

DCBL/JM/MPPCB/F-V/2023-24

27.09.2024

To,
The Regional Officer,
Madhya Pradesh Pollution Control Board,
Satna (M.P).

Subject: Submission of Environment Statement in Form-V for the year 2023-24 pertaining to Jamuna Limestone Mine bearing PCB ID- 137525 of M/s. Dalmia Cement (Bharat) Limited.

Dear Sir,

With reference to the subject above, we are herewith submitting the Environment Statement in Form-V for the year 2023-24 pertaining to Jamuna Limestone Mine (89.234 Ha) in Village – Jamuna, Tehsil- Rampur Baghelan, District- Satna (M.P) of M/s. Dalmia Cement Bharat Limited.

We request you to kindly acknowledge the Receipt.

Thanking You,

Yours Faithfully,
For M/s. Dalmia Cement Bharat Limited


Dinesh Dixit
(HOD Mines)



Encl: a/a

Dalmia Cement (Bharat) Limited

11th & 12th Floor, Hansalaya Building, 15, Borakhamba Raod, New Delhi - 110 001, Delhi, India

T +91 11 2346 5100 Toll Free 1800 2020 W www.dalrmiacement.com

CIN U 6 5 1 9 1 T N 1 9 9 6 P L C 0 3 5 9 6 3

Registered Office: Dalmiapuram, District Tiruchirappalli — 621 651, Tamil Nadu, India

A Dalmia Bharat group company, www.dalmiabharat.com



ENVIRONMENTAL STATEMENT IN FORM-V

(Under Rule-14, Environmental protection Rules, 1986)

(FY 2023-2024)

Jamuna Limestone Mine, Satna

Dalmia Cement Bharat Limited



CONTENTS

S. No.	Chapter	Particulars	Page No.
	Executive Summary		
1	Chapter-I	Introduction	4 to 5
2	Chapter-II	Environmental Statement Form-V (Part A to I)	6 to 9

LIST OF ANNEXURES

Annexure No.	Particulars	Page No.
I	Ambient Air Quality, Work Place, Fugitive, Work Zone Noise & Noise Level Data	10-11
II	Water Quality Data	12-15
III	Soil Quality Report	15
IV	Mine Location Plan	16
V	Location Map of Monitoring Stations	17



EXECUTIVE SUMMARY

M/s Dalmia Cement (Bharat) Ltd. (DCBL) has been granted Mining Lease by Government of Madhya Pradesh (MP) vide its letter no. F-3-7/ 2013/12-1 dated 01.04.2015 for an area of 89.234 Ha. at Village – Jamuna, Tehsil – Rampur Baghelan, District – Satna (M.P.).

The Mining Lease was executed on 28.07.2015 and registered on 05.11.2015. The Mining Plan along with Progressive Mine Closure Plan has been approved from the Office of Regional Controller of Mines, IBM, Jabalpur vide letter no. MP/ Satna/ Limestone/ MPLN/ G-04/ 14 - 15/ 5124 dated 25.09.2014. The Mining Lease comprises of predominantly agriculture land (84.234 Ha.) and a minimal portion of Barren land (5.0 Ha.).

The Environmental Clearance was granted by SEIAA Bhopal Govt. of Madhya Pradesh vide letter no: 7687/SEIAA/21 dated: 25.03.2022 for production of limestone to the tune of 0.50 Million Tonnes/ Annum (0.902 MMTPA of total excavation/ ROM). The Mining of limestone is proposed by adopting the method of Mechanisation. Mining operation in Jamuna ML (89.234 Ha) were commenced from 21.07.2021, accordingly the notice of Mine opening was given to the Government Authority.



CHAPTER – I

INTRODUCTION

1.1 GENESIS:

The Gazette Notification vide G.S.R No. 329 (E) dated 13th March, 1992 and subsequently renamed to 'Environmental Statement' vide Ministry of Environment & Forests (MOEF), Govt. of India gazette notification No. G.S.R No. 386 (E) Dated 22 April 1993 reads as follows.

