

GMDC/JLP/ 271 /25-26

Date: 20.06.2025



To,

Scientist-C

Integrated Regional Office, Gandhinagar, (IRO Gandhinagar)

By Mail

Ministry of Environment and Forest and Climate Change.

Room No. 407, Aranya Bhawan, Near CH-3 circle,

Sector 10 A, Gandhinagar-382010.

Sub: Submission of half yearly EC Compliance report for the period of October -24 to March-25.

Dear Sir,

Please find enclosed herewith half yearly compliance report for EC conditions for the period of October-24 to March - 2025 for Amod (G-19 Extn.) Lignite Mine, Rajpardi-GMDC.

This is for your kind information and perusal please.

Thanking You.

For GMDC Ltd.,

**General Manager (Project)-I/c
Lignite Project, Rajpardi.**

Copy to: Regional Officer
Gujarat Pollution Control Board
5009/4, GIDC Estate
Ankleshwar-393002

Reg.AD

**LIGNITE PROJECT, RAJPARDI,
Gujarat Mineral Development Corporation Limited**

(A Government of Gujarat Enterprise)

CIN: L14100GJ1963SGC001206

At & PO : Rajpardi, Tal : Jhagadia,

Dist : Bharuch, Gujarat - 393115, (India)

Phone No. : 02645-240185,

Fax No. 02645-240167,


E-mail : rajpardi@gmdcltd.com

www.gmdcltd.com

**PROJECT
SHIKHAR**
A STRATEGIC TRANSFORMATION INITIATIVE AT GMDC LTD.

Amod G-19 Ext. Lignite Mine, Lignite Project-Rajpardi
Environmental Clearance issued by Ministry of Environment and Forest
Compliance for the period of October- 2024 to March- 2025

Environment Clearance Letter no. MoEFCC No. J-11015/405/2005- I.A.II (M) dated 14th July 2006.

Sr. No.	E.C. Conditions	Compliance															
A	Specific conditions																
i	All the NOC condition shall be strictly implemented.	<u>Complied</u>															
ii	No mining of associated major minerals such as silica sand shall be under taken without prior EC as per laid down procedure.	No mining of associated major minerals such as silica sand is carried out. But silica sand coming out as OB during lignite mining is stacked separately.															
iii	Topsoil should 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 greenbelt.	<p style="text-align: center;"><u>Complied</u></p> <p>Topsoil scrapped out during mining processes is stacked properly in an earmarked area.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Sl. No.</th> <th style="text-align: center;">Location</th> <th style="text-align: center;">Storage Area (in Ha)</th> <th style="text-align: center;">Volume (in Lac M³)</th> <th style="text-align: center;">Slope</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">Near Time office/ Workshop campus (TS-2)</td> <td style="text-align: center;">11.30</td> <td style="text-align: center;">20.23</td> <td style="text-align: center;">25^o</td> </tr> <tr> <td colspan="2" style="text-align: center;">Total</td> <td style="text-align: center;">11.30</td> <td style="text-align: center;">20.23</td> <td></td> </tr> </tbody> </table> <p>Top soil used for spreading on dumps and plantation work. Photographs of top soil stack is shown below:</p> <div style="text-align: center;">  </div>	Sl. No.	Location	Storage Area (in Ha)	Volume (in Lac M ³)	Slope	1	Near Time office/ Workshop campus (TS-2)	11.30	20.23	25 ^o	Total		11.30	20.23	
Sl. No.	Location	Storage Area (in Ha)	Volume (in Lac M ³)	Slope													
1	Near Time office/ Workshop campus (TS-2)	11.30	20.23	25 ^o													
Total		11.30	20.23														

<p>iv</p>	<p>OB should be stacked at the earmarked external OB dumpsite(s) within ML area and shall be a maximum height of 30 m only consists of benches of 10 m each. The ultimate slope of the dump shall not exceed 28°. Backfill shall begin at the end of 3rd year in the de-coaled area. Monitoring and management of existing reclaimed dumpsites should continue until the vegetation becomes self sustaining. Compliance status should be submitted to the Ministry of Environment and Forests and its regional office located at Bhopal on yearly basis.</p>	<p><u>Complied</u></p> <p>OB has been stacked at the earmarked places and there are 2 external dumps in the present scenario, the details of which is furnished below:</p> <table border="1" data-bbox="603 293 1310 456"> <thead> <tr> <th>SI No</th> <th>Dump</th> <th>Height (m)</th> <th>Slope</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>South- Eastern side Dump-1</td> <td>26</td> <td>25°</td> </tr> <tr> <td>2</td> <td>Western side Dump-2</td> <td>16</td> <td>25°</td> </tr> </tbody> </table> <p>Dump height does not exceed 30 m & slope of dump does not exceed 28° as shown in table above. So far, non receipt of show cause notice from DGMS reveals compliance to the norms.</p> <p>Bench Height has been maintained within 10-meter height but due to nature of OB, continuous efforts are required to maintain the benches. So far, non receipt of show cause notice from DGMS reveals compliance to the norms.</p> <p>Backfilling has started since April 2013. 53.06 Ha of OB dump has been reclaimed till date.</p> <p>The reclaimed dumpsites are being regularly monitored.</p> <p>Compliance status is submitted to the ministry of Environment and Forests and its integrated regional office located at Gandhinagar on half-yearly basis and last report was submitted vide letter No. GMDC/JLP/919/2023-24 Dated 26.10.2023 through e-mail.</p>	SI No	Dump	Height (m)	Slope	1	South- Eastern side Dump-1	26	25°	2	Western side Dump-2	16	25°		
SI No	Dump	Height (m)	Slope													
1	South- Eastern side Dump-1	26	25°													
2	Western side Dump-2	16	25°													
<p>v</p>	<p>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, greenbelt development, etc. The drain should be regularly de-silted and maintained properly.</p> <p>Garland drains (size, gradient, length) and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow</p>	<p><u>Complied.</u></p> <p>Garland drains, catch drains and siltation pond have been constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected is utilized for watering the mine area, roads, green belt development, etc. The rest of the water flows into the nearby nallah where it is used for irrigation purposes. De-silting and maintenance of the siltation pond and existing drains is also carried out periodically.</p> <p>Garland drains (size, gradient, length) and sump capacity are designed keeping 50% safety margin over and above peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity also provides adequate retention period to allow proper settling of silt material.</p> <p>Size and gradient of the garland drains and siltation pond in the mine area is mentioned below:</p> <table border="1" data-bbox="603 1771 1519 2011"> <thead> <tr> <th>Sl. No</th> <th>Garland Drain</th> <th>Length (m)</th> <th>Breadth (m)</th> <th>Depth (m)</th> <th>Gradient</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Garland Drain no.1</td> <td>1500</td> <td>3</td> <td>3</td> <td>1 in 200</td> <td></td> </tr> </tbody> </table>	Sl. No	Garland Drain	Length (m)	Breadth (m)	Depth (m)	Gradient	Remarks	1	Garland Drain no.1	1500	3	3	1 in 200	
Sl. No	Garland Drain	Length (m)	Breadth (m)	Depth (m)	Gradient	Remarks										
1	Garland Drain no.1	1500	3	3	1 in 200											


proper settling of silt material.	2	Garland Drain no.2	1547	2.5	3	1 in 133		
	3	Garland Drain no.3	425	2.5	3	1 in 200		
	4	Siltation Pond 1	380	132	10	NA	S	
	5	Siltation Pond 2	20	15	2	NA	N	
	6	Siltation Pond 3	6285 M ²			NA		E



