Dalmia cement

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DCBL/JPB/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 Janardanpur-Patarhai-Bairiha Limestone Mine bearing PCB ID- 140132 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 Janardanpur- Patarhai- Bairiha Limestone Mine (575.830 Ha) in Village – Janardanpur, Patarhai & Bairiha, 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)

Dalmia Cement (Bharat) Ltd. OFFICE

Encl: a/a

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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)

Janardanpur-Patrahai-Bairiha Limestone Mine, Satna
Dalmia Cement Bharat Limited

CONTENTS

LIST OF ANNEXURES

Dalmia Cement (Bharat) OFFICE

EXECUTIVE SUMMARY

The proposed Limestone Mine (ML Area: 575.830 Ha) with Limestone Production Capacity – 4.0 Million TPA, Top Soil & Sub Soil – 1.25 Million TPA, Waste (OB/IB/Shale) – 1.00 Million TPA & Screen Rejects – 0.40 Million TPA (Total Excavation – 6.65 Million TPA) along with installation of Crusher – 1200 TPH Capacity with Wobbler at Villages: Bairiha, Patrahai & Janardanpur, Tehsil: Rampur Baghelan, District: Satna (Madya Pradesh).

Dalmia Cement Bharat Limited (DCBL) was initially sanctioned prospecting license over an area of 724.541 Ha vide order dated: 27.12.2012. LOI was granted for mining lease over an area of 575.832 Ha under section 10 A (2)(b) of MMDR Amendment Act 2015 by the State Government vide its letter no. F 3-8/2014/12/1 dated: 18.01.2018. Thereafter, the State Govt. vide order no. 3-8/2014/12/1 dated: 28.08.2018 has rectified the LOI with an area mentioned as 575.830 Ha as per the Khasara Schedule. Mining lease has been granted by Government of Madhya Pradesh vide order no. AF 3-8/2014/12/1 dated: 08.08.2019.

Dalmia Cement (Bharat) Ltd. OFFICE

CHAPTER – I

INTRODUCTION

1.1 GENESIS:

The Gazette Notification vide G.S.R No. 329 (E) dated13th 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 22April 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:

<table>
<tr><td>Name of the Project</td><td colspan="5">Janardanpur-Patrahai-Bairiha Limestone Mine</td></tr>
<tr><td>Location Village</td><td colspan="5">Bairiha, Patrahai & Janardanpur</td></tr>
<tr><td>Tehsil</td><td colspan="5">Rampur Baghelan</td></tr>
<tr><td>District</td><td colspan="5">Satna (M.P.)</td></tr>
<tr><td>Lease Area</td><td colspan="5">575.830 Ha</td></tr>
<tr><td>Land Type</td><td colspan="5"><table>
<tr><th>Sr. No.</th><th>Village Area (ha)</th><th>Land Type (ha)</th><th>Private Land</th><th>Govt. Land</th></tr>
<tr><td>1</td><td>Bairiha</td><td>354.95</td><td>349.77</td><td>5.188</td></tr>
<tr><td>2</td><td>Janardanpur</td><td>74.528</td><td>73.517</td><td>1.011</td></tr>
<tr><td>3</td><td>Patrahai</td><td>146.35</td><td>143.9</td><td>2.449</td></tr>
<tr><td colspan="2">Total Area</td><td>575.83</td><td>567.18</td><td>8.648</td></tr>
</table></td></tr>
<tr><td>Latitude & Longitude</td><td colspan="5">24°34'0.3095" N to 24°35'48.2047" N
81°02'42.3126" E to 81°05'32.0272" E</td></tr>
<tr><td>Toposheet No.</td><td colspan="5">Core Area: G44V2 (63 H/2)
Study Area: G44V2 (63 H/2), G44U14 (63D/14), G44U15 (63D/15), G44V3 (63H/3</td></tr>
<tr><td>Elevation Range</td><td colspan="5">288 to 306.65m AMSL</td></tr>
<tr><td>Probable Mineral Reserves</td><td colspan="5">21.11 Million Tonnes</td></tr>
</table>

Targeted Production	Top Soil/ Sub Soil- 32 Million Tonnes Waste (OB/IB/Shale) and screen reject- 25.2 Million Tonnes

