

ENVIRONMENTAL STATEMENT 2022-23

CHURI-BENTI UG PROJECT N K AREA, DAKRA

September, 2023



**CENTRAL COALFIELDS
LIMITED
ENVIRONMENT DIVISION
Ranchi**

EXECUTIVE - SUMMARY

1.0 BACKGROUND

Churi Benti Underground Project of Central Coalfield Ltd. is situated in North Karanpura Coalfield, which lies in Ranchi District of Jharkhand State. Its planned production capacity is 0.93 (Peak) MTY. The project produced about 7.059 lakh tonne of coal during the year 2022-23. It is a nationalized mine and land within the Project boundary belonged to the erstwhile owner. The physical possession of the land was taken by its owner.

A comprehensive Environmental Management Plan (EMP) for this Project was prepared by Regional Institute - III of CMPDI and submitted to the Ministry of Environment and Forest (MOEF).

This report is prepared to fulfill the statutory obligations laid down by the Ministry of Environment & Forest. Environmental statement / audit report has been considered as one such document which can be utilized by the planners and government agencies to understand the environmental implications and also adequacy of existing measures and to take decisions in the interest of the Environment and economy.

2.0. FINDINGS:

Environmental Statement report reveals the following facts regarding environmental aspect of this project

- i) The concentration of SO₂, NO_x and CO in ambient air in core zone is well within the permissible limits.
- ii) The concentration of SPM in core zone is within permissible limits at all sampling stations.
- iii) The quality of sump water at the disposal point is meeting the prescribed standards with respect to all parameters.
- iv) The noise level in the core and buffer zone is not crossing the threshold value of 75 dB (A)
- v) No solid waste material is generated from the mine.
- vi) The volume of waste water generated from the mine and colony is 1050 and 398m³/day respectively.
- vii) No hazardous waste material is being produced either from any process or any pollution control facilities.

SUMMARISED DATA

1. Production capacity : 0.81 MTY
2. Gradient of seam : 1 in 16 to 1 in 24
3. Average quality of coal : Grade G7
4. Forest land requirement : 593.93 Ha
5. No. of Project Affected Families (PAF) : 8
6. Average Rainfall / annum : 1450 mm
7. Temperature :
 - i. Maximum : 42 °c
 - ii. Minimum : 04 °c
8. Predominant Wind Direction : WNW (wind frequency-17.37%)
NW (wind frequency-117.26%)
W (wind frequency-13.57%)
Wind speeds: 1-5 km/hr (51.63%)
and 5-11 km/hr(15.23%) of the
total time
9. Magnitude of waste generated
 - i. Waste water discharge from
 - a. Colony : 398 m³/day
 - b. Mine : 1050 m³/day
 - ii. Solid Waste.
 - a. Top Soil : Not Applicable
 - b. O.B. : Not Applicable

**ENVIRONMENT STATEMENT FOR THE FINANCIAL YEAR ENDING 31ST MARCH
2023**

PART-A

I. Name and Address of the mine

NAME	: CHURI-BENTI UG PROJECT
PLACE	: CHURI
POST	: RAY
DISTT.	: RANCHI, JHARKHAND

II. INDUSTRY CATEGORY : PRIMARY

III. Date of last Environmental Statement Report submitted : September-2022

IV. PRODUCTION CAPACITY : 0.81 MTY

V. YEAR OF STARTING : 1973

PART - B

WATER AND RAW MATERIAL CONSUMPTION

1. WATER CONSUMPTION (cu.m/day)

a. Mining

- i. Haul road dust suppression :NA
 - a. Workshop :NA
 - b. Fire Fighting :27 m³/Day
- ii., Others (Service building etc.) :9 m³/Day

b. Domestic

- i. Colony :445 m³/Day
- ii. Arboriculture : 9 m³/Day

Name of Product	Water Consumption per Unit of Product					
	Financial Year –2022-23			Financial Year – 2021-22		
	Production (MT)	Industrial (m ³ /Te)	Domestic (m ³ /Te)	Production (MT)	Industrial (m ³ /Te)	Domestic (m ³ /Te)
ROM Coal	0.7059	0.018	0.23	0.58	0.023	0.28

Note: Industrial water consumption is mainly due to fire fighting and miscellaneous operations and not directly linked with production.

