

**Name of Project: Giral Lignite Project, District, Barmer**Clearance letter no. J-11015/94/2014-IA-II (M), dated 12<sup>th</sup> March, 2015.

Compliances Report:- April 2022 to September 2022

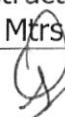
S.No.	(A) Specific Conditions:	Status of implementation :
i.	The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.	The maximum production from the mine at any given time will not exceed the limit as prescribed in the EC.
ii.	The validity of the EC is for the life of the Mine or as specified in the EIA Notification, 2006, whichever is earlier.	Agreed
iii.	Coal transportation in pit by Tippers, Surface to Siding by Tippers and loading at siding by Pay loader.	Transportation of ROM (lignite) carried out for mercantile sector transportation through trucks.
iv.	There shall be no external OB dumps.	Over-burden is being dumped at earmarked site as proposed in EIA & EMP and overall slope of 28° is being maintained. Back filling has commenced. Monitoring and management of rehabilitation areas continue till the vegetation become self-sustaining. Status of compliances is being sent regularly.
v.	The contractual labours shall be provided with housing facilities at work place.	All the contractual labours have provided housing facilities at work place (contractor camp) and Technical staff at Bharka (13 Km.).
vi.	All three voids left after filling of the excavated area located in different blocks will be developed as water storage ponds.	Presently two nos. of pit are in working. 3 <sup>rd</sup> block i.e. Thumbali to be opened in future. At the conceptual stage all the three voids after filling of the excavated area will be converted in water pond.
vii.	The depth of the internal void shall be 35 m from the ground level and should be adequate for fishery purpose.	At the time of closure the internal void will be 35m from the ground level & adequate for fishery purpose.
viii.	All safety measures shall be taken as per CMR, 1957 & related Circulars.	All safety measures have been taken as per CMR, 1957 & related circulars of DGMS.
ix.	The production shall be within the same Mining Lease area.	The production of lignite has within the same mining lease area only.
x.	The OB shall be completely re-handled at the end of the mining and will be back filled up to the ground level and covered with about a meter thick top and put to use. The land after mining shall be brought back for agriculture purpose.	The outside OB will be completely re-handled at the end of the mining and will be backfilled up to ground level and covered with about a meter.
xi.	Garland drains be provided.	The Garland drain is already

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		constructed along the benches in the pit and constructed.
xii.	Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent of the mine.	No river/nallah flowing near or adjacent of the mine area.
xiii.	The CSR cost should be Rs 5 Per Tonnes of Coal produced which should be adjusted as per the annual inflation.	Agreed
xiv.	Everybody in the core area should be provided with mask for protection against fugitive dust emissions.	Regular water spraying arrangement carried out on haul roads, loading & unloading points to protect fugitive dust emissions. Marks for protection against fugitive dust emissions have been provided.
xv.	Dust mask to be provided to everyone working in mining area.	Dust mask have been provided to every employees working in mining area.
xvi.	The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.	All the employees working in the core area have used the dust mask. All the statutory personnel i.e. Overman, Mining Sirdar look after the above responsibility very well to ensure safety of person employed.
xvii.	People working in the core area should be periodically tested for the lung diseases and the burden of cost on account of working in the coal mine area.	Health check-ups of all the employees are periodically conducted for the lung diseases as per norms of DGMS.
xviii.	The mining area should be surrounded by green belt having thick closed thick canopy of the tree cover.	The mining area will be covered by green belt having thick closed thick canopy of the tree cover.
xix.	The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.	There is no river/nallah flowing adjacent to the mine area.
xx.	There shall be no overflow of OB into the river and into the agricultural fields and massive plantation of native species shall be taken up in the area between the river and the project.	There is no river/nallah follow in the lease area. Also there will be no overflow of OB into the agriculture fields due to adequate retaining wall with siltation ponds will be constructed all around the external dump.
xxi.	Catch drain and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flow from soil, OB and mineral dumps. The water so collected shall be utilized for watering the mine area, roads, green belt development, etc. The drains shall be regularly de-silted and maintained	Approximate 1.5 Kms. Length X 1.5 Mtrs. Width X 1.5 Mtrs. Depth Garland drain constructed around the OB Dump and approximate 50 Nos. Siltation ponds constructed size 3 Mtrs. X 3 Mtrs. X 3 Mtrs. Proposed

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	properly. Garland drains (size, gradient and length) and sump capacity shall 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 shall also provide adequate retention period to allow proper settling of silt material.	1.5 Kms. Length X 1.5 Mtrs. Width X 1.5 Mtrs. Depth garland drain and 20 Nos. Of siltation ponds size 20 Mtrs. X 20 Mtrs. X 3 mtrs.
xxii.	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.	Retaining wall of 1.50m height & 2.0m wide to check run-off and siltation has been constructed.
xxiii.	Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.	There is no mineral processing unit at mines.
xxiv.	Drills shall be wet operated.	There is no needed of drilling for mining operation.
xxv.	The project authorities shall undertake regular repairing and tarring of roads used for mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads.	The new black top road has been constructed for mineral transportation. A 3-tier green belt comprising of a mix of native species will be developed all along the major approach roads.
xxvi.	Controlled blasting shall be practiced with use of delay detonators and only during day time. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.	No blasting operation is carried for mining operation.
xvii.	A progressive afforestation plan shall be implemented covering an area of 892.38 ha at the end of mining, which include reclaimed External OB dump area( 157.28 ha), Internal OB dump area (660.10 ha), Green belt(75.00 ha) and in township located outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 1000 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and a 3-tier avenue plantation along the main approach roads to the mine.	Total area to be brought under afforestation covering an area of 892.38 ha at the end of mining, which include reclaimed External OB dump area (157.28 ha), Internal OB dump area (660.10 ha), Green belt (75.00 ha) by planting native species in consultation with the local DFO/Agriculture department. The density of the trees will be kept as per norms of MOEF clearance.
xviii.	An estimated total 5023.805 Mm <sup>3</sup> of OB will be generated during the entire life of the mine. Out of which 386.855 Mm <sup>3</sup> of OB will be dumped in three external OB Dumps an earmarked area covering 157.28 ha of land with height of 30 meter in 3 lifts. 4636.95 Mm <sup>3</sup> of will be three	Overburden has been dumped at earmark site as proposed in EIA & EMP and an overall slope of 28° has maintained. Monitoring and management of rehabilitation areas will continue till the vegetation