“Every person carrying on an industry, operation or process requiring consent under section 25 of the Water Act, 1974 or under section 21 of the Air Act, 1981 or both or authorisation under the Hazardous Waste Rules, 1989 issued under the Environmental Protection Act, 1986 shall submit an Environmental Audit Report for the year ending 31st March in Form V to the concerned State Pollution Control Board on or before the 30th day of September every year.”

In compliance with the above, the work of Environmental Statement for Dalmia Cement is submitted to M. P. Pollution Control Board by GM (Environment), Dalmia Cement, Satna.

1.2 MINE DESCRIPTION:

Name of the Project	Jamuna Limestone Mine
Location Village	Jamuna
Tehsil	Rampur Baghelan
District	Satna (M.P.)
Lease Area	89.234 Ha
Land Type	Barren Land (Govt. Waste Land) – 5.00 Ha.; Agricultural Land (Private Land) – 84.234 Ha
Latitude & Longitude	24°33'57.3"N to 24°34'35.4"N; 81°04'41.9"E to 81°05'48.1"E
Toposheet No.	G44V2 (63H/2)
Elevation (MSL)	Lowest - 298; Highest –310
Probable Mineral Reserve	11.43MT (1,14,27,690 Tonnes)
Targeted Production	Limestone: - 0.50 MTPA; Soil: - 0.042 MTPA and OB: - 0.36 MTPA



1.3 COMMUNICATION:

Nearest Habitation & Population	Patarahai~ 0.30 Km, NNW (Population-1,221 & Household-243)
	Jamuna~ 0.70 Km, SSE (Population – 3,046 & Household-593)
Nearest Major Town	Rampur Baghelan~ 6.72Km, SSW (Population1,68,127 &Households36,564)
Nearest Highway	NH - 75 Gwalior - Ranchi 6.5, S
	NH - 7 Rewa - Jabalpur 11.6, S
Nearest Railway Station	Baghai ~ 3.7 Km, SW
Nearest Airport	Prayagraj (Allahabad) 116.0 NNE
	Khajuraho Airport 121.0 NW

1.4 ENVIRONMENTAL SCENARIO:

The Environmental monitoring was carried out quarterly as per guideline of Ministry of Environment and Forests (MOEF) by on quarterly basis.

Accordingly, Ambient Air Quality and Noise levels is being monitored at different stations along with the Mine Discharge Water quality and Ground / Drinking Water quality. Ground water levels in designated dug wells is also monitored.

The Environmental monitoring result for three quarters is appended as Annexure- I, II & III. The environmental monitoring results for the year 2023-2024 as given below:

AMBIENT AIR QUALITY

The PM10 concentration was found in the range of 61.7 to 79.2 $\mu\text{g}/\text{m}^3$.
The PM2.5 concentrations was found in the range of 31.3 to 43.6 $\mu\text{g}/\text{m}^3$.
The SO2 concentration was found in the range of 6.5 to 8.7 $\mu\text{g}/\text{m}^3$.
The NO2 concentration was in the range of 18.7 to 24.3 $\mu\text{g}/\text{m}^3$.
The O3 concentration was in the range of 16.7 to 19.6 $\mu\text{g}/\text{m}^3$.
The NH3 concentration was in the range of 14.6 to 19.0 $\mu\text{g}/\text{m}^3$.

WATER QUALITY

The Water analysis result reveals that all the parameters are below permissible limits prescribed by Ministry of Environment & Forests (MOEF).

NOISE LEVEL

The noise level was found in the range of 44.5 to 55.1 dB(A) in Day time & 34.6 to 40.0 dB(A) at Night time. The noise level recorded is below permissible limit prescribed by Ministry of Environment and Forest (MoEF).