2. RAW MATERIAL CONSUMPTION:

Name of Products	Name of Raw Material	Consumption of Raw Material (per unit of output)	
		Financial Year –2022-23	Financial Year –2021-22
ROM Coal	POL	0.00	0.00
	Explosives	0.00	0.00

PART - C

POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT

(PARAMETERS SPECIFIED IN THE CONSENT ISSUED)

Pollutions	Quantity of pollution generated (Mass / Day)	Concentration of Pollutants Discharged (mass/Volume)	Percentage variation from prescribed standards with reasons
WATER	Water discharged from: a) Mine 1050 cu.m./day b) Workshop-Nil cu.m/day c) Colony – 398 cu.m/day	The quality of mine water at the discharge point vis-à-vis the prescribed standards are given in Annexure	The analysis results reveal that most of the Parameters are below the limits prescribed by MOEF.
AIR	It is difficult to quantify the amount of air pollutants. The main air pollutant is suspended particulate matter (SPM).	The Ambient air quality monitoring results are placed as Annexure	Ambient air quality results show that SO ₂ , NO _x , CO & SPM level are well within prescribed standards.

PART - D

HAZARDOUS WASTES

(As specified under Hazardous Waste Management and Handling Rules, 1989)

Hazardous Wastes	Total Quantity	
	Financial Year –2022-23	Financial Year – 2021-22
From Mining Process	NIL	NIL

PART - E

SOLID WASTES

Description of Solid Waste	Total quantity in m ³	
	Financial Year –2022-23	Financial Year – 2021-22
a) From mining process Overburden	NIL	NIL
b) From pollution control facilities	NIL	NIL
c) Quantity recycled or reutilized	NIL	NIL

PART - F

PLEASE SPECIFY THE CHARACTERISTICS (INTERMS OF CONCENTRATION AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATE THE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES

Hazardous wastes are not being produced either from mining operation or from any pollution control facilities. It is an Underground mine, only coal is extracted by continuous miner and no solid waste material is generated during mining operation. Coal dust and carbon monoxide is generated during mining and their concentration in working environment is kept below Threshold Limiting Values (TLV) by providing adequate ventilation.

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 / being implemented.

1.0 ANTI AIR-POLLUTION MEASURES

The following measures have been / are taken to control air pollution:

- i) Mining by Continuous miner is being carried out thereby eliminating use of explosives
- ii) Adequate amount of fresh air is circulated in the mine to keep the concentration of coal dust and other pollutants gases below Threshold Limiting Values.
- iii) Plantation has been done within the mine leasehold area.
- iv) Water spraying over coal stock is practiced.

2.0 ANTI WATER-POLLUTION MEASURES

The following measures have been / are taken to control water pollution from the mine:

- i) Mine water is collected in the underground sump and pumped to a settling pond before disposal. About one fourth of this water is used for firefighting and other operations.
- ii) Each house in the colony has been provided with a septic tank with soak pit arrangement.

3.0. ANTI NOISE-POLLUTION MEASURES

- i) Tree plantation has been done in the buffer zone for noise attenuation.
- ii) Result of noise monitoring, reveal that the noise level is well below 85 dB (A).

PART - H

ADDITIONAL INVESTMENT PROPOSAL FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT OF POLLUTION

In future, investment will be made in following heads for further improvement of environment around the project:


- i. The plantation will be done over vacant space within the mine leasehold boundary throughout life of mine. Gap Plantation in 312.76 ha of forest land has been completed in the project
- ii. In order to minimize air pollution due to road transportation, three rows of trees of mixed varieties will be planted on either side of the road.

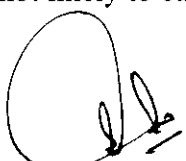
PART - I

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

The regular monitoring of the ambient air and water quality is being done in and around core zone and the quarterly monitoring report is submitted to the Jharkhand State Pollution Control Board, Ranchi

The cave painting site is not falling within the study area of the project. The radius of the study area is 10.0 Km. The Project is situated at 26.0 Km away from the painting site. Therefore, the Project activities are not likely to cause any pollution to the cave painting site.