Photographs are shown below:



vi	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.	<p><u>Complied.</u></p> <p>Retaining wall has been constructed all along the toe of the dump, the dimension of which is given below:</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Location of the Retention Wall</th> <th>Length (in m)</th> <th>Breadth (in m)</th> <th>Height (in m)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N-E side of present mine pit against toe of the dump</td> <td>200</td> <td>2</td> <td>3</td> </tr> </tbody> </table>	Sl. No.	Location of the Retention Wall	Length (in m)	Breadth (in m)	Height (in m)	1	N-E side of present mine pit against toe of the dump	200	2	3
Sl. No.	Location of the Retention Wall	Length (in m)	Breadth (in m)	Height (in m)								
1	N-E side of present mine pit against toe of the dump	200	2	3								



<p>vii</p>	<p>Measures shall be undertaken to ensure that no OB from the mining operations outfalls into the seasonal nallah flowing within and adjoining the mine lease.</p>	<p><u>Complied.</u> Following measures are undertaken to ensure that no OB from the mining operations outfalls into the seasonal nallah flowing within and adjoining the mine lease</p> <ol style="list-style-type: none"> 1) Garland drains (3 nos.) all along the toe of the dumps and Siltation Pond (3 nos.) to arrest siltation within and adjoining the mine lease. 2) Retaining wall at the toe of the Dump to arrest outfall of OB material. (Refer Point no VI for details.) <p>Photographs are shown below:</p> 
<p>viii</p>	<p>No mineral processing shall be undertaken without prior clearance/approval from MoEF.</p>	<p>Not Applicable. No mineral processing is carried out at mine. If proposed in future prior clearance/approval from MoEF &CC shall be undertaken.</p>
<p>ix</p>	<p>Drills should be wet operated.</p>	<p><u>Point noted with esteem</u> No drilling operation is carried out at present as the mining is carried</p>

		out using excavator and dumpers combination.
X	No blasting shall be carried out.	Complied. Strata in Amod G-19 Ext. Lignite Mine are soft and hence no blasting is carried out. Mining is carried out using excavator and dumpers combination.
xi	Area brought under afforestation shall include reclaimed external OB dumps (38 ha.), backfilled area, along ML boundary (10 ha.), along road (2 ha.) and non mineralized /vacant undisturbed land located within the lease by planting native species in consultation with DFO/ Agriculture Dept. The density of the trees should be around 2500 plants /ha.	<p>Ongoing activity, under Progress.</p> <p>Plantation activity has been started from the year 2007 and it is progressing in phased manner every year in consultation with the local Forest Department. Amod G-19 Ext. Lignite Mine has carried out plantation in 27.63 Ha. area till date which includes:</p> <ol style="list-style-type: none"> 1) 5.17 Ha plantation on backfilled area, 2) 2.72 along road 3) 11.51 Ha along mining lease boundary 4) 1.76 Ha in undisturbed area. 5) 0.92 Ha Fruit bearing area. 6) 1.0 Ha Plantation opp. RBL Durga (JV) camp. 7) 0.55 Ha Plantation on road parapet, 8) 2.0 Ha in dump area in lignite weighbridge 9) 2.0 Ha Near Traffic Point Lignite weighbridge <div style="display: flex; justify-content: space-around;">   </div> <p>No forestation is being carried out in external dumps as OB dumping is a progressive activity and there is planning to use it in backfilling of the mine void. After exhaustion of the mining activity, the plantation shall be carried out in 38 ha OB dumps of specific height as per the condition.</p> <p>Total Plantation = 110238 Total Area (in Ha) =27.63</p>
xii	A progressive Mine closure plan shall be implemented by reclamation of mine out quarry area which shall be backfilled and afforested by planting native plant species in consultation with the DFO/ Agriculture Department. The density of the trees should be around 2500 plants /ha.	<p>Under Progress.</p> <p>Activities as per progressive Mine closure plan are carried out in phased manner. Till date, 66.00 Ha area has been backfilled and the activities going on are mentioned below:</p> <ol style="list-style-type: none"> 1) 7.14 Ha area has been reclaimed biologically with 19290 plants with a density of 2489 plants/Ha. 2) 58.86 Ha area has been backfilled up to the ground level, out of which topsoil layering is done over 46.68 Ha. The process of grass development for green manuring has been started in 2 Ha backfilled area for the purpose of developing Agricultural land as per the approved Progressive Mine Closure Plan.

Photographs are shown below:



xiii

Conservation plan for avian fauna and for the protected animal species found in and around the project area shall be formulated, in consultation with the state Forest and wildlife departments. A separate fund with budget for capital and recurring costs shall be earmarked for its implementation and the progress reports shall be regularly submitted at least once a year to the Regional Office of this Ministry at Bhopal.

Under Progress.

Conservation Plan for avian fauna and flora for the protected animal species found in and around the project area has already prepared and submitted to the Gujarat Forest Department vide letter no. GMDC/ENV/630/2018-19 dated January 28, 2019, and the copy of letter of submission of said plan to Gujarat State Forest Department is enclosed herewith.



GUJARAT MINERAL DEVELOPMENT CORPORATION LIMITED
(A Government of Gujarat Enterprise)
Khanj Bhavan, 6th Floor, "A" Tower, 132 ft Ring Road,
Near University Ground, Vastropur, Ahmedabad -380 052
Telephone: 27912356, 27913200 Fax: 27911454, 27913038

GMDC/ENV/629/2018-19/

January 28th, 2019

To,
Assistant Conservator of Forests,
Bharuch Sub-Division
Ayurvedik Hospital Compound,
Tulasi Dham, Jadeshwar Road,
Bharuch

Sub: - Wildlife Conservation Plan (WLCF) for Avian Fauna, Protected Animal Species and Flora in and around 10 Kms. zone of Amod (G-19 Extn.) Lignite Mines, Bharuch.

R/Sir,

As per above subject, we are sending herewith Wildlife Conservation Plan (WLCF) of Amod (G-19 Extn.) Lignite Mines, located in Village: Amod, Taluka: Jhagadia, District: Bharuch.

We are kindly requested to review this Wildlife Conservation Plan as well as to provide your suggestions, if any, so that an effective Wildlife Conservation Plan (WLCF) can be structured.

We are in process of finalizing the report by Dt. 10/02/2019. Hence, you are requested to provide us valuable suggestions before that, so that we can incorporate the same in final report, else it will be deemed to be approved.

This is for your information and further necessary action please.

Thanking you.

Yours Faithfully
For GMDC Ltd.,

[Chirag A Shah]
General Manager (Environment)



Cc to: The Principal Chief Conservator of Forest and Head of the Forest Force (HoFF), "Aranya Bhavan", Near CH-3 Circle, Sector 30 A, Gandhinagar- 382010, Gujarat.

