



RAJASTHAN STATE MINES & MINERALS LIMITED
(A Government of Rajasthan Enterprise)
SBU & PC LIGNITE, JAIPUR

Khanij Bhawan, Tilak Marg, C-Scheme, Jaipur-302005

Corporate Office: 4, Meera Marg, Udaipur-303001

Registered Office: C-89-90, Lal Kothi Scheme, Jaipur-302015

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CIN-U14109RJ1949SGC000505, Website: www.rsmml.com, **GSTIN-08AAACR7857H1Z0**

Ref : RSMML/SBU-PC(L)/F.5/VBD/2023-24/ **195**

Date **15.05.2023**

To,

The Deputy Director/Scientist-C,
Integrated Regional Office (IRO),
Ministry of Environment, Forests & Climate Change,
Aranya Bhawan, Jhalana Dungri,
Jaipur(Raj)
e-mail- iro.jaipur-mefcc@gov.in

Sub: Six monthly compliance report of Environmental Clearance for Sonari Lignite Mines, Distt. Barmer (Rajasthan) for the period of Octo.-2022 to March-2023.

Dear Sir,

In compliance of conditions stipulated in the Environmental Clearance vide letter No.J-11015/186/2006-IA,II(M) dated 17th July, 2007 & Project Code- Thermal & Coal; please find enclosed herewith half yearly report for the period of Octo.-2022 to March-2023, in respect of Sonari Lignite Mines, Distt. Barmer (Rajasthan).

Thanking you,

Yours faithfully,

(Arun Singh)
Head & In-charge (Lignite)
& Project Proponent

Encl : As above

ARUN SINGH
HEAD & IN-CHARGE (LIGNITE)



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REGISTERED

Date: 15.05.2023

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To,

The Deputy Director/Scientist-C,
Integrated Regional Office (IRO),
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Yours faithfully,
-sd-

(Arun Singh)
Head & In-charge (Lignite)
& Project Proponent

Encl : As above

- Copy to: 1. The Director(S), Ministry of Environment, Forest & Climate Change, Govt. of India, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi 110003 (INDIA)
e-mail- monitoring-ec@nic.in
2. The Member Secretary, Rajasthan State Pollution Control Board, 4, Institutional Area, Jhalana Dungri, Jaipur, e-mail- member-secretary@rpcb.nic.in
3. Dy.General Manager (System), Corporate Office, Udaipur to upload on RSMML website


(Arun Singh)
Head & In-charge (Lignite)
& Project Proponent
ARUN SINGH
HEAD & IN-CHARGE (LIGNITE)

Name of the Project: Sonari Lignite Project, District Barmer (Rajasthan)

Project Code: Thermal & Coal

Clearance letter No. J-11015/186/2006-IA.II(M) dated 17th July, 2007

Period of Compliance Report: October 2022 to March 2023

S. No	(A) Specific Conditions:	Status of implementation:
I	Mining shall be carried out as per statuette at a safe distance from the villages located within the mine lease area.	Lignite mining is carried out as per statuette & at safe distance from the villagers located within the mining lease area.
II	Top Soil shall be stacked properly with proper slope at earmarked site (s) and should not be kept active and shall be used for reclamation and development of green belt.	Top soil is being stacked separately at earmarked site and is being used for reclamation & rehabilitation of the mined out areas.
III	OB should be stacked at earmarked one external OB dumpsite within ML area for three years only and shall be a maximum height of 30 M only and consist of three benches of 10 M each. The ultimate slope of the dump shall not exceed 28°. The OB dumps shall be vegetatively reclaimed. Monitoring and management of reclaimed dumpsite should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional Office located at Lucknow on a yearly basis.	Over-burden has been dumped at earmarked site as proposed in EIA & EMP and an overall slope of 28° is being maintained. Partial backfilling has commenced. Monitoring and management of rehabilitation areas will continue till the vegetation becomes self-sustaining. Status of compliances is being sent regularly.
IV	Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted and maintained properly. Garland drains (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also be provided adequate retention period to allow proper settling of silt material.	Catch drains and siltation ponds of appropriate sizes have been constructed to arrest silt and sediments flows from OB dump and mineral dumps. The water so collected will be utilized for water spraying in the mine area, roads & for green belt development etc; and the drains will be regularly maintained properly. The Garland drains sump capacity has been constructed keeping in view 50% over & above safety margin for peak sudden rainfall & proper settling of silt material is also being allowed.
V	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.	Dimension of the retaining is Height 2 Mtrs. X 1 Mtr. Width & 1 Km. Length. To check run of siltation is being provided based on rainfall data.
VI	Permanent haul roads shall be metal topped. Water sprinkling system should be provided to check fugitive emissions haulage roads, transfer points, etc.	Regular water sprinkling / spraying system has been provided to check fugitive emissions at haulage roads and transfer points with the help of 20 KL water tanker available at the site and daily water dust suppression by water spraying under the control of mines manager and shift incharge and check on regular basis.
VII	Mining shall not involve drilling and blasting operations. No lignite handling plant or washery shall be installed in the ML without prior permission of the Ministry.	No drilling & blasting is needed for lignite mining because formation of over burden is soft. No lignite handling plant & washery is installed in the