Dy Manager (Envnt)
NK Area


Environment Officer /IC
Churi Benti UG


Project Officer
Churi Benti UG

CSR activities in NK Area

NK Area carries out CSR activities in 14 different panchayats of Khalari and Tandwa circle. Some of CSR activities are as follows:

Drinking Water

3 Deep borings, 9 wells, 6 handpumps, 3 water purifiers at Khalari & Mcluskieganj railway station and khalari block



Quarantine library



Graameen Football



श्रेष्ठ, उत्तराखण्ड में राष्ट्रीय ग्रामीण फुटबॉल प्रतियोगिता का प्रारंभ, जिला की खिलाड़ियों को उपलब्ध करायेंगे बेहतर कोच

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बालिका वर्ग में गणेश स्पोर्टिंग क्लब राय त बालक वर्ग में विश्रामपुर की टीम विजयी

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Distribution of sports items



Swachhta Hi Sewa 2019

1000 cloth bag distribution, social message and branding with help of 3000 pamphlets depicting restriction on use of single use plastic at houses, shops and public places in NK Area



Tricycles for physically challenged

39 tricycles for physically challenged



Village/School health Camps

Total -175 Camps





Construction of toilets



Community hall constructed under CSR scheme of NK Area



Installation of Hand pipes



Construction of well at Mcluskiganj



P.C.C.Road TUMANG (C.D. Scheme)C.C.L.



Construction of road and bridge near Purnadih village

ENVIRONMENT LABORATORY, CMPDI (HQ) , RANCHI

TEST REPORT

06/22 Test Report No. 2006	Job No. 094321044	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Jun-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** P.O. Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter (PM ₁₀ + >PM ₁₀)/TPM	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (as NO _x)	
Apr-22 1st FN	01/04/22-02/04/22	16-04-2022	16/04/22-19/04/22	206	132	51	< 25	< 6	East Sunny
Apr-22 2nd FN	18/04/22-19/04/22	02-05-2022	02/05/22-06/05/22	179	101	59	< 25	< 6	East Sunny
May-22 3rd FN	02/05/22-03/05/22	16-05-2022	16/05/22-20/05/22	128	66	25	< 25	< 6	East Sunny
May-22 4th FN	16/05/22-17/05/22	01-06-2022	01/06/22-07/06/22	211	103	53	< 25	< 6	East Sunny
Jun-22 5th FN	01/06/22-02/06/22	16-06-2022	16/06/22-18/06/22	290	127	72	< 25	< 6	East Sunny
Jun-22 6th FN	16/06/22-17/06/22	01-07-2022	01/07/22-06/07/22	254	129	63	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By

Authorized Signatory

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TEST REPORT

06/22 Test Report No. 2207	Job No. 094321044	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Jun-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** Churi Old Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter (PM ₁₀ + >PM ₁₀)TPM	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (as NO _x)	
Apr-22 1st FN	02/04/22-03/04/22	16-04-2022	16/04/22-19/04/22	145	79	40	< 25	< 6	East Sunny
Apr-22 2nd FN	19/04/22-20/04/22	02-05-2022	02/05/22-06/05/22	169	80	33	< 25	< 6	East Sunny
May-22 3rd FN	03/05/22-04/05/22	16-05-2022	16/05/22-20/05/22	158	77	44	< 25	< 6	East Sunny
May-22 4th FN	17/05/22-18/05/22	01-06-2022	01/06/22-07/06/22	251	104	58	< 25	< 6	East Sunny
Jun-22 5th FN	02/06/22-03/06/22	16-06-2022	16/06/22-18/06/22	206	90	54	< 25	< 6	East Sunny
Jun-22 6th FN	17/06/22-18/06/22	01-07-2022	01/07/22-06/07/22	174	78	32	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

06/22 Test Report No. 2208	Job No. 094321044	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Jun-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** Subhas Nagar Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter (PM ₁₀ +>PM ₁₀)TPM	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (as NO _x)	
Apr-22 1st FN	02/04/22-03/04/22	16-04-2022	16/04/22-19/04/22	222	92	55	< 25	< 6	East Sunny
Apr-22 2nd FN	19/04/22-20/04/22	02-05-2022	02/05/22-06/05/22	208	91	53	< 25	< 6	East Sunny
May-22 3rd FN	03/05/22-04/05/22	16-05-2022	16/05/22-20/05/22	165	85	52	< 25	< 6	East Sunny
May-22 4th FN	17/05/22-18/05/22	01-06-2022	01/06/22-07/06/22	206	93	44	< 25	< 6	East Sunny
Jun-22 5th FN	02/06/22-03/06/22	16-06-2022	16/06/22-18/06/22	134	65	31	< 25	< 6	East Sunny
Jun-22 6th FN	17/06/22-18/06/22	01-07-2022	01/07/22-06/07/22	118	63	25	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