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	internal OB dump in covering an area of 660.10 ha with height of 12 metres each lift. The maximum height of external OB dump for hard OB will not exceed 90 m. The maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation become self-sustaining and compliance status shall be submitted to MOEF and its Regional Office on yearly basis.	becomes self sustaining. Status of compliances is being sent regularly. The back filling has already been commenced and is being reclaimed by top soil and the land will be used in a productive and sustainable manner and every month survey, back filling dump area by our Survey team.
xxix.	The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.	The backfilling has already commence and are reclaimed by top soil and the land be used in a productive & sustainable manner.
xxx.	Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.	The backfilling has already commence and are reclaimed by top soil and the land used in a productive & sustainable manner.
xxxi.	The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.	The mining operation has in sustainable manner. Presently all the OB used as backfilling & no outside OB dumping at the mines site.
xxii.	No ground water shall be used for mining operations.	No ground water have used for mining operation. The maximum ultimate depth of mine working is 60 m & ground water range from 90 m to 110 m below the ground level.
xxiii.	Of the total quarry area of 883 ha, the backfilled quarry area of 660.10 ha shall be reclaimed with plantation and a void of 222.90 ha at a depth of 40 m which is proposed to be converted in to a water body shall be gently sloped and the upper benches shall be terraced and stabilised with plantation/afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.	Total backfilled area to be brought under afforestation at the end of mine life will not less than 660.10 ha and a void of 222.90 ha at a depth of 40 m which will be converted in to a water body will be gently sloped and the upper benches will be terraced and stabilized with plantation/afforestation in consultation with the local DFO/Agriculture department. The density of the trees shall be around 2500 plants per ha.
xxiv.	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall 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 shall be submitted to the Ministry of Environment, Forests & climate change and the Central Pollution Control Board quarterly	In the core and Buffer zone there is no well/tube well for drinking purpose. Only saline water is available in the area from 90 m to 110 m below the ground level.

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	within one month of monitoring.	
xxv.	The company shall put up artificial ground water recharge measures for augmentation of ground water resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby villages(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 13 kms away from the mines site; i.e. at Bharka (PHED tube well).
xxvi.	Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.	There is no colony at mines site & all the employees are living in Barmer town. The existing contractor not having any workshop. Also there is no coal handling plant within the lease are.
xvii.	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 specialised agency /institution within the District/ State 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 and villagers carried of regular interval by Doctors and Compounders as well as IME/PME of RSMML staff and contractor workers at Giral mines are going on as per prescribed mining rules (DGMS).
xviii.	Land oustees shall be compensated as per the norms laid out R&R Policy of CIL, or the National R&R Policy or R&R Policy of the State Government whichever is higher.	Land Acquisition has been made by the State Govt. for the purpose of lignite mining & compensation has been paid to land owners as per the approval of State Govt. & in line with Land Acquisition Act, 1894.
xxix.	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: 5000) 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 &CC and its concerned Regional office.	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 MoFE and its Regional Office.
xi.	A detailed Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forests & Climate Change within 6 months of grant of Environment Clearance.	Final Mine Closure Plan along with details of Corpus Fund will be submitted to the Ministry 5 years in advance of final mine closure for approval.
xli.	The project authorities shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine.	We are complied Vide letter no. 24 & 25 dated 02.04.2015, to Sarpanch, Gram Panchayat, Akali/Kotra, Sheo, Barmer, advised to submit the

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		proposal under CSR scheme.
xlii.	Corporate Environment Responsibility	
	a) The company shall have a well laid down Environment Policy approved by the Board of Directors.	We are always Environment conscious. Our policy is always for preservation and improvement in ECOLOGY.
	b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environment or forest norms/conditions.	Our Environment Policy has provision for immediate detection of any infringements/deviation/violation of the environment or forest norms/conditions.
	c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.	<p>Managing Director</p> <p>↑</p> <p>Head-SBU &amp; PC</p> <p>↑</p> <p>Unit Head</p> <p>↑</p> <p>Mines Manager</p>
	d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliance /violations of environmental norms to the Board of Directors of the company and /or shareholders or stakeholders at large.	We do have the same. However our company does not believe in non-compliance/violations of environment norms.
S. No.	(B) <b>General Conditions:</b>	
i.	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, Forests & Climate Change.	No change has been carried in mining technology and scope of work.
ii.	No change in the calendar plan of production for quantum of mineral coal shall be made.	No change in the calendar plan for excavation, quantum of mineral lignite and overburden.
iii.	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and NO <sub>x</sub> monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. carried out at least once in six months.	<p>Ambient air monitoring stations already established in core zone as well as in buffer zone for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>x</sub> in consultation with RSPCB.</p> <p>Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. carried out once in six months. Last monitoring of above heavy metals was done in September, 2022.</p>
iv.	Data on ambient air quality (PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and NO <sub>x</sub> ) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its concerned	Six (6) monthly ambient air quality (PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and NO <sub>x</sub> ) and heavy metals reports are sending to MoEF, Integrated Regional Office at

