com



Mitra S. K. Private Limited

5/4, Shankar Colony,
Old Fatehpura, Udaipur - 313001 (Rajasthan)
CIN : U51909WB1956PTC023037

T: 0294 2451926
F: 0294 2451926
E: udaipur@mitrask.co.in



TESTING • INSPECTION

Certificate No.: - MSK/UDR/RWPL/2018-19/121

Date:- 05.03.2019

Date	TM% (ARB)	ASH% (ARB)	VM% (ARB)	FC% (ARB)	GCV (Kcal/kg) (ARB)	Sulfur% (ARB)
22.02.19	42.25	11.56	25.41	20.80	3111	0.89
23.02.19	43.84	10.75	23.93	21.50	3050	0.91
24.02.19	42.52	10.93	24.91	21.60	3071	0.88
25.02.19	42.59	11.04	26.01	20.40	3155	0.85
26.02.19	41.86	10.41	25.83	21.90	3160	0.92
27.02.19	42.88	9.95	25.62	21.60	3100	0.84
28.02.19	44.31	11.57	24.64	19.50	2887	0.84

Note :-

1. These Samples were collected by Mitra S. K. Pvt. Ltd. from JSW Energy (Barmer) Ltd. Plant, Bhadresh & analyzed at our NABL accredited Gandhidham Lab.

2. This report reflects our findings at the date and place of Inspection only and does not refer to any other matter.

Checked By:

Authorized Signatory

For Mitra S. K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

5/4, Shankar Colony,
Old Fatehpura, Udaipur - 313001 (Rajasthan)
CIN : U51909WB1956PTC023037

T : 0294 2451926
F : 0294 2451926
E : udaipur@mitrask.co.in



Certificate No.: - MSK/UDR/RWPL/2018-19/133

Date:- 05.04.2019

CERTIFICATE OF SAMPLING & ANALYSIS

This is to certify that we the under sign surveyor have carried out Conveyor Belt Coal sampling feeding to Unit # 1, 2, 3, 4, 5, 6, 7 & 8 Bunker and analysis for the same LIGNITE COAL sample and report as under

Date & Place of Attendance: At JSW Energy (Barmer) Ltd. Plant, Bhadresh from 01.03.2019 to 31.03.2019

Sampling & Analysis: Continuous sampling was done during feeding of Lignite Coal in Bunker. 24 Hrs. sample thus collected sample was reduced to prepare the Moisture and General analysis sample

COMPOSITE OF UNIT 1, 2, 3, 4, 5, 6, 7 & 8

Date	TM% (ARB)	ASH% (ARB)	VM% (ARB)	FC% (ARB)	GCV (Kcal/kg) (ARB)	Sulfur% (ARB)
01.03.19	42.51	12.31	23.15	22.03	2990	0.91
02.03.19	43.58	11.74	23.52	21.16	2980	0.88
03.03.19	42.18	12.12	23.69	22.01	2985	0.93
04.03.19	42.49	12.46	23.05	22.00	2987	0.95
05.03.19	42.00	12.62	23.67	21.71	2990	0.96
06.03.19	42.03	12.47	23.70	21.80	2981	0.88
07.03.19	43.23	12.32	23.91	20.54	2905	0.91
08.03.19	43.43	12.29	25.45	18.83	2925	0.88
09.03.19	44.62	12.32	23.80	19.26	2850	0.92
10.03.19	44.51	11.65	24.98	18.86	2820	0.88
11.03.19	44.69	12.23	24.00	19.08	2860	0.91
12.03.19	44.53	12.86	24.44	18.17	2845	0.92
13.03.19	44.27	12.41	23.57	19.75	2881	0.96
14.03.19	44.48	12.01	24.69	18.82	2878	0.94
15.03.19	44.09	11.73	24.36	19.82	2890	0.96
16.03.19	45.49	12.32	24.45	17.74	2800	0.95
17.03.19	45.33	12.08	24.60	17.99	2790	0.90
18.03.19	44.95	12.63	24.72	17.70	2821	0.79
19.03.19	43.51	12.40	23.32	20.77	2905	0.86
20.03.19	43.15	12.63	22.81	21.41	2910	0.93
21.03.19	43.12	12.61	24.19	20.08	2915	0.81

H.O. : Shrachi Centre (5th Floor), 74B, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India
T : 91 33 22172249 / 4014 3000/ 2265 0006 / 2265 0007 F : 91 33 2265 0008 E : info@mitrask.com W : www.mitrask.com