06/22 Test Report No. 2209	Job No. 094321044	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Jun-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** Pit Top

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter (PM ₁₀ +>PM ₁₀)TPM	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (as NO _x)	
Apr-22 1st FN	02/04/22-03/04/22	16-04-2022	16/04/22-19/04/22	250	107	66	< 25	< 6	East Sunny
Apr-22 2nd FN	19/04/22-20/04/22	02-05-2022	02/05/22-06/05/22	213	122	62	< 25	< 6	East Sunny
May-22 3rd FN	03/05/22-04/05/22	16-05-2022	16/05/22-20/05/22	203	95	42	< 25	< 6	East Sunny
May-22 4th FN	17/05/22-18/05/22	01-06-2022	01/06/22-07/06/22	145	80	38	< 25	< 6	East Sunny
Jun-22 5th FN	02/06/22-03/06/22	16-06-2022	16/06/22-18/06/22	227	130	65	< 25	< 6	East Sunny
Jun-22 6th FN	17/06/22-18/06/22	01-07-2022	01/07/22-06/07/22	215	109	54	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

TEST REPORT

06/22 Test Report No. 2211	Job No. 094321044	Year	FY2022-23
Type of Sample:	Effluent Water	Quarter Ending	Jun-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

Area: North Karanpura **Project:** Churi Benti UGP **Stations:** Mine Water

Analysis Results of FN Effluent Water							
Parameters →				COD	O & G	pH value	TSS
Detection Limit				4	2	0.2	10
MOEF -SCH-VI, STANDARDS, Class 'A'				250	10	5.5 to 9.0	100
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	Value in mg/l, except pH			
Apr-22 1st FN	06/04/22	18/04/22	18/04/22-29/04/22	20	<2.00	7.61	29.7
Apr-22 2nd FN	23/04/22	02/04/22	02/04/22-13/05/22	16	<2.00	7.6	22.9
May-22 3rd FN	06/05/22	16/05/22	16/05/22-31/05/22	20	<2.00	8.01	33.5
May-22 4th FN	21/05/22	01/06/22	01/06/22-17/06/22	20	<2.00	7.8	32.7
Jun-22 5th FN	06/06/22	16/06/22	16/06/22-30/06/22	16	<2.00	7.6	31.4
Jun-22 6th FN	21/06/22	01/07/22	01/07/22-15/07/22	20	<2.00	7.7	27.1
BIS Standard & Method				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

Analysed By

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TEST REPORT

09/22 Test Report No. 2006	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Sep-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** P.O. Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter (PM ₁₀ + >PM ₁₀)/TPM	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (as NO _x)	
Jul-22 1st FN	01/07/22-02/07/22	18-07-2022	18/07/22-20/07/22	231	106	53	< 25	< 6	East Sunny
Jul-22 2nd FN	18/07/22-19/07/22	01-08-2022	01/08/22-04/08/22	207	90	39	< 25	< 6	East Sunny
Aug-22 3rd FN	01/08/22-02/08/22	16-08-2022	16/08/22-23/08/22	202	104	66	< 25	< 6	East Sunny
Aug-22 4th FN	16/08/22-17/08/22	01-09-2022	01/09/22-10/09/22	203	116	62	< 25	< 6	East Sunny
Sep-22 5th FN	01/09/22-02/09/22	16-09-2022	16/09/22-20/09/22	185	81	38	< 25	< 6	East Sunny
Sep-22 6th FN	16/09/22-17/09/22	01-10-2022	01/10/22-08/10/22	188	72	32	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By