	Regional office and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognised under the EPA rules, 1986 shall be furnished as part of compliance report.	Jaipur and RSPCB regularly. Reports are enclosed.
v.	Adequate measures shall be taken for control of noise level below 85 dBA in the work environment, Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.	Measures are being taken for controlling & managing noise level below 85 dBA. Ear plugs & muffs are being provided to all HEMM operator, supervisor etc. There are no drilling & blasting operations in the mines.
vi.	Industrial wastewater (workshop and waste water from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	Contractor not having any work shop. The contractor only washes machinery in the camp site in the mining area. All the greasing and oiling work done at mines site/Barmer. The waste water properly collected, treated and conforms to the standards prescribed and discharge.
vii.	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.	Vehicular emissions are being checked & controlled. During the despatch to open market tarpaulin sheets are used for loaded trucks.
viii.	Monitoring of environment quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analysed through a laboratory recognised under EPA Rules, 1986.	Adequate numbers and types of pollution monitoring equipments, like dust sampler for SPM, Personnel dust sampler, noise meter, wind monitor etc. have been provided and got analysed through a laboratory recognised under EPA Rules, 1986.
ix.	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.	Persons working in dusty areas are being provided protective respiratory devices and also imparted adequate training & information on safety and health at V.T. centre at mines.
x.	Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.	Health checkups of all the employees are being conducted periodically, as per the norms of The Mines Rule, 1995 and 10 <sup>th</sup> /11 <sup>th</sup> conferences on safety in mines. No occupational diseases have been reported so far. All the employees provided ear plugs/ear muffs, safety helmet, safety boots, luminous jackets.
xi.	A separate environmental management cell with suitable qualified personnel shall be set up under	A separate environmental management cell (comprising

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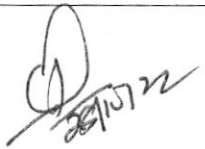
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	the control of a Senior Executive who will report directly to the Head of the company.	qualified personnel) has been set up and persons are directly reporting to the competent authority.
xii.	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional office.	The fund 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.	The project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in 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 be seen at the website of the Ministry of Environment , Forests & Climate Change at <a href="http://envfor.nic.in">http://envfor.nic.in</a> .	It was advertised in two local newspaper widely circulated around the project. 1. Danik Bhaskar, Dated 20-03-2015. 2. Janta Sahkar, Dated 20-03-2015.
xiv.	A copy of the environmental clearance letter shall be marked to concern Panchayat/Zila Parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestion/ representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on company's website.	Copy of clearance letter has been sent to concerned Panchayat, Tahsildar, Sheo, Pradhan, Sheo for their information on 20-03-2015.
xv.	A copy of the environmental clearance letter shall be shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Sector, and Collector's Office/Tehsildar's Office for 30 days.	Complied.
xvi.	The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and Soil) and critical pollutant such as PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , and NO <sub>x</sub> (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.	Complied.
xvii.	The project proponent shall submit six monthly compliance reports on status of compliance of the	Six monthly compliance reports of the stipulated environmental



	stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of this Ministry, respective Zonal Offices of CPCB and the SPCB.	clearance conditions (both in hard copy and e-mail) to the Regional office located at Jaipur, RSPCB submitted periodically.
xviii.	The Regional Office of this Ministry located in the Region shall monitor compliance of the stipulated conditions. The project authorities shall extend full cooperation of the office(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	Full cooperation to the officer(s) of Regional Office, Jaipur is being extended and all the information are being furnished regarding stipulated conditions.
xix.	The Environmental statement for each financial year ending 31 March in Form-V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of FC conditions and shall be sent to the respective Regional Officers of the MoEF & CC by email.	Complied

→ Submit.



Head & In-Charge (Lignite)

(ARUN SINGH)  
Head & In-Charge (Lignite)  
Rajasthan State Mines & Minerals Ltd.  
Khanij Bhawan, Tilak Marg  
JAIPUR-302005





**TEAM TEST HOUSE**  
(Unit of Team Institute of Science & Technology Pvt. Ltd.)

Approved by Ministry of Environment and Forest, Government of India as Environmental Laboratory				
RSPCB	ISO 9001:2015,	ISO 14001:2015,	ISO 45001:2018 (OH&S)	JDA/UDH
Office : E-65, Chitrangan Marg, C-Scheme, Jaipur - 302001, Rajasthan Phone : +91 6377210064, 9414077379, Website : www.teamtesthouse.com Email : team.bdhead@gmail.com			Laboratory : G1-584, RICO Industrial Area, Sitapura, Jaipur - 302022, Rajasthan Phone : +91 9460222039, 9460222049, Email : director@teamtesthouse.com, Email : marketinglab@teamtesthouse.com	

**TEST REPORT**

Report No.:	RSMML/Barmer/Air/2022/09/04	Date :	30.09.2022
Issued To :	M/s Rajasthan State Mines & Minerals Ltd. Giral 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 <sub>2</sub> [µg/m <sup>3</sup> ]	Particulate Matter (PM 2.5) [µg/m <sup>3</sup> ]	Sulphur Dioxide SO <sub>2</sub> [µg/m <sup>3</sup> ]	Particulate Matter (PM 10) [µg/m <sup>3</sup> ]
1	02.09.2022	13.48	28.96	3.45	57.46
2	09.09.2022	12.96	25.41	3.81	55.25
3	17.09.2022	13.40	27.90	4.30	58.19
4	24.09.2022	12.46	28.45	4.19	60.25
Limits as per National Ambient Air Quality Standard, 2009		80.00	60.00	80.00	100.00

Notes :-

- # The results listed refer only to the tested sample (s) & parameters (s). Endorsement of products is neither inferred nor implied.
- # This report is not to be reproduced wholly or in part and can not be used evidence in the court of law and should not be used in any advertising media without our special permission in writing.
- # The samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified.