SOIL QUALITY:

The Soil analysis result reveals that all the parameters are below permissible limits prescribed by Ministry of Environment & Forests (MOEF).



CHAPTER – II
ENVIRONMENTAL STATEMENT
FORM – V

Environmental Statement for the period of FY 2023-2024

PART – A

(I) NAME AND ADDRESS OF THE MINE

Name of the Project	Jamuna Limestone Mine
Location Village	Jamuna
Tehsil & Post	Rampur Baghelan
District	Satna (M.P.)

(II) INDUSTRY CATEGORY

Category “B”

(III) PRODUCTION CAPACITY

Total Excavation
ROM: - 0.902 Million TPA of ROM
(Limestone: - 0.50 MTPA,
Soil: - 0.042 MTPA (26,000 cu. m) and
OB: - 0.36 MTPA (1,80,004 cu. m))

(IV) TOTAL PRODUCTION IN FY 2023-2024

Limestone Production in FY 2023-2024 is **217 Tons**

PART – B

WATER AND RAW MATERIAL CONSUMPTION

(I) WATER CONSUMPTION (Cu.m/day)

--- NIL ---

Mining operations are in the very Nascent stage. Mine development work is in progress. The production and dispatch of limestone from Mines is at a very meagre level as the construction of captive cement plant is delayed.



(A) WATER CONSUMPTION PER UNIT OF PRODUCT

--- NIL ---

Mining operations are in the very Nascent stage. Mine development work is in progress. The production and dispatch of limestone from Mines is at a very meagre level as the construction of captive cement plant is delayed.

(II) RAW MATERIAL CONSUMPTION:

--- NIL ---

Mining operations are in the very Nascent stage. Mine development work is in progress. The production and dispatch of limestone from Mines is at a very meagre level as the construction of captive cement plant is delayed.

PART – C

POLLUTION GENERATED

Pollution	Quantity of pollution generated	Percentage variation from prescribed standards with reasons
AMBIENT AIR	Analysis results are given in Annexure-I.	Ambient air quality result shows that the values of PM10, PM2.5, SO ₂ , Nox, O ₃ , NH ₃ , As , C ₆ H ₆ , BaP, Ni & Pb are well within prescribed standards.
WATER	Water Analysis results are given in Annexure-II.	No effluent is discharged into in Land Surface water.
SOIL	Analysis results are given in Annexure-III	All Results are within prescribed Limit.

PART – D

HAZARDOUS WASTE

(As specified under Hazardous waste management and handling Rules, 1989)

--- NIL ---

Mining operations are in the very Nascent stage. Mine development work is in progress. The production and dispatch of limestone from Mines is at a very meagre level as the construction of captive cement plant is delayed.



PART – E

SOLID WASTE

--- NIL ---

Mining operations are in the very Nascent stage. Mine development work is in progress. The production and dispatch of limestone from Mines is at a very meagre level as the construction of captive cement plant is delayed.

PART – F

PLEASE SPECIFY THE CHARACTERISTICS (IN TERMS OF CONCENTRATION AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTE AND INDICATE THE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTE.

--- NIL ---

Mining operations are in the very Nascent stage. Mine development work is in progress. The production and dispatch of limestone from Mines is at a very meagre level as the construction of captive cement plant is delayed.

PART – G

IMPACT OF POLLUTION CONTROL MEASURES ON CONSERVATION OF NATURAL RESOURCES AND CONSEQUENTLY ON COST OF PRODUCTION.

In order to carry out mining in an eco-friendly manner following pollution control measures have been implemented.

1.0 AIR POLLUTION CONTROL MEASURES:

The following measures have been taken to control air pollution.

- (I) Water sprinkling is done on transportation road with the help of water tanker.
- (II) Regular sprinkling of water at transfer and loading points.

2.0 WATER POLLUTION CONTROL MEASURES:

Presently no effluent is generated, in future if effluent water is generated, we will comply General Standard of MOEF for Class- A effluent.