<p>Xiv</p>	<p>The company shall put up artificial ground water recharge measures for augmentation of ground water resource in consultation with the local villagers.</p> <p>The project authorities should meet water requirement of nearby village in case the village(s) wells go dry due to dewatering of mine.</p>	<p><u>Complied.</u></p> <p>Presently there is no such problem of water table depletion recorded in this area. This area is a heavy rainfall receiving area. The average rainfall of last five years is approximately 1300mm. However, low lying areas within the mine lease area serve as water storage and recharge of water.</p> <p>Further, fund of Rs 3.50 Lakh Rupees had been given to develop Bharuch Matariya Dam and deepening of 03 ponds has been undertaken in three villages for augmentation of ground water, the details are as below:</p> <p><u>Details of Water Recharge Measures along with Expenditure</u></p> <table border="1" data-bbox="603 607 1509 1346"> <thead> <tr> <th>Sl. No.</th> <th>Location</th> <th>Work Description</th> <th>Year of Completion</th> <th>Expenditure (in Rs)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Bharuch</td> <td>Fund provided for development of Bharuch Matariya Dam</td> <td>2013</td> <td>3,50,000</td> </tr> <tr> <td>2</td> <td>Bhuri Village</td> <td>Construction of Dam of size 144*63*3 m³</td> <td>2017</td> <td>3,10,128</td> </tr> <tr> <td>3</td> <td>Amod Village</td> <td>Construction of Dam of size 33*17*2 m³</td> <td>2017</td> <td>1,91,061</td> </tr> <tr> <td>4</td> <td>Bhimpor Village</td> <td>Construction of Dam of size 55*50*2 m³</td> <td>2017</td> <td>1,10,760</td> </tr> <tr> <td>5</td> <td>Near Adm office & Bhuri Village</td> <td>Construction of 02 Nos of Borewell for Artificial Ground water Recharge</td> <td>2019</td> <td>6,45,000</td> </tr> </tbody> </table> <p>GMDC has hereby agreed to cater water requirement of nearby village in case the village(s) wells go dry due to dewatering of mine. We have received one request from Bhuri village to provide ETP treated water for Agricultural purpose. After receiving the request, we have got the water analyzed in College of Agriculture, Bharuch and found fit for agricultural purpose. Afterwards we have supported the villagers by providing a pipeline up to the Bhuri Pond from where the villagers draw water as per their requirement for agricultural purpose.</p> <p>The photographs are given below:</p>	Sl. No.	Location	Work Description	Year of Completion	Expenditure (in Rs)	1	Bharuch	Fund provided for development of Bharuch Matariya Dam	2013	3,50,000	2	Bhuri Village	Construction of Dam of size 144*63*3 m ³	2017	3,10,128	3	Amod Village	Construction of Dam of size 33*17*2 m ³	2017	1,91,061	4	Bhimpor Village	Construction of Dam of size 55*50*2 m ³	2017	1,10,760	5	Near Adm office & Bhuri Village	Construction of 02 Nos of Borewell for Artificial Ground water Recharge	2019	6,45,000
Sl. No.	Location	Work Description	Year of Completion	Expenditure (in Rs)																												
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5	Near Adm office & Bhuri Village	Construction of 02 Nos of Borewell for Artificial Ground water Recharge	2019	6,45,000																												



GMDC has constructed 02 Nos of bore well for artificial ground water recharge purpose for augmentation of ground water resource in consultation with the local villagers.



xv

The company shall obtain

Point noted with esteem.

approval of CGWA/CGWB, Regional office for use of additional ground water if any, for mining operations.

No groundwater is being used for Mining operations as well as no additional ground water is required.

Amod (G-19 Extn.) Lignite Mine, Rajpardi has obtained NOC from CGWA vide NOC NO. CGWA/NOC/MIN/ORIG/2021/12461 dated 03.08.2021.

NOC Copy is attached herewith:

① Externally Originated Document File.
② Env. file
03/08/2021

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास
और गंगा संरक्षण विभाग
केन्द्रीय भूमि जल प्राधिकरण
Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development & Ganga Rejuvenation
Central Ground Water Authority

AMDC LTD.
RAJPARDI
03 AUG 2021
666 666

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)
NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	Amod(g19 Extension) Lignite Mine Lignite Project Rajpardi		
Project Address:	Gmdc Ltd, Lignite Project Rajpardi		
Village:	Amod	Block:	Jhagadia
District:	Bharuch	State:	Gujarat
Pin Code:			
Communication Address:	Gmdc Ltd, Lignite Project Rajpardi, Jhagadia, Bharuch, Gujarat - 393115		
Address of CGWB Regional Office :	Central Ground Water Board West Central Region, Swami Narayan College, Building, Shah Alam Tolnaka, Ahmadabad, Gujarat - 380022		

1. NOC No.:	CGWA/NOC/MIN/ORIG/2021/12461		
2. Application No.:	21-4/2581/GJ/MIN/2017	3. Category: (GWRE 2017)	Safe
4. Project Status:	Existing Project	5. NOC Type:	New
6. Valid from:	03/08/2021	7. Valid up to:	02/08/2023
8. Ground Water Abstraction Permitted:			
	Fresh Water		Saline Water
	m ³ /day	m ³ /year	m ³ /year
	20.00	6000.00	180.00
	Dewatering		Total
	m ³ /day	m ³ /year	m ³ /day
		54000.00	

9. Details of ground water abstraction /Dewatering structures

	Total Existing No.:2						Total Proposed No.:0					
	DW	DCB	BW	TW	MP	MPu	DW	DCB	BW	TW	MP	MPu
Abstraction Structure*	0	0	0	1	0	0	0	0	0	0	0	0
Dewatering Structure*	0	0	0	0	1	0	0	0	0	0	0	0

*DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit;MPu-Mine Pumps

10. Ground Water Abstraction/Restoration Charges paid (Rs.): 120000.00

11. Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism.

No. of Piezometers	Monitoring Mechanism		
	Manual	DWLR**	DWLR With Telemetry
1	0	1	0

**DWLR - Digital Water Level Recorder

(Compliance Conditions given overleaf)
This is an auto generated document & need not to be signed.

18/11, जामनगर हाउस, मानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jammagar House, Mansingh Road, New Delhi-110011
Phone: (011) 23383561 Fax: 23382051, 23386743
Website: cgwa-noc.gov.in
पानी बचाये... जीवन बचाये
SAVE WATER - SAVE LIFE

xvi Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and construction of new piezometer. The monitoring

Complied.

Regular monitoring of ground water level is carried out departmentally through construction of Piezometer. The piezometer monitoring data are as under

Month	Water Level
-------	-------------

for quantity should be done four times a year in pre-monsoon (in May), monsoon (August), Post monsoon (November) and winter (January) seasons and for quality in May. Data thus collected should be submitted to the MoEF & CPCB quarterly within one month of monitoring.

October 2024	-28.34
February 2025	-28.30

The monitoring for assessing the quality of groundwater is carried out by the MOEFCC, NABL & GPCB Accredited agency

March-25 is shown below:

Head Office & Lab
Dayal Estate, National Highway No.8, Opp APMC Market Gate-1, Jetalpur, District-Ahmedabad-382426
Gujarat. INDIA
Mobile No : +91-7069072001 Email Id : lab@gogreenmechanisms.com

CERTIFICATE OF ANALYSIS

Report Number: GGMP/L/PN/4094D/05/01
Gujarat Mineral Development Corp. Ltd. (Rajpardi)
Lignite Project-Rajpardi,
Tal-Jhagadia-393115,Dist-Bharuch

Reporting Date : 26/03/2025

SAMPLE DETAILS

Lab ID:	Lab/PN/4094D/05/01	Sampling Date:	18/03/2025
Sample Drawn By:	Mayan Dabhi	Sample Receipt Date:	19/03/2025
Sample Type:	Ground Water	Analysis Start Date:	20/03/2025
Sample Description:	Borewell Near STP Plant	Analysis End Date:	25/03/2025
Sample Quantity:	3 L	Sampling Method:	GGMPL/WI/27A
Sample Condition:	Satisfactory	Packing:	Sealed

Sr.No	Parameters	Results	Unit	Test Method	AL	PL
13	Arsenic	BQL (QL=0.005)	mg/L	GGMPL/SOP/W & WW/46	0.01	No relaxation
14	Barium	BQL (QL=0.02)	mg/L	GGMPL/SOP/W & WW/46	0.7	No relaxation
15	Beryllium	BQL (QL=0.02)	mg/L	GGMPL/SOP/W & WW/46	NS	NS
16	Cadmium	BQL (QL=0.002)	mg/L	GGMPL/SOP/W & WW/46	0.003	No relaxation
17	Chromium	BQL (QL=0.02)	mg/L	GGMPL/SOP/W & WW/46	0.05	No relaxation
18	Cobalt	BQL (QL=0.02)	mg/L	GGMPL/SOP/W & WW/46	NS	NS
19	Iron	BQL (QL=0.05)	mg/L	GGMPL/SOP/W&WW/46	1	No relaxation
20	Lead	BQL (QL=0.005)	mg/L	GGMPL/SOP/W & WW/46	0.01	No relaxation
21	Manganese	BQL (QL=0.05)	mg/L	GGMPL/SOP/W & WW/46	0.1	0.3
22	Mercury	BQL (QL=0.0005)	mg/L	GGMPL/SOP/W & WW/46	0.001	No relaxation
23	Nickel	BQL (QL=0.01)	mg/L	GGMPL/SOP/W & WW/46	0.02	No relaxation