*Puran*  
Puran Mal Yogi  
Senior Analyst

*Rajesh*  
Rajesh Maneswan  
Authorized Signatory  
(Report No: RSMML/Barmer/Air/2022/09/04)



**TEAM TEST HOUSE**  
(Unit of Team Institute of Science & Technology Pvt. Ltd.)

Approved by Ministry of Environment and Forest, Government of India as Environmental Laboratory

RSPCB      ISO 9001:2015,      ISO 14001:2015,      ISO 45001:2018 (OH&S)      JDA/UDH

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C-Scheme, Jaipur - 302001, Rajasthan  
Phone : +91 6377210064, 9414077379,  
Website : www.teamtesthouse.com  
Email : team.tdhead@gmail.com

Laboratory : G1-584, RIICO Industrial Area,  
Sitapura, Jaipur - 302022, Rajasthan  
Phone : +91 9460222039, 9460222049,  
Email : director@teamtesthouse.com,  
Email : marketinglab@teamtesthouse.com

**TEST REPORT**

Report No.:	RSMMI/Barmer/Air/2022/09/02	Date :	30.09.2022
Issued To :	M/s Rajasthan State Mines & Minerals Ltd. Gnal 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 <sub>2</sub> [µg/m <sup>3</sup> ]	Particulate Matter (PM 2.5) [µg/m <sup>3</sup> ]	Sulphur Dioxide SO <sub>2</sub> [µg/m <sup>3</sup> ]	Particulate Matter (PM 10) [µg/m <sup>3</sup> ]
1	01.09.2022	11.38	27.42	3.68	61.32
2	08.09.2022	12.46	25.96	4.12	58.41
3	16.09.2022	10.95	24.38	3.96	57.42
4	23.09.2022	11.31	26.17	3.71	59.46
Limits as per National Ambient Air Quality Standard, 2009		80.00	60.00	80.00	100.00

**Notes :-**

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Puran Mal Yogi  
General Manager

Authorized Signatory  
(Report No: RSMMI/Barmer/Air/2022/09/02)





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**TEST REPORT**

Report No.:	RSMML/Barmer/Air/2022/09/03	Date :	30.09.2022
Issued To :	M/s Rajasthan State Mines & Minerals Ltd. Giral Lignite Mines Barmer, Barmer, Rajasthan	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Point of Collection	Rest Shelter
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 <sub>2</sub> [µg/m <sup>3</sup> ]	Particulate Matter (PM 2.5) [µg/m <sup>3</sup> ]	Sulphur Dioxide SO <sub>2</sub> [µg/m <sup>3</sup> ]	Particulate Matter (PM 10) [µg/m <sup>3</sup> ]
1	02.09.2022	11.91	28.71	3.48	60.41
2	09.09.2022	10.52	25.92	4.12	58.41
3	17.09.2022	12.46	27.84	4.13	57.70
4	24.09.2022	11.75	26.48	3.91	58.43
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.

**Puran Mal Yogi**  
Senior Analyst

**Rajesh Maheshwari**  
Authorized Signatory  
(Report No: RSMML/Barmer/Air/2022/09/03)



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Sitapura, Jaipur - 302022, Rajasthan  
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Email : director@teamtesthouse.com,  
Email : marketinglab@teamtesthouse.com

**TEST REPORT**

Report No.:	RSMML/Barmer/Air/2022/09/01	Date :	30.09.2022
Issued To :	M/s Rajasthan State Mines & Minerals Ltd. Giral 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

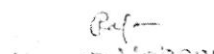
**RESULTS**

S. No.	Date of Sampling	Nitrogen Dioxide NO <sub>2</sub> [ $\mu\text{g}/\text{m}^3$ ]	Particulate Matter (PM 2.5) [ $\mu\text{g}/\text{m}^3$ ]	Sulphur Dioxide SO <sub>2</sub> [ $\mu\text{g}/\text{m}^3$ ]	Particulate Matter (PM 10) [ $\mu\text{g}/\text{m}^3$ ]
1	01.09.2022	12.48	25.62	3.46	51.30
2	08.09.2022	11.92	27.41	3.75	55.25
3	16.09.2022	12.45	26.05	4.32	54.78
4	23.09.2022	13.61	25.48	4.18	53.41
Limits as per National Ambient Air Quality Standard, 2009		80.00	60.00	80.00	100.00

Notes :-

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**Puran Mal Yogi**  
Senior Analyst

  
Authorized Signatory  
(Report No: RSMML/Barmer/Air/2022/09/01)



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

**TEST REPORT**

Report No./ULR No. :	RSMML/Barmer/Air/2022/09/05	Date	30-09-2022
Issued To :	M/S Rajasthan State Mines & Minerals Limited Giral Lignite Mines, Barmer Barmer, (Rajasthan)	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Date of Sample Collection/Monitoring :	23-09-2022
Point of Collection	Weigh Bridge	Date of Receipt :	25-09-2022
Date of Test/Analysis :	25-09-2022 to 29-09-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Unit's Representative
Unit's representative :	Mr Arun Maru	Condition of Sample :	Fit for testing

**RESULTS**

S.No	Parameters	Observed Value	Testing Protocol	Limits as per National Ambient Air Quality Standard, 2009
1	Chromium [ng/m3]	3.21	IS 5182 : Part 26 : 2020	-
2	Cadmium [ng/m3]	BDL (<1.0)	IS 5182 : Part 26 : 2020	-
3	Mercury [ng/m3]	BDL (<1.0)	IS 5182 : Part 26 : 2020	-
4	Arsenic [ng/m3]	BDL(<2.0)	IS 5182 (Part 22) : 2004 Reaffirmed 2019	6.00
5	Nickel [ng/m3]	7.22	IS 5182 : Part 26 : 2020	20.00

**Notes :-**

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**Puran Mal Yogi**  
Senior Analyst

**Rajesh Manesriwan**  
Authorized Signatory  
(Report No: RSMML/Barmer/Air/2022/09/05)



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

## TEST REPORT

Report No./ULR No.:	RSMML/Barmer/Air/2022/09/06	Date :	30-09-2022
Issued To :	M/S Rajasthan State Mines & Minerals Limited Giral Lignite Mines, Barmer Barmer, (Rajasthan)	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Date of Sample Collection/Monitoring :	23-09-2022
Point of Collection	Mining Area	Date of Receipt :	25-09-2022
Date of Test/Analysis :	25-09-2022 to 29-09-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Unit's Representative
Unit's Representative	Mr Arun Maru	Condition of Sample :	Fit for testing

## RESULTS

S No	Parameters	Observed Value	Testing Protocol	Limits as per National Ambient Air Quality Standard, 2009
1	Chromium [ng/m3]	4.55	IS 5182 : Part 26 : 2020	-
2	Cadmium [ng/m3]	BDL (<1.0)	IS 5182 : Part 26 : 2020	-
3	Mercury [ng/m3]	BDL (<1.0)	IS 5182 : Part 26 : 2020	-
4	Arsenic [ng/m3]	BDL(<2.0)	IS 5182 (Part 22) : 2004 Reaffirmed 2019	6.00
5	Nickel [ng/m3]	14.56	IS 5182 : Part 26 : 2020	20.00