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		mining lease area .
VIII	The total area brought under afforestation at the end of mine life (post mining land use) shall not be less than 775 ha. and shall include reclaimed external OB dump, reclaimed quarry area, green belt including plantation along ML boundary, roads, around infrastructure area and vacant / undisturbed area by planting native species in consultation with the local DFO / Agriculture Department. The density of the trees should be around 2000 plants per Ha. Plant species selected shall be local species suitable for growth in arid climatic conditions.	Total area to be brought under afforestation at the end of mine life will not be less than 775 Hect. and will include quarry area, green belt including plantation along mining lease boundary, roads, around infrastructure area and vacant / undisturbed area; by planting native species in consultation with DFO / Agricultural Deptt. The density of the trees have kept as per the norms of MoEF clearance. 8000 Nos. plants planted different species like Acacia, Nilotica, Acaciatoralis, Neem, Sisam etc.
IX	Backfilling shall begin from 3 rd year of mining operations. A Progressive Mine Closure Plan shall be implemented from the 3 rd Year of mining operation and the OB generated shall be backfilled. Plantation shall be developed over the backfilled area.	Backfilling begin from November, 2014, i.e. at the end of 3 rd year of Mining operations. Progressive mining closure plan shall be implemented from the 3 rd year of mining operation and OB generated will be backfilled & plantation will be undertaken in the backfilled area simultaneously.
X	The project authorities shall provide for grazing, if required, in the reclaimed land / quarry area, in consultation with local villagers.	RSMM will provide areas for grazing, if required.
XI	Prior approval of the competent authority such as the SGWB / CGWA shall be obtained for using ground water for the project.	Prior approval will be taken for using ground water for the project if required.
XII	Mining shall not intersect ground water. A detailed hydro-geological study of the impact of mining on the ground water regime shall be prepared and submitted to Ministry within two years of grant of this environmental clearance.	No groundwater table is likely to be intersected during mining. A detailed hydro-geological study of the impact of mining on the ground water regime has already been submitted to the Ministry alongwith EIA & EMP Report.
XIII	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity should be done four times a year in pre-monsoon (May), Monsoon (August), post monsoon (November) and winter (January) seasons and for quality in May. Data thus collected should be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring. The project proponent shall undertake continuous monitoring/surveillance of quality of mine seepage water to address the impact of mining on ground water regime on long-term basis. During Post-mining period, the proponent shall undertake monitoring of mine pit water quality and ground water regime in the area on a long term basis (for at least three years) to assess the impact of mining during post mining period. The proponent shall also carry out appropriate treatment technology of mine water in case of Acid Mine Drainage problem resulting from high sulphur labels from lignite/rocks and treatment of TDS to prescribe levels before discharge of mine water outside the premises during mining operation. Prior approval of	There are no wells around the village and the mine area because there is no availability of ground water. The drinking water source is about 15 Kms. away from the mines' site i.e. at Bharka PHED Tube Well. There is no mine seepage in the mining area and there is no Acid Mine Drainage. There is no need of Prior approval of SGWB/CGWA because there is no availability of ground water in mining area.

	SGWB/CGWA shall be obtained in case of abstraction of groundwater in the core zone and in the over exploited buffer zone, which are critical/semi critical from exploitation of groundwater. (As per Modification Letter dated 13.08.2010)	
XIV	The company shall put up artificial ground water recharge measures for augmentation of ground water resource. The project authorities should meet water requirement of nearby village (s) in case the village wells go dry due to dewatering of mine.	Ground water recharge measures have been proposed, which are under progress. There are no wells around the village & mine area; because, there is no availability of ground water. Drinking water source is about 15 kms. away from the mine site i.e. at Bharka (PHED tubewell).
XV	ETP should also be provided for workshop treating workshop effluents and an STP for the colony and only treated effluents meeting prescribed standards shall be discharged out of ML area.	There is no colony at mine site & all the employees are living in Barmer town. The existing contractor not having any workshop only washing of machinery at Camp Site.
XVI	For monitoring land use pattern and for post mining land use, a time series of land-use maps, based on satellite imagery (on a scale of 1 : 5,000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MoEF and its Regional Office at Lucknow.	Digital processing of the entire lease area using remote sensing technique is being undertaken once in three years for monitoring land use pattern and will be submitted to MoEF & its Regional Office.
XVII	Pre-project study on characterization of dust shall be taken up and a pre-project health survey shall be carried out. Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.	As per the norms of DGMS regular periodic health checkups of the workers & 10% of the workers identified from work force engaged in active mining operation are being checked for occupational diseases and hearing impairment, if any. RSMML is also having facility for medical checkups for labours as well as villagers living nearby.
XVIII	R&R shall be as per norms of State Government and completed within an agreed time schedule.	R&R as per the norms of State Government have been completed within agreed time schedule.
XIX	A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	Final mine closure plan along- with details of Corpus funds will be submitted to the Ministry five years in advance.
XX	Consent to Operate shall be obtained before starting mining operations after fulfilling the conditions imposed in NOC.	Consent to operate has been obtained for enhanced capacity of mines. It is valid upto 31/05/2023.

