Environment Management and Engineering Division

(Environmental Laboratory)

Agriculture College Campus, Next to DIC office, Shivaji Nagar, Pune. 411 005, Ph. No. 66289405/400, email: emelab@mitconindia.com

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Format No. EME/LAB/Format 7.8/TR

Quarter October- November- December 2022

Test Report

Report Number: MITCON/2022-23/November/11283

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11283/2
M/s MOIL LIMITED,	Date of Monitoring	11/11/2022
·	Type of Monitoring	Ambient Air
Beldongri Manganese Mines L2=12.990Ha Site, Dist:-	Test Location	Near OCF
Nagpur (M.S)	Monitoring Done By	MITCON
	Date of Analysis	14/11/2022

OBSERVATION

	Ambient Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
	30	30	19	45	1440	0.0	8.3 km/	E
ł	11 1 4 WEST	e Parkir distrik	Award Migrafiana	n en	Sa Cou		hrs.(Avg)	Sec. 1

result

2 24 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	AUGUSTAN ESTADOS	\$1401400555V11 .			
Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO₂)	μg/M³	13.0	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO ₂)	μg/M³	17.4	<u></u> ≤80	IS 5182(Part 6)
03 ું ે	Particulate Matter PM10 micron	μg/M³	67.2	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 micron	μg/M³	32.4	ુ≤ 60	USEPA 40 CFRCH
05	Ozone (O₃)	μg/M³	3.8	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤ 1.0	APHA - AAS
. 07	Carbon Monoxide (CO)	mg/M³	0.364	* ≤ 2.0	IS 5182
08	Ammonia (NH₃)	μg/M³	4.0	≤ 400	APHA - 401
09	Benzene (C₅H₅)	μg/M³	BDL	≤5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/M³	BDL	≤1	IS 5182
11	Arsenic (As)	ng/ M³	BDL	≤6	APHA - AAS
12	Nickel (Ni)	ng/ M³	BDL	≤ 20	APHA - AAS

REMARKS/OBSERVATIONS:

- > All above results are within National Ambient Air Quality standards.
- ➤ BDL: Below Detection Limit.

For MITCON Consultancy & Engineering Services

Checked By

(Mrs.Kadambari Deshmukh)

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Quarter October- November- December 2022

Test Report

Report Number: MITCON/2022-23/November/11283

Issue Date:21/11/2022

Client's Name & Address		Sample Details	
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11283/1	
	Name of Sample	Ground Water	
Beldongri Manganese Mines L2=12.990Ha Site, Dist:-Nagpur (M.S)	Sample Details	OCF Bore well	
	Container Details	1 lit plastic can	
	Sample Collected By	MITCON	
	Method of sampling	IS 3025(Part I)	
	Sample Collected On	11/11/2022	
	Date of Sample Receipt	14/11/2022	
	Analysis Start Date	14/11/2022	
	End Date of Analysis	21/11/2022	

ANALYSIS RESULTS

- T							
Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods		
01	pH at 25C	7.21	8 8 8 E	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017		
02	Total suspended solids	6.8	mg/l	N.S	APHA 2540 D.2-70 to 2-71 23rd ed 2017		
03	Turbidity	<1	NTU	<u>s</u> 1	IS: 3025 Part-10 (R.A : 2002)		
04	Total Dissolved Solids	285.3	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017		
05	Total Hardness as Caco3	149.25	mg/l	≤200	APHA 2340 C ,2-48 to 2-50,23rd Ed 2017		
06	Calcium as Ca	47.14	mg/l	≤75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017		
07	Magnesium as Mg	12.25	mg/l	≤ 30	APHA 3500 Mg B, 3-86 , 23rd Ed. 2017		
08	Mangnese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017		
09	Total Alkalinity as Caco3	145.12	Mg/I	<200	APHA 2320 B ,2-37 to 2-39 23rd Ed 2017		
10	Fluoride as F	< 0.1	Mg/l	<1	APHA 4500 F- D 4-90 to 4-9123rd Ed 2017		
11	Chloride as Cl	48.12	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017		
12	Sulphate as SO4	27.02	mg/l	≤ 200	APHA 4500 -SO4E, 4-199 TO 4-200, 23rd Ed 2017		
13	Iron as Fe	< 0.05	mg/l	≤0.3	APHA 3111 B, 3-18 TO 3-21, 23rd Ed 2017 (using AAS)		
14	Nitrate as NO3	7.15	mg/i	≤45	APHA 4500 NO3-B,4-127 23rd Ed 2017		
15	E.coli	Absent	MPN/100ml	Absent	IS: 1622 (R.A : 2014)		
16	Total Coliform	Absent	MPN/100ml	Absent	IS: 1622 (R.A : 2014)		
17	colour	<5	HZ	≤5	IS: 3025 Part-4 (Rev.1, RA 2012)		
18	odour	Aggreable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)		