Mitra S. K. Private Limited

5/4, Shankar Colony,
Old Fatehpura, Udaipur - 313001 (Rajasthan)
CIN : U51909WB1956PTC023037

T : 0294 2451926
F : 0294 2451926
E : udaipur@mitrask.co.in



TESTING • INSPECTION

Certificate No.: - MSK/UDR/RWPL/2018-19/133

Date:- 05.04.2019

Date	TM% (ARB)	ASH% (ARB)	VM% (ARB)	FC% (ARB)	GCV (Kcal/kg) (ARB)	Sulfur% (ARB)
22.03.19	43.13	12.84	23.84	20.19	2916	0.90
23.03.19	43.19	12.17	23.20	21.44	2920	0.96
24.03.19	42.77	12.41	24.28	20.54	2925	0.91
25.03.19	42.60	12.33	23.69	21.38	2930	0.87
26.03.19	42.33	12.68	24.34	20.65	2940	0.92
27.03.19	43.09	12.73	24.60	19.58	2900	0.90
28.03.19	43.84	11.99	25.50	18.67	2860	0.87
29.03.19	43.64	12.61	24.83	18.92	2870	0.88
30.03.19	43.44	12.46	24.23	19.87	2875	0.85
31.03.19	43.47	12.45	23.93	20.15	2870	0.89

Note :-

1. These Samples were collected by Mitra S. K. Pvt. Ltd. from JSW Energy (Barmer) Ltd. Plant, Bhadresh & analyzed at our NABL accredited Gandhidham Lab.

2. This report reflects our findings at the date and place of Inspection only and does not refer to any other matter.

Checked By:

Authorized Signatory

For Mitra S-K Private Limited

Authorized Signatory

H.O. : Shrachi Centre (5th Floor), 74B, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India
T : 91 33 22172249 / 4014 3000/ 2265 0006 / 2265 0007 F : 91 33 2265 0008 E : info@mitrask.com W : www.mitrask.com

ANNEXURE-IV

STACK EMISSION MONITORING RESULTS OCT, 2018 – MAR, 2019

Month: Oct, 2018

SN	Parameters	UOM	Unit-I	Unit - II	Unit - III	Unit - IV	Unit - V	Unit - VI	Unit-VII	Unit-VIII
1	Average Velocity	m/Sec	18.4	19.7	19.0	19.0		18.2	18.1	20.6
2	Flow	Nm ³ /Sec	348.1	373.8	369.9	355.7		350	363.2	382.8
3	Stack Exit Temp.	°C	157	154	144	160		148	132	163
4	Particulate Matter	mg/Nm ³	536	450	516	510		485	465	477
5	Sulphur Dioxide	mg/Nm ³	229	159	178	196		242	210	206
6	Oxides of Nitrogen	mg/Nm ³	13.2	10.8	14.6	12.9		18.9	17.5	16.6

Month: Nov, 2018

SN	Parameters	UOM	Unit-I	Unit - II	Unit - III	Unit - IV	Unit - V	Unit - VI	Unit-VII	Unit-VIII
1	Average Velocity	m/Sec	16.0	15.7	16.6	16.7	17.0	16.2	17.2	17.9
2	Flow	Nm ³ /Sec	304.2	311.8	321.1	310.7	319.5	309.2	330.1	337.5
3	Stack Exit Temp.	°C	154	136	146	162	159	151	149	158
4	Particulate Matter	mg/Nm ³	55.8	58.6	51.9	48.6	57.4	50.9	53.7	61.3
5	Sulphur Dioxide	mg/Nm ³	463	443	441	378	492	406	591	390
6	Oxides of Nitrogen	mg/Nm ³	176	187	165	198	213	238	205	165

Month: Dec, 2018

SN	Parameters	UOM	Unit-I	Unit - II	Unit - III	Unit - IV	Unit - V	Unit - VI	Unit-VII	Unit-VIII
1	Average Velocity	m/Sec		16.2		16.5	15.9	16.9	15.8	16.5
2	Flow	Nm ³ /Sec		315.4		317.6	302.4	314.5	301.3	306
3	Stack Exit Temp.	°C	Shut	144	Shut	149	153	162	153	165
4	Particulate Matter	mg/Nm ³	down	52.8	down	49.6	55.2	48.6	55.8	58.4
5	Sulphur Dioxide	mg/Nm ³		451		480	504	474	509	515
6	Oxides of Nitrogen	mg/Nm ³		147		141	197	177	197	193