### Notes :

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Senior Analyst

Authorized Signatory  
(Report No: RSMML/Barmer/Air/2022/09/06 )





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Email : marketinglab@teamtesthouse.com

**TEST REPORT**

Report No./ULR No. :	RSMWV/22/01	Date	30-09-2022
Issued To :	M/S Rajasthan State Mines & Minerals Limited Giral Lignite Mines, Barmer Barmer, (Rajasthan).	Type of Unit :	Mines
Type of Sample :	Liquid Effluents	Date of Sample Collection/Monitoring :	23-09-2022
Point of Collection	Giral Mines	Date of Receipt :	25-09-2022
Date of Test/Analysis :	25-09-2022 to 29-09-2022	Sampling Plan :	APHA 2017 : 1060
Quantity of Sample :	2ltr.	Sample Collected By :	Unit's Representative
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)	92	APHA 2017:2540-D	100
2	Biochemical Oxygen Demand (BOD) (mg/l)	22.54	APHA 2017 5210-B	30
3	Chemical Oxygen Demand (COD) (mg/l)	148	APHA 2017 : 5220-C	250
4	pH	7.09	APHA:2017 : 4500 H+B	5.5 - 9.0
5	Oil & Grease (mg/l)	6	APHA 2017 : 5520 B	10

Notes :-

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Sunil Kumar  
Senior Analyst

Rajesh Maheshwari  
Authorized Signatory  
(Report No: RSMWV/22/01)



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Email : marketinglab@teamtesthouse.com

### TEST REPORT

Report No./ULR No. :	RSMWS/22/02	Date :	30-09-2022
Issued To :	M/S Rajasthan State Mines & Minerals Limited Giral Lignite Mines, Barmer Barmer, (Rajasthan).	Type of Unit :	Mines
Type of Sample :	Soil Sample	Date of Sample Collection/Monitoring :	23-09-2022
Point of Collection :	Near to Jalela Pit	Date of Receipt :	25-09-2022
Date of Test/Analysis :	25-09-2022 to 29-09-2022	Sampling Plan :	Not Available
Quantity of Sample :	-	Sample Collected By :	Unit's Representative
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]	601	Method Manual
2	pH	8.22	Method Manual
3	Moisture [%]	5.95	Method Manual
4	Calcium Carbonate (%)	1.54	Method Manual
5	Available Nitrogen [%]	0.09	Method Manual
6	Available Phosphorous [Kg/ha]	15.6	Method Manual
7	Available Potassium [Kg/ha]	96	Method Manual
8	Organic Carbon [%]	0.39	Method Manual

#### Notes :

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Puran Mal Yogi  
Senior Analyst

Rajesh Maheshwari  
Authorized Signatory  
(Report No: RSMWS/22/02)



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Email : marketinglab@teamtesthouse.com

### TEST REPORT


Report No./ULR No. :	RSMM/S/22/01	Date	30-09-2022
Issued To :	M/S Rajasthan State Mines & Minerals Limited Giral Lignite Mines, Barmer Barmer, (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Soil Sample	Date of Sample Collection/Monitoring :	23-09-2022
Point of Collection :	Near to GB-2 Pit	Date of Receipt :	25-09-2022
Date of Test/Analysis :	25-09-2022 to 29-09-2022	Sampling Plan :	Not Available
Quantity of Sample :	-	Sample Collected By :	Unit's Representative
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]	665	Method Manual
2	pH	8.29	Method Manual
3	Moisture [%]	6.52	Method Manual
4	Calcium Carbonate (%)	1.22	Method Manual
5	Available Nitrogen [%]	0.06	Method Manual
6	Available Phosphorous [Kg/ha]	18.7	Method Manual
7	Available Potassium [Kg/ha]	148	Method Manual
8	Organic Carbon [%]	0.45	Method Manual

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P. Mani Yogi  
Senior Analyst

  
Rakesh Maheshwari  
Authorized Signatory  
(Report No: RSMM/S/22/01)



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Email : marketinglab@teamtesthouse.com

### TEST REPORT

Report No.:	RSMML/Barmer/Air/2022/09/03	Date :	30.09.2022
Issued To :	M/s Rajasthan State Mines & Minerals Ltd. Giral Lignite Mines Barmer, Barmer, Rajasthan	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Point of Collection	Rest Shelter
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 <sub>2</sub> [ $\mu\text{g}/\text{m}^3$ ]	Particulate Matter (PM 2.5) [ $\mu\text{g}/\text{m}^3$ ]	Sulphur Dioxide SO <sub>2</sub> [ $\mu\text{g}/\text{m}^3$ ]	Particulate Matter (PM 10) [ $\mu\text{g}/\text{m}^3$ ]
1	02.09.2022	11.91	28.71	3.48	60.41
2	09.09.2022	10.52	25.92	4.12	58.41
3	17.09.2022	12.46	27.84	4.13	57.70
4	24.09.2022	11.75	26.48	3.91	58.43
Limits as per National Ambient Air Quality Standard, 2009		80.00	60.00	80.00	100.00

#### Notes :-

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Puran Mal Yogi  
Senior Analyst

Rajesh Maneswar  
Authorized Signatory  
(Report No: RSMML/Barmer/Air/2022/09/03)



