



ENVIRONMENTAL AUDIT STATEMENT

2022-23

For

GAYATRI UG MINE

Under

(BISHRAMPUR AREA)

South Eastern Coalfields Limited

(A Mini Ratna Company)

Year of establishment – 2003

Capacity of Mine - 0.3 MTPA

Project Area - 507.472 Ha. (As per EC)

**Central Mine Planning & Design Institute Limited
Regional Institute – V, CMPDI Complex, Seepat Road,
BILASPUR (C.G.)**

ENVIRONMENTAL AUDIT STATEMENT (2022 – 23)

GAYATRI UG MINE

CHAPTER-I

TABLE-1.1

1.0	General Information	:	
a)	Extractable Reserves (as on 01.04.2023)	:	10.612 million T (Seam I –Comb)
b)	Target output & grade of coal (2023-24)	:	7,40,000 T (Subject to EC Enhancement)
c)	Seams Worked	:	Seam I (Combined)
d)	Thickness of Seam Worked (in metres.)	:	1.2 m to 5m - General (as per RPR) 2 m to 3m - Prevalent (as per RPR)
e)	Depth of Seams from the surface	:	
	Minimum :		49 m
	Maximum:		154 m
f)	Av. Stripping ratio mining purpose	:	NA
g)	No. of villages/ families	:	NIL
h)	(i) Mining area (in Ha.)	:	491.472 Ha
	(ii) Leasehold area other than mining purpose (in Ha.)	:	16.00 Ha
	(iii) Total Leasehold Area (in Ha.)	:	507.472 Ha (As per EC)

1.1	Brief Geology of Mine:	<p>The mine is located in the western part of Rehar block which covers mostly Jogi block of Lakhanpur coalfields. The leasehold area of this mine is 507.472 Hectare as per EMP clearance.</p> <p>There are five seams in the area namely Seam 0 to Seam IV. At present working of this mine is being done in Seam-I combines which has been declared as Degree-I Gassy Seam. The present thickness of Seam is varying from 1.5 m to 3.0 M. There is frequent variation in the thickness of seam being observed on regular basis.</p> <p>The percolation of water from roof and floor is high which increases substantially during and after rainy season. The RMR of the roof of CMP1, CMP2, CMP3 development panel is 45.76 .The gradient of seam is 1 in 20 and with direction N 45° E.</p>															
1.2	Mining Method Description:	<p>Seam-I Combined is being developed by the conventional Board & Pillar method. At present there is one nos. of development panel being worked by CM package. The coal cut by CM is hauled upto tailend end of gate belt by shuttle cars. The gate belt discharges coal on to trunk belts and it is discharged into the surface bunker via a series of Trunk belt conveyors.</p>															
1.3	Present Status of the mine	:															
1.	Production Figures	:	Working(Development)														
			<table border="1"> <thead> <tr> <th>Year</th> <th>Coal Production (in Tonnes/ MT)</th> </tr> </thead> <tbody> <tr> <td>2018-19</td> <td>2,50,001 T</td> </tr> <tr> <td>2019-20</td> <td>2,50,050 T</td> </tr> <tr> <td>2020-21</td> <td>1,93,000 T</td> </tr> <tr> <td>2021-22</td> <td>1,23,500 T</td> </tr> <tr> <td>2022-23</td> <td>1,86,605 T</td> </tr> <tr> <td>2023-24 (target)</td> <td>7,40,000 T (Subject to EC Enhancement)</td> </tr> </tbody> </table>	Year	Coal Production (in Tonnes/ MT)	2018-19	2,50,001 T	2019-20	2,50,050 T	2020-21	1,93,000 T	2021-22	1,23,500 T	2022-23	1,86,605 T	2023-24 (target)	7,40,000 T (Subject to EC Enhancement)
Year	Coal Production (in Tonnes/ MT)																
2018-19	2,50,001 T																
2019-20	2,50,050 T																
2020-21	1,93,000 T																
2021-22	1,23,500 T																
2022-23	1,86,605 T																
2023-24 (target)	7,40,000 T (Subject to EC Enhancement)																
2.	No. of Inclines (Running)	:	2														
3.	Shafts	:	1 (Air Shaft)														
4.	No. of quarries	:	NA														
5.	Overburden	:	NA														
6.	Main Consumers	:	Power and Non Power sector														
7.	Mode of dispatch	:	By trucks and tippers														

CHAPTER-II

FORM-V (See rule 14)

Environmental Statement for the Financial Year ending
31st March 2023

PART-A

(i)	Name and address of the mine	:	Gayatri UG Mine P.O. - Ketka Thana- Surajpur Distt. - Surajpur (C.G) PIN - 497229
(ii)	Industry category Primary (SIC Code) or Secondary (SIC Code)	:	Primary
(iii)	Production capacity units	:	0.3 MTPA
(iv)	Year of establishment	:	2003
(v)	Date of the last environmental Statement Submitted	:	August 2022

PART-B

Water and Raw Materials Consumption

(i) Water Consumption (KLD)

Industrial consumption: 1032 KLD

Domestic consumption: 9 KLD

Name of Products	Process water consumption per product output	
	During the previous financial year 2021-22	During the current financial year 2022-23
Coal	Water is not required in any underground coal mining process.	

(ii) Raw materials consumption

*Name of raw materials	Name of products	Consumption of raw material per unit of output	
		During the previous financial year 2021-22	During the current financial year 2022-23
Explosive	Coal	0.545 kg/tonne	0.270 kg/tonne
P.O.L	Coal	0.298 lit/tonne	0.156 lit/tonne

*Industry may use codes if disclosing details of raw materials would violate contractual obligations, otherwise all industries have to name the raw materials used.

PART-C

POLLUTANT DISCHARGED TO ENVIRONMENT/ UNIT OF OUTPUT (Parameters as specified in the consent issued)

Pollutants (Including mine & colony discharge of water)	Quantity of pollutants discharged (mass/day)	Concentrations of pollutants in discharges (mass/ volume)	Percentage of variation from prescribed standards with reasons
(a) Air	NIL	Environmental Monitoring report Enclosed.	Environmental Monitoring report Enclosed.
(b) Water			
(i) Mine water pumped out	4919 kld		
(ii) Industrial water discharged	NA		
(iii) Colony water discharged	NA		
(c) Noise	NA		

PART-D

HAZARDOUS WASTES

(As specified under Hazardous Wastes/ Management Handling Rule, 1989)

Hazardous Wastes	Total quantity	
	During the previous financial year 2021-22	During the current financial year 2022-23
From Process	50 lit (Used oil)	50 lit (Used oil) 10 kg (Oil filter and oil soaked jute)
From Pollution control facilities	NIL	NIL

PART-E

SOLID WASTES

Removal of overburden	Total quantity	
	During the current financial year 2021-22	During the current financial year 2022-23
Total O.B.	Not applicable for Gayatri UG Mine.	
Total O.B. For back filling		
Total O.B. disposed		

PART-F

Please specify the characterization (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Description	Qty. MT / Year (22-23)	Collection Method
Steel Scrap	Nil	
Copper Scrap	Nil	
Aluminum Scrap	Nil	
Used Oil	50 lit	Stored in plastic drums

PART-G

Impact of the pollution abatement measure taken on conservation of natural resources and on the cost of production.

Pollution control measures have brought down the pollution of natural resources and the limits are well within prescribed standards. The impact of the pollution abatement measure on the cost of the production is Rs. 156.67 /Te. in the year 2022-23 (expenditure figures are of entire Bishrampur Area)

PART-H

Additional measures/ investment proposals for environmental protection including abatement of pollution, prevention of pollution.