Month: Jan' 2019

SN	Parameters	UOM	Unit-I	Unit - II	Unit - III	Unit - IV	Unit - V	Unit - VI	Unit-VII	Unit-VIII
1	Average Velocity	m/Sec	16.0	13.0	13.6	13.0	15.1	15.0	14.9	14.9
2	Flow	Nm ³ /Sec	312.2	265.8	273.1	259.1	299.7	296.0	293.0	290.5
3	Stack Exit Temp.	°C	143	124	131	135	136	139	139	142
4	Particulate Matter	mg/Nm ³	51.6	49.8	52.6	55.2	48.6	50.4	53.9	49.6
5	Sulphur Dioxide	mg/Nm ³	559	573	431	427	461	456	542	526
6	Oxides of Nitrogen	mg/Nm ³	146	160	172	168	144	183	167	172

Month: Feb' 2019

SN	Parameters	UOM	Unit-I	Unit - II	Unit - III	Unit - IV	Unit - V	Unit - VI	Unit-VII	Unit-VIII
1	Average Velocity	m/Sec	14.8	15.7	15.7	16.2	16.6	16.5		13.6
2	Flow	Nm ³ /Sec	297.2	310.1	301.1	324.7	321.6	315.0		262.8
3	Stack Exit Temp.	°C	131	137	150	133	146	152	Shut	148
4	Particulate Matter	mg/Nm ³	48.6	51.8	50.7	52.9	46.3	54.8	down	48.9
5	Sulphur Dioxide	mg/Nm ³	530	569	591	565	585	567		585
6	Oxides of Nitrogen	mg/Nm ³	173	166	168	161	178	196		159

Month: Mar' 2019

SN	Parameters	UOM	Unit-I	Unit - II	Unit - III	Unit - IV	Unit - V	Unit - VI	Unit-VII	Unit-VIII
1	Average Velocity	m/Sec	17.1	18.3	16.5	16.8	14.0	15.9	16.8	15.8
2	Flow	Nm ³ /Sec	331.5	349.3	326.1	333.5	289.1	325.6	340.1	316.3
3	Stack Exit Temp.	°C	146	153	138	135	119	124	129	132
4	Particulate Matter	mg/Nm ³	48.9	50.7	54.2	49.9	51.9	50.1	52.9	45.5
5	Sulphur Dioxide	mg/Nm ³	522	515	469	434	439	444	534	489
6	Oxides of Nitrogen	mg/Nm ³	201	210	156	150	132	141	146	142

ANNEXURE-IV

Unit # 1 - Continuous Emission Monitoring System-CEMS DATA

Month		SOX mg/m3	NOX mg/m3	SPM mg/m3
OCT- 18	Average	108	41	77
	Max	314	43	79
NOV- 18	Average	134	53	61
	Max	233	93	80
DEC - 18	Average	109	68	24
	Max	346	107	60
JAN-19	Average	161	103	50
	Max	431	138	66
Feb-19	Average	140	116	43
	Max	431	147	73
MAR-19	Average	125	87	16
	Max	298	137	49

Unit # 2 - Continuous Emission Monitoring System-CEMS DATA

Month		SOX mg/m3	NOX mg/m3	SPM mg/m3
OCT- 18	Average	133	48	57
	Max	341	151	59
NOV- 18	Average	153	49	56
	Max	237	174	60
DEC - 18	Average	141	57	56
	Max	255	115	61
JAN-19	Average	141	53	59
	Max	274	174	63
Feb-19	Average	202	78	47
	Max	368	143	79
MAR-19	Average	213	33	40
	Max	557	159	56

Unit # 3 - Continuous Emission Monitoring System-CEMS DATA

Month		SOX mg/m3	NOX mg/m3	SPM mg/m3
OCT- 18	Average	194	68	74
	Max	217	88	75
NOV- 18	Average	122	39	69
	Max	328	142	71
DEC - 18	Average	137	33	51
	Max	437	148	56
JAN-19	Average	195	85	69
	Max	377	125	75
Feb-19	Average	199	102	56
	Max	377	139	75
MAR-19	Average	112	53	35
	Max	457	178	57