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S.No.	(A) General Conditions:	Status of implementation:
I.	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forest.	No change has been carried out in mining technology and scope of working.
II.	No change in the calendar plan including excavation, quantum of mineral and waste should be made.	No changes in the calendar plan beyond approved quantities for excavation, quantum of mineral lignite and overburden have been made.
III.	Four ambient air quality-monitoring stations should be established in the core zone as well as the buffer zone for SPM, RPM, SO ₂ , NO _x monitoring. Locations of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultations with the State Pollution Control Board.	Ambient air monitoring stations are established in core zone as well as in buffer zone for RPM, SPM, SO ₂ , NO _x in consultation with RSPCB. Reports are enclosed.
IV.	Data on ambient air quality (SPM, RPM, SO ₂ , NO _x) should be regularly submitted to the Ministry including its Regional Office at Lucknow and the State Pollution Control Board and the Central Pollution Control Board once in six months.	Six (6) monthly ambient air quality (RPM, SPM, SO ₂ , NO _x) reports are sending to MoEF, Regional Office at Lucknow and RSPCB regularly. Reports are enclosed.
V.	Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading & unloading) points should be provided and properly maintained.	Regular water spraying is carried out on haulage roads, loading & unloading points to protect fugitive dust emissions. Proper monitoring & data recording are being undertaken. The permanent haul roads available are being used and regular water sprinkling / spraying system with the help of 20 KI Water tanker available at site and daily water tanker spraying are being checked by Manager and Shift Incharge on regular basis.
VI.	Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM etc. should be provided with ear plugs / muffs.	Measures are being taken for controlling & managing noise levels below 85 dBA. Ear plugs & muffs are being provided to all HEMM operators, supervisors etc. Report enclosed.
VII.	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated: 19 th May, 1993 and 31 st December, 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.	Industrial waste waters from workshops are being properly collected as per the standard prescribed rules.
VIII.	Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally.	Vehicular emissions are being checked & controlled. During the despatch to power plant or open market tarpaulin sheets are used for loaded trucks.
IX.	Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.	Environmental laboratory has been established just adjoining of Giral Lignite Mine. Adequate numbers and types of pollution monitoring equipments, like dust sampler, noise meter, wind monitor etc. have been provided.
X.	Personnel working in dusty areas should wear	Persons working in dusty areas are being

	<p>protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.</p> <p>Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.</p>	<p>provided protective respiratory devices and also imparted adequate training & information on safety and health at V.T. center at Mines. Health check-ups of all the employees are being conducted periodically, as per the norms of National Institute of Miners Health, Nagpur.</p>
XI.	A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the Company.	A separate Environmental Management Cell (comprising qualified personnel) has been setup and persons are directly reporting to the competent authority.
XII.	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to this Ministry and its Regional Office at Lucknow.	The funds earmarked for environmental control measures are not being utilized for any other purpose. Year-wise expenditure on environmental protection measures will be reported accordingly.
XIII.	A copy of the will be marked to concerned Panchayat / Local NGO, if any, from whom any suggestion / representation has been received while processing the proposal.	Copy of clearance letter has been sent to concerned Panchayat & local NGO for their information.
XIV.	State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Center and Collector's Office / Tehsildar's Office for 30 days.	Already requested all concerned for displaying the copy of clearance letter.
XV.	The Project authorities should advertise at least in two local news papers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also been seen at the website of the Ministry of Environment & Forests at http://envfor.nic.in .	It has been advertised in two local newspapers widely circulated around the project.


5/10/23

Head & In-Charge (Lignite)
ARUN SINGH
 HEAD & IN-CHARGE (LIGNITE)


Rajasthan State Mines & Minerals Ltd.					
Unit: Sonari Lignite Project, Barmer					
Sound Monitoring record for the month of October -2022					
S.N	Date	Locations	db		Remarks
			Min.	Max.	
1	20.10.2022	Manager Office (In Side)	26.2	31.0	
2	20.10.2022	Manager Office (Out Side)	27.1	32.4	
3	20.10.2022	Sonari Village	26.2	30.7	
4	20.10.2022	Weigh-Bridge (In Side)	37.3	42.1	Trucks are in operation for weighing
5	20.10.2022	Weigh Bridge (Out Side)	38.5	43.7	Trucks are in operation for weighing
6	20.10.2022	Camp	26.0	30.6	
7	20.10.2022	Plantation Area	25.2	30.3	
8	20.10.2022	SON-19 (Inside Cabin)	50.2	54.5	Kobelco SK-220 XD LC is in operation for Lignite loading
9	20.10.2022	SON-19 (Outside Cabin)	59.1	64.2	Kobelco SK-220 XD LC is in operation for Lignite loading
10	20.10.2022	SON-19 (Inside Cabin)	49.3	53.4	Volvo Ex-480 BLC is in operation for O/B loading
11	20.10.2022	SON-19 (Outside Cabin)	58.4	64.0	Volvo Ex-480 BLC is in operation for O/B loading
12	20.10.2022	SON-22 (Inside Cabin)	50.2	55.3	Volvo EC-300 DL is in operation for Lignite loading
13	20.10.2022	SON-22 (Outside Cabin)	60.3	65.5	Volvo EC-300 DL is in operation for Lignite loading
14	20.10.2022	SON-24 (Inside Cabin)	51.1	55.3	Volvo Ex-480 BLC is in operation for I/B loading
15	20.10.2022	SON-24 (Outside Cabin)	61.0	65.6	Volvo Ex-480 BLC is in operation for I/B loading
16	20.10.2022	SON-06 (Inside Cabin)	50.3	55.4	Volvo Ex-480 BLC is in operation for I/B loading
17	20.10.2022	SON-06 (Outside Cabin)	59.0	64.5	Volvo Ex-480 BLC is in operation for I/B loading
18	20.10.2022	Dump Yard	43.4	47.2	Dumpers are in operation for O/B unloading.
19	20.10.2022	Haul Road	42.2	46.3	Dumpers are crossing with lignite loading