1. Spraying system installed to mitigate air born particular matter (main cause of air pollution)
 2. Settling tanks made to settle the water before discharge.
 3. Forest is available around the mine. In the premises, plants have been planted.
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PART-I

Any other particulars for improving the quality of the environment.

1. Monitoring of air, water, noise is regularly being done to know the status of environmental status of environmental pollution.
 2. Necessary action is being taken/will be taken to the protect from the environmental pollution
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ENVIRONMENTAL MONITORING REPORT

**CENTRAL MINE PLANNING AND DESIGN INSTITUTE LIMITED**

Environment Laboratory, Regional Institute-V,
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cmpdi
A Mini Ratna Company

AIR QUALITY REPORT

Month	January	Area	Bishrampur	Report No.	HSD/BSPR/2023/01
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	21.02.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	13-14

Parameter		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Remarks			
Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs	Industrial Zone -(G.S.R. 742(E), dated 25.9.2000)	A-O	600	300	-	120	120			
		A-N	500	250	-	120	120			
	Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996)	B	200	100	60	80	80			
Method of analysis		IS-5182 PART 4	IS-5182 PART 23	USEPA CFR 40, Appendix L to Part 50	IS-5182 PART 2	IS-5182 PART 6				
Station Name	St. Code	St. cat.	Date of sampling	Date of analysis						
GAYATRI MINE SITE OFFICE	13	A-N	03.01.23	13.01.23	340	150	38		16	22
			06.01.23	18.01.23	333	166	45		19	20
			10.01.23	22.01.23	330	161	48		14	21
			13.01.23	24.01.23	352	141	43		15	20
			18.01.23	27.01.23	360	212	32		16	22
			20.01.23	31.01.23	349	154	36	15	19	
			24.01.23	03.02.23	340	158	24	16	21	
			27.01.23	07.02.23	355	153	23	19	23	
31.01.23	15.02.23	337	141	48	23	25				
EXHAUST FAN HOUSE	14	A-N	03.01.23	13.01.23	349	142	40	19	24	
			06.01.23	18.01.23	340	212	57	18	26	
			10.01.23	22.01.23	324	183	30	16	25	
			13.01.23	24.01.23	331	186	32	23	26	
			18.01.23	27.01.23	347	168	23	18	24	
			20.01.23	31.01.23	325	122	33	19	19	
			24.01.23	03.02.23	359	186	45	18	19	
			27.01.23	07.02.23	371	189	43	15	21	
31.01.23	15.02.23	398	238	30	16	22				

Tested by
Scientific Asst.

Checked by

Officer In charge

Note: 1) The results above relate to the samples tested.

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AIR QUALITY REPORT

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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	21.02.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	15-16

Parameter		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Remarks			
Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs	Industrial Zone -(G.S.R. 742(E), dated 25.9.2000)	A-O	600	300	-	120		120		
		A-N	500	250	-	120		120		
	Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996)	B	200	100	60	80		80		
Method of analysis		IS-5182 PART 4	IS-5182 PART 23	USEPA CFR 40, Appendix L to Part 50	IS-5182 PART 2	IS-5182 PART 6				
Station Name	St. Code	St. cat.	Date of sampling	Date of analysis						
SUB AREA OFFICE	15	B	03.01.23	13.01.23	179	104	50	16	18	
			06.01.23	18.01.23	247	214	32	12	16	
			10.01.23	22.01.23	285	248	27	14	17	
			13.01.23	24.01.23	236	206	23	15	19	
			18.01.23	27.01.23	218	207	52	18	16	
			20.01.23	31.01.23	204	158	52	15	18	
			24.01.23	03.02.23	295	279	57	15	19	
			27.01.23	07.02.23	258	140	50	18	21	
			31.01.23	15.02.23	278	203	41	15	17	
CHECK POST	16	A-N	03.01.23	13.01.23	359	229	30	12	16	
			06.01.23	18.01.23	368	205	41	14	17	
			10.01.23	22.01.23	387	148	37	16	21	
			13.01.23	24.01.23	345	161	35	15	19	
			18.01.23	27.01.23	367	92	50	12	18	
			20.01.23	31.01.23	360	192	45	14	21	
			24.01.23	03.02.23	332	201	50	15	19	
			27.01.23	07.02.23	345	143	41	16	21	
			31.01.23	15.02.23	351	165	35	16	18	

Tested by
Scientific Asst.

Checked by

Officer In charge

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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	21.02.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	17-18

Parameter		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Remarks			
Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs	Industrial Zone -(G.S.R. 742(E), dated 25.9.2000)	A-O	600	300	-	120		120		
		A-N	500	250	-	120		120		
	Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996)	B	200	100	60	80		80		
Method of analysis		IS-5182 PART 4	IS-5182 PART 23	USEPA CFR 40, Appendix L to Part 50	IS-5182 PART 2	IS-5182 PART 6				
Station Name	St. Code	St. cat.	Date of sampling	Date of analysis						
PONDI VILLAGE	17	B	03.01.23	13.01.23	159	68	24	14	19	
			06.01.23	18.01.23	164	54	24	16	17	
			10.01.23	22.01.23	160	78	50	14	19	
			13.01.23	24.01.23	170	61	19	15	18	
			18.01.23	27.01.23	155	40	33	18	17	
			20.01.23	31.01.23	153	97	40	12	17	
			24.01.23	03.02.23	152	42	29	14	16	
			27.01.23	07.02.23	164	93	40	16	18	
			31.01.23	15.02.23	176	41	25	15	19	
LAINGA VILLAGE	18	B	03.01.23	13.01.23	168	87	33	18	20	
			06.01.23	18.01.23	145	35	20	14	22	
			10.01.23	22.01.23	166	38	35	15	20	
			13.01.23	24.01.23	150	66	35	12	18	
			18.01.23	27.01.23	149	33	43	16	19	
			20.01.23	31.01.23	159	67	33	14	18	
			24.01.23	03.02.23	145	51	20	15	16	
			27.01.23	07.02.23	151	55	43	23	22	
			31.01.23	15.02.23	158	30	43	14	19	

Tested by
Scientific Asst.

Checked by

Officer In charge

Note: 1) The results above relate to the samples tested.

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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	21.02.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	19-20

Parameter		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Remarks			
Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs	Industrial Zone -(G.S.R. 742(E), dated 25.9.2000)	A-O	600	300	-	120		120		
		A-N	500	250	-	120		120		
	Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996)	B	200	100	60	80		80		
Method of analysis		IS-5182 PART 4	IS-5182 PART 23	USEPA CFR 40, Appendix L to Part 50	IS-5182 PART 2	IS-5182 PART 6				
Station Name	St. Code	St. cat.	Date of sampling	Date of analysis						
MANI VILLAGE	19	B	03.01.23	13.01.23	152	45	40	14	19	
			06.01.23	18.01.23	160	31	29	15	23	
			10.01.23	22.01.23	154	60	48	12	18	
			13.01.23	24.01.23	156	23	25	15	19	
			18.01.23	27.01.23	157	40	43	12	17	
			20.01.23	31.01.23	160	77	45	16	19	
			24.01.23	03.02.23	164	37	35	15	18	
			27.01.23	07.02.23	160	92	14	16	22	
			31.01.23	15.02.23	162	85	40	19	19	
PENDARAKHI VILLAGE	20	B	03.01.23	13.01.23	154	91	57	19	19	
			06.01.23	18.01.23	161	62	41	9	16	
			10.01.23	22.01.23	163	96	32	11	14	
			13.01.23	24.01.23	156	51	38	15	19	
			18.01.23	27.01.23	148	40	50	14	17	
			20.01.23	31.01.23	147	74	48	16	18	
			24.01.23	03.02.23	151	57	33	14	19	
			27.01.23	07.02.23	146	72	40	16	19	
			31.01.23	15.02.23	140	64	30	14	19	

Tested by
Scientific Asst.