Unit # 4 - Continuous Emission Monitoring System-CEMS DATA

Month		SOX mg/m3	NOX mg/m3	SPM mg/m3
OCT- 18	Average	122	43	70
	Max	438	149	76
NOV- 18	Average	119	51	57
	Max	395	172	77
DEC - 18	Average	115	78	56
	Max	322	127	69
JAN-19	Average	132	89	35
	Max	249	114	61
Feb-19	Average	158	88	28
	Max	261	137	61
MAR-19	Average	275	92	30
	Max	430	164	63

Unit # 5 - Continuous Emission Monitoring System-CEMS DATA

Month		SOX mg/m3	NOX mg/m3	SPM mg/m3
OCT- 18	Average	308	52	54
	Max	329	164	71
NOV- 18	Average	277	71	40
	Max	410	105	50
DEC - 18	Average	350	82	53
	Max	456	121	81
JAN-19	Average	377	70	53
	Max	456	95	75
Feb-19	Average	312	80	53
	Max	456	142	87
MAR-19	Average	83	26	45
	Max	408	141	67

Unit # 6 - Continuous Emission Monitoring System-CEMS DATA

Month		SOX mg/m3	NOX mg/m3	SPM mg/m3
OCT- 18	Average	394	72	52
	Max	450	102	69
NOV- 18	Average	344	114	50
	Max	452	177	68
DEC - 18	Average	316	56	40
	Max	452	102	45
JAN-19	Average	298	82	34
	Max	400	137	51
Feb-19	Average	266	123	44
	Max	400	182	55
MAR-19	Average	189	76	49
	Max	286	120	75

Unit # 7 - Continuous Emission Monitoring System-CEMS DATA

Month		SOX mg/m3	NOX mg/m3	SPM mg/m3
OCT- 18	Average	349	83	40
	Max	388	88	55
NOV- 18	Average	249	76	43
	Max	401	123	53
DEC - 18	Average	284	50	47
	Max	409	185	51
JAN-19	Average	313	71	45
	Max	416	97	47
Feb-19	Average	365	84	46
	Max	416	97	47
MAR-19	Average	281	77	46
	Max	376	123	57

Unit # 8 - Continuous Emission Monitoring System-CEMS DATA

Month		SOX mg/m3	NOX mg/m3	SPM mg/m3
OCT- 18	Average	368	67	53
	Max	423	175	58
NOV- 18	Average	287	75	32
	Max	418	110	62
DEC - 18	Average	324	51	54
	Max	429	169	63
JAN-19	Average	261	96	51
	Max	396	131	62
Feb-19	Average	187	64	41
	Max	461	131	66
MAR-19	Average	66	26	30
	Max	433	153	63

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

(For the Period from April, 2018 to March, 2019)

Name of Thermal Power Plant: JSW Energy (Barmer) Limited

(Formerly: Raj WestPower Limited - Jalpa-Kapurdi Thermal Plant Lignite Coal Base Thermal Plant

Sr. No	Month	Ash Generation and Utilisation						Mode of Ash Utilisation and Utilisation in Each Mode (IN LAKH TON)									
		Coal Consume (Lakh Ton)	Lime Coal Consumed (Lakh Ton)	Ash Content of Coal (Percentage)	Ash Generation (Lakh Ton)	Ash Utilised (Lakh Ton)	Ash Utilisation (Percentage)	In Making of Fly Ash Based Bricks/Blocks/ Tiles etc.	In Manufacture of Portland Pozzolana Cement	In Construction of Highway & Roads Including Flyovers	Part Replacement of Cement in Concrete	In Hydro Sector as Part replacement or in Roller Compacted Concrete Dam Construction	In Ash Dyke Raising	In Reclamation of Low Lying Area	In Mine Filling	In Agriculture / Waste Land Development	Other (Pl Specify)
1	April, 18	5.2788	0.226	11.47	0.8043	0.8064	100.3	0.6702	0.0868						0.0494		
2	May, 18	5.8673	0.227	11.41	0.8691	1.0037	115.5	0.6174	0.0970						0.2893		
3	June, 18	5.0788	0.189	11.42	0.7468	1.0101	135.3	0.6428	0.0995						0.2678		
4	July, 18	4.5119	0.223	11.36	0.7091	0.8370	118.0	0.7081	0.1015						0.0273		
5	Aug, 18	5.3274	0.220	11.33	0.7973	1.0049	126.0	0.8165	0.1031						0.0854		
6	Sep, 18	5.1848	0.195	11.28	0.7563	1.0870	143.7	0.7995	0.1116						0.1759		
7	Oct, 18	5.8184	0.220	10.91	0.8278	1.1148	134.7	0.8147	0.1258						0.1743		
8	Nov, 18	4.1670	0.140	10.51	0.5612	0.8824	157.2	0.6309	0.0871						0.1644		
9	Dec, 18	4.0490	0.154	11.00	0.5814	0.7412	127.5	0.6114	0.1298						0.0000		
10	Jan, 19	4.9659	0.209	11.81	0.7702	0.9654	125.3	0.7789	0.1560						0.0305		
11	Feb, 19	3.8171	0.182	11.89	0.6136	0.6792	110.7	0.5584	0.1209						0.0000		
12	Mar, 19	4.7320	0.237	11.15	0.7361	0.8478	115.2	0.7280	0.1198						0.0000		
	Total	58.7985	2.4226	11.30	8.773	10.980	125.15	8.377	1.339	0.000	0.000	0.000	0.000	0.000	1.264	0.000	0.000