 Manager (Geology)
 SLP, Barmer

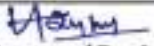
Rajasthan State Mines & Minerals Ltd.					
Unit: Sonari Lignite Project, Barmer					
Sound Monitoring record for the month of November-2022					
S.N	Date	Locations	db		Remarks
			Min.	Max.	
1	25.11.2022	Manager Office (In Side)	25.7	30.6	
2	25.11.2022	Manager Office (Out Side)	26.4	31.6	
3	25.11.2022	Sonari Village	25.3	30.2	
4	25.11.2022	Weigh-Bridge (In Side)	36.5	41.4	Trucks are in operation for weighing
5	25.11.2022	Weigh Bridge (Out Side)	37.6	42.5	Trucks are in operation for weighing
6	25.11.2022	Camp	25.3	30.1	
7	25.11.2022	Plantation Area	26.3	31.4	
8	25.11.2022	SON-06 (Inside Cabin)	51.3	55.2	Volvo Ex-470 BLC is in operation for O/B loading
9	25.11.2022	SON-06 (Outside Cabin)	60.2	65.5	Volvo Ex-470 BLC is in operation for O/B loading
10	25.11.2022	SON-06 (Inside Cabin)	48.4	53.6	Volvo Ex-480 BLC is in operation for O/B loading
11	25.11.2022	SON-06 (Outside Cabin)	58.2	63.2	Volvo Ex-480 BLC is in operation for O/B loading
12	25.11.2022	SON-22 (Inside Cabin)	49.3	54.1	Volvo EC-300 DL is in operation for Lignite loading
13	25.11.2022	SON-22 (Outside Cabin)	59.5	64.2	Volvo EC-300 DL is in operation for Lignite loading
14	25.11.2022	SON-24 (Inside Cabin)	50.6	55.0	Volvo Ex-290 BLC is in operation for I/B loading
15	25.11.2022	SON-24 (Outside Cabin)	60.3	64.7	Volvo Ex-290 BLC is in operation for I/B loading
16	25.11.2022	SON-24 (Inside Cabin)	51.1	56.3	Volvo Ex-470 BLC is in operation for I/B loading
17	25.11.2022	SON-24 (Outside Cabin)	60.4	65.1	Volvo Ex-470 BLC is in operation for I/B loading
18	25.11.2022	Dump Yard	44.2	48.0	Dumpers are in operation for O/B unloading.
19	25.11.2022	Haul Road	43.3	47.5	Dumpers are crossing with lignite loading


 Manager (Geology)
 SLP, Barmer


Rajasthan State Mines & Minerals Ltd.					
Unit: Sonari Lignite Project, Barmer					
Sound Monitoring record for the month of December-2022					
S.N	Date	Locations	db		Remarks
			Min.	Max.	
1	21.12.2022	Manager Office (In Side)	27.0	31.3	
2	21.12.2022	Manager Office (Out Side)	28.2	32.4	
3	21.12.2022	Sonari Village	26.1	31.3	
4	21.12.2022	Weigh-Bridge (In Side)	37.5	42.6	Trucks are in operation for weighing
5	21.12.2022	Weigh Bridge (Out Side)	39.4	44.2	Trucks are in operation for weighing
6	21.12.2022	Camp	26.3	31.4	
7	21.12.2022	Plantation Area	25.5	30.6	
8	21.12.2022	SON-06 (Inside Cabin)	49.5	54.7	Volvo Ex-470 BLC is in operation for O/B loading
9	21.12.2022	SON-06 (Outside Cabin)	59.6	64.0	Volvo Ex-470 BLC is in operation for O/B loading
10	21.12.2022	SON-06 (Inside Cabin)	50.1	54.7	Volvo Ex-480 BLC is in operation for O/B loading
11	21.12.2022	SON-06 (Outside Cabin)	59.3	64.1	Volvo Ex-480 BLC is in operation for O/B loading
12	21.12.2022	SON-19 (Inside Cabin)	50.8	55.2	Volvo EC-300 DL is in operation for OB loading
13	21.12.2022	SON-19 (Outside Cabin)	60.3	65.4	Volvo EC-300 DL is in operation for OB loading
14	21.12.2022	SON-19 (Inside Cabin)	49.2	54.2	Volvo Ex-480 BLC is in operation for O/B loading
15	21.12.2022	SON-19 (Outside Cabin)	58.6	63.5	Volvo Ex-480 BLC is in operation for O/B loading
16	21.12.2022	SON-24 (Inside Cabin)	50.2	55.6	Volvo Ex-290 BLC is in operation for Lignite loading
17	21.12.2022	SON-24 (Outside Cabin)	59.7	64.2	Volvo Ex-290 BLC is in operation for Lignite loading
18	21.12.2022	Dump Yard	43.6	48.4	Dumpers are in operation for O/B unloading.
19	21.12.2022	Haul Road	44.2	49.1	Dumpers are crossing with lignite loading