Checked by

Officer In charge

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NOISE QUALITY REPORT

Month	January	Area	Bishrampur	Report No.	HSD/BSPR/2023/01
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	21.02.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	16-23

Parameter				The Noise Pollution (R & C) rules, 2000		Remarks
				Day Time	Night Time	
Limit in dB(a) Leq	Industrial area	A	75	70		
	Commercial area	B	65	55		
	Residential Area	C	55	45		
	Silence Zone	D	50	40		
Method of analysis	CPCB Protocol For Ambient Level Noise Monitoring					
Station Name	Station Code	Station category	Date of measurement	Value in dB(a)	Value in dB(a)	
GAYATRI MINE SITE OFFICE	16	A	12.01.2023	70.3	59.9	
			24.01.2023	72.1	63.4	
MANI VILLAGE	17	C	12.01.2023	46.8	39.3	
			24.01.2023	48.1	43.2	
PONDI VILLAGE	18	C	12.01.2023	50.7	41.2	
			24.01.2023	51.1	40.6	
EXHAUST FAN HOUSE	19	A	12.01.2023	62.3	45.2	
			24.01.2023	63.2	50.5	
SUB AREA OFFICE	20	B	12.01.2023	50.3	39.2	
			24.01.2023	51.4	44.1	
CHECK POST	21	A	12.01.2023	50.7	40.2	
			24.01.2023	46.6	42.6	
LAINGA VILLAGE	22	C	12.01.2023	50.4	41.8	
			24.01.2023	51.2	40.5	
PENDARAKHI VILLAGE	23	C	12.01.2023	52.6	38.7	
			24.01.2023	50.2	40.2	

Monitored by
Scientific Asst.

Checked by

Officer In charge

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EFFLUENT WATER QUALITY REPORT

Month	January	Area	Bishrampur	Report No.	HSD/BSPR/2023/01
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	21.02.2023
Name of the Project	GAYATRI U.G.	Sample reference No.	11,12 & 16-18

Parameter	pH Value, LDL	Total suspended Solids, mg/l, max	C.O.D , mg/l, max	Oil & Grease , mg/l, max	B.O.D. (3 days 27°C) m g/l,max	D. O. mg/l, max..			
Lower Detection Limit	0.02	25.0	4.0	2.0	2.0				
General Standards for Discharge of Environmental Pollution (Part A: Effluent) as per Schedule VI, Environment (Protection) Rules	5.5 to 9.0	100.0	250.0	10.0	30.0				
Station name	St. Code	Date of Sampling	Date of Analysis						
MINE DISCHARGE WATER (Untreated)	13	07.01.23	07.01.23 to 24.01.23	7.37	42	20	2.3	<2.0	-
		25.01.23	25.01.23 to 18.02.23	7.40	49	16	2.2	<2.0	-
MINE DISCHARGE WATER (Treated)	14	07.01.23	07.01.23 to 24.01.23	7.39	36	20	<2.0	<2.0	-
		25.01.23	25.01.23 to 18.02.23	7.41	29	16	<2.0	<2.0	-
GAYTRI MINE DISCHARGE WATER MEETING POINT AT JOBGA NALLAH	15	07.01.23	07.01.23 to 24.01.23	7.40	38	20	<2.0	5.3	6.6
		25.01.23	25.01.23 to 18.02.23	7.46	41	20	<2.0	5.5	6.8
JOBGA NALLAH MEETING POINT AT REHAR RIVER CONFLUENCE POINT UP STREAM (FOR REHAR UG & GAYATRI UG MINE)	11	07.01.23	07.01.23 to 24.01.23	7.23	33	16	<2.0	5.7	-
		25.01.23	25.01.23 to 18.02.23	7.26	35	20	<2.0	5.5	-
JOBGA NALLAH MEETING POINT AT REHAR RIVER CONFLUENCE POINT DOWN STREAM (FOR REHAR UG & GAYATRI UG MINE)	12	07.01.23	07.01.23 to 24.01.23	7.34	37	16	<2.0	5.4	-
		25.01.23	25.01.23 to 18.02.23	7.40	33	20	<2.0	5.3	-

Tested by
Scientific Asst.

Checked by

Officer In-charge

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AIR QUALITY REPORT

Month	February	Area	Bishrampur	Report No.	HSD/BSPR/2023/02
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	18.03.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	13-14

Parameter		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Remarks			
Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs	Industrial Zone -(G.S.R. 742(E), dated 25.9.2000)	A-O	600	300	-	120		120		
		A-N	500	250	-	120		120		
	Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996)	B	200	100	60	80		80		
Method of analysis		IS-5182 PART 4	IS-5182 PART 23	USEPA CFR 40, Appendix L to Part 50	IS-5182 PART 2	IS-5182 PART 6				
Station Name	St. Code	St. cat.	Date of sampling	Date of analysis						
GAYATRI MINE SITE OFFICE	13	A-N	03.02.23	15.02.23	356	151	45	11	23	
			04.02.23	18.02.23	374	156	47	13	22	
			08.02.23	20.02.23	361	153	41	12	21	
			11.02.23	22.02.23	384	176	56	16	30	
			15.02.23	24.02.23	344	146	40	12	27	
			18.02.23	26.02.23	387	178	45	17	30	
			22.02.23	01.03.23	364	156	42	15	26	
			25.02.23	07.03.23	407	182	61	18	33	
-	-	-	-	-	-	-	-	-		
EXHAUST FAN HOUSE	14	A-N	03.02.23	15.02.23	361	164	55	16	26	
			04.02.23	18.02.23	352	152	37	12	22	
			08.02.23	20.02.23	365	171	41	15	26	
			11.02.23	22.02.23	374	175	44	18	23	
			15.02.23	24.02.23	345	137	36	12	37	
			18.02.23	26.02.23	356	142	39	15	25	
			22.02.23	01.03.23	345	135	32	12	22	
			25.02.23	07.03.23	387	161	56	18	23	
-	-	-	-	-	-	-	-	-		

Tested by
Scientific Asst.

Checked by

Officer In charge

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AIR QUALITY REPORT

Month	February	Area	Bishrampur	Report No.	HSD/BSPR/2023/02
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	18.03.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	15-16

Parameter		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Remarks		
Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs	Industrial Zone -(G.S.R. 742(E), dated 25.9.2000)	A-O	600	300	-	120		120	
		A-N	500	250	-	120		120	
	Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996)	B	200	100	60	80		80	
Method of analysis		IS-5182 PART 4	IS-5182 PART 23	USEPA CFR 40, Appendix L to Part 50	IS-5182 PART 2	IS-5182 PART 6			
Station Name	St. Code	St. cat.	Date of sampling	Date of analysis					
SUB AREA OFFICE	15	B	03.02.23	15.02.23	169	81	33	14	25
			04.02.23	18.02.23	184	92	41	17	28
			08.02.23	20.02.23	156	79	36	15	22
			11.02.23	22.02.23	171	84	35	18	26
			15.02.23	24.02.23	157	81	32	14	24
			18.02.23	26.02.23	187	95	44	16	31
			22.02.23	01.03.23	153	83	40	13	27
			25.02.23	07.03.23	182	92	43	15	33
CHECK POST	16	A-N	03.02.23	15.02.23	372	164	27	11	20
			04.02.23	18.02.23	381	171	30	12	22
			08.02.23	20.02.23	364	159	28	10	19
			11.02.23	22.02.23	397	181	36	15	28
			15.02.23	24.02.23	378	173	33	14	25
			18.02.23	26.02.23	395	181	41	16	31
			22.02.23	01.03.23	364	155	34	12	24
			25.02.23	07.03.23	405	186	45	19	36

Tested by
Scientific Asst.