Cement Industries and Some Brick manufacturer has taken ash from Ash pond

ANNEXURE-VI

Noise Level Monitoring- OCT, 2018 – MAR, 2019

S N	Month	October		November		December		January		February		March	
	Noise Levels dB (A)	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
1	MAIN GATE INSIDE	71.3	62.8	73.8	69.4	71.9	62.7	69.8	58.6	71.5	62.8	69.7	58.6
2	COOLING TOWER END	67.8	59.8	69.7	62.8	74.1	63.9	71.3	63.5	73.8	61.9	73.7	63.8
3	NORTH WEST CORNER	70.8	61.6	72.3	65.3	71.3	61.9	70.3	62.7	70.9	63.6	71.1	64.4
4	Bhadresh Village	54.2	43.9	53.8	44.6	53.3	43.4	54.2	42.6	52.8	41.2	53.6	41.6
5	Isharpura Village	53.9	44.8	51.9	43.2	51.2	41.5	52.8	40.9	50.9	39.8	54.5	44.8
6	Chuli Village	52.6	43.4	54.7	44.3	53.0	43.6	54.1	44.2	53.4	43.6	52.9	43.2

ANNEXURE-VII

Ambient Air Quality Data- OCT, 2018 – MAR 2019

Month – Oct' 2018

SN	Location (Avg.24 Hrs.)	PM-10 ($\mu\text{g}/\text{m}^3$)	SO2 ($\mu\text{g}/\text{m}^3$)	NO2 ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)	PM-2.5 ($\mu\text{g}/\text{m}^3$)
1	Main Gate	85	6.89	22.5	0.44	11.89
2	Ash pond	38.26	16.31	14.29	0.54	31.47
3	Reservoir Area	29.99	14.56	10.1	2.79	5.36
4	Bhadresh Village	71.9	27	17.6		38.4
5	Isharpura Village	75.3	22.2	14.8		34.9
6	Chuli Village	75.3	22.2	14.8		34.9

Month – Nov' 2018

SN	Location (Avg.24 Hrs.)	PM-10 ($\mu\text{g}/\text{m}^3$)	SO2 ($\mu\text{g}/\text{m}^3$)	NO2 ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)	PM-2.5 ($\mu\text{g}/\text{m}^3$)
1	Reservoir Area	49.14	22.6	33.6	2.37	16.71
2	Main Gate	37.88	20.89	15.24	0.55	33.16
3	Ash pond	36.3	15.25	10.35	2.75	5.66
4	Bhadresh Village	73.4	26.8	17.6	ND	39.2
5	Isharpura Village	76.7	22.6	15	ND	35.5
6	Chuli Village	76.7	22.6	15	ND	35.5

Month – Dec' 2018

SN	Location (Avg.24 Hrs.)	PM-10 ($\mu\text{g}/\text{m}^3$)	SO2 ($\mu\text{g}/\text{m}^3$)	NO2 ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)	PM-2.5 ($\mu\text{g}/\text{m}^3$)
1	Reservoir Area	52.73	22.54	35.45	1.35	20.44
2	Main Gate	44.89	21.08	14.6	0.39	23.41
3	Ash pond	33.98	15.44	10.33	2.74	10.86
4	Bhadresh Village	74.2	27.4	17.5	ND	39.7
5	Isharpura Village	78.2	23	15.3	ND	36.2
6	Chuli Village	78.2	23	15.3	ND	36.2