1.3 COMMUNICATION:

Nearest Habitation & Population	Patrahai~ 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 four 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 four quarters is appended as Annexure- I & II. The environmental monitoring results for the year 2023-2024 as given below:

AMBIENT AIR QUALITY

The PM10 concentration was found in the range of 65.8 to 82.8 µg/m3.
The PM2.5 concentrations was found in the range of 36.8 to 47.9 µg/m3.
The SO2 concentration was found in the range of 7.0 to 9.1 µg/m3.
The NO2 concentration was in the range of 17.4 to 23.5 µg/m3.
The O3 concentration was in the range of 15.9 to 19.4 µg/m3.
The NH3 concentration was in the range of 13.4 to 19.2 µg/m3.

WATER QUALITY

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

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NOISE LEVEL

The noise level was found in the range of 48.6 to 55.4 dB(A) in Day time & 37.0 to 40.6 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).

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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	Janardanpur-Patrahai-Bairiha Limestone Mine
Location Village	Bairiha, Patrahai & Janardanpur
Tehsil & Post	Rampur Baghelan
District	Satna (M.P.)

(II) INDUSTRY CATEGORY

Category "B"

(III) PRODUCTION CAPACITY

Total Excavation - 6.65 Million TPA
Limestone Production Capacity - 4.0 Million TPA,
Top Soil / Sub Soil - 1.25 Million TPA,
Waste (OB/IB/Shale) - 1.00 Million TPA, &
Screen Rejects - 0.40 Million TPA.

(IV) TOTAL PRODUCTION IN FY 2023-2024

Limestone Production in FY 2023-2024 is **213 Ton**

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.

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(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
WATER	Water Analysis results are given in Annexure-II.	No effluent is discharged into in Land Surface water.
AIR	Analysis results are given in Annexure-I.	Ambient air quality result shows that the values of PM10, PM2.5, SO_2 and NOx are well within prescribed standards.

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.

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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.

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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 ENVIRONMENAL 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.

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ANNEXURE-I
Ambient Air Quality Monitoring Results:

Monitoring Station	Sampling Date	PM10 (µg/m3)	PM2.5 (µg/m3)	NO2 (µg/m3)	SO2 (µg/m3)	CO (mg/M3)	O3 (µg/m3)	NH3 (µg/m3)	As (ng/m3)	C6H6 (µg/m3)	BaP (ng/m3)	Ni (ng/m3)	Pb (µg/m3)
Bairiha mine site (SAN 01)	06.05.2023 to 07.05.2023	77.3	39.4	21.4	8.2	BDL(<1.15)	17.9	18.5	BDL (<1.0)	BDL (<1.0)	BDL (<0.05)	BDL (<1.0)	BDL (<0.05)
Village Sakarwat (SAN 10)	06.05.2023 to 07.05.2023	74.6	40.3	20.8	7.9	BDL(<1.15)	17.2	17.4	BDL (<1.0)	BDL (<1.0)	BDL (<0.05)	BDL (<1.0)	BDL (<0.05)
Bairiha mine site (SAN 01)	01.09.2023 to 02.09.2023	71.1	37.7	19.9	7.4	BDL(<1.15)	18.1	17.5	BDL (<1.0)	BDL (<1.0)	BDL (<0.05)	BDL (<1.0)	BDL (<0.05)
Village Sakarwat (SAN 10)	02.09.2023 to 03.09.2023	65.8	36.8	19.0	8.1	BDL(<1.15)	17.7	16.2	BDL (<1.0)	BDL (<1.0)	BDL (<0.05)	BDL (<1.0)	BDL (<0.05)
Bairiha mine site (SAN 01)	17.12.2023 to 18.12.2023	75.6	40.8	23.5	9.1	BDL(<1.15)	19.4	16.7	BDL (<1.0)	BDL (<1.0)	BDL (<0.05)	BDL (<1.0)	BDL (<0.05)
Village Sakarwat (SAN 10)	17.12.2023 to 18.12.2023	79.6	46.2	20.0	8.5	BDL(<1.15)	15.9	19.2	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/m3)
Bairiha to Jamuna (Transportation point)	11.05.2023	137.2
Bairiha to Jamuna (Transportation point)	11.09.2023	107.9
Bairiha (Unloading point)	12.09.2023	125.1
Bairiha to Jamuna (Transportation point)	16.12.2024	155.0
Bairiha to Jamuna (Transportation point)	16.02.2024	129.2
Bairiha (Unloading point)	16.02.2024	141.6