Checked by

Officer In charge

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AIR QUALITY REPORT

Month	February	Area	Bishrampur	Report No.	HSD/BSPR/2023/02
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	18.03.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	17-18

Parameter		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Remarks			
Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs	Industrial Zone -(G.S.R. 742(E), dated 25.9.2000)	A-O	600	300	-	120	120			
		A-N	500	250	-	120	120			
	Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996)	B	200	100	60	80	80			
Method of analysis		IS-5182 PART 4	IS-5182 PART 23	USEPA CFR 40, Appendix L to Part 50	IS-5182 PART 2	IS-5182 PART 6				
Station Name	St. Code	St. cat.	Date of sampling	Date of analysis						
PONDI VILLAGE	17	B	03.02.23	15.02.23	135	76	23		14	21
			04.02.23	18.02.23	126	68	21		11	20
			08.02.23	20.02.23	142	76	24		17	24
			11.02.23	22.02.23	147	81	29	21	27	
			15.02.23	24.02.23	141	77	22	18	22	
			18.02.23	26.02.23	155	84	25	20	29	
			22.02.23	01.03.23	128	68	21	17	25	
			25.02.23	07.03.23	161	91	29	22	31	
-	-	-	-	-	-	-	-			
LAINGA VILLAGE	18	B	03.02.23	15.02.23	141	76	21	14	28	
			04.02.23	18.02.23	137	72	17	13	25	
			08.02.23	20.02.23	131	75	20	15	27	
			11.02.23	22.02.23	142	77	23	18	31	
			15.02.23	24.02.23	135	67	16	16	26	
			18.02.23	26.02.23	147	70	22	20	32	
			22.02.23	01.03.23	134	63	16	14	23	
			25.02.23	07.03.23	152	78	24	19	29	
-	-	-	-	-	-	-	-			

Tested by
 Scientific Asst.

Checked by

Officer In charge

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AIR QUALITY REPORT

Month	February	Area	Bishrampur	Report No.	HSD/BSPR/2023/02
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	18.03.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	19-20

Parameter		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Remarks			
Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs	Industrial Zone -(G.S.R. 742(E), dated 25.9.2000)	A-O	600	300	-	120		120		
		A-N	500	250	-	120		120		
	Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996)	B	200	100	60	80		80		
Method of analysis		IS-5182 PART 4	IS-5182 PART 23	USEPA CFR 40, Appendix L to Part 50	IS-5182 PART 2	IS-5182 PART 6				
Station Name	St. Code	St. cat.	Date of sampling	Date of analysis						
MANI VILLAGE	19	B	03.02.23	15.02.23	126	73	36	12	20	
			04.02.23	18.02.23	122	69	39	13	21	
			08.02.23	20.02.23	137	82	21	16	27	
			11.02.23	22.02.23	124	75	37	14	22	
			15.02.23	24.02.23	129	78	22	17	29	
			18.02.23	26.02.23	144	84	25	15	24	
			22.02.23	01.03.23	127	63	36	11	22	
			25.02.23	07.03.23	149	84	23	18	31	
-	-	-	-	-	-	-	-			
PENDARAKHI VILLAGE	20	B	03.02.23	15.02.23	129	65	23	14	24	
			04.02.23	18.02.23	118	60	22	13	28	
			08.02.23	20.02.23	126	61	29	12	23	
			11.02.23	22.02.23	131	64	35	14	22	
			15.02.23	24.02.23	124	61	27	16	25	
			18.02.23	26.02.23	135	62	33	15	29	
			22.02.23	01.03.23	123	60	24	12	21	
			25.02.23	07.03.23	142	70	39	17	27	
-	-	-	-	-	-	-	-			

Tested by
Scientific Asst.

Checked by

Officer In charge

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NOISE QUALITY REPORT

Month	February	Area	Bishrampur	Report No.	HSD/BSPR/2023/02
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	18.03.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	16-23

Parameter				The Noise Pollution (R & C) rules, 2000		Remarks
				Day Time	Night Time	
Limit in dB(a) Leq	Industrial area	A	75	70		
	Commercial area	B	65	55		
	Residential Area	C	55	45		
	Silence Zone	D	50	40		
Method of analysis	CPCB Protocol For Ambient Level Noise Monitoring					
Station Name	Station Code	Station category	Date of measurement	Value in dB(a)	Value in dB(a)	
GAYATRI MINE SITE OFFICE	16	A	14.02.2023	61.9	50.5	
			25.02.2023	60.4	52.7	
MANI VILLAGE	17	C	14.02.2023	53.1	42.8	
			25.02.2023	52.5	42.0	
PONDI VILLAGE	18	C	14.02.2023	51.1	41.5	
			25.02.2023	51.4	42.3	
EXHAUST FAN HOUSE	19	A	14.02.2023	62.6	50.0	
			25.02.2023	62.1	51.9	
SUB AREA OFFICE	20	B	14.02.2023	52.7	43.1	
			25.02.2023	52.3	41.8	
CHECK POST	21	A	14.02.2023	50.5	43.3	
			25.02.2023	50.1	41.6	
LAINGA VILLAGE	22	C	14.02.2023	50.4	41.0	
			25.02.2023	50.9	41.7	
PENDARAKHI VILLAGE	23	C	14.02.2023	51.9	40.5	
			25.02.2023	50.4	42.7	

Monitored by
Scientific Asst.

Checked by

Officer In charge

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EFFLUENT WATER QUALITY REPORT

Month	February	Area	Bishrampur	Report No.	HSD/BSPR/2023/02
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	18.03.2023
Name of the Project	GAYATRI U.G.	Sample reference No.	11,12 & 16-18

Parameter	pH Value, LDL	Total suspended Solids, mg/l, max	C.O.D , mg/l, max	Oil & Grease , mg/l, max	B.O.D. (3 days 27°C)mg/l,max	D. O. mg/l, max..			
Lower Detection Limit	0.02	25.0	4.0	2.0	2.0				
General Standards for Discharge of Environmental Pollution (Part A: Effluent) as per Schedule VI, Environment (Protection) Rules	5.5 to 9.0	100.0	250.0	10.0	30.0				
Station name	St. Code	Date of Sampling	Date of Analysis						
MINE DISCHARGE WATER (Untreated)	13	14.02.23	14.02.23 to 20.02.23	7.33	39	20	2.5	<2.0	-
		28.02.23	28.02.23 to 04.03.23	7.38	34	16	2.2	<2.0	-
MINE DISCHARGE WATER (Treated)	14	14.02.23	14.02.23 to 20.02.23	7.35	30	20	2.3	<2.0	-
		28.02.23	28.02.23 to 04.03.23	7.41	29	16	2.1	<2.0	-
GAYTRI MINE DISCHARGE WATER MEETING POINT AT JOBGA NALLAH	15	14.02.23	14.02.23 to 20.02.23	7.43	35	20	<2.0	5.4	6.7
		28.02.23	28.02.23 to 04.03.23	7.45	38	20	<2.0	5.7	6.9
JOBGA NALLAH MEETING POINT AT REHAR RIVER CONFLUENCE POINT UP STREAM (FOR REHAR UG & GAYATRI UG MINE)	11	14.02.23	14.02.23 to 20.02.23	7.71	32	16	<2.0	5.1	-
		28.02.23	28.02.23 to 04.03.23	7.68	30	12	<2.0	4.6	-
JOBGA NALLAH MEETING POINT AT REHAR RIVER CONFLUENCE POINT DOWN STREAM (FOR REHAR UG & GAYATRI UG MINE)	12	14.02.23	14.02.23 to 20.02.23	7.68	34	20	<2.0	5.4	-
		28.02.23	28.02.23 to 04.03.23	7.64	28	16	<2.0	4.9	-

Tested by
Scientific Asst.