Manager (Geology)
SLP, Barmer

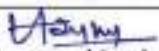
Rajasthan State Mines & Minerals Ltd.					
Unit: Sonari Lignite Project, Barmer					
Sound Monitoring record for the month of January-2023					
S.N	Date	Locations	db		Remarks
			Min.	Max.	
1	19.01.2023	Manager Office (In Side)	25.2	29.1	
2	19.01.2023	Manager Office (Out Side)	26.3	30.2	
3	19.01.2023	Sonari Village	25.4	30.5	
4	19.01.2023	Weigh-Bridge (In Side)	35.5	39.7	Trucks are in operation for weighing
5	19.01.2023	Weigh Bridge (Out Side)	36.0	41.2	Trucks are in operation for weighing
6	19.01.2023	Camp	25.2	30.6	
7	19.01.2023	Plantation Area	25.1	29.3	
8	19.01.2023	SON-06 (Inside Cabin)	49.3	53.6	Volvo EC-300 DL is in operation for Lignite loading
9	19.01.2023	SON-06 (Outside Cabin)	58.0	63.1	Volvo EC-300 DL is in operation for Lignite loading
10	19.01.2023	SON-06 (Inside Cabin)	50.2	54.4	Volvo Ex-480 BLC is in operation for I/B loading
11	19.01.2023	SON-06 (Outside Cabin)	58.7	63.0	Volvo Ex-480 BLC is in operation for I/B loading
12	19.01.2023	SON-19 (Inside Cabin)	49.8	54.3	Kobelco SK-220 XD LC is in operation for Lignite loading
13	19.01.2023	SON-19 (Outside Cabin)	59.3	64.1	Kobelco SK-220 XD LC is in operation for Lignite loading
14	19.01.2023	SON-19 (Inside Cabin)	49.5	54.4	Tata Hitachi Zaxis 470 H is in operation for OB loading
15	19.01.2023	SON-19 (Outside Cabin)	58.4	63.2	Tata Hitachi Zaxis 470 H is in operation for OB loading
16	19.01.2023	SON-02 (Inside Cabin)	50.3	55.7	Volvo Ex-480 BLC is in operation for O/B loading
17	19.01.2023	SON-02 (Outside Cabin)	58.2	64.5	Volvo Ex-480 BLC is in operation for O/B loading
18	19.01.2023	Dump Yard	42.0	46.2	Dumpers are in operation for O/B unloading.
19	19.01.2023	Haul Road	42.3	47.3	Dumpers are crossing with lignite loading


 Manager (Geology)
 SLP, Barmer

Rajasthan State Mines & Minerals Ltd.					
Unit: Sonari Lignite Project, Barmer					
Sound Monitoring record for the month of February-2023					
S.N	Date	Locations	db		Remarks
			Min.	Max.	
1	24.02.2023	Manager Office (In Side)	26.1	30.3	
2	24.02.2023	Manager Office (Out Side)	27.0	31.4	
3	24.02.2023	Sonari Village	26.5	30.7	
4	24.02.2023	Weigh-Bridge (In Side)	36.8	40.5	Trucks are in operation for weighing
5	24.02.2023	Weigh Bridge (Out Side)	37.3	43.0	Trucks are in operation for weighing
6	24.02.2023	Camp	25.6	30.5	
7	24.02.2023	Plantation Area	26.2	30.1	
8	24.02.2023	SON-24 (Inside Cabin)	50.3	54.7	Kobelco SK-220 XD LC is in operation for Lignite loading
9	24.02.2023	SON-24 (Outside Cabin)	59.2	64.6	Kobelco SK-220 XD LC is in operation for Lignite loading
10	24.02.2023	SON-06 (Inside Cabin)	49.8	54.5	Volvo Ex-480 BLC is in operation for O/B loading
11	24.02.2023	SON-06 (Outside Cabin)	58.5	63.7	Volvo Ex-480 BLC is in operation for O/B loading
12	24.02.2023	SON-19 (Inside Cabin)	50.6	55.2	Tata Hitachi Zaxis 470 H is in operation for IB loading
13	24.02.2023	SON-19 (Outside Cabin)	60.0	65.3	Tata Hitachi Zaxis 470 H is in operation for IB loading
14	24.02.2023	SON-02 (Inside Cabin)	49.4	53.9	Tata Hitachi Zaxis 470 H is in operation for OB loading
15	24.02.2023	SON-02 (Outside Cabin)	59.1	64.0	Tata Hitachi Zaxis 470 H is in operation for OB loading
16	24.02.2023	SON-02 (Inside Cabin)	49.7	54.5	Volvo Ex-480 BLC is in operation for O/B loading
17	24.02.2023	SON-02 (Outside Cabin)	59.3	64.4	Volvo Ex-480 BLC is in operation for O/B loading
18	24.02.2023	Dump Yard	43.4	47.1	Dumpers are in operation for O/B unloading.
19	24.02.2023	Haul Road	44.2	48.2	Dumpers are crossing with lignite loading


 Manager (Geology)
 SLP, Barmer

Rajasthan State Mines & Minerals Ltd.					
Unit: Sonari Lignite Project, Barmer					
Sound Monitoring record for the month of March-2023					
S.N	Date	Locations	db		Remarks
			Min.	Max.	
1	27.03.2023	Manager Office (In Side)	26.5	30.9	
2	27.03.2023	Manager Office (Out Side)	27.7	32.2	
3	27.03.2023	Sonari Village	26.8	31.5	
4	27.03.2023	Weigh-Bridge (In Side)	37.6	42.3	Trucks are in operation for weighing
5	27.03.2023	Weigh Bridge (Out Side)	38.5	44.2	Trucks are in operation for weighing
6	27.03.2023	Camp	26.3	31.4	
7	27.03.2023	Plantation Area	26.0	30.5	
8	27.03.2023	SON-24 (Inside Cabin)	49.6	54.2	Volvo EC-300 DL is in operation for Lignite loading
9	27.03.2023	SON-24 (Outside Cabin)	58.7	64.3	Volvo EC-300 DL is in operation for Lignite loading
10	27.03.2023	SON-06 (Inside Cabin)	50.9	55.6	Kobelco SK-220 XD LC is in operation for Lignite loading
11	27.03.2023	SON-06 (Outside Cabin)	60.1	65.3	Kobelco SK-220 XD LC is in operation for Lignite loading
12	27.03.2023	SON-06 (Inside Cabin)	50.3	54.6	Tata Hitachi Zaxis 470 H is in operation for IB loading
13	27.03.2023	SON-06 (Outside Cabin)	59.7	64.8	Tata Hitachi Zaxis 470 H is in operation for IB loading
14	27.03.2023	SON-02 (Inside Cabin)	51.3	55.6	Volvo Ex-480 BLC is in operation for O/B loading
15	27.03.2023	SON-02 (Outside Cabin)	60.2	65.2	Volvo Ex-480 BLC is in operation for O/B loading
16	27.03.2023	SON-02 (Inside Cabin)	50.1	54.4	Tata Hitachi Zaxis 470 H is in operation for OB loading
17	27.03.2023	SON-02 (Outside Cabin)	59.8	64.2	Tata Hitachi Zaxis 470 H is in operation for OB loading
18	27.03.2023	Dump Yard	44.3	48.0	Dumpers are in operation for O/B unloading.
19	27.03.2023	Haul Road	45.4	49.5	Dumpers are crossing with lignite loading