REMARKS / OBSERVATIONS:

KS / OBSERVATIONS:
The above water sample is complying with required limits accounts 10500:2012.

For MITCON Consultancy & Engineering Services/160) Checked By CUT) COLL

(Mrs. Kadambari Deshmukh)

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Test Report

Report Number: MITCON/2022-23/November/11283

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022-23/November/11283/3
M/s MOIL LIMITED,	Date of Monitoring	11/11/2022
	Type of Monitoring	Ambient Noise
Beldongri Manganese Mines L2=12.990Ha Site, Dist:-Nagpur (M.S).	Monitoring Done By	MITCON

READINGS

Sr. No.	Test Location	Unit	Readings
01	Near OCF	dB(A)	63.2

REMARKS / OBSERVATIONS:

Limits: The Maharashtra Pollution Control Board has prescribe 75 dB (A) as an upper limit of Noise Level during daytime.

For MITCON Consultancy & Engineering Services Ltd.

KUT) early Checked By

(Mrs. Kadambari Deshmukh)

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Quarter October- November- December 2022

Test Report

Report Number: MITCON/2022-23/November/11282

Issue Date:21/11/2022

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Client's Name & Address	Reference No.	MITCON/2022- 23/November/11282/5
M/s MOIL LIMITED,	Date of Monitoring	11/11/2022
,	Type of Monitoring	Ambient Air
Beldongri Manganese Mines L1=26.660 Ha Site, Dist:-	Test Location	Near Haul Road
Nagpur (M.S)	Monitoring Done By	MITCON
	Date of Analysis	14/11/2022

OBSERVATION

Ambient Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
30	30	19	45	1440	0.0	8.3 km/	E
y to the decrease.	gysteletata againe	โดยกลุโกลีมันการต่อง (Re	<u> </u>	<u> </u>		hrs.(Avg)	9- ⁸⁸ 5

RESULT

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO ₂)	μg/M³	12.4	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO2)	μg/M³	17.0	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	65.8	³⁰ ≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 mlcron	μg/M³	31.4	 ≤ 60	USEPA 40 CFRCH
05	Ozone (O₃)	μg/M³	3.6	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M³	0.338	≤ 2.0	IS 5182
08	Ammonia (NH ₃)	μg/M³	4.0	≤ 400	APHA - 401
09	Benzene (C ₆ H ₆)	μg/M³	BDL	≤5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M³	BDL	≤1	IS 5182
11	Arsenic (As)	ng/M³	BDL	≤6	APHA - AAS
12	Nickel (Ni)	ng/ M³	BDL	≤ 20	APHA - AAS

REMARKS/OBSERVATIONS:

> All above results are within National Ambient Air Quality standards.

> BDL: - Below Detection Limit.