Authorized Signatory

ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

TEST REPORT

09/22 Test Report No. 2207	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Sep-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** Churi Old Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter (PM ₁₀ +>PM ₁₀)/TPM	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (as NO _x)	
Jul-22 1st FN	02/07/22-03/07/22	18-07-2022	18/07/22-20/07/22	139	79	44	< 25	< 6	East Sunny
Jul-22 2nd FN	19/07/22-20/07/22	01-08-2022	01/08/22-04/08/22	143	73	32	< 25	< 6	East Sunny
Aug-22 3rd FN	02/08/22-03/08/22	16-08-2022	16/08/22-23/08/22	153	75	36	< 25	< 6	East Sunny
Aug-22 4th FN	17/08/22-18/08/22	01-09-2022	01/09/22-10/09/22	136	70	37	< 25	< 6	East Sunny
Sep-22 5th FN	02/09/22-03/09/22	16-09-2022	16/09/22-20/09/22	144	74	34	< 25	< 6	East Sunny
Sep-22 6th FN	17/09/22-18/09/22	01-10-2022	01/10/22-08/10/22	111	50	23	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

TEST REPORT

09/22 Test Report No. 2208	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Sep-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** Subhas Nagar Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter (PM ₁₀ +>PM ₁₀)/TPM	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (as NO _x)	
Jul-22 1st FN	02/07/22-03/07/22	18-07-2022	18/07/22-20/07/22	196	82	54	< 25	< 6	East Sunny
Jul-22 2nd FN	19/07/22-20/07/22	01-08-2022	01/08/22-04/08/22	189	80	46	< 25	< 6	East Sunny
Aug-22 3rd FN	02/08/22-03/08/22	16-08-2022	16/08/22-23/08/22	181	97	54	< 25	< 6	East Sunny
Aug-22 4th FN	17/08/22-18/08/22	01-09-2022	01/09/22-10/09/22	164	82	45	< 25	< 6	East Sunny
Sep-22 5th FN	02/09/22-03/09/22	16-09-2022	16/09/22-20/09/22	136	63	28	< 25	< 6	East Sunny
Sep-22 6th FN	17/09/22-18/09/22	01-10-2022	01/10/22-08/10/22	178	74	41	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ) , RANCHI

TEST REPORT

09/22 Test Report No. 2209	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Sep-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** Pit Top

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter (PM ₁₀ +>PM ₁₀)/TPM	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (as NO _x)	
Jul-22 1st FN	02/07/22-03/07/22	18-07-2022	18/07/22-20/07/22	146	71	36	< 25	< 6	East Sunny
Jul-22 2nd FN	19/07/22-20/07/22	01-08-2022	01/08/22-04/08/22	233	101	56	< 25	< 6	East Sunny
Aug-22 3rd FN	02/08/22-03/08/22	16-08-2022	16/08/22-23/08/22	154	73	36	< 25	< 6	East Sunny
Aug-22 4th FN	17/08/22-18/08/22	01-09-2022	01/09/22-10/09/22	219	95	54	< 25	< 6	East Sunny
Sep-22 5th FN	02/09/22-03/09/22	16-09-2022	16/09/22-20/09/22	220	105	66	< 25	< 6	East Sunny
Sep-22 6th FN	17/09/22-18/09/22	01-10-2022	01/10/22-08/10/22	158	81	48	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

TEST REPORT

09/22 Test Report No. 2211	Job No. 094322160	Year	FY2022-23
Type of Sample:	Effluent Water	Quarter Ending	Sep-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

Area: North Karanpura **Project:** Churi Benti UGP **Stations:** Mine Water

Analysis Results of FN Effluent Water							
Parameters →				COD	O & G	pH value	TSS
Detection Limit				4	2	0.2	10
MOEF -SCH-VI, STANDARDS, Class 'A'				250	10	5.5 to 9.0	100
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	Value in mg/l, except pH			
Jul-22 1st FN	06/07/22	18/07/22	18/07/22-30/07/22	16	<2.00	7.8	32.8
Jul-22 2nd FN	23/07/22	01/08/22	01/08/22-13/08/22	16	<2.00	8	50.7
Aug-22 3rd FN	06/08/22	16/08/22	16/08/22-30/08/22	20	<2.00	8.1	24.3
Aug-22 4th FN	21/08/22	01/09/22	01/09/22-15/09/22	16	<2.00	7.7	41.3
Sep-22 5th FN	06/09/22	16/09/22	16/09/22-30/09/22	16	<2.00	7.6	27
Sep-22 6th FN	21/09/22	01/10/22	01/10/22-14/10/22	16	<2.00	7.35	25
BIS Standard & Method				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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ENVIRONMENT LABORATORY, CMPDI (HQ) , RANCHI