 Manager (Geology)
 SLP, Barmer



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Phone : +91 9460222039, 9460222049,
Email : director@teamtesthouse.com,
Email : marketinglab@teamtesthouse.com

TEST REPORT

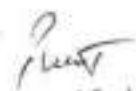
Report No.:	RSMML/Barmer/Air/2023/03/05	Date :	30.03.2023
Issued To :	M/s Rajasthan State Mines & Minerals Ltd. Sonari Lignite Mines Barmer, Barmer, Rajasthan	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Point of Collection	Site Office
Unit's representative :	Mr. Ashok Maru	Sample Collection By	Unit's Representative
Sampling Duration	24 (Hrs.)	Sampling Plan :	IS 5182:2000 (Part 14) RA 2014

RESULTS

S. No.	Date of Sampling	Nitrogen Dioxide NO ₂ [$\mu\text{g}/\text{m}^3$]	Particulate Matter (PM 2.5) [$\mu\text{g}/\text{m}^3$]	Sulphur Dioxide SO ₂ [$\mu\text{g}/\text{m}^3$]	Particulate Matter (PM 10) [$\mu\text{g}/\text{m}^3$]
1	04.03.2023	13.82	41.96	7.38	79.26
2	12.03.2023	15.40	40.28	6.1	81.35
3	20.03.2023	14.81	43.36	7.41	85.38
4	27.03.2023	15.42	40.61	6.55	83.48
Limits as per National Ambient Air Quality Standard, 2009		80.00	60.00	80.00	100.00

Notes :-

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- # The samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified.


Senior Analyst **Mat Yogi**


Authorized Signatory
(Report No: RSMML/Barmer/Air/2023/03/05)



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Email : team.bdthead@gmail.com

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Email : director@teamtesthouse.com,
Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No.:	RSMML/Barmer/Air/2023/03/08	Date :	30.03.2023
Issued To :	M/s Rajasthan State Mines & Minerals Ltd. Sonari Lignite Mines Barmer, Barmer, Rajasthan	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Point of Collection	Contractor Camp
Unit's representative :	Mr. Ashok Maru	Sample Collection By	Unit's Representative
Sampling Duration	24 (Hrs.)	Sampling Plan :	IS 5182:2000 (Part 14) RA 2014

RESULTS

S. No.	Date of Sampling	Nitrogen Dioxide NO ₂ [µg/m ³]	Particulate Matter (PM 2.5) [µg/m ³]	Sulphur Dioxide SO ₂ [µg/m ³]	Particulate Matter (PM 10) [µg/m ³]
1	04.03.2023	12.98	31.26	5.19	68.92
2	12.03.2023	11.45	35.90	4.81	70.40
3	20.03.2023	13.90	33.48	6.25	71.26
4	27.03.2023	14.21	36.42	6.71	69.45
Limits as per National Ambient Air Quality Standard, 2009		80.00	60.00	80.00	100.00

Notes :-

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Senior Analyst
Puran Mat Yogi

Rajesh Kumar Singh
(Report No: RSMML/Barmer/Air/2023/03/08)



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TEST REPORT

Report No.:	RSMML/Barmer/Air/2023/03/06	Date :	30.03.2023
Issued To :	M/s Rajasthan State Mines & Minerals Ltd. Sonari Lignite Mines Barmer, Barmer, Rajasthan	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Point of Collection	Weigh Bridger
Unit's representative :	Mr. Ashok Maru	Sample Collection By	Unit's Representative
Sampling Duration	24 (Hrs.)	Sampling Plan :	IS 5182:2000 (Part 14) RA 2014

RESULTS

S. No.	Date of Sampling	Nitrogen Dioxide NO ₂ [$\mu\text{g}/\text{m}^3$]	Particulate Matter (PM 2.5) [$\mu\text{g}/\text{m}^3$]	Sulphur Dioxide SO ₂ [$\mu\text{g}/\text{m}^3$]	Particulate Matter (PM 10) [$\mu\text{g}/\text{m}^3$]
1	04.03.2023	14.20	43.68	6.41	81.42
2	12.03.2023	15.81	40.92	5.96	79.36
3	20.03.2023	16.25	45.39	7.28	76.48
4	27.03.2023	15.38	43.26	6.55	78.92
Limits as per National Ambient Air Quality Standard, 2009		80.00	60.00	80.00	100.00

Notes :-

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Senior Analyst
Puran Mat Yogi

Authorized Signatory
(Report No: RSMML/Barmer/Air/2023/03/06)