For MITCON Consultancy & Engineering Servi

Checked By

(Mrs.Kadambari Deshmukh)

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Quarter October- November- December 2022

Test Report

Report Number: MITCON/2022-23/November/11282

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11282/6
M/s MOIL LIMITED, Beldongri Manganese Mines L1=26.660 Ha Site, Dist:-	Date of Monitoring	11/11/2022
	Type of Monitoring	Ambient Air
Nagpur (M.S).	Test Location	Near Electric Sub Station
2Or (1	Monitoring Done By	MITCON
	Date of Analysis	14/11/2022

OBSERVATION

Ambient Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
30	30	19	45	1440	0.0	8.3 km/ hrs.(Avg)	E

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO ₂)	μg/M³	11.8	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO2)	μg/M³	16.3	∂ ≤ 80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	59.3	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM _{2.5 micron}	μg/M³	27.4	≤ 60	USEPA 40 CFRCH
05	Ozone (O ₃)	μg/M³	3.2	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M³	0.320	≤ 2.0	IS 5182
08	Ammonia (NH ₃)	μg/M³	3.2	≤ 400	APHA - 401
09	Benzene (C ₆ H ₆)	μg/M³	BDL	≤5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/M³	BDL	≤1	IS 5182
11	Arsenic (As)	ng/ M³	BDL	≤6	APHA - AAS
12	Nickel (Ni)	ng/ M³	BDL.	≤ 20	APHA - AAS

REMARKS/OBSERVATIONS:

➢ All above results are within National Ambient Auguality standards.
 ➢ BDL: - Below Detection Limit.

For MITCON Consultancy & Engineering Ser

kupenul Checked By

(Mrs.Kadambari Deshmukh)

Authorized Sign Dr. Sandeep Jadhav Senior vice president

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Quarter October- November- December 2022

Test Report

Report Number: MITCON/2022-23/November/11282

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11282/7
M/s MOIL LIMITED,	Date of Monitoring	11/11/2022
Beldongri Manganese Mines L1=26.660 Ha Site, Dist:- Nagpur (M.S).	Type of Monitoring	Ambient Air
	Test Location	Near Staff Colony
	Monitoring Done By	MITCON
	Date of Analysis	14/11/2022

OBSERVATION

Ambient Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
30	30	19	45	1440	0.0	8.3 km/ hrs.(Avg)	E

		RESULT	lviku: Tokala		
Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO ₂)	μg/M³	10.6	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO2)	µg/M³	14.0	≤80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	56.9	≤ 100	IS 5182 (Part 23)
24	Particulate Matter PM2.5 micron	µg/M³	25.8	≤ 60	USEPA 40 CFRCH
05	Ozone (O ₃)	μg/M³	2.8	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤ 1.0	APHA - AAS
.07	Carbon Monoxide (CO)	mg/M ³	0.220	≤ 2.0 *	IS 5182
08	Ammonia (NH ₃)	μg/M³	3.2	≤ 400	APHA - 401
09	Benzene (C ₆ H ₆)	μg/M³	BDL	≤5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M ³	BDL	≤1	IS 5182
11	Arsenic (As)	ng/ M³	BDL	≤6	APHA - AAS
12	Nickel (Ni)	ng/ M³	BDL	≤ 20	APHA - AAS

REMARKS/OBSERVATIONS:

> All above results are within National Ambient Air Quality standards.

> BDL: - Below Detection Limit.

For MITCON Consultancy & Engineering Services Ltd.

kuthealleh Checked By

(Mrs.Kadambari Deshmukh)



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Quarter October- November- December 2022

Test Report

Report Number: MITCON/2022-23/November/11282

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11282/8
M/s MOIL LIMITED,	Date of Monitoring	11/11/2022
·	Type of Monitoring	Ambient Air
Beldongri Manganese Mines L1=26.660 Ha Site, Dist:-	Test Location	Near Hospital
Nagpur (M.S).	Monitoring Done By	MITCON
•	Date of Analysis	14/11/2022

OBSERVATION

Ambient Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
30	30	19	45	1440	0.0	8.3 km/ hrs.(Avg)	E

RESULT

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO₂)	μg/M³	11.0	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO ₂)	μg/M³	15.3	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	58.5	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 mlcron	µg/M³	27.6	≤ 60	USEPA 40 CFRCH
05	Ozone (O₃)	μg/M³	2.0	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M³	0.298	≤ 2.0	IS 5182
08	Ammonia (NH₃)	μg/M³	3.2	≤ 400	APHA - 401
09	Benzene (C ₆ H ₆)	μg/M³	BDL	≤5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/M³	BDL	≤1	IS 5182
11	Arsenic (As)	ng/ M³	BDL	≤6	APHA - AAS
12	Nickel (Ni)	ng/M³	BDL	≤ 20	APHA - AAS

REMARKS/OBSERVATIONS:

> All above results are within National Ambient An Quality of andards.