TEST REPORT

12/22 Test Report No. 2006	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Dec-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** P.O. Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter (PM ₁₀ + >PM ₁₀)TPM	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (as NO _x)	
Oct-22 1st FN	03/10/22-04/10/22	17-10-2022	17/10/22-26/10/22	214	98	63	< 25	< 6	East Sunny
Oct-22 2nd FN	17/10/22-18/10/22	01-11-2022	01/11/22-07/11/22	148	74	35	< 25	< 6	East Sunny
Nov-22 3rd FN	01/11/22-02/11/22	16-11-2022	16/11/22-23/11/22	247	110	48	< 25	< 6	East Sunny
Nov-22 4th FN	16/11/22-17/11/22	01-12-2022	01/12/22-09/12/22	238	106	63	< 25	< 6	East Sunny
Dec-22 5th FN	01/12/22-02/12/22	16-12-2022	16/12/22-21/12/22	182	79	37	< 25	< 6	East Sunny
Dec-22 6th FN	16/12/22-17/12/22	02-01-2023	02/01/23-10/01/23	202	110	54	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ) , RANCHI

TEST REPORT

12/22 Test Report No. 2207	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Dec-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** Churi Old Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter ($\text{PM}_{10} + >\text{PM}_{10}$)TPM	Particulate Matter (PM_{10})	Particulate Matter ($\text{PM}_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Oct-22 1st FN	04/10/22-05/10/22	17-10-2022	17/10/22-26/10/22	148	65	30	< 25	< 6	East Sunny
Oct-22 2nd FN	18/10/22-19/10/22	01-11-2022	01/11/22-07/11/22	245	94	52	< 25	< 6	East Sunny
Nov-22 3rd FN	02/11/22-03/11/22	16-11-2022	16/11/22-23/11/22	201	89	50	< 25	< 6	East Sunny
Nov-22 4th FN	17/11/22-18/11/22	01-12-2022	01/12/22-09/12/22	203	113	58	< 25	< 6	East Sunny
Dec-22 5th FN	02/12/22-03/12/22	16-12-2022	16/12/22-21/12/22	216	96	47	< 25	< 6	East Sunny
Dec-22 6th FN	17/12/22-18/12/22	02-01-2023	02/01/23-10/01/23	245	118	50	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept. '2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ) , RANCHI

TEST REPORT

12/22 Test Report No. 2208	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Dec-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** Subhas Nagar Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter ($\text{PM}_{10} + >\text{PM}_{10}$)TPM	Particulate Matter (PM_{10})	Particulate Matter ($\text{PM}_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Oct-22 1st FN	04/10/22-05/10/22	17-10-2022	17/10/22-26/10/22	158	78	41	< 25	< 6	East Sunny
Oct-22 2nd FN	18/10/22-19/10/22	01-11-2022	01/11/22-07/11/22	180	80	41	< 25	< 6	East Sunny
Nov-22 3rd FN	02/11/22-03/11/22	16-11-2022	16/11/22-23/11/22	134	61	26	< 25	< 6	East Sunny
Nov-22 4th FN	17/11/22-18/11/22	01-12-2022	01/12/22-09/12/22	134	64	30	< 25	< 6	East Sunny
Dec-22 5th FN	02/12/22-03/12/22	16-12-2022	16/12/22-21/12/22	225	75	36	< 25	< 6	East Sunny
Dec-22 6th FN	17/12/22-18/12/22	02-01-2023	02/01/23-10/01/23	216	96	56	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ) , RANCHI

TEST REPORT

12/22 Test Report No. 2209	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Dec-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** Pit Top

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter (PM ₁₀ + >PM ₁₀)TPM	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (as NO _x)	
Oct-22 1st FN	04/10/22-05/10/22	17-10-2022	17/10/22-26/10/22	160	74	40	< 25	< 6	East Sunny
Oct-22 2nd FN	18/10/22-19/10/22	01-11-2022	01/11/22-07/11/22	212	101	55	< 25	< 6	East Sunny
Nov-22 3rd FN	02/11/22-03/11/22	16-11-2022	16/11/22-23/11/22	162	87	51	< 25	< 6	East Sunny
Nov-22 4th FN	17/11/22-18/11/22	01-12-2022	01/12/22-09/12/22	198	91	57	< 25	< 6	East Sunny
Dec-22 5th FN	02/12/22-03/12/22	16-12-2022	16/12/22-21/12/22	251	96	61	< 25	< 6	East Sunny
Dec-22 6th FN	17/12/22-18/12/22	02-01-2023	02/01/23-10/01/23	210	91	40	< 25	6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