AL & PL as per IS 10500.
NS=Not Specified, BQL=Below Quantification Limit,QL= Quantification Limit

Reviewed & Authorized by Tantan Kumar

Reviewed & Authorized by Payal Patel

**Head Office & Lab**Dayal Estate, National Highway No.8, Opp APMC Market Gate-1, Jetalpur, District-Ahmedabad-382426
Gujarat. INDIA

Mobile No : +91-7069072001

Email Id : lab@gogreenmechanisms.com

CERTIFICATE OF ANALYSIS

Report Number: GGMP/L/PN/4094D/05/01

Reporting Date : 26/03/2025

Gujarat Mineral Development Corp. Ltd. (Rajpardi)

Lignite Project-Rajpardi,
Tal-Jhagadia-393115,Dist-Bharuch

TC-7073

SAMPLE DETAILS

Lab ID:	Lab/PN/4094D/05/01	Sampling Date:	18/03/2025
Sample Drawn By:	Mayan Dabhi	Sample Receipt Date:	19/03/2025
Sample Type:	Ground Water	Analysis Start Date:	20/03/2025
Sample Description:	Borewell Near STP Plant	Analysis End Date:	25/03/2025
Sample Quantity:	3 L	Sampling Method:	GGMP/L/WI/27A
Sample Condition:	Satisfactory	Packing:	Sealed

Sr.No	Parameters	Results	Unit	Test Method	AL	PL
13	Arsenic	BQL (QL=0.005)	mg/L	GGMP/L/SOP/W & WW/46	0.01	No relaxation
14	Barium	BQL (QL=0.02)	mg/L	GGMP/L/SOP/W & WW/46	0.7	No relaxation
15	Beryllium	BQL (QL=0.02)	mg/L	GGMP/L/SOP/W & WW/46	NS	NS
16	Cadmium	BQL (QL=0.002)	mg/L	GGMP/L/SOP/W & WW/46	0.003	No relaxation
17	Chromium	BQL (QL=0.02)	mg/L	GGMP/L/SOP/W & WW/46	0.05	No relaxation
18	Cobalt	BQL (QL=0.02)	mg/L	GGMP/L/SOP/W & WW/46	NS	NS
19	Iron	BQL (QL=0.05)	mg/L	GGMP/L/SOP/W&WW/46	1	No relaxation
20	Lead	BQL (QL=0.005)	mg/L	GGMP/L/SOP/W & WW/46	0.01	No relaxation
21	Manganese	BQL (QL=0.05)	mg/L	GGMP/L/SOP/W & WW/46	0.1	0.3
22	Mercury	BQL (QL=0.0005)	mg/L	GGMP/L/SOP/W & WW/46	0.001	No relaxation
23	Nickel	BQL (QL=0.01)	mg/L	GGMP/L/SOP/W & WW/46	0.02	No relaxation

AL & PL as per IS 10500.

NS=Not Specified, BQL=Below Quantification Limit,QL= Quantification Limit

Reviewed & Authorized by
Tantan KumarReviewed & Authorized by
Payal Patel

Head Office & Lab
Dayal Estate, National Highway No.8, Opp APMC Market Gate-1, Jetalpur, District-Ahmedabad-382426
Gujarat. INDIA

Mobile No : +91-7069072001 Email Id : lab@gogreenmechanisms.com

CERTIFICATE OF ANALYSIS

Report Number: GGMP/LN/4094D/05/01
Gujarat Mineral Development Corp. Ltd. (Rajpardi)
Lignite Project-Rajpardi,
Tal-Jhagadia-393115,Dist-Bharuch

Reporting Date : 26/03/2025

SAMPLE DETAILS

Lab ID:	Lab/PN/4094D/05/01	Sampling Date:	18/03/2025
Sample Drawn By:	Mayan Dabhi	Sample Receipt Date:	19/03/2025
Sample Type:	Ground Water	Analysis Start Date:	20/03/2025
Sample Description:	Borewell Near STP Plant	Analysis End Date:	25/03/2025
Sample Quantity:	3 L	Sampling Method:	GGMPL/WI/27A
Sample Condition:	Satisfactory	Packing:	Sealed

Sr.No	Parameters	Results	Unit	Test Method	AL	PL
24	Zinc	BQL (QL=0.02)	mg/L	GGMPL/SOP/W & WW/46	5	15
25	Selenium	BQL (QL=0.005)	mg/L	GGMPL/SOP/W & WW/46	0.01	No relaxation
26	Nitrate	0.76	mg/L	APHA 24th Edn 4500 NO3 B	45	No relaxation

AL & PL as per IS 10500.
NS=Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit

Reviewed & Authorized by
Tantan Kumar

Reviewed & Authorized by
Payal Patel

Page No : 3/3

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xvii

Beside 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 disease and hearing impairment, if any through an agency such as NIOH, Ahmedabad within a period of one year and results reported to the Ministry

Complied.

Health check up of all the employees in accordance with the provision of Rule 29-B of Mines rules, 1955 and recommendations of the 10th and 11th Conference on Safety in mines for Occupational diseases including hearing impairment is being carried out in every 3 years (for the employees above 45 years age) and 5 years interval (for the employees below 45 years age) by outside competent agency (Sunshine Global Hospital, Vadodara).

Following medical tests are being carried out:

- 1) General Physical Examination
- 2) Height
- 3) Weight
- 4) Eyes (Visual acuity, Night Blindness, Colour Blindness, Squint, Any Organic disease)

and DGMS.

- 5) Ears (Audimetry, Any Organic Disease, Hearing)
- 6) Respiratory System: (chest measurement and Spirometry test)
- 7) Circulatory System (Blood Pressure, Pulse, Cardiology assessment)
- 8) Abdomen (Tenderness, Liver, Spleen, Tumor, Other)
- 9) Nervous System (reflexes, peripheral Circulation, Vibrational syndromes etc)
- 10) Skiagram of chest (ILO classification of chest radiograph)
- 11) Hematological Test 9Haemoglobin, TLC, DLC - Neutrophils, Lymphocytes, Monocytes, Eosinophils, Basophils, ESR, Platelets)
- 12) Report on Biochemistry (Blood Sugar, Blood Urea, Serum Creatinine, Total Cholesterol, Triglyceride, HDL, VLDL, LDL, Ratio CHOL/HDL)

Medical examinations of 44 employees were carried out at Amod (G-19 Extn.) Lignite Mine, Lignite Project Rajpardi.

[FORM - 0]

[See rule 29F (2) and 29L] Report of medical examination under rule 29B

(To be issued in triplicate)

Certificate No. 2929

Certificate that Shri/Shamati* MITEEN V. PATEL employed as Medical Officer in G.M.D.C. mine, Form B No. 57 has been examined for an initial/periodical medical examination. He/she appears to be 27 years of age. The findings of the examining authority are given in the attached sheet. It is considered that Shri/Shrimati* MITEEN V. PATEL

- a) is medically fit for any employment in mines*.
- b) is suffering from.....and is medically unfit for*
 - I. Any employment in mine; or
 - II. Any employment below ground; or Joomay
 - III. Any employment or work.

c) is suffering from.....and should get this disability* cured/controlled and should be again examined within a period of.....months. He/she* will appear for re-examination with the result of test of..... and the opinion ofspecialist fromHe/She may be permitted/not permitted* to carry on his duties during this period.