➢ BDL: - Below Detection Limit.

For MITCON Consultancy & Engineering Service

Checked By

(Mrs.Kadambari Deshmukh)

Authorized Signatory
Dr. Sandeep Jadhav
Senior vice president

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Test Report

Report Number: MITCON/2022-23/November/11282

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022-23/November/11282/9
M/s MOIL LIMITED,	Date of Monitoring	11/11/2022
Beldongri Manganese Mines L1=26.660 Ha Site,	Type of Monitoring	Ambient Noise
Dist:-Nagpur (M.S).	Monitoring Done By	MITCON

READINGS

Sr. No.	Test Location		Unit	nizit .	Readings
01	Near Compressor Room		dB(A)		69.4
02	Near Haul Road		dB(A)	Walter State Control	66.9
03	Near Jack Hammer Drill		dB(A)		69.0
04	Near Vertical Fan	Silvabayour Balasaya	dB(A)	71877012 July 1911 1	71.3

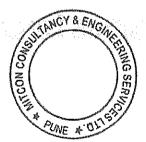
REMARKS / OBSERVATIONS:

Limits: The Maharashtra Pollution Control Board has prescribe 75 dB (A) as an upper limit of Noise Level during daytime.

For MITCON Consultancy & Engineering Services Ltd.

Checked By

(Mrs. Kadambari Deshmukh)



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Test Report

Report Number: MITCON/2022-23/November/11282

Issue Date:21/11/2022

Client's Name & Address		Sample Details
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11282/1
	Name of Sample	Ground Water
Beldongri Manganese Mines L1=26.660 Ha Site,	Sample Details	Satak Village Borewell Water
Dîst:-Nagpur (M.S)	Container Details	1 lit plastic can
	Sample Collected By	MITCON
	Method of sampling	IS 3025(Part I)
	Sample Collected On	11/11/2022
	Date of Sample Receipt	14/11/2022
	Analysis Start Date	14/11/2022
	End Date of Analysis	21/11/2022

ANALYSIS RESULTS

Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.21	ARKANIA SET	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	7.8	mg/I	, N.S	APHA 2540 D,2-70 to 2-71 23rd ed 2017
. 03	Turbidity	<1	ַ אַדע	≤1	IS: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	243.2	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	120.25	mg/l	≤200	APHA 2340 C ,2-48 to 2-50,23rd Ed 2017
06	Calcium as Ca	38.25	mg/l	≤ 75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017
07	Magnesium as Mg	12.45	mg/l	≤30	APHA 3500 Mg B, 3-86 , 23rd Ed. 2017
08	Mangnese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as	107.45	Mg/l	<200	APHA 2320 B ,2-37 to 2-39 23rd Ed 2017
n . an	Caco3	<u>la e</u>	Angelog y and a	68 6	Totals - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
10	Fluoride as F	< 0.1	Mg/I	(1)	APHA 4500 F- D 4-90 to 4-9123rd Ed 2017
11	Chloride as Cl	25.25	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	17.45	mg/l	≤ 200	APHA 4500 -SO4E, 4-199 TO 4-200, 23rd Ed 2017
13	Iron as Fe	< 0.05	mg/l	≤ 0.3	APHA 3111 B, 3-18 TO 3-21, 23rd Ed 2017 (using AAS)
14	Nitrate as NO3	5.58	mg/l	≤45	APHA 4500 NO3-B,4-127 23rd Ed 2017
15	E.coli	Absent	MPN/100ml	Absent	IS: 1622 (R.A : 2014)
16	Total Coliform	Absent	MPN/100ml	Absent	IS: 1622 (R.A : 2014)
17	colour	<5	HZ	≤5	IS: 3025 Part-4 (Rev.1, RA 2012)
18	odour	Aggreable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

REMARKS / OBSERVATIONS:

KS / OBSERVATIONS:

The above water sample is complying with required limits as per IS 10500:2012.