## Rajasthan State Mines & Minerals Ltd.

Unit: Giral Lignite Project, Barmer

Sound Monitoring record for the month of September- 2022

Sl. no.	Date	Locations	dB		Remarks
			Min.	Max.	
1	15.09.2022	Site office (in side )	26.4	30.5	
2	15.09.2022	Site office (Out Side)	27.6	32.3	
3	15.09.2022	Thumbli village	26.8	30.6	
4	15.09.2022	Weigh bridge(in side)	36.1	39.8	Trucks are in operation for weighing.
5	15.09.2022	Weigh bridge(Outside)	38.5	43.7	"
6	15.09.2022	Mining camp.	26.4	32.0	
7	15.09.2022	Plantation area	27.5	31.6	
8	15.09.2022	Rest shelter	28.4	32.1	
9	15.09.2022	R-37 (In Side cabin)	49.0	54.2	Volvo EC-480 DL is in operation for O/B loading
10	15.09.2022	R-37(Out Side cabin)	59.3	64.1	"
11	15.09.2022	R-37 (In Side cabin)	50.5	55.6	Volvo EC-480 DL is in operation for O/B loading
12	15.09.2022	R-37(Out Side cabin)	59.7	64.4	"
13	15.09.2022	R-34 (In Side cabin)	50.4	55.8	Volvo EC-290 BLC is in operation for I/B loading
14	15.09.2022	R-34(Out Side cabin)	59.6	63.0	"
15	15.09.2022	R-36 (In Side cabin)	51.3	56.4	Volvo EC-480 DL is in operation for O/B loading
16	15.09.2022	R-36 (Out Side cabin)	59.5	64.5	"
17	15.09.2022	MT-84 (In Side cabin)	51.6	56.0	Volvo EC-290 BLC is in operation for lignite loading
18	15.09.2022	MT-84 (In Side cabin)	60.4	65.3	"
19	15.09.2022	MT-84 (In Side cabin)	49.1	54.5	Kobelco SK 210 HD LC is in operation for Lignite loading
20	15.09.2022	MT-84 (In Side cabin)	59.3	64.0	"
21	15.09.2022	Back fill area	44.0	48.2	Dumpers are in operation for O/B unloading
22	15.09.2022	Haul road	42.4	47.1	Trucks are crossing with lignite.
23	15.09.2022	Giral village	26.3	31.2	

Manager (Geology)  
GLP, Barmer

<b>Rajasthan State Mines &amp; Minerals Ltd.</b> Unit: Giral Lignite Project, Barmer Sound Monitoring record for the month of August- 2022					
Sl. no.	Date	Locations	dB		Remarks
			Min.	Max.	
1	22.08.2022	Site office (in side )	25.2	29.1	
2	22.08.2022	Site office (Out Side)	26.4	31.0	
3	22.08.2022	Thumbli village	24.0	29.7	
4	22.08.2022	Weigh bridge(in side)	35.2	39.4	Trucks are in operation for weighing.
5	22.08.2022	Weigh bridge(Outside)	36.3	41.2	"
6	22.08.2022	Mining camp.	25.5	31.6	
7	22.08.2022	Plantation area	26.0	30.8	
8	22.08.2022	Rest shelter	26.3	31.3	
9	22.08.2022	MT-48 (In Side cabin)	47.5	52.6	Volvo EC-480 DL is in operation for O/B loading
10	22.08.2022	MT-48 (In Side cabin)	58.6	63.5	"
11	22.08.2022	MT-48 (In Side cabin)	49.2	54.3	Volvo EC-480 DL is in operation for O/B loading
12	22.08.2022	MT-48 (In Side cabin)	58.7	63.2	"
13	22.08.2022	R-34 (In Side cabin)	51.3	56.0	Volvo EC-290 BLC is in operation for Lignite loading
14	22.08.2022	R-34(Out Side cabin)	60.1	64.2	"
15	22.08.2022	R-36 (In Side cabin)	50.5	55.8	Volvo EC-480 DL is in operation for O/B loading
16	22.08.2022	R-36 (Out Side cabin)	59.3	64.7	"
17	22.08.2022	MT-84 (In Side cabin)	50.1	54.3	Volvo EC-290 BLC is in operation for I/B loading
18	22.08.2022	MT-84 (In Side cabin)	59.3	64.6	"
19	22.08.2022	R-86 (In Side cabin)	48.2	53.8	Kobelco SK 210 HD LC is in operation for Lignite loading
20	22.08.2022	R-86 (In Side cabin)	59.0	63.2	"
21	22.08.2022	Back fill area	42.3	46.1	Dumpers are in operation for O/B unloading
22	22.08.2022	Haul road	41.4	46.5	Trucks are crossing with lignite.
23	22.08.2022	Giral village	25.0	30.4	

*Handwritten signature*

Manager (Geology)  
GLP, Barmer

## Rajasthan State Mines & Minerals Ltd.

Unit: Giral Lignite Project, Barmer

Sound Monitoring record for the month of July- 2022

Sl. no.	Date	Locations	dB		Remarks
			Min.	Max.	
1	19.07.2022	Site office (in side )	26.0	30.8	
2	19.07.2022	Site office (Out Side)	27.3	32.4	
3	19.07.2022	Thumbli village	26.4	31.6	
4	19.07.2022	Weigh bridge(in side)	37.5	42.0	Trucks are in operation for weighing.
5	19.07.2022	Weigh bridge(Outside)	38.6	43.7	"
6	19.07.2022	Mining camp.	26.1	30.2	
7	19.07.2022	Plantation area	27.3	31.5	
8	19.07.2022	Rest shelter	27.0	32.4	
9	19.07.2022	MT-48 (In Side cabin)	49.2	54.8	Volvo EC-480 DL is in operation for O/B loading
10	19.07.2022	MT-48 (In Side cabin)	58.3	63.1	"
11	19.07.2022	R-33 (In Side cabin)	50.4	54.8	Volvo EC-480 DL is in operation for O/B loading
12	19.07.2022	R-33 (Out Side cabin)	60.3	64.7	"
13	19.07.2022	R-34 (In Side cabin)	50.1	55.6	Volvo EC-480 DL is in operation for O/B loading
14	19.07.2022	R-34(Out Side cabin)	59.2	63.7	"
15	19.07.2022	R-31 (In Side cabin)	51.2	56.3	Volvo EC-290 BLC is in operation for I/B loading
16	19.07.2022	R-31 (Out Side cabin)	60.4	65.4	"
17	19.07.2022	MT-84 (In Side cabin)	49.3	54.6	Volvo EC-290 BLC is in operation for Lignite loading
18	19.07.2022	MT-84 (In Side cabin)	58.2	63.2	"
19	19.07.2022	R-86 (In Side cabin)	49.5	54.6	Kobelco SK 210 HD LC is in operation for Lignite loading
20	19.07.2022	R-86 (In Side cabin)	58.3	63.0	"
21	19.07.2022	Back fill area	42.1	47.3	Dumpers are in operation for O/B unloading
22	19.07.2022	Haul road	43.0	48.1	Trucks are crossing with lignite.
23	19.07.2022	Giral village	26.4	31.6	