TEST REPORT

12/22 Test Report No. 2211	Job No. 094322160	Year	FY2022-23
Type of Sample:	Effluent Water	Quarter Ending	Dec-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

Area: North Karanpura **Project:** Churi Benti UGP **Stations:** Mine Water

Analysis Results of FN Effluent Water							
Parameters →				COD	O & G	pH value	TSS
Detection Limit				4	2	0.2	10
MOEF -SCH-VI, STANDARDS, Class 'A'				250	10	5.5 to 9.0	100
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	Value in mg/l, except pH			
Oct-22 1st FN	08/10/22	17/10/22	17/10/22-31/10/22	16	<2.00	7.76	29
Oct-22 2nd FN	22/10/22	01/11/22	01/11/22-15/11/22	16	<2.00	7.81	30
Nov-22 3rd FN	05/11/22	16/11/22	16/11/22-30/11/22	12	<2.00	7.7	26
Dec-22 5th FN	06/12/22	16/12/22	16/12/22-30/12/22	16	<2.00	7.9	41
Dec-22 6th FN	21/12/22	02/01/23	02/01/23-13/01/23	12	<2.00	7.6	28
BIS Standard & Method				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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**TEST REPORT**

03/23 Test Report No. 2006	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** P.O. Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter ($\text{PM}_{10} + >\text{PM}_{10}$)TPM	Particulate Matter (PM_{10})	Particulate Matter ($\text{PM}_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Jan-23 1st FN	02/01/23-03/01/23	16-01-2023	16/01/23-19/01/23	349	171	59	< 25	< 6	East Sunny
Jan-23 2nd FN	16/01/23-17/01/23	01-02-2023	01/02/23-08/02/23	272	131	64	< 25	< 6	East Sunny
Feb-23 3rd FN	01/02/23-02/02/23	16-02-2023	16/02/23-17/02/23	151	88	42	< 25	< 6	East Sunny
Feb-23 4th FN	16/02/23-17/02/23	01-03-2023	01/03/23-14/03/23	202	94	47	< 25	< 6	East Sunny
Mar-23 5th FN	01/03/23-02/03/23	16-03-2023	16/03/23-22/03/23	240	115	54	< 25	< 6	East Sunny
Mar-23 6th FN	16/03/23-17/03/23	01-04-2023	01/04/23-17/04/23	132	82	57	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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**TEST REPORT**

03/23 Test Report No. 2207	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** Churi Old Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter (PM ₁₀ + >PM ₁₀)TPM	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (as NO _x)	
Jan-23 1st FN	03/01/23-04/01/23	16-01-2023	16/01/23-19/01/23	165	70	32	< 25	< 6	East Sunny
Jan-23 2nd FN	17/01/23-18/01/23	01-02-2023	01/02/23-08/02/23	174	69	43	< 25	< 6	East Sunny
Feb-23 3rd FN	02/02/23-03/02/23	16-02-2023	16/02/23-17/02/23	218	82	53	< 25	< 6	East Sunny
Feb-23 4th FN	17/02/23-18/02/23	01-03-2023	01/03/23-14/03/23	119	67	36	< 25	< 6	East Sunny
Mar-23 5th FN	02/03/23-03/03/23	16-03-2023	16/03/23-22/03/23	146	69	29	< 25	< 6	East Sunny
Mar-23 6th FN	17/03/23-18/03/23	01-04-2023	01/04/23-17/04/23	141	69	27	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By

Authorized Signatory

**TEST REPORT**

03/23 Test Report No. 2208	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** Subhas Nagar Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter (PM ₁₀ + >PM ₁₀)TPM	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (as NO _x)	
Jan-23 1st FN	03/01/23-04/01/23	16-01-2023	16/01/23-19/01/23	304	108	67	< 25	< 6	East Sunny
Jan-23 2nd FN	17/01/23-18/01/23	01-02-2023	01/02/23-08/02/23	155	76	32	< 25	< 6	East Sunny
Feb-23 3rd FN	02/02/23-03/02/23	16-02-2023	16/02/23-17/02/23	138	71	31	< 25	< 6	East Sunny
Feb-23 4th FN	17/02/23-18/02/23	01-03-2023	01/03/23-14/03/23	110	55	24	< 25	< 6	East Sunny
Mar-23 5th FN	02/03/23-03/03/23	16-03-2023	16/03/23-22/03/23	218	91	51	< 25	< 6	East Sunny
Mar-23 6th FN	17/03/23-18/03/23	01-04-2023	01/04/23-17/04/23	182	78	38	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By