Work Place Monitoring Results:

Monitoring Station	Sampling Date	SPM (µg/m3)	Silica (µg/m3)	Crystalline Silica (µg/m3)
Bairiha Entry point (Unloading point)	04.09.2023	6.5	0.26	0.7
Bairiha North site (Unloading point)	04.09.2023	7.6	0.33	0.78
Bairiha mine site (Transportation point)	05.09.2023	6.7	0.38	0.99
Bairiha South site (Unloading point)	05.09.2023	8.3	0.41	1.08
Village Bairiha Transportation point	06.09.2023	7.9	0.25	0.80
Bairiha to Jamuna Transportation point	06.09.2023	5.4	0.37	0.86
Bairiha mine site (Loading Point)	17.12.2023	8.4	0.41	0.79
Village Bairiha (Transportation point)	17.12.2023	8.1	0.35	0.67

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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)
Bairiha mine site (SAN 01)	06.05.2023 to 07.05.2023	55.7	28.1	51.3	38.0	43.4
Village Sakarwat (SAN 10)	06.05.2023 to 07.05.2023	59.3	29.8	54.3	38.7	44.1
Bairiha mine site (SAN 01)	01.09.2023 to 02.09.2023	60.3	30.1	55.4	39.9	45.2
Village Sakarwat (SAN 10)	02.09.2023 to 03.09.2023	56.8	28.0	52.3	37.6	42.9
Bairiha mine site (SAN 01)	17.12.2023 to 18.12.2023	68.7	30.0	48.6	38.9	44.2
Village Sakarwat (SAN 10)	17.12.2023 to 18.12.2023	58.0	26.2	49.4	37.0	42.3
Bairiha mine site (SAN 01)	19.02.2024 to 20.02.2024	64.0	28.4	52.4	38.2	43.5
Village Sakarwat (SAN 10)	19.02.2024 to 20.02.2024	66.8	32.9	55.1	40.6	46.0

Work Zone Noise Quality Monitoring Results:

Monitoring Station	Sampling Date	Unit	Lmin	Lmax
Janardanpur Mine Site (loading point)	14.05.2023	dB(A)	34.0	66.9
Bairiha (Unloading point)	01.09.2023	dB(A)	28.3	55.6
Janardanpur Mine Site (loading point)	16.12.2023	dB(A)	26.8	73.4
Bairiha (Unloading point)	15.02.2024	dB(A)	32.3	62.1

ANNEXURE-II
Water Quality Results:

Sampling Location		Baheria Mine Site (SGWS1)			
Type of Water		Ground Water			
Sampling Date		07.05.2023	03.09.2023	17.12.2023	19.02.2024
Parameters	Unit	Results	Results	Results	Results
pH (at 25°C)	-	7.55	7.61	7.69	7.5
Electrical Conductivity	(µS/cm)	696	688	672	660
Turbidity	NTU	<0.5	<0.5	<0.5	<0.5
Total Dissolved Solids	mg/l	400	380.0	380	420
Total solids	mg/l	420	400.0	400	440
Alkanity	mg/l	350	325.0	310	430
Total Hardness	mg/l	480	462.0	453.2	466
Ca Hardness	mg/l	243	232.0	198	226
Mg Hardness	mg/l	237	230.0	255.2	240
Ca	mg/l	97.2	92.8	79.2	90.4
Mg	mg/l	57.6	55.9	62	58.3
Chloride as Cl-	mg/l	28.0	20.0	42.4	26.0
Sulphate	mg/l	112	102.2	96.4	100
Nitrate	mg/l	20.0	26.8	24.2	22.2
Iron	mg/l	0.26	0.25	0.28	0.26
Fluoride	mg/l	0.9	0.7	0.8	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	3.7	4.0	3.5	3.9
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