3.0 NOISE POLLUTION CONTROL MEASURES

- (I) Regular maintenance of machines and other equipment at workshop will be regularly followed.
- (II) Providing green belt around core activity area, along road side in colony and in other vacant space.



4.0 LAND DEGRADATION CONTROL MEASURES

--- NIL ---

Mining operations are in the very Nascent stage and Land purchasing is in progress.

PART – H

ADDITIONAL INVESTMENT PROPOSAL FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT OF POLLUTION.

The following are the additional investment proposals for environmental protection:

- (I) The Environmental monitoring of the mine will be continued quarterly as per the guideline of Ministry of Environment and Forest (MoEF).
- (II) Necessary Consent for discharge will be taken from Competent Authority

PART – I

ANY OTHER PARTICULARS IN RESPECT OF ENVIRONMENTAL PROTECTION AND ABATEMENT OF POLLUTION.

The Environmental Monitoring is carried out quarterly for the mine as per the guideline of Ministry of Environment and Forest (MoEF) and based on the result there of, Dalmia Cement Bharat Limited takes necessary action if needed.



ANNEXURE-I
Ambient Air Quality Monitoring Results:

Monitoring Station	Sampling Date	PM10 (µg/m ³)	PM2.5 (µg/m ³)	NO2 (µg/m ³)	SO2 (µg/m ³)	CO (mg/M ³)	O3 (µg/m ³)	NH3 (µg/m ³)	As (ng/m ³)	C6H6 (µg/m ³)	BaP (ng/m ³)	Ni (ng/m ³)	Pb (µg/m ³)
Jamuna Mine Site	07.05.2023 to 08.05.2023	69.0	35.9	19.8	7.2	BDL(<1.15)	16.7	15.9	BDL (<1.0)	BDL (<1.0)	BDL (<0.05)	BDL (<1.0)	BDL (<0.05)
Jamuna Village	07.05.2023 to 08.05.2023	70.1	37.0	21.4	8.7	BDL(<1.15)	18.7	17.9	BDL (<1.0)	BDL (<1.0)	BDL (<0.05)	BDL (<1.0)	BDL (<0.05)
Jamuna Mine Site	03.09.2023 to 04.09.2023	63.4	32.3	23.0	6.7	BDL(<1.15)	19.6	16.9	BDL (<1.0)	BDL (<1.0)	BDL (<0.05)	BDL (<1.0)	BDL (<0.05)
Jamuna Village	04.09.2023 to 05.09.2023	61.7	34.5	24.3	7.7	BDL(<1.15)	18.9	17.1	BDL (<1.0)	BDL (<1.0)	BDL (<0.05)	BDL (<1.0)	BDL (<0.05)
Jamuna Mine Site	18.12.2023 to 19.12.2023	79.2	43.6	18.7	6.6	BDL(<1.15)	18.2	15.4	BDL (<1.0)	BDL (<1.0)	BDL (<0.05)	BDL (<1.0)	BDL (<0.05)
Jamuna Village	18.12.2023 to 19.12.2023	68.4	39.0	22.8	8.5	BDL(<1.15)	17.6	19.0	BDL (<1.0)	BDL (<1.0)	BDL (<0.05)	BDL (<1.0)	BDL (<0.05)

Fugitive Emission Monitoring Results:

Monitoring Station	Sampling Date	SPM (µg/m ³)
Jamuna Near Mine Site Transportation Point	10.05.2023	118.9
Jamuna Mine Site Loading Point	14.05.2023	131.6
Jamuna Mine West Site (Loading Point)	09.09.2023	131.3
Jamuna Mine East Site (Loading Point)	10.09.2023	119.7
Jamuna Near Mine Site Transportation Point	16.12.2023	109.7
Jamuna Mine Site Loading Point	17.12.2023	175.8
Jamuna Mine West Site (Loading Point)	15.02.2024	105.6
Jamuna Mine East Site (Loading Point)	15.02.2024	101.8