ANNEXURE-VII

Month – Jan' 2019

SN	Location (Avg.24 Hrs.)	PM-10 ($\mu\text{g}/\text{m}^3$)	SO2 ($\mu\text{g}/\text{m}^3$)	NO2 ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)	PM-2.5 ($\mu\text{g}/\text{m}^3$)
1	Reservoir Area	59.47	22.56	26.87	1.82	17.82
2	Main Gate	38.49	21.55	14.67	0.34	24.35
3	Ash pond	29.66	15.31	9.95	2.8	11.09
4	Bhadresh Village	74.6	28.1	17.9	ND	39.9
5	Isharpura Village	79.7	23.4	15.8	ND	36.4
6	Chuli Village	79.7	23.4	15.8	ND	36.4

Month – Feb' 2019

SN	Location (Avg.24 Hrs.)	PM-10 ($\mu\text{g}/\text{m}^3$)	SO2 ($\mu\text{g}/\text{m}^3$)	NO2 ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)	PM-2.5 ($\mu\text{g}/\text{m}^3$)
1	Reservoir Area	85.7	17.77	6.84	2.21	13.06
2	Main Gate	39.29	14.99	16.47	0.33	25.2
3	Ash pond	30.93	10.31	14.8	2.38	11.13
4	Bhadresh Village	76.6	27.6	17.8	ND	41.1
5	Isharpura Village	77.3	23.6	16	ND	39.2
6	Chuli Village	77.3	23.6	16	ND	39.2

Month – Mar' 2019

SN	Location (Avg.24 Hrs.)	PM-10 ($\mu\text{g}/\text{m}^3$)	SO2 ($\mu\text{g}/\text{m}^3$)	NO2 ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)	PM-2.5 ($\mu\text{g}/\text{m}^3$)
1	Reservoir Area	56.64	22.09	22.55	0.69	13.3
2	Main Gate	36.99	14.96	20.18	0.29	24.98
3	Ash pond	39.21	10.95	15.15	0.68	11.46
4	Bhadresh Village	74.6	26.9	17.3	ND	40.1
5	Isharpura Village	75.3	23.6	15.7	ND	37.7
6	Chuli Village	75.3	23.6	15.7	ND	37.7

ANNEXURE-VIII**RAJ WESTPOWER LIMITED**

Village & Post : Bhadresh, Post Box No. 30,
Distt : Barmer – 344001 (Rajasthan)
CIN : U31102MH1996PLC185098
Phone : +91 2982 229100
Fax : +91 2982 229222
Website : www.jsw.in

Ref: RWPL/ENV/18-19/014

Date: 09.06.2018

To,
Ministry of Environment & Forests
Indira Paryavaran Bhavan,
Ali Ganj, Jorbagh Road,
New Delhi, Delhi 110003

**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-2017 to March-2018**, for the conditions stipulated in the Environmental clearance issued for this Power Project. Analysis Data has uploaded on RWPL website – www.rwpl.in.

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

Thanking you,

For Raj WestPower Ltd


Dilip D. Narwani
Dy. General Manager (Environment & Chemistry)

Enclosure:


1. Compliance Report
2. Water consumption Data
3. Coal Analysis Data
4. Stack monitoring Data
5. Ash Utilization Data
6. AAQ Monitoring Data
7. Effluent Water Data

C.C.

The Director – MOEF, Lucknow
The Member Secretary – Central Pollution Control Board, Delhi
The Member Secretary – RSPCB, Jaipur
The Regional Officer – RSPCB, Balotra.

Part of O.P.Jindal Group

Regd. Office : Raj WestPower Ltd., JSW Center, BKC Complex, Bandra (E), Mumbai – 400051
Jaipur Office: Office No. 2 & 3, 7th Floor, Man Upasana Plaza, C-44, Sardar Patel Marg, C-Scheme, Jaipur – 302 001 Ph : 0141 2369772 Fax 0141 2369774


श्री. अर. अनुमति प्राप्त किया
Regd. Office : O.P. Jindal Group
अधिकारी, पर्यावरण, जलवायु और वनस्पति विभाग
Ministry of Environment, Forests & Climate Change
राष्ट्रिय पर्यावरण बोर्ड, भारत
एन.ए. रोड, इंदिरा पारिवारिक भवन
दिल्ली - 110003
श्री. अर. अनुमति प्राप्त किया
दिल्ली - 110003