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Sampling Location		Village Baheria(SGWS-6)			
Type of Water		Ground Water			
Sampling Date		07.05.2023	03.09.2023	17.12.2023	19.02.2024
Parameters	Unit	Results	Results	Results	Results
pH (at 25°C)	-	7.44	7.66	7.82	7.61
Electrical Conductivity	(µS/cm)	752	740	782	696
Turbidity	NTU	<0.5	<0.5	<0.5	<0.5
Total Dissolved Solids	mg/l	460	440	460	400
Total solids	mg/l	480	460	480	420
Alkanity	mg/l	345	355	350	335
Total Hardness	mg/l	452	440	455.2	488
Ca Hardness	mg/l	225	222	210.6	244
Mg Hardness	mg/l	227	218	244.6	244
Ca	mg/l	90.0	88.8	84.2	97.6
Mg	mg/l	55.1	52.9	59.4	59.3
Chloride as Cl-	mg/l	24.0	26.0	40.9	22.0
Sulphate	mg/l	104	98.8	100.4	106
Nitrate	mg/l	20.8	18.6	21.4	20.6
Iron	mg/l	0.27	0.26	0.28	0.24
Fluoride	mg/l	0.7	0.6	0.7	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	4.2	4.6	4.0	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		Mine Pit	Mine Pit	Canal	Canal
Type of Water		Surface Water			
Sampling Date		07.05.2023	03.09.2023	17.12.2023	19.02.2024
Parameters	Unit	Results	Results	Results	Results
pH (at 25°C)	-	7.9	7.9	7.88	7.86
Electrical Conductivity	(µS/cm)	746	746	718	688
Turbidity	NTU	4.0	4.0	3.0	3.0
Total Dissolved Solids	mg/l	440	440.0	420	420
Total solids	mg/l	480	480.0	440	440
Alkanity	mg/l	235	235.0	228	255
Total Hardness	mg/l	300	300.0	249.2	340
Ca Hardness	mg/l	151.2	151.2	153	176.4
Mg Hardness	mg/l	148.8	148.8	96.2	163.9
Ca	mg/l	60.5	60.5	61.2	57.6
Mg	mg/l	34.4	34.4	23.3	41.5
Chloride as Cl-	mg/l	21.5	21.5	25.4	21
Sulphate	mg/l	82.2	82.2	72.2	80.8
Nitrate	mg/l	9.4	9.4	8.6	8.2
Iron	mg/l	0.08	0.08	0.08	0.06
Fluoride	mg/l	0.7	0.7	0.7	0.7
COD	mg/l	28.0	28.0	32.0	36.0
BOD	mg/l	7.3	7.3	8.7	9.7
DO	mg/l	7	7.0	7.3	7.2
Oil & Grease	mg/l	4.2	4.2	4.8	4.4
Total Chromium	mg/l	0.08	0.08	0.08	0.12
Phosphate	mg/l	5.1	5.1	5	5.6
Zinc	mg/l	<5.0	<5.0	<5.0	<5.0