For MITCON Consultancy & Engineering Services Ltd. Checked By Kunesulh

(Mrs. Kadambari Deshmukh)

Authorized Signatory (Dr.Sandeep Jadhav) Senior Vice President

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Quarter October- November- December 2022

Test Report

Report Number: MITCON/2022-23/November/11282

Issue Date:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11282/2		
·	Name of Sample	Ground Water		
Beldongri Manganese Mines L1=26.660 Ha Site,	Sample Details	Mine Office drinking water		
Dist:-Nagpur (M.S)	Container Details	1 lit plastic can		
	Sample Collected By	MITCON		
	Method of sampling	IS 3025(Part I)		
•	Sample Collected On	11/11/2022		
	Date of Sample Receipt	14/11/2022		
	Analysis Start Date	14/11/2022		
	End Date of Analysis	21/11/2022		

ANALYSIS RESULTS

Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.18	MATERIA -	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	10.8	mg/I	N.S	APHA 2540 D,2-70 to 2-71 23rd ed 2017
03	Turbidity	<1章變量	NTU 💮	≤1	IS: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	287.3	mg/l	≤500	APHA 2540 G, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	138.25	mg/I	≤200	APHA 2340 C ,2-48 to 2-50,23rd Ed 2017
06	Calcium as Ca	28.25	mg/I	≤75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017
07	Magnesium as Mg	13,20	mg/l	≤30	APHA 3500 Mg B, 3-86 , 23rd Ed. 2017
08	Mangnese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as Caco3	128.52	Mg/I	<200	APHA 2320 B ,2-37 to 2-39 23rd Ed 2017
10	Fluoride as F	< 0.1	Mg/l	<1	APHA 4500 F- D 4-90 to 4-9123rd Ed 2017
11.	Chloride as Cl	27.52	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	18.15	mg/l	≤ 200	APHA 4500 -SO4E, 4-199 TO 4-200, 23rd Ed 2017
13	Iran as Fe	< 0.05	mg/i	≤0.3	APHA 3111 B, 3-18 TO 3-21, 23rd Ed 2017 (using AAS)
14	Nitrate as NO3	11.25	mg/l	≤45	APHA 4500 NO3-B,4-127 23rd Ed 2017
15	E.coli	Absent	MPN/100ml	Absent	IS: 1622 (R.A : 2014)
16	Total Coliform	Absent	MPN/100ml	Absent	IS: 1622 (R.A : 2014)
17	colour	<5	HZ	≤5	IS: 3025 Part-4 (Rev.1, RA 2012)
18	odour	Aggreable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

REMARKS / OBSERVATIONS:

For MITCON Consultancy & Engineering Service 1/2d.

Checked By

(Mrs. Kadambari Deshmukh)



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Format No. EME/LAB/Format 7.8/TR

Quarter October- November- December 2022

Test Report

Report Number: MITCON/2022-23/November/11282

Issue Date:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11282/3		
	Name of Sample	Ground water		
Beldongri Manganese Mines L1=26.660 Ha Site,	Sample Details	Staff colony borewell		
Dist:-Nagpur (M.S)	Container Details	1 lit plastic can		
	Sample Collected By	MITCON		
	Method of sampling	IS 3025(Part I)		
	Sample Collected On	11/11/2022		
	Date of Sample Receipt	14/11/2022		
	Analysis Start Date	14/11/2022		
	End Date of Analysis	21/11/2022		