Checked by

Officer In-charge

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AIR QUALITY REPORT

Month	March	Area	Bishrampur	Report No.	HSD/BSPR/2023/03
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	31.03.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	13-14

Parameter		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Remarks			
Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs	Industrial Zone -(G.S.R. 742(E), dated 25.09.2000)	A-O	600	300	-	120		120		
		A-N	500	250	-	120		120		
	Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996)	B	200	100	60	80		80		
Method of analysis		IS-5182 PART 4	IS-5182 PART 23	USEPA CFR 40, Appendix L to Part 50	IS-5182 PART 2	IS-5182 PART 6				
Station Name	St. Code	St. cat.	Date of sampling	Date of analysis						
GAYATRI MINE SITE OFFICE	13	A-N	01.03.23	12.03.23	356	151	45	11	23	
			04.03.23	15.03.23	369	150	46	12	26	
			06.03.23	17.03.23	354	153	51	14	28	
			10.03.23	19.03.23	340	118	50	16	27	
			13.03.23	21.03.23	317	119	53	18	25	
			16.03.23	23.03.23	319	115	49	11	29	
			20.03.23	25.03.23	324	116	49	16	30	
			23.03.23	27.03.23	326	111	48	15	32	
			27.03.23	30.03.23	368	164	42	13	31	
EXHAUST FAN HOUSE	14	A-N	01.03.23	12.03.23	363	167	55	20	35	
			04.03.23	15.03.23	360	156	46	21	36	
			06.03.23	17.03.23	371	168	50	19	34	
			10.03.23	19.03.23	366	173	48	21	41	
			13.03.23	21.03.23	365	162	51	18	43	
			16.03.23	23.03.23	354	160	48	20	37	
			20.03.23	25.03.23	361	166	52	23	47	
			23.03.23	27.03.23	367	165	51	22	46	
			27.03.23	30.03.23	355	152	42	13	22	

Tested by
Scientific Asst.

Checked by

Officer In charge

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AIR QUALITY REPORT

Month	March	Area	Bishrampur	Report No.	HSD/BSPR/2023/03
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	31.03.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	15-16

Parameter		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Remarks		
Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs	Industrial Zone -(G.S.R. 742(E), dated 25.09.2000)	A-O	600	300	-	120		120	
		A-N	500	250	-	120		120	
	Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996)	B	200	100	60	80		80	
Method of analysis		IS-5182 PART 4	IS-5182 PART 23	USEPA CFR 40, Appendix L to Part 50	IS-5182 PART 2	IS-5182 PART 6			
Station Name	St. Code	St. cat.	Date of sampling	Date of analysis					
SUB AREA OFFICE	15	B	01.03.23	12.03.23	338	166	29	9	19
			04.03.23	15.03.23	332	163	31	11	22
			06.03.23	17.03.23	339	160	33	9	20
			10.03.23	19.03.23	347	169	36	11	20
			13.03.23	21.03.23	350	171	29	13	24
			16.03.23	23.03.23	340	176	31	10	21
			20.03.23	25.03.23	356	178	35	11	22
			23.03.23	27.03.23	376	184	32	10	21
CHECK POST	16	A-N	01.03.23	12.03.23	339	153	23	9	19
			04.03.23	15.03.23	324	147	19	10	20
			06.03.23	17.03.23	332	144	28	12	25
			10.03.23	19.03.23	325	147	27	11	23
			13.03.23	21.03.23	320	142	21	9	21
			16.03.23	23.03.23	329	140	19	10	25
			20.03.23	25.03.23	337	153	18	11	23
			23.03.23	27.03.23	360	148	28	10	23
			27.03.23	30.03.23	377	156	26	11	20

Tested by
Scientific Asst.

Checked by

Officer In charge

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AIR QUALITY REPORT

Month	March	Area	Bishrampur	Report No.	HSD/BSPR/2023/03
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	31.03.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	17-18

Parameter		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Remarks			
Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs	Industrial Zone -(G.S.R. 742(E), dated 25.09.2000)	A-O	600	300	-	120		120		
		A-N	500	250	-	120		120		
	Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996)	B	200	100	60	80		80		
Method of analysis		IS-5182 PART 4	IS-5182 PART 23	USEPA CFR 40, Appendix L to Part 50	IS-5182 PART 2	IS-5182 PART 6				
Station Name	St. Code	St. cat.	Date of sampling	Date of analysis						
PONDI VILLAGE	17	B	01.03.23	12.03.23	132	69	22	10	23	
			04.03.23	15.03.23	130	60	24	11	27	
			06.03.23	17.03.23	140	69	25	09	21	
			10.03.23	19.03.23	148	63	24	11	23	
			13.03.23	21.03.23	125	69	28	09	20	
			16.03.23	23.03.23	139	62	30	12	23	
			20.03.23	25.03.23	121	59	33	11	21	
			23.03.23	27.03.23	125	67	20	08	19	
			27.03.23	30.03.23	133	65	17	10	21	
LAINGA VILLAGE	18	B	01.03.23	12.03.23	129	62	21	11	22	
			04.03.23	15.03.23	120	65	20	09	20	
			06.03.23	17.03.23	132	63	22	08	18	
			10.03.23	19.03.23	127	70	20	10	20	
			13.03.23	21.03.23	123	77	22	09	19	
			16.03.23	23.03.23	129	79	23	11	22	
			20.03.23	25.03.23	123	62	28	10	19	
			23.03.23	27.03.23	129	69	28	09	18	
			27.03.23	30.03.23	135	72	22	10	23	

Tested by
Scientific Asst.

Checked by

Officer In charge

Note: 1) The results above relate to the samples tested.

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**CENTRAL MINE PLANNING AND DESIGN INSTITUTE LIMITED**

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AIR QUALITY REPORT

Month	March	Area	Bishrampur	Report No.	HSD/BSPR/2023/03
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	31.03.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	19-20

Parameter		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Remarks			
Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs	Industrial Zone -(G.S.R. 742(E), dated 25.09.2000)	A-O	600	300	-	120	120			
		A-N	500	250	-	120	120			
	Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996)	B	200	100	60	80	80			
Method of analysis		IS-5182 PART 4	IS-5182 PART 23	USEPA CFR 40, Appendix L to Part 50	IS-5182 PART 2	IS-5182 PART 6				
Station Name	St. Code	St. cat.	Date of sampling	Date of analysis						
MANI VILLAGE	19	B	01.03.23	12.03.23	112	51	17	11	19	
			04.03.23	15.03.23	109	52	22	10	20	
			06.03.23	17.03.23	105	48	20	09	18	
			10.03.23	19.03.23	118	53	24	10	20	
			13.03.23	21.03.23	121	60	19	09	21	
			16.03.23	23.03.23	110	62	21	11	22	
			20.03.23	25.03.23	101	65	31	12	24	
			23.03.23	27.03.23	113	61	39	10	23	
			27.03.23	30.03.23	129	59	35	08	17	
PENDARAKHI VILLAGE	20	B	01.03.23	12.03.23	131	63	31	13	26	
			04.03.23	15.03.23	148	65	33	11	22	
			06.03.23	17.03.23	132	60	37	10	23	
			10.03.23	19.03.23	138	66	32	08	18	
			13.03.23	21.03.23	130	55	30	11	24	
			16.03.23	23.03.23	138	59	32	10	23	
			20.03.23	25.03.23	133	63	24	10	22	
			23.03.23	27.03.23	126	65	22	10	24	
			27.03.23	30.03.23	132	69	17	11	19	

Tested by
Scientific Asst.