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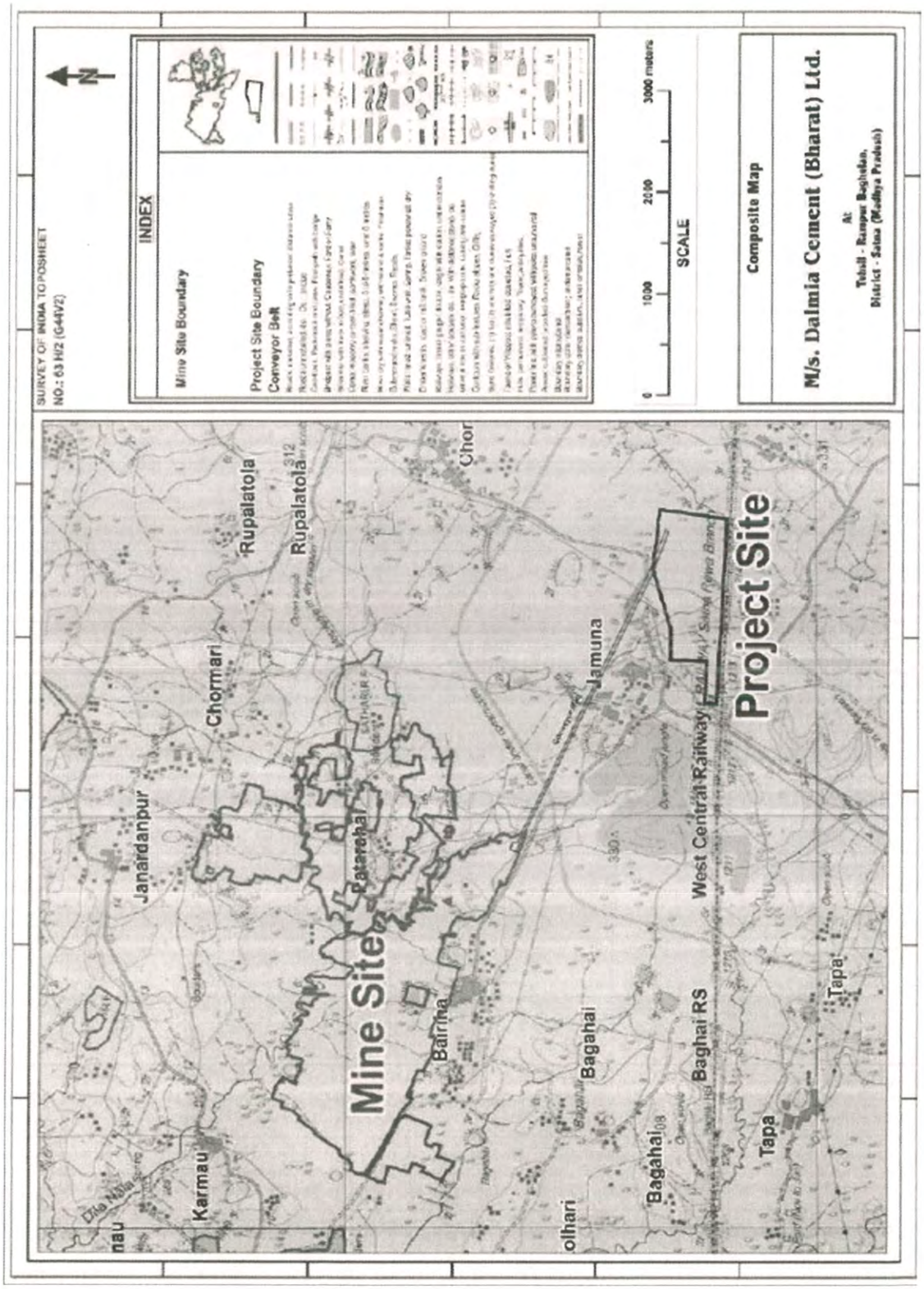
Coliform	MPN/100 ml	1200	1400	1200	1200

ANNEXURE-III
Soil Quality Results:

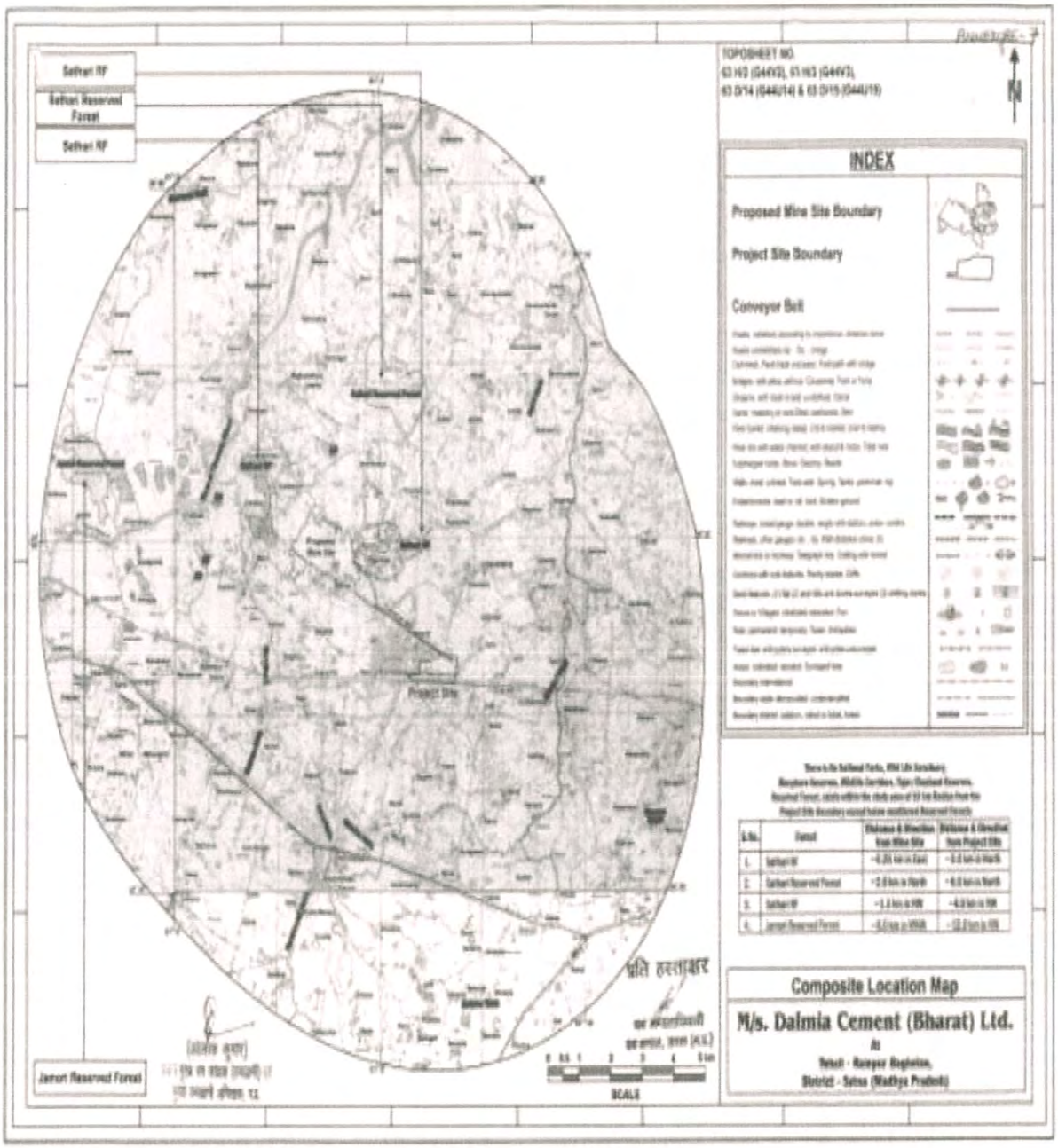
Sampling Location		Village Bairiha			
Sampling Date		07.05.2023	03.09.2023	17.12.2023	19.02.2024
Parameters	Unit	Results	Results	Results	Results
pH (at 25°C)	-	7.78	7.72	7.76	7.56
Electrical Conductivity	(mS/cm)	0.436	0.55	0.39	0.28
Organic Matter	%	1.239	1.111	1.123	1.224
Phosphorus	mg/Kg	19.1	17.3	16.4	17.33
Potassium	mg/Kg	9.0	8.0	8.7	8.8
Particle Distribution	mm	2.0	2.0	2.0	2.0
Water Holding Capacity	%	68	64.0	29.96	30.2
Free Ammonical Nitrogen	mg/Kg	24.6	24.6	23.0	22.4
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

Sampling Location		Bairiha mine site			
Sampling Date		07.05.2023	03.09.2023	17.12.2023	19.02.2024
Parameters	Unit	Results	Results	Results	Results
pH (at 25°C)	-	7.7	7.81	7.85	7.65
Electrical Conductivity	(mS/cm)	0.425	0.400	0.221	0.221
Organic Matter	%	1.231	1.154	1.27	1.125
Phosphorus	mg/Kg	17.6	16.4	15.52	16.4
Potassium	mg/Kg	8.8	8.4	8.1	6.1
Particle Distribution	mm	2.0	2.0	2.0	2.0
Water Holding Capacity	%	66.0	66.0	18.8	20.6
Free Ammonical Nitrogen	mg/Kg	26.3	26.3	28.0	28.6
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



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