Manager (Geology)  
GLP, Barmer

**Rajasthan State Mines & Minerals Ltd.**

Unit: Giral Lignite Project, Barmer

**Sound Monitoring record for the month of June- 2022**

Sl. no.	Date	Locations	dB		Remarks
			Min.	Max.	
1	23.06.2022	Site office (in side )	28.3	33.4	
2	23.06.2022	Site office (Out Side)	29.5	34.5	
3	23.06.2022	Thumbli village	27.3	32.7	
4	23.06.2022	Weigh bridge(in side)	39.2	44.5	Trucks are in operation for weighing.
5	23.06.2022	Weigh bridge(Outside)	40.1	46.2	"
6	23.06.2022	Mining camp.	27.0	32.5	
7	23.06.2022	Plantation area	26.4	31.0	
8	23.06.2022	Rest shelter	27.3	32.6	
9	23.06.2022	R-33 (In Side cabin)	50.2	54.6	Volvo EC-480 DL is in operation for O/B loading
10	23.06.2022	R-33 (In Side cabin)	59.7	64.4	"
11	23.06.2022	R-33 (In Side cabin)	51.2	56.3	Volvo EC-480 DL is in operation for O/B loading
12	23.06.2022	R-33 (Out Side cabin)	61.0	66.4	"
13	23.06.2022	R-34 (In Side cabin)	49.3	54.7	Volvo EC-480 DL is in operation for O/B loading
14	23.06.2022	R-34(Out Side cabin)	59.5	64.3	"
15	23.06.2022	R-31 (In Side cabin)	50.3	55.5	Volvo EC-290 BLC is in operation for I/B loading
16	23.06.2022	R-31 (Out Side cabin)	59.0	64.4	"
17	23.06.2022	MT-84 (In Side cabin)	50.2	55.8	Volvo EC-290 BLC is in operation for Lignite loading
18	23.06.2022	MT-84 (In Side cabin)	59.3	64.9	"
19	23.06.2022	R-86 (In Side cabin)	50.1	55.2	Kobelco SK 210 HD LC is in operation for Lignite loading
20	23.06.2022	R-86 (In Side cabin)	60.2	65.3	"
21	23.06.2022	Back fill area	44.3	49.0	Dumpers are in operation for O/B unloading
22	23.06.2022	Haul road	45.5	50.2	Trucks are crossing with lignite.
23	23.06.2022	Giral village	27.0	32.4	

Manager (Geology)  
GLP, Barmer

# **Rajasthan State Mines & Minerals Ltd.**

Unit: Giral Lignite Project, Barmer

Sound Monitoring record for the month of May- 2022

Sl. no.	Date	Locations	dB		Remarks
			Min.	Max.	
1	21.05.2022	Site office (in side )	28.0	32.7	
2	21.05.2022	Site office (Out Side)	29.1	33.8	
3	21.05.2022	Thumbli village	26.2	31.3	
4	21.05.2022	Weigh bridge(in side)	38.0	43.4	Trucks are in operation for weighing.
5	21.05.2022	Weigh bridge(Outside)	39.4	44.7	"
6	21.05.2022	Mining camp.	26.3	31.4	
7	21.05.2022	Plantation area	25.5	30.5	
8	21.05.2022	Rest shelter	27.1	32.0	
9	21.05.2022	R-86 (In Side cabin)	49.6	55.0	Kobelco SK 210 HD LC is in operation for Lignite loading
10	21.05.2022	R-86 (Out Side cabin)	59.2	64.1	"
11	21.05.2022	R-33 (In Side cabin)	50.3	55.7	Volvo EC-480 DL is in operation for O/B loading
12	21.05.2022	R-33 (Out Side cabin)	60.1	65.2	"
13	21.05.2022	R-33 (In Side cabin)	50.0	54.8	Volvo EC-480 DL is in operation for O/B loading
14	21.05.2022	R-33(Out Side cabin)	60.2	65.4	"
15	21.05.2022	R-31 (In Side cabin)	49.6	54.0	Volvo EC-290 BLC is in operation for Lignite loading
16	21.05.2022	R-31 (Out Side cabin)	59.3	64.5	"
17	21.05.2022	R-31 (In Side cabin)	51.4	56.2	Volvo EC-290 BLC is in operation for I/B loading
18	21.05.2022	R-31 (In Side cabin)	60.2	65.1	"
19	21.05.2022	MT-84 (In Side cabin)	49.5	54.8	Volvo EC-480 DL is in operation for O/B loading
20	21.05.2022	MT-84(Out Side cabin)	59.6	65.5	"
21	21.05.2022	Back fill area	44.0	48.5	Dumpers are in operation for O/B unloading
22	21.05.2022	Haul road	45.1	49.3	Trucks are crossing with lignite.
23	21.05.2022	Giral village	27.2	32.0	