Checked by

Officer In charge

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NOISE QUALITY REPORT

Month	March	Area	Bishrampur	Report No.	HSD/BSPR/2023/03
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	31.03.2023
Name of the Project	GAYATRI U.G.	Sample Reference No.	16-23

Parameter				The Noise Pollution (R & C) rules, 2000		Remarks
				Day Time	Night Time	
Limit in dB(a) Leq	Industrial area	A	75	70		
	Commercial area	B	65	55		
	Residential Area	C	55	45		
	Silence Zone	D	50	40		
Method of analysis	CPCB Protocol For Ambient Level Noise Monitoring					
Station Name	Station Code	Station category	Date of measurement	Value in dB(a)	Value in dB(a)	
GAYATRI MINE SITE OFFICE	16	A	02.03.2023	65.9	51.3	
			17.03.2023	63.7	48.6	
MANI VILLAGE	17	C	02.03.2023	51.6	46.2	
			17.03.2023	53.7	47.5	
PONDI VILLAGE	18	C	02.03.2023	52.2	49.6	
			17.03.2023	50.6	45.3	
EXHAUST FAN HOUSE	19	A	02.03.2023	60.5	48.6	
			17.03.2023	61.2	47.3	
SUB AREA OFFICE	20	B	02.03.2023	50.9	42.8	
			17.03.2023	51.6	43.5	
CHECK POST	21	A	02.03.2023	72.8	50.2	
			17.03.2023	69.3	51.3	
LAINGA VILLAGE	22	C	02.03.2023	50.7	40.9	
			17.03.2023	52.3	41.6	
PENDARAKHI VILLAGE	23	C	02.03.2023	51.9	40.5	
			17.03.2023	50.4	42.7	

Monitored by
Scientific Asst.

Checked by

Officer In charge

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EFFLUENT WATER QUALITY REPORT

Month	March	Area	Bishrampur	Report No.	HSD/BSPR/2023/03
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Name of the Customer	South Eastern Coalfields Ltd, Bilaspur	Date of Issue	31.03.2023
Name of the Project	GAYATRI U.G.	Sample reference No.	11,12 & 16-18

Parameter	pH Value, LDL	Total suspended Solids, mg/l, max	C.O.D , mg/l, max	Oil & Grease , mg/l, max	B.O.D. (3 days 27°C) m g/l,max	D. O. mg/l, max..			
Lower Detection Limit	0.02	25.0	4.0	2.0	2.0				
General Standards for Discharge of Environmental Pollution (Part A: Effluent) as per Schedule VI, Environment (Protection) Rules	5.5 to 9.0	100.0	250.0	10.0	30.0				
Station name	St. Code	Date of Sampling	Date of Analysis						
MINE DISCHARGE WATER (Untreated)	13	04.03.23	04.03.23 to 09.03.23	7.24	31	20	2.2	<2.0	-
		18.03.23	18.03.23 to 23.03.23	7.29	35	16	2.4	<2.0	-
MINE DISCHARGE WATER (Treated)	14	04.03.23	04.03.23 to 09.03.23	7.26	30	20	<2.0	<2.0	-
		18.03.23	18.03.23 to 23.03.23	7.31	32	16	2.1	<2.0	-
GAYTRI MINE DISCHARGE WATER MEETING POINT AT JOBGA NALLAH	15	04.03.23	04.03.23 to 09.03.23	7.41	33	20	<2.0	5.3	6.8
		18.03.23	18.03.23 to 23.03.23	7.47	36	20	<2.0	5.5	6.7
JOBGA NALLAH MEETING POINT AT REHAR RIVER CONFLUENCE POINT UP STREAM (FOR REHAR UG & GAYATRI UG MINE)	11	04.03.23	04.03.23 to 09.03.23	7.26	31	16	<2.0	5.6	-
		18.03.23	18.03.23 to 23.03.23	7.29	34	20	<2.0	5.4	-
JOBGA NALLAH MEETING POINT AT REHAR RIVER CONFLUENCE POINT DOWN STREAM (FOR REHAR UG & GAYATRI UG MINE)	12	04.03.23	04.03.23 to 09.03.23	7.35	33	16	<2.0	5.7	-
		18.03.23	18.03.23 to 23.03.23	7.39	38	20	<2.0	5.6	-

Tested by
Scientific Asst.

Checked by

Officer In-charge

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TEST & SAMPLING REPORT OF (DRINKING WATER)

Unique Report No.	22109	Report Issue Date	20-02-2023
Customer Name	South Estern Coal Field Ltd Bilaspur	Address & Contact Details	SEEPAT ROAD BILASPUR 7752241927
Sampling By	G R sarode	Date of Sampling	14-01-2023
Sampling Location	Pondi village well water GAYATRI UG	Sampling Plan	MONTHLY
Sample Condition	APPROPRIATE	Date of Receipt of Sample	17-01-2023
		Sample ID	15639
		Sampling Method	CMPDI/BSP/LSOP
		Date of Analysis	From 14-01-2023 To 20-02-2023

Sr. No	Parameter	Test At	Method of Analysis	Range of Testing	IS 10500:2012		Observed Value	UOM (at 95% C.L&K=1.96)
					Acceptable Limit	Permissible Limit		
1	Alkalinity mg/l as CaCO3	Main	IS 3025(Part 23):1986,R 2003	5.0 - 1000.0	200	1000	40.00	±0.19696@10.0
2	Arsenic mg/l	Main	IS 3025 (Part 37):1988,R 2003	0.002 - 0.040	0.01	0.05	BDL	±0.0081@0.018
3	Boron mg/l	Main	APHA, 23rd Edition,2017, 4500-B	0.5 - 14.0	0.5	1	BDL	±0.310@5.16
4	Calcium mg/l	Main	IS 3025 (Part 40): 1991, R : 2009	5.0 - 500.0	75	200	16.096	±2.512@99.8
5	Chlorides mg/l	Main	IS 3025(Part 32):1988 , R : 2007	5.0 - 1000.0	250	1000	39.49	±6.551@253.5
6	Colour Hazen	Main	APHA, 23rd Edition,2017, 2120.C	1.0 - 500	5	15	3.50	±1.05@ 49.86
7	Copper mg/l	Main	IS 3025 (Part 42) : 1992 R : 2009	0.03 - 10.0	0.05	1.5	BDL	±0.13@4.90
8	Fluoride mg/l	Main	APHA, 23rd Edition,2017, 4500, F- D	0.1 - 5.0	1.0	1.5	0.17	±0.014@0.98
9	Iron mg/l	Main	IS 3025 (Part 53) :2003, R:2009	0.05 - 15.0	0.3	No Relaxation	BDL	±0.0782@7.95
10	Lead mg/l	Main	APHA, 23rd Edition,2017, 3113B	0.0050 - 0.1000	0.01	No relaxation	BDL	±0.000266@0.005
11	Manganese mg/l	Main	IS 3025 (Part 59) : 2006	0.05 - 5.0	0.1	0.3	0.09	±0.026@2.44
12	Nitrate mg/l	Main	APHA, 23rd Edition,2017, 4500, B	0.5 - 45	45	No Relaxation	32.24	±0.528@20.41
13	Odour none	Main	IS 3025 (Part 5):1983	-	Agreeable	Agreeable	Agreeable	Not applicable
14	pH Value none	Main	IS 3025 (Part 11):1983, R : 2012	4.00 - 10.00	6.5 - 8.5	No Relaxation	6.67	±0.127@7.01
15	Phenolic compounds mg/l	Main	APHA, 23rd Edition,2017, 5530.C	0.001 - 0.2	0.001	0.002	BDL	±0.0204 at 0.1004
16	Residual Free Chlorine mg/l	Main	APHA, 23rd Edition,2017, 4500G	0.1 - 10.0	0.2	1	NIL	±0.0082@0.1
17	Selenium mg/l	Main	IS 3025 (Part 56):2003	0.001 - 0.040	0.01	No Relaxation	BDL	±0.000938@0.001
18	Sulphate mg/l	Main	APHA, 23rd Edition,2017, 4500-SO42- E	2.0 - 40.0	200	400	22.09	±0.640@19.88
19	Total Chromium mg/l	Main	IS 3025 (Part 52) : 2003	0.05 - 15.0	0.05	No relaxation	BDL	±0.004@0.05
20	Total Coliform MPN/100 ml	Main	APHA, 23rd Edition, 9221 B	-	Nil	No Relaxation	BDL	Not specified
21	Total Dissolved Solids mg/l	Main	IS 3025 (Part 16):1984 R : 2006	30.0 - 2000.0	500	2000	258.00	±4.473@592.0
22	Total Hardness mg/l as CaCO3	Main	IS 3025 (Part 21):2009	4.0 - 2000.0	200	600	82.00	±11.545@612.8
23	Turbidity NTU	Main	IS 3025 (Part 10):1984, R : 2006	1.0 - 100.0	1	5	BDL	±0.855@41.58
24	Zinc mg/l	Main	IS 3025 (Part 49) : 1994, R : 2009	0.01 - 2.0	5	15	BDL	±0.0013@0.01