ANALYSIS RESULTS

pH at 25C		!	10500:2012	adriva .
	7.26 mm	95-885.40 + -	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
Total suspended solids	10.0	mg/l	N.S	APHA 2540 D,2-70 to 2-71 23rd ed 2017
Turbidity	<1	NTU	≲ ≤1	IS: 3025 Part-10 (R.A : 2002)
Total Dissolved Solids	302.1	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
Total Hardness as CaCO3	145.25	mg/i	≤200	APHA 2340 C,2-48 to 2-50,23rd Ed 2017
Calcium as Ca	54,25	mg/l	≤75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017
Magnesium as Mg	12.25	mg/l	≤30	APHA 3500 Mg B, 3-86, 23rd Ed. 2017
Mangnese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
Total Alkalinity as Caco3	140.25	Mg/I	<200	APHA 2320 B ,2-37 to 2-39 23rd Ed 2017
Fluoride as F	< 0.1	Mg/I	3.31	APHA 4500 F- D 4-90 to 4-9123rd Ed 2017
Chloride as Cl	52.25	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
Sulphate as SO4	18.25	mg/l	≤ 200	APHA 4500 -SO4E, 4-199 TO 4-200, 23rd Ed 2017
iron as Fe	< 0.05	mg/l	≤ 0.3	APHA 3111 B, 3-18 TO 3-21, 23rd Ed 2017 (using AAS)
Nitrate as NO3	5.25	mg/i	≤45	APHA 4500 NO3-B,4-127 23rd Ed 2017
E.coli	Absent	MPN/100ml	Absent	IS: 1622 (R,A : 2014)
Total Coliform	Absent	MPN/100ml	Absent	IS: 1622 (R _. A : 2014)
colour	<5	HZ	≤5	IS: 3025 Part-4 (Rev.1, RA 2012)
odour	Aggreable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)
	CaCO3 Calcium as Ca Magnesium as Mg Mangnese as mn Total Alkalinity as Caco3 Fluoride as F Chloride as Cl Sulphate as SO4 Iron as Fe Nitrate as NO3 E.coli Total Coliform colour	CaCO3 54,25 Calcium as Ca 54,25 Magnesium as Mg 12.25 Mangnese as mn < 0.1	CaCO3 54.25 mg/l Calcium as Ca 54.25 mg/l Magnesium as Mg 12.25 mg/l Mangnese as mn < 0.1	CaCO3 S4.25 mg/l ≤ 75 Magnesium as Mg 12.25 mg/l ≤ 30 Mangnese as mn < 0.1

For MITCON Consultancy & Engineering Services Vid.

Checked By

(Mrs. Kadambari Deshmukh)

Authorized Signatory (Dr. Sandeep Jadhav) Senior-Vice President

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Quarter October- November- December 2022

Test Report

Report Number: MITCON/2022-23/November/11282

Issue Date:21/11/2022

Client's Name & Address		Sample Details	
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11282/4	
1411 2 14TO THE DELIVER THE PARTY OF THE PAR	Name of Sample	Waste water	
Beldongri Manganese Mines L1=26.660 Ha Site,	Sample Details	Mine Discharge Water from underground 234 MRL	
list:-Nagpur (M.S)	Container Details	1 lit plastic can	
	Sample Collected By	MITCON	
	Method of sampling	IS 3025(Part I)	
	Sample Collected On	11/11/2022	
	Date of Sample Receipt	14/11/2022	
	Analysis Start Date	14/11/2022	
	End Date of Analysis	21/11/2022	

ANALYSIS RESULTS

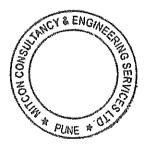
Sr. No.	Characteristic	Results	Unit	Permissible Limit as per Consent Condition	Test Methods
01	pH at 25°C	7.19	(K) _	5.5 to 9.0	APHA 4500 H+ A, 4-95, 23rd Ed. 2017
02	Dissolved Oxygen	2,8	mg/l	. 	IS: 3025 Part 38
03	Chemical Oxygen Demand	51.2	mg/l	250	APHA 5220 C,5-20 to 5-21 23rd Ed 2017
04	Biochemical Oxygen	19.2	mg/l	30	IS :3025 (Part 44)
05	Total suspended solids	29.7	mg/l	100	APHA 2540 D,2-70 to 2-71 23 rd Ed 2017
06	Oil and grease	<5	mg/l	10 🐇	APHA 5520 B,5-42 to 5-43 23 rd Ed 2017
07	Manganese	0.35	mg/l	2	APHA 3111 B,3-18 to 3-21 23rd Ed 2017

REMARKS / OBSERVATIONS:

For MITCON Consultancy & Engineering Services Ltd.