Work Place Monitoring Results:

Monitoring Station	Sampling Date	SPM (µg/m ³)	Silica (µg/m ³)	Crystalline Silica (µg/m ³)
Jamuna Near North site (Working Pit)	01.09.2023	5.2	0.25	0.86
Jamuna Near East site (Working Pit)	02.09.2023	5.8	0.43	1.21
Jamuna Near West site (Working Pit)	02.09.2023	4.7	0.38	1.00
Jamuna near Road site (Working Pit)	03.09.2023	7.1	0.3	0.94
Jamuna Entry site (Working Pit)	03.09.2023	7.9	0.39	1.02
Jamuna Near South site (Working Pit)	01.09.2023	8.6	0.34	0.93
Jamuna Working Pit	18.12.2023	5.5	0.31	0.66
Jamuna mine site (Loading Point)	18.12.2023	6	0.25	0.83



Ambient Noise Quality Monitoring Results:

Monitoring Station	Sampling Date	Lmax	Lmin	Leq Day	Leq Night	Ldn
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Jamuna Mine Site	07.05.2023 to 08.05.2023	61.2	27.6	52.6	35.8	41.2
Jamuna Village	07.05.2023 to 08.05.2023	53.7	28.3	50.4	36.3	41.6
Jamuna Mine Site	03.09.2023 to 04.09.2023	55.7	28.7	53.8	37.2	42.7
Jamuna Village	04.09.2023 to 05.09.2023	67.8	31.2	52.7	37.1	42.5
Jamuna Mine Site	18.12.2023 to 19.12.2023	57.7	27.1	49.1	35.4	40.7
Jamuna Village	18.12.2023 to 19.12.2023	54.3	28.0	44.5	34.6	40.0
Jamuna Mine Site	20.02.2024 to 21.02.2024	29.5	67.6	55.1	40.0	45.3
Jamuna Village	20.02.2024 to 21.02.2024	30.3	62.4	51.9	37.7	43.1

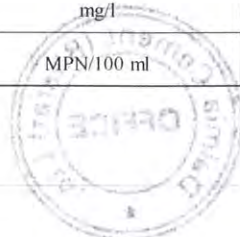
Work Zone Noise Quality Monitoring Results:

Monitoring Station	Sampling Date	Unit	Lmin	Lmax
Jamuna Mine Site (Loading Point)	10.05.2023	dB(A)	33.7	66.3
Jamuna Working Pit	11.05.2023	dB(A)	35.1	59.6
Jamuna Mine Site (Loading Point)	03.09.2023	dB(A)	44.0	68.7
Bairiha to Jamuna (Transportation Point)	02.09.2023	dB(A)	45.1	74.9
Jamuna Working Pit	04.09.2023	dB(A)	33.5	69.6
Jamuna Working Pit	16.12.2023	dB(A)	33.3	62.5
Jamuna Mine Site (Loading Point)	17.12.2023	dB(A)	36.0	68.2
Jamuna Mine Site (Loading Point)	15.02.2024	dB(A)	38.9	66.7
Bairiha to Jamuna (Transportation Point)	16.02.2024	dB(A)	44.7	68.2
Jamuna Working Pit	16.02.2024	dB(A)	40.4	63.1



ANNEXURE-II
Water Quality Results:

Sampling Location		Jamuna Village			
Type of Water		Ground Water			
Sampling Date		08.05.2023	05.09.2023	18.12.2023	21.02.2024
Parameters	Unit	Results	Results	Results	Results
pH (at 25°C)	-	7.77	7.74	7.23	7.49
Electrical Conductivity	(µS/cm)	690	680	966	600
Turbidity	NTU	<0.5	<0.5	<0.5	<0.5
Total Dissolved Solids	mg/l	380	400	600	360
Total solids	mg/l	400	440	620	420
Alkacity	mg/l	360	340	365.7	300
Total Hardness	mg/l	496	400	420.2	398
Ca Hardness	mg/l	246.6	210	181.8	206
Mg Hardness	mg/l	249.4	190	238.4	192
Ca	mg/l	98.6	84	72.7	82.4
Mg	mg/l	60.6	46.1	57.9	46.6
Chloride as Cl-	mg/l	26.0	22.0	91.1	26.0
Sulphate	mg/l	120	110	104.6	96.8
Nitrate	mg/l	24.4	28.6	23.4	15.2
Iron	mg/l	0.28	0.25	0.26	0.26
Fluoride	mg/l	0.8	0.9	1.0	0.6
COD	mg/l	<4.0	<4.0	<4.0	<4.0
BOD	mg/l	<2.0	<2.0	<2.0	<2.0
DO	mg/l	4.4	4.0	3.6	3.4
Oil & Grease	mg/l	<0.5	<0.5	<0.5	<0.5
Total Chromium	mg/l	<0.003	<0.003	<0.003	<0.003
Phosphate	mg/l	<5.0	<5.0	<5.0	<5.0
Zinc	mg/l	<5.0	<5.0	<5.0	<5.0
Coliform	MPN/100 ml	Absent	Absent	Absent	Absent



Sampling Location		Jamuna Mine Site			
Type of Water		Ground Water			
Sampling Date		08.05.2023	05.09.2023	18.12.2023	21.02.2024
Parameters	Unit	Results	Results	Results	Results
pH (at 25°C)	-	7.68	7.49	7.81	7.81
Electrical Conductivity	(µS/cm)	766	600	708	708
Turbidity	NTU	<0.5	<0.5	<0.5	<0.5
Total Dissolved Solids	mg/l	440	360	400	400
Total solids	mg/l	460	420	440	440
Alkanity	mg/l	325	300	325	325
Total Hardness	mg/l	472	398	391.4	361.5
Ca Hardness	mg/l	235.8	206	189	204
Mg Hardness	mg/l	237	192	202.4	157.5
Ca	mg/l	117.9	82.4	75.6	81.6
Mg	mg/l	57.6	46.6	49.2	38.3
Chloride as Cl-	mg/l	24.0	26.0	51.9	51.9
Sulphate	mg/l	108	96.8	92.4	92.4
Nitrate	mg/l	26.8	15.2	17.6	17.6
Iron	mg/l	0.28	0.026	0.28	0.28
Fluoride	mg/l	0.7	0.06	0.7	0.7
COD	mg/l	<4.0	<4.0	<4.0	<4.0
BOD	mg/l	<2.0	<2.0	<2.0	<2.0
DO	mg/l	3.4	3.4	3.6	3.8
Oil & Grease	mg/l	<0.5	<0.5	<0.5	<0.5
Total Chromium	mg/l	<0.003	<0.003	<0.003	<0.003
Phosphate	mg/l	<5.0	<5.0	<5.0	<5.0
Zinc	mg/l	<5.0	<5.0	<5.0	<5.0
Coliform	MPN/100 ml	Absent	Absent	Absent	Absent