HARESH KUMAR RAM
MBBS, AFIP
General Physician & Surgeon
Industrial Health Consultants
Regd. No. G33340

Dr. HARESH KUMAR RAM
MBBS, AFIP
General Physician & Surgeon
Industrial Health Consultants
Regd. No. G33340

Place: G.M.D.C. Rajpardi



Date: 06/12/24

Signature of Examination Authority

Name and Designation in Block Letters

*Delete whatever is not applicable.

** One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the manager of the mine concerned by registered post; and the third copy shall be retained by the examining authority.

<p>xviii</p>	<p>Digital processing of the entire lease using remote sensing technique should be done (pre & during Mining Operation) regularly once in 3 years for monitoring land use pattern and assess the impact of mining and restoration of land post closure and report submitted to MoEF Regional Office, Bhopal.</p>	<p>GMDC has awarded the work to M/s Indian Geomatics Research Institute for “Study of change in Land use pattern for 2018-2021 by remote sensing & Geographical Information System (RI/GIS) technique vide work order no GMDC/ENV/152/2022-23 DTD 14th June 2022. The agency submitted the report of change in Land Use pattern along with Maps for Core Zone as well as 10 kms Buffer Zone by using remote sensing and geographical information system (RS/GIS) technique for AMOD (G-19 Extn.) Lignite Mine, Rajpardi. Reports along with maps were submitted during last EC compliance-</p> <p style="text-align: center;">STUDY OF CHANGE IN LAND USE PATTERNS FOR 2018-2021 USING REMOTE SENSING & GEOGRAPHICAL INFORMATION SYSTEM FOR BUFFER AREA OF AMOD LIGNITE MINING (G-19 EXTN.) BHARUCH (GMDC)</p> <div style="text-align: center;">  </div> <p style="text-align: center;">Submitted By</p> <div style="text-align: center;">  <p>INDIAN GEOMATICS RESEARCH INITIATIVE</p> <p>A-405, The First Corporate Commune B/H ITC Narmada Hotel, Keshavbaug Near IIM, Ahmedabad - 380015</p> <p><i>November - 2022</i></p> </div>
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STUDY OF CHANGE IN LAND USE PATTERNS FOR 2018-2021 USING REMOTE SENSING & GEOGRAPHICAL INFORMATION SYSTEM FOR CORE AREA OF AMOD LIGNITE MINING PROJECT (G-19 EXTN.) BHARUCH (GMDC)



Submitted By



A-405, The First Corporate Commune
B/H ITC Narmada Hotel, Keshavbaug
Near IIM, Ahmedabad - 380015

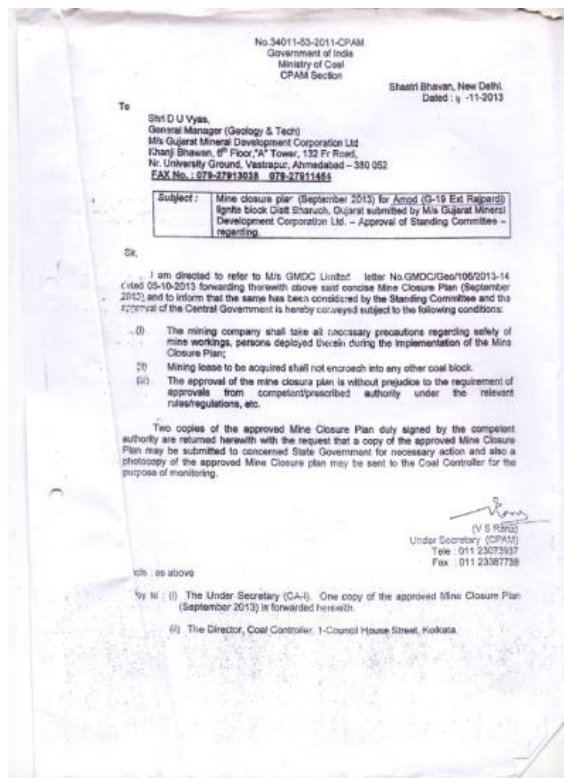
November - 2022

Xix

A final mine closure plan along with details of corpus fund should be submitted to the MoEF 5 years in advance of final mine closure for approval.

Point Noted with esteem.

Progressive Mine Closure Plan for Amod G-19 Ext. Lignite Mine is approved in the September 2013. Approval letter is attached below:



The copy of above said letter is also submitted in MOEFCC Regional Office, Bhopal along with 6 monthly compliance report vide letter no.

		GMDC/JLP/2023/18-19 dated 17.10.2018. The work of final mine closure plan is also awarded, and report is under preparation.
Xx	Details of R&R package involving the village AmodTarsali shall be prepared and implemented in consultation with the District Administration and Local Body, the package shall not be inferior to the national R&R Policy and of the State Government.	Details of R&R package involving the village Amod Tarsali had prepared and implemented in consultation with the District Administration and Local Body, the package was not inferior to the national R&R Policy and of the State Government. Detail of R & R is given as below:

Details of R& R related actions and Expenditure:

In total lease area of 384.9618 ha, Amod-Tarsali village was present over the lignite bearing area. The village had two settlements- one which was muslim dominated called as Tarsali and the other tribals staying at Vasahat area. On order to start mining, this village was to be displaced.

After due deliberation with the villagers and with their agreement and in coordination with the district authority, the displaces have been settled within the mine lease area on the non-lignite bearing area in the eastern part.

The implementation has been completed in May-June 2008. The salient features of the R&R scheme was as follows:

- 1) Project affected persons (PAPs): The scheme included the entire population who has been residing within the proposed mining lease area as per the Census Report of 2001.
- 2) Family: A family shall include husband, wife, minor children and any other person who is directly dependent on the head of the family e.g. widow-mother. Every major married son has been treated as separate family.
- 3) Agricultural land: The private revenue land, falling within the proposed mining lease area, whether belonging to the persons residing in the area or outside, needed acquisition.
- 4) Land allotment: GMDC has acquired land for rehabilitation within the mine lease itself and each PAP families have been allotted a plot admeasuring minimum 150 sq.m. for human settlement and another 150 sq.m. for their cattle.
- 5) School &anganwadi: In resettlement area, facility of a primary school and anganwadi has been provided as per the norms of education department.
- 6) Drinking water: GMDC is providing facility of drinking water through bore well, open well and pipeline from own borewell
- 7) Electricity: Corporation has provided electricity to resettlement site through transformer and poles in streets. Each family has obtained connection through meters.
- 8) Roads: GMDC has constructed CC approach road as well as internal streets at resettlement sites at its cost
- 9) Community hall: a community hall of approximate size with a plate from, electricity and water connections has been provided at resettlement site.
- 10) Panchayat Ghar: GMDC has constructed a Panchayat Ghar as per Govt. standard drawing & designs.
- 11) Religious places: GMDC has upgraded or constructed place of worship at the resettlement sites as per the religion of the resettled population.
- 12) Resettlement Grant: Resettlement grant as per the prevailing Govt. Rules has been paid to each PA family. The 50% of grant has been provided before resettlement & another 50% grant has been provided after resettlement.
- 13) Employment & self-employment: PAP's are getting employment and self employment from this project.