Checked By (Mrs. Kadambari Deshmukh)

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Quarter October- November- December 2022

Test Report

Report Number: MITCON/2022-23/November/11284

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11284/5
M/s MOIL LIMITED,	Date of Monitoring	11/11/2022
	Type of Monitoring	Ambient Air
Satak Manganese Mines L1=8.680 Ha Site, Dist:-	Test Location	Bankuri Road
Nagpur (M.S)	Monitoring Done By	MITCON
	Date of Analysis	14/11/2022

OBSERVATION

Ambient Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
- 30	30 ,	19	45	1440	0.0	8.3 km/	E
					Luke Rhing	hrs.(Avg)	Artista.

RESULT

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO₂)	μg/M³	11.2	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO ₂)	μg/M³	15.8	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	58.3	. ≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM _{2.5 micron}	μg/M³	29.6	≤ 60	USEPA 40 CFRCH
05	Ozone (O ₃)	μg/M³	3.0	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤,1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M ³	0.344	≤ 2,0	IS 5182
08	Ammonia (NH₃)	μg/M³	3.2	≤ 400	APHA - 401
09	Benzene (C₅H₅)	μg/M³	BDL	≤5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/M³	BDL	≤1	IS 5182
11	Arsenic (As)	ng/ M³	BDL	≤6	APHA - AAS
12	Nickel (Ni)	ng/ M³	BDL.	≤ 20	APHA - AAS

REMARKS/OBSERVATIONS:

> All above results are within National Ambient Air Quality standards.

> BDL: - Below Detection Limit.

For MITCON Consultancy & Engineering Services

Checked By

(Mrs.Kadambari Deshmukh)

Authorized Signatory
Dr. Sandeep Jadhav
Senior vice president

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Quarter October- November- December 2022

Test Report

Report Number: MITCON/2022-23/November/11284

Issue Date:21/11/2022

Reference No.	MITCON/2022- 23/November/11284/6
Date of Monitoring	11/11/2022
Type of Monitoring	Ambient Air
Test Location	Beldongri Road
Monitoring Done By	MITCON
Date of Analysis	14/11/2022
	Date of Monitoring Type of Monitoring Test Location Monitoring Done By

OBSERVATION

Ambient Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
30	30	19	45	1440	0.0	8.3 km/	E
	2 (2-44-17)	Landa and Sa	Programme	to the same of		hrs.(Avg)	7.75