Sampling Location		Mine Pit			
Type of Water		Surface Water			
Sampling Date		08.05.2023	05.09.2023	18.12.2023	21.02.2024
Parameters	Unit	Results	Results	Results	Results
pH (at 25°C)	-	7.91	7.91	7.82	7.91
Electrical Conductivity	(µS/cm)	760	760	692	760
Turbidity	NTU	3	3	3	3
Total Dissolved Solids	mg/l	460	460	380	460
Total solids	mg/l	480	480	400	480
Alkanity	mg/l	235	235	225	230
Total Hardness	mg/l	360	360	302.8	325
Ca Hardness	mg/l	217.8	217.8	162	180
Mg Hardness	mg/l	143.2	143.2	140.8	145.2
Ca	mg/l	87.1	87.1	64.8	72
Mg	mg/l	34.5	34.5	34.2	35.3
Chloride as Cl-	mg/l	17.5	17.5	21	17.5
Sulphate	mg/l	94.4	94.4	88.4	94.4
Nitrate	mg/l	9.6	9.6	6.4	9.6
Iron	mg/l	0.05	0.05	0.06	0.05
Fluoride	mg/l	0.5	0.5	0.6	0.5
COD	mg/l	24	24	20	24
BOD	mg/l	6.5	6.5	5.4	6.5
DO	mg/l	6.2	6.2	6.5	6.2
Oil & Grease	mg/l	4.4	4.4	4	4.4
Total Chromium	mg/l	0.12	0.12	0.08	0.12
Phosphate	mg/l	5.5	5.5	5.2	5.0
Zinc	mg/l	<5.0	<5.0	<5.0	<5.0
Coliform	MPN/100 ml	1400	1200	1000	1000



Sampling Location		Canal			
Type of Water		Surface Water			
Sampling Date		08.05.2023	05.09.2023	18.12.2023	21.02.2024
Parameters	Unit	Results	Results	Results	Results
pH (at 25°C)	-	7.87	7.87	7.59	7.87
Electrical Conductivity	(µS/cm)	660	660	672	660
Turbidity	NTU	3.0	3.0	3.0	3.0
Total Dissolved Solids	mg/l	380	380	360	380
Total solids	mg/l	400	400	380	400
Alkanity	mg/l	245	245	214	245
Total Hardness	mg/l	334	334	311	323.3
Ca Hardness	mg/l	167.4	167.4	189	198
Mg Hardness	mg/l	166.6	166.6	122	125.3
Ca	mg/l	70.0	70.0	75.6	79.2
Mg	mg/l	40.5	40.5	29.6	30.4
Chloride as Cl-	mg/l	19.0	19.0	20.0	19.0
Sulphate	mg/l	84.6	84.6	80.2	84.6
Nitrate	mg/l	7.8	7.8	6.2	7.8
Iron	mg/l	0.06	0.06	0.08	0.06
Fluoride	mg/l	0.6	0.6	0.5	0.6
COD	mg/l	28	28	24	32
BOD	mg/l	7.8	7.8	6.5	8.4
DO	mg/l	7.0	7.0	7.0	5.0
Oil & Grease	mg/l	3.8	3.8	3.4	3.8
Total Chromium	mg/l	0.08	0.08	0.1	0.08
Phosphate	mg/l	5.2	5.4	5.6	5.2
Zinc	mg/l	<5.0	<5.0	<5.0	<5.0
Coliform	MPN/100 ml	1200	1400	1200	1200