Expenditure incurred on rehabilitation and resettlement of Amod Villages is given in below Table:

S. NO.	DESCRIPTION	EXPENDITURE
AMOD VASAHATREHABILITATION:		
1	House compensation	11,126,801
2	15%incentive	1,669,020
3	Tree compensation	664,872
4	Food	910,500
5	Barbed wire fencing at village Amod	192,519
6	CC Road	3,649,606
7	Power Supply	491,987
8	Community hall, Anganwadi, OH Tank / UG Tank	950,778
9	School building with compound wall	1,197,554
10	Water pipeline	300,000
11	Hawada	27,300
12	Temple	431,352
13	Shamskar Shades	45,440
14	Utensils	33,696
15	Gram Panchayat Chair / Reloving Chair, Tables, Books etc.	16,250
16	Tents	294,800
17	Plants	45,250
18	School Books	90,000
	SUB TOTAL - A	22,137,725

S. NO.	DESCRIPTION	EXPENDITURE
AMOD TARSALI REHABILITATION:		
1	House compensation	6,551,060
2	15%incentive	982,659
3	Tree compensation	191,290
4	Plot compensation	4,491,020
5	Plot compensation for each 21 year old	3,304,000
	SUB TOTAL -B	15,520,029
	GRAND TOTAL	37,657,754

The impacts of the project in terms of the following have been positive:

- Better economic status of the community.
- Faster industrial development of the area.
- Higher inputs in the area towards infrastructural facilities provided for better access to markets, health care, education, communication etc.

The service sector has raised some employment of local people by ancillary activities like transportation of lignite and supply of consumer goods to the mine. The facilities created for

The project benefits for the local population.

Mostly from each family of the core zone villages at least one member is working in the existing mine of GMDC. About 300 local people have been provided appointment in the mine as permanent employee. Corporation is providing drinking water in the villages Amod, Bhuri, Maljipura, Bhimpur, Gundecha regularly through water tankers. Children are given school bus facilities.

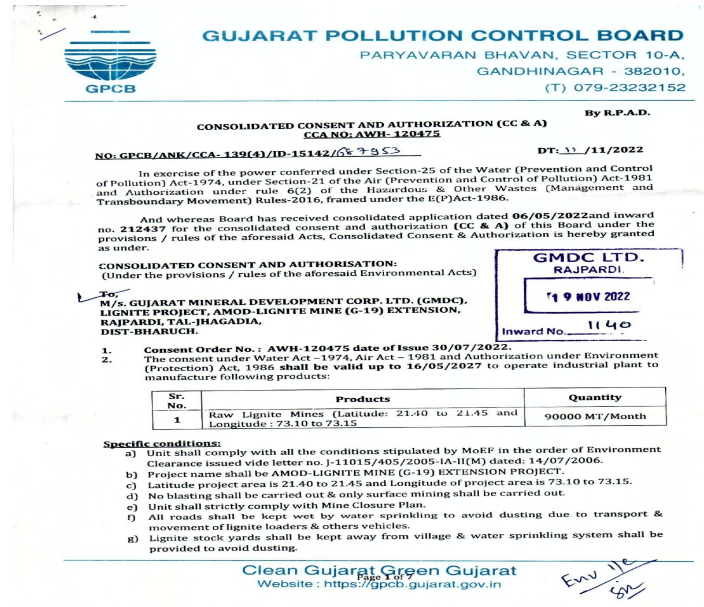
Regular help is extended in education and medical facilities by the Corporation. Corporation has also constructed water tanks and permanent cement concrete roads in the villages.

Maljipura and Amod villagers have been rehabilitated under a package covering alternate residential accommodation, schooling, and electricity & water supply facilities by the Corporation. The employee's colony is located at about 6 km from the mine site having all the facilities like dispensary, club, water and power supply. Transport and communication facilities are also provided by the corporation.

Xxi	Consent to operate shall be	<u>Complied.</u>
------------	-----------------------------	-------------------------

obtained before starting mining operations.

Consent to operate was obtained from GPCB before starting mining operations and the first CCA was taken in the year 2008 vide No. 615 dated 17.07.2008. Current Consent No. AWH-120475 is valid up to 16/05/2027.



B General Conditions

i No change in mining technology and scope of working should be made without prior approval of the MoEF.

Complied.
 No change in mining technology and scope of work is done and if any such change is proposed in future shall be made after prior approval of the MoEF&CC.

ii No change in the calendar plan including excavation, quantum of mineral lignite and waste should be made.

Complied.

Year	OB Planning (Lac m ³)	OB Excavated (Lac m ³) up to June 2024	Lignite Planning (Lac MT)	Lignite Dispatch (MT) up to June 2024
2024-25	36.00	18.40	1.50	1.14

iii Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO₂ and NO_x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the SPCB.

Complied.
 Five ambient air quality monitoring stations have been established based on the meteorological data, topographical features and environmentally and ecologically sensitive targets which are given below:

- Near ADM
- Near Silica Weigh Bridge
- Near Electrical Substation
- Near Lignite Weigh Bridge
- Near Guest House.

Third Party monitoring is carried out by Go Green Mechanisms Pvt. Ltd which is approved by MOEFCC, NABL and GPCB. Copy of Half yearly EC Compliance is also submitted to regional office, Ankleshwar- GPCB.

Summary of results for last six months is as below:

Station 1(Near ADM)

Parameter	Max	Min	Ave	Prescribed Limit
PM 10	76.59	57.59	68.07	100
PM2.5	42.49	28.33	35.47	60
SO ₂	19.98	9.47	14.58	80
NO ₂	28.07	12.81	20.41	80
CO	0.63	0.22	0.45	4

Station 2(Near Silica Weigh -Bridge)

Parameter	Max	Min	Ave	Prescribed Limit
PM 10	84.79	62.2	70.91	100
PM2.5	40.82	32.07	36.64	60
SO ₂	21.57	16.09	18.29	80
NO ₂	25.35	17.42	22.10	80
CO	0.53	0.37	0.44	4

Station 3(Near Electrical Substation)

Parameter	Max	Min	Ave	Prescribed Limit
PM 10	80.38	51.71	68.39	100
PM2.5	44.57	27.91	36.05	60
SO ₂	20.7	9.45	15.49	80
NO ₂	26.53	16.27	21.99	80
CO	0.58	0.27	0.43	4

Station 4(Near Lignite Weigh Bridge)

Parameter	Max	Min	Ave	Prescribed Limit
PM 10	81.07	62.37	71.47	100
PM2.5	40.4	31.24	35.06	60
SO ₂	24.56	15.02	19.81	80
NO ₂	26.17	19.51	23.00	80
CO	0.59	0.37	0.44	4

Station 5(Near Guest House)

Parameter	Max	Min	Ave	Prescribed Limit
PM 10	76.9	17.01	64.49	100
PM2.5	42.07	29.57	35.01	60
SO ₂	20.32	9.47	14.80	80
NO ₂	27.79	13.44	20.64	80
CO	0.56	0.24	0.44	4

iv Fugitive dust emission (SPM and RSPM) from all the sources should be controlled, regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, and dump trucks (loading and unloading) points should be provided and properly maintained.

Complied.

Fugitive emission is monitored in the ambient environment in the form of ambient air quality as per NAAQS 2009.

Monthly monitoring of ambient air quality with respect to SPM and RSPM (As per NAAQS 2009, it is now PM10 and PM 2.5) is being carried out. Fugitive dust emission is controlled through water sprinkling which is carried out by:

1. Four Numbers of 20 KL capacity tankers
2. Fixed Sprinklers in Truck haul road
3. Rain gun in Lignite loading area.

Apart from sprinkling, green belt development all along the mining lease is also done in phased manner to control movement of fugitive dust. Photographs are shown below:



Five stations for ambient air quality monitoring has been established in the mine:

1. Near ADM
2. Near Silica Weigh Bridge
3. Near Electrical Substation
4. Near Guest House
5. Near Lignite Weigh Bridge

Third Party monitoring is carried out by the MOEFCC, NABL & GPCB Accredited agency.