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Email : director@teamtesthouse.com,
Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No.:	RSMML/Barmer/Air/2023/03/07	Date :	30.03.2023
Issued To :	M/s Rajasthan State Mines & Minerals Ltd, Sonari Lignite Mines Barmer, Barmer, Rajasthan	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Point of Collection	Mining Area
Unit's representative :	Mr. Ashok Maru	Sample Collection By	Unit's Representative
Sampling Duration	24 (Hrs.)	Sampling Plan :	IS 5182:2000 (Part 14) RA 2014

RESULTS

S. No.	Date of Sampling	Nitrogen Dioxide NO ₂ [$\mu\text{g}/\text{m}^3$]	Particulate Matter (PM 2.5) [$\mu\text{g}/\text{m}^3$]	Sulphur Dioxide SO ₂ [$\mu\text{g}/\text{m}^3$]	Particulate Matter (PM 10) [$\mu\text{g}/\text{m}^3$]
1	04.03.2023	13.48	33.71	6.70	78.92
2	12.03.2023	12.40	30.25	5.48	80.41
3	20.03.2023	12.85	32.43	6.26	45.28
4	27.03.2023	13.45	35.70	7.41	77.49
Limits as per National Ambient Air Quality Standard, 2009		80.00	60.00	80.00	100.00

Notes :-

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Senior Analyst Mal Yogi

Rajesh Kumar Singh
(Report No: RSMML/Barmer/Air/2023/03/07)



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Email : marketinglab@teamtesthouse.com

TEST REPORT

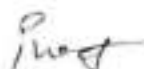
Report No.	RSMML/Barmar/WW/2023/03/02	Date :	30.03.2023
Issued To :	M/s Rajasthan State Mines & Minerals Ltd. Sonari Lignite Mines Barmar Barmar, Rajasthan	Type of Unit :	Mine
Type of sample / Discipline :	Liquid Effluents	Date of Sample Collection/Monitori ng :	24.03.2023
Point of Collection :	Sonari Lignite Mines	Date of Receipt :	25.03.2023
Date of Test/Analysis :	25.03.2023 to 30.03.2023	Sampling Plan :	APHA 2017 : 1060
Quantity of Sample :	2 ltr.	Sample Collected By :	By Courier
Unit's representative	Mr. Ashok Maru	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Limits as per Environment protection rules, 1986
1	Total Suspended Solids [mg/l]	86	APHA.2017:2540-D	100
2	Biochemical Oxygen Demand (BOD) [mg/l]	12.96	APHA 2017:5210-B	30
3	Chemical Oxygen Demand (COD) [mg/l]	98.34	APHA.2017 : 5220-C	250
4	pH	8.33	APHA 2017 : 4500 H+B	5.5 - 9.0
5	Oil & Grease [mg/l]	5	APHA 2017 : 5520 B	10

Notes :-

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Senior Analyst **Mal Yogi**


Authorized Signatory **Pran**
(Report No: RSMML/Barmar/WW/2023/03/02)



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Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No.	RSMML/Barmer/Soil/2023/03/03	Date :	30.03.2023
Issued To :	M/s Rajasthan State Mines & Minerals Ltd. Sonari Lignite Mines, Barmer Barmer, Rajasthan	Type of Unit :	Mine
Type of sample / Discipline :	Soil Sample	Date of Sample Collection/Monitoring :	24.03.2023
Point of Collection :	Near Sonari Pit E - Side	Date of Receipt :	25.03.2023
Date of Test/Analysis :	25.03.2023 to 30.03.2023	Sampling Plan :	Not Available
Quantity of Sample :	-	Sample Collected By :	By Courier
Unit's representative :	Mr. Ashok Maru	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Electrical Conductivity (EC) [micromho/cm]	528	Method Manual
2	pH	8.10	Method Manual
3	Moisture Content [%]	4.35	Method Manual
4	Calcium Carbonate [%]	1.38	Method Manual
5	Available Nitrogen [Kg/ha]	0.34	Method Manual
6	Available Phosphorous [Kg/ha]	16.96	Method Manual
7	Available Potassium [Kg/ha]	39	Method Manual
8	Organic Matter [%]	0.52	Method Manual

Notes :-

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Purush
Senior Analyst
Purush Mal Yogi

Bar
Authorized Signatory
Rajesh Kumar Singh
(Report No: RSMML/Barmer/Soil/2023/03/03)



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Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No.	RSMML/Barmer/Soil/2023/03/04	Date :	30.03.2023
Issued To :	M's Rajasthan State Mines & Minerals Ltd. Sonari Lignite Mines Barmer, Barmer, Rajasthan	Type of Unit :	Mine
Type of sample / Discipline :	Soil Sample	Date of Sample Collection/Monitori ng :	24.03.2023
Point of Collection :	Near Sonari Pit N - Side	Date of Receipt :	25.03.2023
Date of Test/Analysis :	25.03.2023 to 30.03.2023	Sampling Plan :	Not Available
Quantity of Sample :	-	Sample Collected By :	By Courier
Unit's representative :	Mr. Ashok Maru	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Electrical Conductivity (EC) [micromho/cm]	581	Method Manual
2	pH	8.47	Method Manual
3	Moisture Content [%]	4.98	Method Manual
4	Calcium Carbonate [%]	1.72	Method Manual
5	Available Nitrogen [Kg/ha]	0.54	Method Manual
6	Available Phosphorous [Kg/ha]	18.93	Method Manual
7	Available Potassium [Kg/ha]	90	Method Manual
8	Organic Matter [%]	0.53	Method Manual

Notes :-

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Senior Analyst

Authorized Signatory
(Report No: RSMML/Barmer/Soil/2023/03/04)



Rajasthan State Mines & Minerals Limited

(A Government of Rajasthan Enterprise)

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Phone: 0291 2511031/2516199 Fax: 0291 2511029 (e-mail: rsmmjodhpur@rsmm.com)

CENTRAL LABORATORY

An ISO 9001:2015 Certified Laboratory

REF: F19 (S)/LIG - B/2022-23/ 3018

Date 27.03.2023

Issued to:

GENERAL MANAGER
LIGNITE PROJECT,
BARMER.