Authorized Signatory

**TEST REPORT**

03/23 Test Report No. 2209	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP **Stations:** Pit Top

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter (PM ₁₀ + >PM ₁₀)TPM	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (as NO _x)	
Jan-23 1st FN	03/01/23-04/01/23	16-01-2023	16/01/23-19/01/23	399	194	64	< 25	< 6	East Sunny
Jan-23 2nd FN	17/01/23-18/01/23	01-02-2023	01/02/23-08/02/23	169	83	40	< 25	< 6	East Sunny
Feb-23 3rd FN	02/02/23-03/02/23	16-02-2023	16/02/23-17/02/23	263	139	75	< 25	< 6	East Sunny
Feb-23 4th FN	17/02/23-18/02/23	01-03-2023	01/03/23-14/03/23	219	129	68	< 25	< 6	East Sunny
Mar-23 5th FN	02/03/23-03/03/23	16-03-2023	16/03/23-22/03/23	166	84	44	< 25	< 6	East Sunny
Mar-23 6th FN	17/03/23-18/03/23	01-04-2023	01/04/23-17/04/23	155	101	64	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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**TEST REPORT**

03/23 Test Report No. 2210	Job No. 094322160	Year	FY2022-23
Type of Sample:	Noise	Quarter Ending	Mar-23
Customer	CCL		
Testing/ Sampling Protocol:	'The noise pollution (Regulation and Control), Rules,2000, LQR 34		
Remarks:			

TEST RESULT

The sample has been tested with the following results: -

Area : North Karanpura **Project:** Churi Benti UGP

Station Name	Noise Level dB(A) Leq					
	Jan-23 1st FN	Jan-23 2nd FN	Feb-23 3rd FN	Feb-23 4th FN	Mar-23 5th FN	Mar-23 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	02-01-2023	16-01-2023	01-02-2023	16-02-2023	01-03-2023	16-03-2023
1. P.O.Office	70.2/64.3	70.4/64.3	71.3/65.6	71.7/65.6	70.4/64.3	71.3/65.4
Date of recording	03-01-2023	17-01-2023	02-02-2023	17-02-2023	02-03-2023	17-03-2023
2. Churi Old Colony	68.8/62.6	68.6/62.2	69.4/63.6	69.5/63.7	68.8/62.4	68.2/62.5

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	Limits in dB(A) Leq	
	Day Time 6.00 AM to 10.00 PM	Night Time 10.00 PM to 6.00 AM
Industrial Area	75	70
Commercial Area	65	55
Residential area	55	45
Silence Zone	50	40

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TEST REPORT

03/23 Test Report No. 2211	Job No. 094322160	Year	FY2022-23
Type of Sample:	Effluent Water	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

Area: North Karanpura **Project:** Churi Benti UGP **Stations:** Mine Water

Analysis Results of FN Effluent Water							
Parameters →				COD	O & G	pH value	TSS
Detection Limit				4	2	0.2	10
MOEF -SCH-VI, STANDARDS, Class 'A'				250	10	5.5 to 9.0	100
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	Value in mg/l, except pH			
Jan-23 1st FN	07/01/23	16/01/23	16/01/23-31/01/23	20	<2.00	8.2	41
Jan-23 2nd FN	21/01/23	01/02/23	01/02/23-15/02/23	16	<2.00	7.7	39.8
Feb-23 3rd FN	06/02/23	16/02/23	16/02/23-28/02/23	20	<2.00	8.1	41
Feb-23 4th FN	21/02/23	01/03/23	01/03/23-15/03/23	20	<2.00	8.2	49
Mar-23 5th FN	06/03/23	16/03/23	16/03/23-31/03/23	16	<2.00	7.7	33
Mar-23 6th FN	21/03/23	03/04/23	03/04/23-13/04/23	20	<2.00	8.3	47
BIS Standard & Method				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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