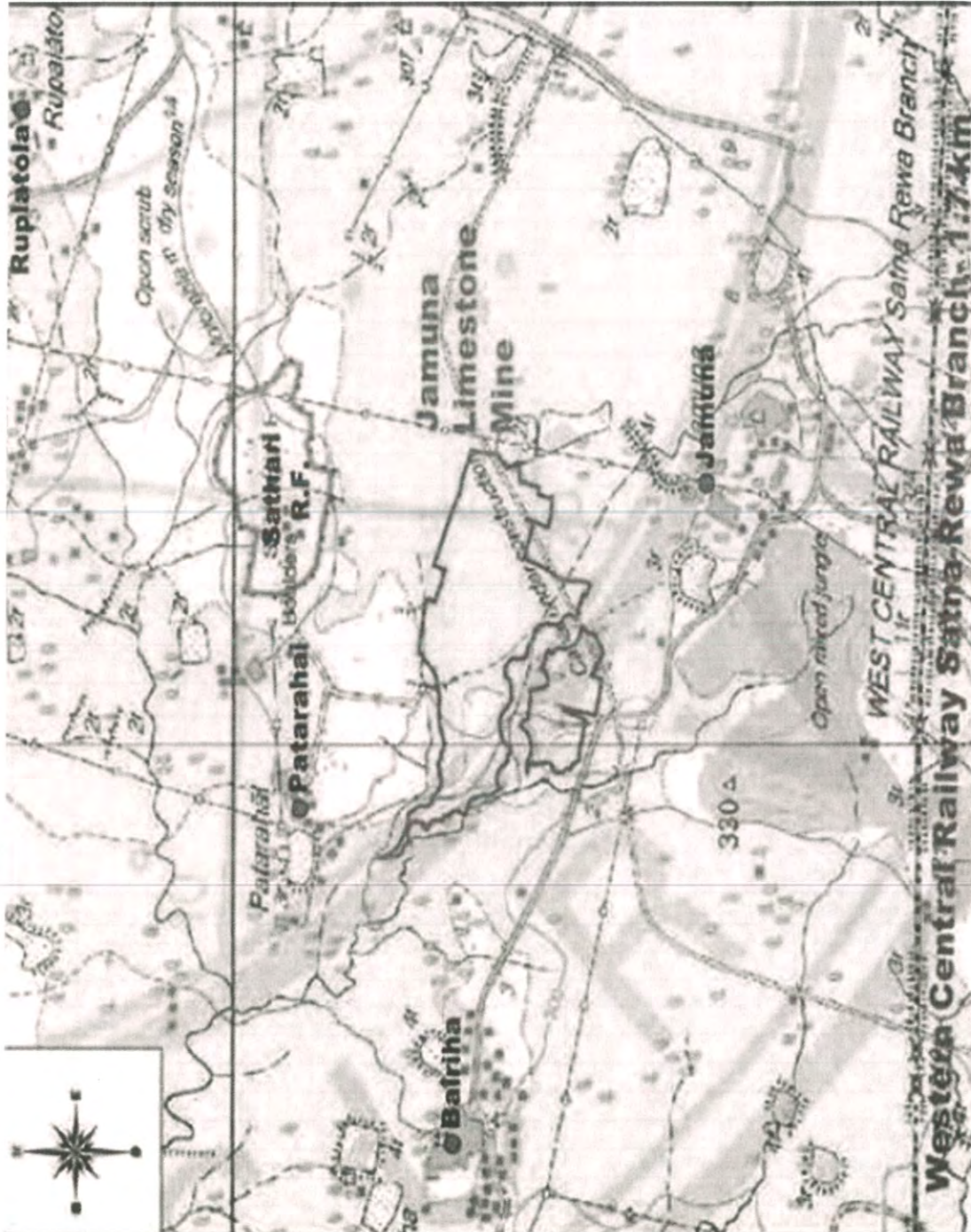
ANNEXURE-III Soil Quality Results:

Sampling Location		Mine Pit			
Sampling Date		08.05.2023	05.09.2023	18.12.2023	21.02.2024
Parameters	Unit	Results	Results	Results	Results
pH (at 25°C)	-	7.72	7.99	8.23	8.19
Electrical Conductivity	(mS/cm)	0.428	0.44	0.294	0.224
Organic Matter	%	1.228	1.125	1.535	1.359
Phosphorus	mg/Kg	18.7	17.6	18.65	19.0
Potassium	mg/Kg	8.5	8.7	9.0	8.3
Particle Distribution	mm	2.0	2.0	2.0	2.0
Water Holding Capacity	%	60	60	20.83	19.52
Free Ammonical Nitrogen	mg/Kg	24.1	24.1	26.3	24.6
Cu	mg/Kg	<0.1	<0.1	<0.1	<0.1
Pb	mg/Kg	<0.1	<0.1	<0.1	<0.1
Cd	mg/Kg	<0.05	<0.05	<0.05	<0.05
Hexavalent Cr	mg/Kg	<0.01	<0.01	<0.01	<0.01



ANNEXURE-IV

Mine Location Map



ANNEXURE-V

Location Map of Monitoring Stations