*[Signature]*

Manager (Geology)  
GLP, Barmer



# **Rajasthan State Mines & Minerals Ltd.**

Unit: Giral Lignite Project, Barmer

Sound Monitoring record for the month of April- 2022

Sl. no.	Date	Locations	dB		Remarks
			Min.	Max.	
1	18.04.2022	Site office (in side )	27.3	32.0	
2	18.04.2022	Site office (Out Side)	28.2	33.4	
3	18.04.2022	Thumbli village	25.5	30.5	
4	18.04.2022	Weigh bridge(in side)	37.1	42.2	Trucks are in operation for weighing.
5	18.04.2022	Weigh bridge(Outside)	38.2	43.5	"
6	18.04.2022	Mining camp.	25.0	30.3	
7	18.04.2022	Plantation area	25.1	30.2	
8	18.04.2022	Rest shelter	26.7	31.4	
9	18.04.2022	R-86 (In Side cabin)	48.5	53.7	Volvo EC-480 DL is in operation for O/B loading
10	18.04.2022	R-86 (Out Side cabin)	58.4	63.2	"
11	18.04.2022	R-32 (In Side cabin)	49.3	54.4	Volvo EC-290 BLC is in operation for Lignite loading +
12	18.04.2022	R-32 (Out Side cabin)	59.6	64.8	"
13	18.04.2022	R-31 (In Side cabin)	51.3	56.2	Kobelco SK 210 HD LC is in operation for Lignite loading
14	18.04.2022	R-31(Out Side cabin)	60.0	65.1	"
15	18.04.2022	R-90 (In Side cabin)	50.5	55.2	Volvo EC-480 DL is in operation for O/B loading
16	18.04.2022	R-90 (Out Side cabin)	59.2	64.7	"
17	18.04.2022	MT-84 (In Side cabin)	50.4	55.6	Volvo EC-290 BLC is in operation for I/B loading
18	18.04.2022	MT-84 (In Side cabin)	59.3	64.4	"
19	18.04.2022	MT-84 (In Side cabin)	48.3	53.5	Volvo EC-480 DL is in operation for O/B loading
20	18.04.2022	MT-84(Out Side cabin)	59.0	64.3	"
21	18.04.2022	Back fill area	43.2	47.6	Dumpers are in operation for O/B unloading
22	18.04.2022	Haul road	44.3	48.0	Trucks are crossing with lignite.
23	18.04.2022	Giral village	26.1	31.4	



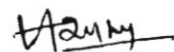
Manager (Geology)  
GLP, Barmer

**Rajasthan State Mines & Minerals Ltd.**

Giral lignite Project, Barmer

SPM Sample results for the month of September, 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	1.09.2022	Rest Shelter	70.467	80.994	151.461
2	3.09.2022	Rest Shelter	86.145	97.668	183.813
3	5.09.2022	Site Office	65.934	88.757	154.691
4	7.09.2022	Site Office	105.698	119.088	224.786
5	9.09.2022	Weigh Bridge	108.730	135.185	243.915
6	12.09.2022	Weigh Bridge	127.642	156.097	283.739
7	14.09.2022	Mining Area	138.624	163.492	302.116
8	16.09.2022	Mining Area	136.577	173.207	309.784



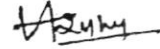
Manager (Geology)  
Giral lignite Mines, Barmer

**Rajasthan State Mines & Minerals Ltd.**

Giral lignite Project, Barmer

SPM Sample results for the month of June, 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	03.06.2022	Rest Shelter	71.703	85.439	157.142
2	06.06.2022	Rest Shelter	97.691	112.124	209.875
3	08.06.2022	Site Office	65.311	86.991	152.302
4	10.03.2022	Site Office	99.151	111.611	210.762
5	13.06.2022	Weigh Bridge	125.833	139.444	265.277
6	15.06.2022	Weigh Bridge	136.316	153.846	290.162
7	16.06.2022	Mining Area	148.550	154.761	303.311
8	18.06.2022	Mining Area	146.791	166.327	313.118



Manager (Geology)

Giral lignite Mines, Barmer



## Rajasthan State Mines & Minerals Limited

(A Government of Rajasthan Enterprise)

S.B.P. LIMESTONE

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Phone: 0291-2341041, 2346199 Fax: 0291-2341041 E-mail: rsmm@rediffmail.com

### CENTRAL LABORATORY

AN ISO 9001:2015 Certified Laboratory

Ref: L119 (S.V.L.G.-B/2022-23/568)

Date: 29.09.2022

Issued to:

GENERAL MANAGER  
IGNITE PROJECT,  
BARMER.

Ref: GLP/Chem.Ana./2022-23/578

DATE: 24/09/2022

Sample Received On Date: 29.09.2022

### SAMPLE PARTICULARS

Two Samples of Drinking Water from GIRAL and SONARI Mines

### TEST RESULTS

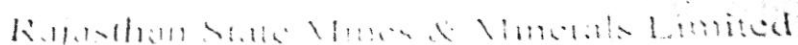
(Analysed as per IS-1514: 1998)

S. No.	Properties	RSMM/IB/9-22/2623 Giral-01	RSMM/IB/09-22/2624 Sonari -02
1.	pH	7.70	7.60
2.	Temperature °C	22.9	22.9
3.	Alkalinity Phenolphthalein (CaCO <sub>3</sub> )	Nil	Nil
4.	Alkalinity Methyl Orange (CaCO <sub>3</sub> )	60	50
5.	Total Hardness	160	160
6.	Calcium Hardness	60	80
7.	Magnesium Hardness	100	80
8.	Carbonate Hardness	60	50
9.	Non Carbonate Hardness	70	110
10.	Chlorides as Cl	90	80
11.	Sulphate	14	15
12.	Fluoride	-	-
13.	TDS	252	264

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

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

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



S E I L I N N S I O N S

8. West Coast Science Center, Davis, Calif. 95616, 1991.

1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 26

## CENTRAL LABORATORY

As I noted, the *Journal* is not a journal in the traditional sense of the word. It is a journal in the sense that it is a record of the work of the American Psychological Association, and it is a journal in the sense that it is a record of the work of the American Psychological Association.

R11 : 448 (8) 410 - B 2024 23 - 2 887

Dec 01, 2022

Issued to:

GENERAL MANAGER

LIGNITE PROJECT

BARNIER.

REF: GLP Chem Aug 2022-2387

DA11-27-06-2022

Sample Received On Date: 01.07.2022

### SAMPLE PARTICULARS

Two Samples of Drinking Water from GIRAL and SONARI Mines

## TEST RESULTS

(Analysed as per IS-1514: 1990)

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

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

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