Ref: RSMM/GLP/ENV/2022-23/770

DATE-22/03/2023

Sample Received On Date: 27.03.2023

SAMPLE PARTICULARS

Two Samples of Drinking Water from Giral and Sonari Mines collected on 22.03.2023

TEST RESULTS

(Analysed as per IS-1514: 1990)

S. No.	Properties	RSMM/IB/03-23/3758 Giral-01	RSMM/IB/03-23/3759 Sonari -02
1.	pH	7.70	7.7
2.	Temperature °C	21.50	21.50
3.	Alkalinity Phenolphthalein (CaCO ₃)	Nil	Nil
4.	Alkalinity Methyl Orange (CaCO ₃)	50	40
5.	Total Hardness	130	120
6.	Calcium Hardness	50	50
7.	Magnesium Hardness	80	70
8.	Carbonate Hardness	50	40
9.	Non Carbonate Hardness	80	80
10.	Chlorides as Cl ⁻	70	60
11.	Sulphate	24	21
12.	Fluoride	-	-
13.	TDS	256	232

Note: All results except at Sr. No.1& 2 are in mg/Lit.


(Dr. SHALENDRA SINGH YADAV)
Sr. Manager & Incharge (Lab)

Note : (i) The above Analysis Results Pertain to the Sample received in the Laboratory .



Rajasthan State Mines & Minerals Limited

(A Government of Rajasthan Enterprise)

SURE LIME STONE

8, West Patel Nagar, Circuit House Road, Jaipur-302011
Phone: 0591 2541011/2510109 Fax: 0591 2511079 E-mail: csmm@rajssmm.com

CENTRAL LABORATORY

As ISO 9001:2015 Certified Laboratory

REF: F19 (8) LIG - B/2022-23 2183

Date: 26/12/2022

Issued to:

GENERAL MANAGER
LIGNITE PROJECT
BARMER

Ref: RSMM/GLP/ENV/2022-23/324

DATE: 22/12/2022

Sample Received On Date: 26/12/2022

SAMPLE PARTICULARS

Two Samples of Drinking Water from Giral and Sonari Mines collected on 20/12/2022

TEST RESULTS

(Analysed as per IS-1514: 1990)

S. No.	Properties	RSMM/IB/12-22/3306 Giral-01	RSMM/IB/12-22/3307 Sonari-02
1.	pH	7.80	7.6
2.	Temperature °C	20.60	20.30
3.	Alkalinity Phenolphthalein (CaCO ₃)	Nil	Nil
4.	Alkalinity Methyl Orange (CaCO ₃)	50	50
5.	Total Hardness	150	140
6.	Calcium Hardness	60	60
7.	Magnesium Hardness	90	80
8.	Carbonate Hardness	50	50
9.	Non Carbonate Hardness	100	90
10.	Chlorides as Cl ⁻	80	80
11.	Sulphate	25	21
12.	Fluoride	-	-
13.	TDS	206	166

Note: All results except at Sr. No. 1 & 2 are in mg/Lit

(Dr. SHALENDRA SINGH YADAV)
Sr. Manager & Incharge (Lab)

Note: (1) The above Analysis Results Pertain to the Sample received in the Laboratory.

Rajasthan State Mines & Minerals Ltd.

Sonari lignite Project, Barmer

SPM Sample results for the month of March, 2023

Sample .no.	Date	Location	RPM($\mu\text{g}/\text{M}^3$)	SPM($\mu\text{g}/\text{M}^3$)	TSPM ($\mu\text{g}/\text{M}^3$)
1	1.03.2023	Site Office	57.692	86.538	144.230
2	3.03.2023	Site Office	85.714	94.780	180.494
3	6.03.2023	Contractor Camp	74.358	85.185	159.543
4	8.03.2023	Contractor Camp	91.869	113.279	205.148
5	10.03.2023	Weigh Bridge	114.906	128.881	243.787
6	13.03.2023	Weigh Bridge	133.862	157.671	291.533
7	15.03.2023	Mining Area	135.978	167.195	303.173
8	17.03.2023	Mining Area	148.238	163.143	311.381



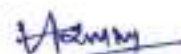
Manager (Geology)
Sonari lignite Mines, Barmer

Rajasthan State Mines & Minerals Ltd.

Sonari lignite Project, Barmer

SPM Sample results for the month of December, 2022

Sample .no.	Date	Location	RPM($\mu\text{g}/\text{M}^3$)	SPM($\mu\text{g}/\text{M}^3$)	TSPM ($\mu\text{g}/\text{M}^3$)
1	1.12.2022	Site Office	92.181	106.172	198.353
2	3.12.2022	Site Office	112.838	136.424	249.262
3	5.12.2022	Contractor Camp	63.679	99.182	162.861
4	7.12.2022	Contractor Camp	86.944	98.333	185.277
5	9.12.2022	Weigh Bridge	111.924	139.295	251.219
6	12.12.2022	Weigh Bridge	134.484	147.566	282.050
7	13.12.2022	Mining Area	141.025	160.125	301.150
8	15.12.2022	Mining Area	143.239	164.390	307.629



Manager (Geology)
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