----- END OF THE REPORT -----

Reported By
M.G.Krishna Deepanwita Bin

Reviewed and Approved
M. Reagan
Manager (Env)
Date&Time :20-02-2023 03:54:23

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TEST & SAMPLING REPORT OF (DRINKING WATER)

Unique Report No.		25881		Report Issue Date			
Customer Name		South Estern Coal Field Ltd Bilaspur		Address & Contact Details		SEEPAT ROAD BILASPUR 7752241927	
Sampling By	Sapan	Date of Sampling	16-02-2023	Sample ID	15951		
Sampling Location	Pondi village well water GAYATRI UG	Sampling Plan	As per monthly plan	Sampling Method	CMPDI/BSP/LSOP		
Sample Condition	APPROPRIATE	Date of Receipt of Sample	17-02-2023	Date of Analysis	From 16-02-2023 To 10-03-2023		

Sr. No	Parameter	Test At	Method of Analysis	Range of Testing	IS 10500:2012		Observed Value	UOM (at 95% C.L&K=1.96)
					Acceptable Limit	Permissible Limit		
1	Alkalinity mg/l as CaCO3	Main	IS 3025(Part 23):1986,R 2003	5.0 - 1000.0	200	1000	55.00	±0.19696@10.0
2	Arsenic mg/l	Main	IS 3025 (Part 37):1988,R 2003	0.002 - 0.040	0.01	0.05	BDL	±0.0081@0.018
3	Boron mg/l	Main	APHA, 23rd Edition,2017, 4500-B	0.5 - 14.0	0.5	1	BDL	±0.310@5.16
4	Calcium mg/l	Main	IS 3025 (Part 40): 1991, R : 2009	5.0 - 500.0	75	200	12.774	±2.512@99.8
5	Chlorides mg/l	Main	IS 3025(Part 32):1988 , R : 2007	5.0 - 1000.0	250	1000	12.00	±6.551@253.5
6	Colour Hazen	Main	APHA, 23rd Edition,2017, 2120. C	1.0 - 500	5	15	BDL	±1.05@ 49.86
7	Copper mg/l	Main	IS 3025 (Part 42) : 1992 R : 2009	0.03 - 10.0	0.05	1.5	BDL	±0.13@4.90
8	Fluoride mg/l	Main	APHA, 23rd Edition,2017, 4500, F- D	0.1 - 5.0	1.0	1.5	0.10	±0.014@0.98
9	Iron mg/l	Main	IS 3025 (Part 53) :2003, R:2009	0.05 - 15.0	0.3	No Relaxation	BDL	±0.0782@7.95
10	Lead mg/l	Main	APHA, 23rd Edition,2017, 3113B	0.0050 - 0.1000	0.01	No relaxation	BDL	±0.000266@0.005
11	Manganese mg/l	Main	IS 3025 (Part 59) : 2006	0.05 - 5.0	0.1	0.3	BDL	±0.026@2.44
12	Nitrate mg/l	Main	APHA, 23rd Edition,2017, 4500, B	0.5 - 45	45	No Relaxation	23.15	±0.528@20.41
13	Odour none	Site	IS 3025 (Part 5):1983	-	Agreeable	Agreeable	Agreeable	Not applicable
14	pH Value none	Site	IS 3025 (Part 11):1983, R : 2012	4.00 - 10.00	6.5 - 8.5	No Relaxation	6.66	±0.127@7.01
15	Phenolic compounds mg/l	Main	APHA, 23rd Edition,2017, 5530. C	0.001 - 0.2	0.001	0.002	BDL	±0.0204 at 0.1004
16	Residual Free Chlorine mg/l	Site	APHA, 23rd Edition,2017, 4500G	0.1 - 10.0	0.2	1	NIL	±0.0082@0.1
17	Selenium mg/l	Main	IS 3025 (Part 56):2003	0.001 - 0.040	0.01	No Relaxation	BDL	±0.000938@0.001
18	Sulphate mg/l	Main	APHA, 23rd Edition,2017, 4500-SO42- E	2.0 - 40.0	200	400	BDL	±0.640@19.88
19	Total Chromium mg/l	Main	IS 3025 (Part 52) : 2003	0.05 - 15.0	0.05	No relaxation	BDL	±0.004@0.05
20	Total Coliform MPN/100 ml	Site	APHA, 23rd Edition, 9221 B	-	Nil	No Relaxation	BDL	Not specified
21	Total Dissolved Solids mg/l	Main	IS 3025 (Part 16):1984 R : 2006	30.0 - 2000.0	500	2000	168.00	±4.473@592.0
22	Total Hardness mg/l as CaCO3	Main	IS 3025 (Part 21):2009	4.0 - 2000.0	200	600	50.20	±11.545@612.8
23	Turbidity NTU	Main	IS 3025 (Part 10):1984, R : 2006	1.0 - 100.0	1	5	BDL	±0.855@41.58
24	Zinc mg/l	Main	IS 3025 (Part 49) : 1994, R : 2009	0.01 - 2.0	5	15	0.03	±0.0013@0.01

----- END OF THE REPORT -----

Reported By
Nirmal Kumar

Santosh Kumar Singh

Reviewed and Approved
M. Reagan
Manager (Env)
Date&Time :

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TEST & SAMPLING REPORT OF (DRINKING WATER)

Unique Report No.	26971	Report Issue Date	27-03-2023
Customer Name	South Eastern Coal Field Ltd Bilaspur	Address & Contact Details	SEEPAT ROAD BILASPUR 7752241927
Sampling By	Bharat Kumar, Sunil Kumar	Date of Sampling	04-03-2023
Sampling Location	Pondi village well water GAYATRI UG	Sampling Plan	As per monthly plan
Sample Condition	APPROPRIATE	Date of Receipt of Sample	06-03-2023
		Sample ID	16136
		Sampling Method	CMPDI/BSP/LSOP
		Date of Analysis	From 04-03-2023 To 19-03-2023