Summary of results for last six months is as below:

Station 1

Parameter	Max	Min	Ave	Permissible Limit
SPM	42.49	28.33	35.48	100

RSPM	76.59	57.59	68.07	60
------	-------	-------	-------	----

Station 2

Parameter	Max	Min	Ave	Permissible Limit
SPM	40.82	32.07	36.64	100
RSPM	84.79	62.2	70.91	60

Station 3

Parameter	Max	Min	Ave	Permissible Limit
SPM	44.57	27.91	36.05	100
RSPM	80.38	51.71	68.39	60

Station 4

Parameter	Max	Min	Ave	Permissible Limit
SPM	42.07	29.57	35.01	100
RSPM	76.09	17.01	64.49	60

Station 5

Parameter	Max	Min	Ave	Permissible Limit
SPM	40.4	31.24	35.06	100
RSPM	81.07	62.37	71.47	60

Further, respirable dust in workplace area is also being monitored for workers working in dust prone areas as per Coal Mines Regulation using personal dust sampler and the average values of same for the period from Oct -2024 to March- 2025 are given as below:

Parameter/Month	Min Value mg/m ³	Max Value mg/m ³	Avg. mg/m ³	Permissible Limit (mg/m ³)
October 2024				
RSPM	0.8	1.51	1.06	2.0
November 2024				
RSPM	10.85	0.8	2.89	2.0
December 2024				
RSPM	1.51	0.8	1.06	2.0
January 2025				
RSPM	1.51	0.99	1.18	2.0
February 2025				
RSPM	1.51	1.13	1.29	2.0
March 2025				
RSPM	1.04	1.13	1.29	2.0

v	Data on ambient air quality	Complied.
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	(SPM, RPM, SO ₂ & NO _x) should be regularly submitted to Ministry including its Regional Office at Bhopal and to State Pollution Control Board and CPCB once in six months.	<p>Data on ambient air quality is submitted to MoEF&CC Bhopal, CPCB and Regional Office of GPCB in every six months with the environmental compliance report.</p> <p>Last three submission reference and dates are as below:</p> <ol style="list-style-type: none"> 1. GMDC/JLP/396/2024-25 Dated 13.07.2024 2. GMDC/JLP/919/2023-24 Dated 26.10.2023 3. GMDC/JLP/455/22-23 dated 24.06.2022 																	
vi	<p>Adequate measures should be taken for control of noise level below 85 dB(A) in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM etc. should be provided with ear plugs/muffs.</p>	<p>Complied.</p> <p>Preventive measures are taken to control the noise pollution below 85 dB (A) through regular maintenance of the vehicles, machineries etc. The mining operations do not include drilling and blasting in Amod G-19 Ext. Lignite Mine, Rajparadi.</p> <p>Apart from that:</p> <ul style="list-style-type: none"> • Ear plugs and ear muffs are provided to the employees engaged in mining operation. • The cabins of machineries are AC cabins which reduces the exposure of operators to the noise. • Periodic maintenance of machineries is planned and carried out. • Periodic medical checkup of the employees is carried out by NIMH, Nagpur which includes audiometry. <p>Ave. summary of noise measurement reports is as below and the copies of test reports for noise monitoring conducted by MOEFCC, NABL approved agency is enclosed herewith</p> <table border="1" data-bbox="603 1048 1406 1335"> <thead> <tr> <th>Location</th> <th>Max</th> <th>Min</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>Near ADM</td> <td>70.1</td> <td>48.9</td> <td rowspan="4">Noise level is well within the prescribed limit.</td> </tr> <tr> <td>Near Silica Weighbridge</td> <td>72.8</td> <td>48</td> </tr> <tr> <td>Near Electrical Substation</td> <td>71.2</td> <td>52</td> </tr> <tr> <td>Near Guest House</td> <td>71.2</td> <td>58.7</td> </tr> </tbody> </table>	Location	Max	Min	Remarks	Near ADM	70.1	48.9	Noise level is well within the prescribed limit.	Near Silica Weighbridge	72.8	48	Near Electrical Substation	71.2	52	Near Guest House	71.2	58.7
Location	Max	Min	Remarks																
Near ADM	70.1	48.9	Noise level is well within the prescribed limit.																
Near Silica Weighbridge	72.8	48																	
Near Electrical Substation	71.2	52																	
Near Guest House	71.2	58.7																	



Head Office & Lab
Dayal Estate, National Highway No.8, Opp APMC Market Gate-1, Jetalpur, District-Ahmedabad-382426
Gujarat, INDIA

Mobile No : +91-7069072001 Email Id : lab@gogreenmechanisms.com

CERTIFICATE OF ANALYSIS

Report Number: GGMPL/PN/3772D/05/09

Reporting Date: 21/02/2025

Gujarat Mineral Development Corp. Ltd. (Rajparadi)
Lignite Project-Rajparadi,
Tal-Jhagadia-393115,Dist-Bharuch



SAMPLE DETAILS

Sampling Instrument : Sound Level Meter
Sample By : Bhargav Dhamecha

Sampling Date: 12/02/2025
Sample Description: Ambient Noise

Sr.No	Lab Id	Location	Time	Unit	Test Method	Reading	Norms
1	Lab/PN/3772D/05/09A	Nr Admin Building	Day Time	dB(A)Leq	IS 9989	70.1	75
2	Lab/PN/3772D/05/09B	Near Weigh Bridge	Day Time	dB(A)Leq	IS 9989	72.3	75
3	Lab/PN/3772D/05/09C	Near Electrical Substation	Day Time	dB(A)Leq	IS 9989	61.0	75
4	Lab/PN/3772D/05/09A	Nr Admin Building	Night Time	dB(A)Leq	IS 9989	57.4	70
5	Lab/PN/3772D/05/09B	Near Weigh Bridge	Night Time	dB(A)Leq	IS 9989	56.8	70
6	Lab/PN/3772D/05/09C	Near Electrical Substation	Night Time	dB(A)Leq	IS 9989	52.0	70

Norms as per the Noise Pollution (Regulation and Control) Rules, 2000

NS=Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit

Reviewed & Authorized by
Tantan Kumar



Reviewed & Authorized by
Manish Kumawat

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vii Industrial waste water should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) or as amended from time to time before discharged. Oil and grease trap should be installed before discharged of work shop effluents.

Complied.

No industrial wastewater is generated. The seepage water generated during mining process is found acidic and neutralized in Primary Effluent Treatment Plant (PETP) and further used in sprinkling purpose as well as irrigating plantation in the adjoining area.



Primary Effluent Treatment

Oil skimmer has been installed at workshop and the water is reused for the purpose of vehicle washing. No effluent is discharged from workshop.



Oil Skimmer

Sewage Treatment Plant also has established and in operation for the treatment of domestic wastewater.



Viii Vehicular emissions should be kept under control and regularly monitored. Vehicle used for transporting the mineral should be covered with tarpaulins and optimally loaded.

Complied.

Vehicular emission is being controlled and monitored. Regular maintenance is being carried out and inspection of dumpers is carried out in every shift. PUC certificate is obtained for all the dumpers running in the mine's premises. Trucks are covered with tarpaulin and optimally loaded as per RTO rules during transportation. Photographs of covered trucks are furnished below:



ix Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with SPCB.

Complied.
 In house monitoring is carried out in Environmental Laboratory. Monitoring is carried out by GPCB recognized agency on monthly basis. Apart from that annual environment audit is also done by GPCB recognized auditors assigned by GPCB. Photographs of some of environment equipment are shown below:



x Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

 Occupational health surveillance program of the workers should be taken periodically to observe any contractions due to

Complied.
 PPEs are provided to the employees based on type of work processes they perform, and it is ensured in Amod G-19 Ext. that they wear it also during the time of working. Year wise record is maintained for issuance of PPEs.

Description	Safety Shoes	Helmet	Fluorescent Jacket	Goggles
Departmental Employees	150	32	57	28
Contractual Employees	17	13	14	14

exposure to dust and to take corrective measures, if needed.

In house training is being imparted to all workers in batches. We are having Group Vocational Training Centre Rajpardi which has its training module based on the guideline issued by Director General of Mines Safety for each category of employees working in the mine's premises.

Occupational health checkup is done as per the rules and regulations of DGMS applicable to our mine workers and their health check up is being doing as per mine rules as well as dust monitoring considering personal dust sampler is also being conducting.

Photographs of training, PPE use, health check are shown below:



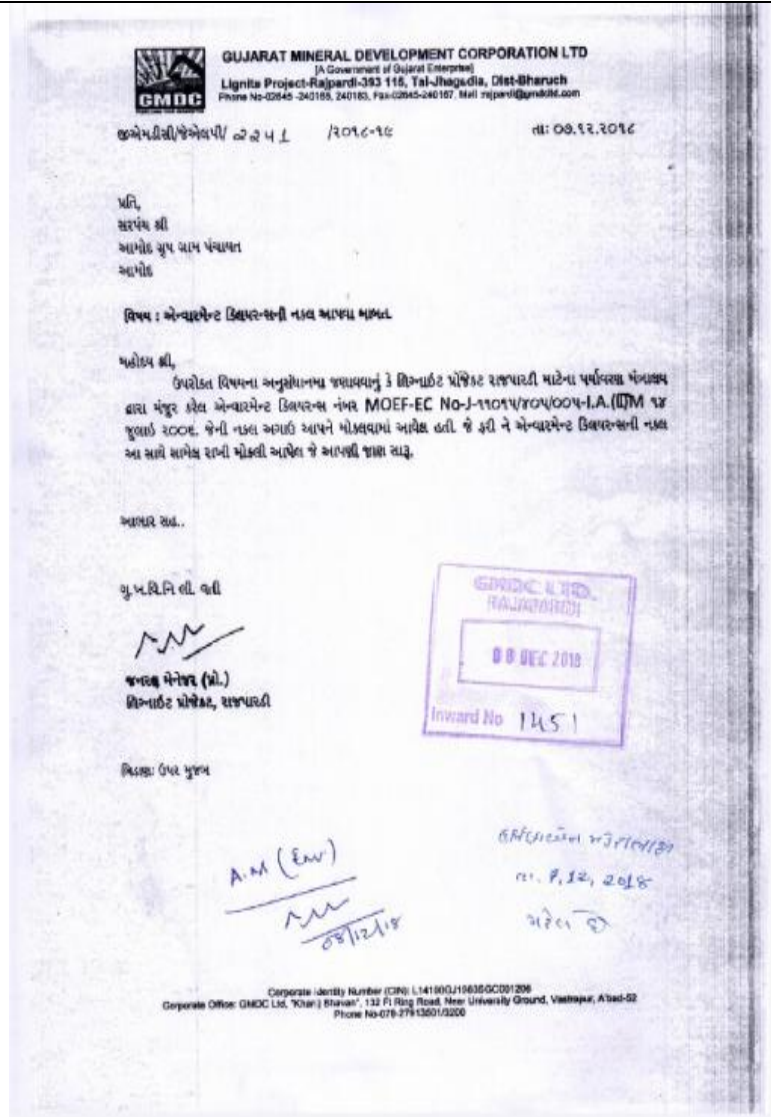
xi A separate environmental management cell with suitable qualified personnel should be set up under the control of a senior executive.

Complied.

A well-established environmental cell is active with suitable qualified candidates comprising Chemist and Manager directly reporting to General Manager (P) at the Project level. The department is headed by GM (Environment) at Corporate Office who is directly reporting to the Managing Director of the corporation.


Sr No	Name of the Person	Designation	Qualification	Experience
1	Shri Ghansham Chaudhari	DGM (safety)/ Environment (I/c.)	B.E (Mining)	29 years

		The above officer qualified and experienced in Environment are reporting the General Manager (Project) – Amod (G-19 Extension), who is having a vast experience in mining as per below:																																																														
		3	Shri Shaileshkumar Jagani	I/C. GM (Project) B.E (Mining) 25 years																																																												
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 MOEF & its Regional Office.	<p><u>Complied.</u></p> <p>Amod G-19 Ext. Lignite Mine is concerned towards the environment and a sufficient budget is allocated for the implementation of best practices in the field of environment. The year wise expenditure is mentioned below in the tabular form.</p> <table border="1"> <thead> <tr> <th>Sl.No.</th> <th>Year</th> <th>Expenditure (in Rs)</th> </tr> </thead> <tbody> <tr><td>1</td><td>2006-07</td><td>1,59,989</td></tr> <tr><td>2</td><td>2007-08</td><td>1,76,124</td></tr> <tr><td>3</td><td>2008-09</td><td>1,19,505</td></tr> <tr><td>4</td><td>2009-10</td><td>6,54,060</td></tr> <tr><td>5</td><td>2010-11</td><td>5,80,060</td></tr> <tr><td>6</td><td>2011-12</td><td>76,910</td></tr> <tr><td>7</td><td>2012-13</td><td>17,47,802</td></tr> <tr><td>8</td><td>2013-14</td><td>3,19,447</td></tr> <tr><td>9</td><td>2014-15</td><td>3,07,646</td></tr> <tr><td>10</td><td>2015-16</td><td>10,88,101</td></tr> <tr><td>11</td><td>2016-17</td><td>16,54,217</td></tr> <tr><td>12</td><td>2017-18</td><td>2,72,90,808</td></tr> <tr><td>13</td><td>2018-19</td><td>1,01,73,366</td></tr> <tr><td>14</td><td>2019-20</td><td>80,67,027</td></tr> <tr><td>15</td><td>2020-21</td><td>65,64,003</td></tr> <tr><td>16</td><td>2021-22</td><td>68,25,193</td></tr> <tr><td>17</td><td>2022-23</td><td>52,13,599</td></tr> <tr><td>18</td><td>2023-24</td><td>56,50,003</td></tr> <tr><td>19</td><td>2024-25</td><td>7,73,905</td></tr> </tbody> </table> <p>Year wise expenditure details are submitted to MOEF & its Regional Office with half yearly EC compliance report.</p>			Sl.No.	Year	Expenditure (in Rs)	1	2006-07	1,59,989	2	2007-08	1,76,124	3	2008-09	1,19,505	4	2009-10	6,54,060	5	2010-11	5,80,060	6	2011-12	76,910	7	2012-13	17,47,802	8	2013-14	3,19,447	9	2014-15	3,07,646	10	2015-16	10,88,101	11	2016-17	16,54,217	12	2017-18	2,72,90,808	13	2018-19	1,01,73,366	14	2019-20	80,67,027	15	2020-21	65,64,003	16	2021-22	68,25,193	17	2022-23	52,13,599	18	2023-24	56,50,003	19	2024-25	7,73,905
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xiii	The Regional Office, Bhopal shall be monitoring compliance of the stipulated conditions.	<u>Noted for compliance.</u>																																																														
xiv	A copy of EC will be marked to panchayat/ local NGO if any from whom any suggestion/ representation has been received while processing the proposal.	Copy of the EC was provided to the local Gram panchayat, and no suggestion was received from any NGO.																																																														



xv SPCB should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/ Tehsildar Office for 30 days.

Noted

<p>xvi</p>	<p>The Project authorities should 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 & Forest at http://envfor.nic.in.</p>	<p>Complied.</p> <p>It was published within seven days after the receipt of physical copy of EC at our office. One in vernacular language and the other in English.</p> <p>Published dt.28/09/06 Gujarat Mitra (Guj) And dt. 29/09/06 The Times of India (Eng.)</p> 
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Environment (I/C)

General Manager (Project)