Sr. No	Parameter	Test At	Method of Analysis	Range of Testing	IS 10500:2012		Observed Value	UOM (at 95% C.L&K=1.96)
					Acceptable Limit	Permissible Limit		
1	Alkalinity mg/l as CaCO3	Main	IS 3025(Part 23):1986,R 2003	5.0 - 1000.0	200	1000	60.00	±0.19696@10.0
2	Arsenic mg/l	Main	IS 3025 (Part 37):1988,R 2003	0.002 - 0.040	0.01	0.05	BDL	±0.0081@0.018
3	Boron mg/l	Main	APHA, 23rd Edition,2017, 4500-B	0.5 - 14.0	0.5	1	BDL	±0.310@5.16
4	Calcium mg/l	Main	IS 3025 (Part 40): 1991, R : 2009	5.0 - 500.0	75	200	16.834	±2.512@99.8
5	Chlorides mg/l	Main	IS 3025(Part 32):1988 , R : 2007	5.0 - 1000.0	250	1000	6.00	±6.551@253.5
6	Colour Hazen	Main	APHA, 23rd Edition,2017, 2120.C	1.0 - 500	5	15	1.19	±1.05@ 49.86
7	Copper mg/l	Main	IS 3025 (Part 42) : 1992 R : 2009	0.03 - 10.0	0.05	1.5	BDL	±0.13@4.90
8	Fluoride mg/l	Main	APHA, 23rd Edition,2017, 4500, F- D	0.1 - 5.0	1.0	1.5	0.71	±0.014@0.98
9	Iron mg/l	Main	IS 3025 (Part 53) :2003, R:2009	0.05 - 15.0	0.3	No Relaxation	BDL	±0.0782@7.95
10	Lead mg/l	Main	APHA, 23rd Edition,2017, 3113B	0.0050 - 0.1000	0.01	No relaxation	BDL	±0.000266@0.005
11	Manganese mg/l	Main	IS 3025 (Part 59) : 2006	0.05 - 5.0	0.1	0.3	0.07	±0.026@2.44
12	Nitrate mg/l	Main	APHA, 23rd Edition,2017, 4500, B	0.5 - 45	45	No Relaxation	5.94	±0.528@20.41
13	Odour none	Main	IS 3025 (Part 5):1983	-	Agreeable	Agreeable	Agreeable	Not applicable
14	pH Value none	Site	IS 3025 (Part 11):1983, R : 2012	4.00 - 10.00	6.5 - 8.5	No Relaxation	6.63	±0.127@7.01
15	Phenolic compounds mg/l	Main	APHA, 23rd Edition,2017, 5530.C	0.001 - 0.2	0.001	0.002	0.001	±0.0204 at 0.1004
16	Residual Free Chlorine mg/l	Site	APHA, 23rd Edition,2017, 4500G	0.1 - 10.0	0.2	1	NIL	±0.0082@0.1
17	Selenium mg/l	Main	IS 3025 (Part 56):2003	0.001 - 0.040	0.01	No Relaxation	BDL	±0.000938@0.001
18	Sulphate mg/l	Main	APHA, 23rd Edition,2017, 4500-SO42- E	2.0 - 40.0	200	400	3.07	±0.640@19.88
19	Total Chromium mg/l	Main	IS 3025 (Part 52) : 2003	0.05 - 15.0	0.05	No relaxation	BDL	±0.004@0.05
20	Total Coliform MPN/100 ml	Site	APHA, 23rd Edition, 9221 B	-	Nil	No Relaxation	BDL	Not specified
21	Total Dissolved Solids mg/l	Main	IS 3025 (Part 16):1984 R : 2006	30.0 - 2000.0	500	2000	161.00	±4.473@592.0
22	Total Hardness mg/l as CaCO3	Main	IS 3025 (Part 21):2009	4.0 - 2000.0	200	600	64.00	±11.545@612.8
23	Turbidity NTU	Main	IS 3025 (Part 10):1984, R : 2006	1.0 - 100.0	1	5	1.02	±0.855@41.58
24	Zinc mg/l	Main	IS 3025 (Part 49) : 1994, R : 2009	0.01 - 2.0	5	15	0.12	±0.0013@0.01

----- END OF THE REPORT -----

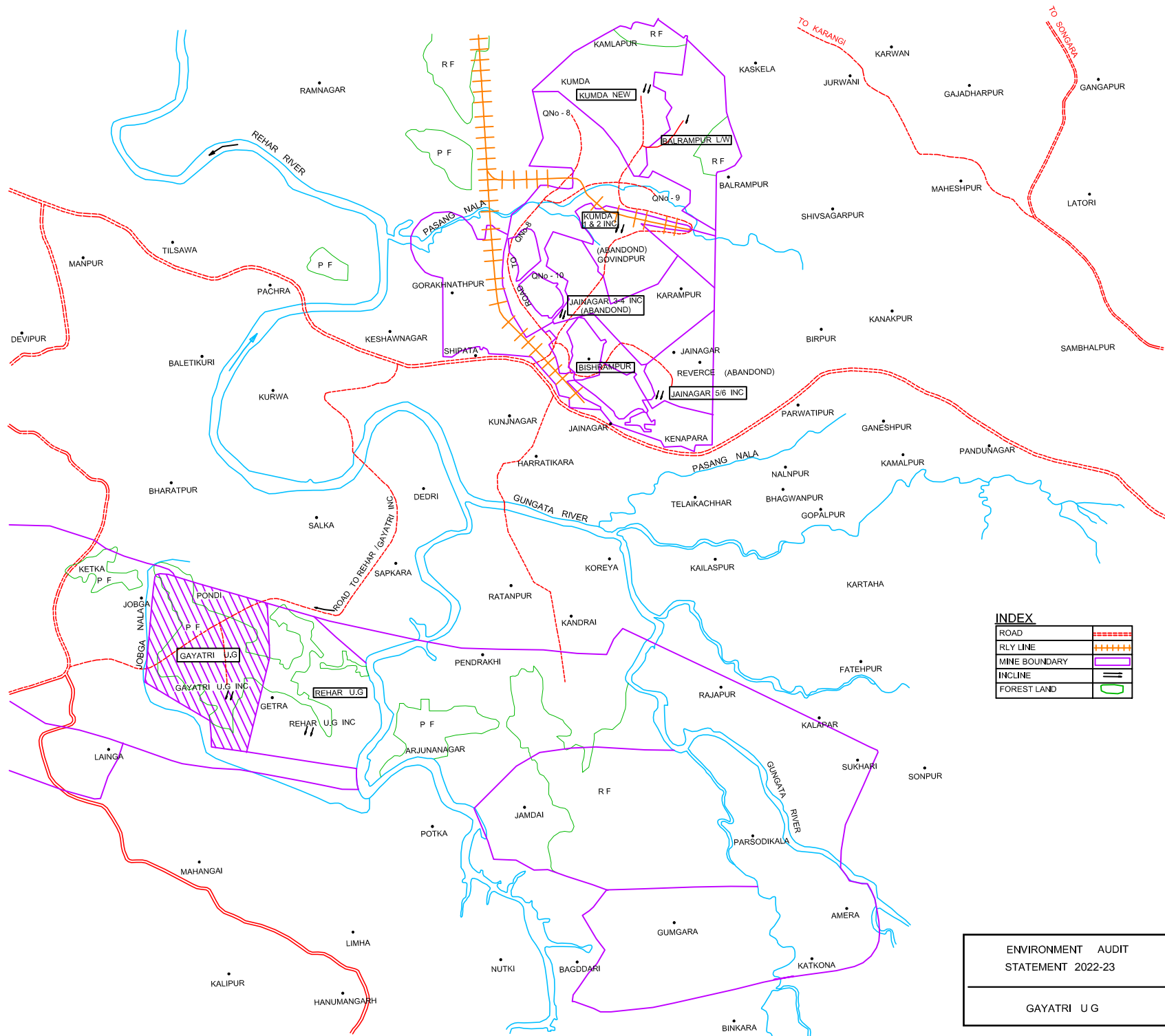
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Panna Lal Kashyap Santosh Kumar Singh

Reviewed and Approved
C. Kumaravel
Manager (Env)
Date&Time :27-03-2023 03:49:40

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ENVIRONMENT AUDIT
STATEMENT 2022-23

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