-			·	254 was 12 1 20 20 20 20 1 20 1 20 1 20 1 20 1	7 (2 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO₂)	μg/M³	11.8	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO₂)	μg/M³	16.2	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	60.5	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM _{2,5 micron}	μg/M³	30.8	≤ 60	USEPA 40 CFRCH
05	Ozone (O ₃)	μg/M³	3.4	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M ³	0.346	≤ 2.0	IS 5182
80	Ammonia (NH₃)	μg/M³	3.8	≤ 400	APHA - 401
09	Benzene (C ₆ H ₆)	μg/M³	BDL	≤ 5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M³	BDL	≤1	IS 5182
11	Arsenic (As)	ng/ M³	BDL	≤6	APHA - AAS
12	Nickel (Ni)	ng/ M³	BDL	≤ 20	APHA - AAS
~~~~~	CANCENLATIONS.				.1

**REMARKS/OBSERVATIONS:** 

➤ All above results are within National Ambient Amount and Ambient Amount Conductor Cond

For MITCON Consultancy & Engineering Service

LIDENUM Checked By

(Mrs.Kadambari Deshmukh)

Authorized Signatory Dr. Sandgep Jadhav Senior vice president

PUNE "

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# Quarter October- November- December 2022

### **Test Report**

Report Number: MITCON/2022-23/November/11284

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11284/7
M/s MOIL LIMITED,	Date of Monitoring	11/11/2022
	Type of Monitoring	Ambient Air
Satak Manganese Mines L1=8.680 Ha Site, Dist:-	Test Location	Near Satak Road
Nagpur (M.S).	Monitoring Done By	MITCON
	Date of Analysis	14/11/2022

#### **OBSERVATION**

Ambient Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
30	30	19	45	1440	0.0	8.3 km/	E
		an in audional machine		- Inches	144.1 144.144	hrs.(Avg)	

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO₂)	μg/M³	12.0	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO ₂ )	μg/M³	16.8	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM30 micron	hg/M³	61.3	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 micron	μg/M³	31.7	≤ 60	USEPA 40 CFRCH
05	Ozone (Os)	μg/M³	3.9	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M³	0.345	≤ 2.0	IS 5182
08	Ammonia (NH ₃ )	μg/M³	4.1	<u> </u>	APHA - 401
09	Benzene (C₅H₅)	μg/M³	BDL	≤5	
10	Benzo(a)Pyrene (BaP)	ng/ M³	BDL	<u> </u>	IS 5182
11	Arsenic (As)	ng/ M³	BDL		IS 5182
12	Nickel (Ni)	ng/ M³	BDL	≤6 ≤20	APHA - AAS APHA - AAS

## **REMARKS/OBSERVATIONS:**

> All above results are within National Ambient Air Quality standards. SULTANCY & ENG

➢ BDL: - Below Detection Limit.

For MITCON Consultancy & Engineering Services Ltd.

Checked By

(Mrs.Kadambari Deshmukh)

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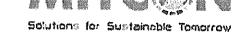
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# Quarter October- November- December 2022

### **Test Report**

Report Number: MITCON/2022-23/November/11284

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11284/8
M/s MOIL LIMITED,  Satak Manganese Mines L1=8.680 Ha Site, Dist:- Nagpur (M.S).	Date of Monitoring	11/11/2022
	Type of Monitoring	Ambient Air
	Test Location	Near Pit no. 2
	Monitoring Done By	MITCON
	Date of Analysis	14/11/2022

#### **OBSERVATION**

Ambient Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
30	30	19	45	1440	0.0	8.3 km/ hrs.(Avg)	E

1000000	10 marganete (20	06(50/909/900)	F		
Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO₂)	μg/M³	12.6	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO ₂ )	μg/M³	17.0	≤80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	66.8	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 micron	μg/M³	34.4	≤ 60	USEPA 40 CFRCH
05	Ozone (O ₃ )	μg/M³	4.3	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤ 1,0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M³	0.414	≤ 2.0	IS 5182
08	Ammonia (NH₃)	μg/M ³	4.6	≤ 400	APHA - 401
09	Benzene (C ₆ H ₆ )	μg/M ³	BDL	≤ 5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M ³	BDL	<u>33</u> ≤1	***************************************
11	Arsenic (As)	ng/ M³	BDL	<u> </u>	IS 5182
12	Nickel (Ni)	ng/M³	BDL	≤ 20	APHA - AAS APHA - AAS

**REMARKS/OBSERVATIONS:** 

➤ All above results are within National Ambient Air Charles Standards.
 ➤ BDL: - Below Detection Limit.

For MITCON Consultancy & Engineering Services

Checked By

(Mrs.Kadambari Deshmukh)

Authorized Signatory Dr. Sandeep Jadhav Senior vice president

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# Quarter October- November- December 2022

#### **Test Report**

Report Number: MITCON/2022-23/November/11284

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022-23/November/11284/9
M/s MOIL LIMITED,	Date of Monitoring	11/11/2022
Satak Manganese Mines L1=8.680 Ha Site, Dist:-	Type of Monitoring	Ambient Noise
Nagpur (M.S).	Monitoring Done By	MITCON

#### READINGS

Sr. No.	Took !	Vo.46 1 41				
	Test Location		Unit		Readings	
01	Near Bankuri Road		dB(A)		**************************************	
02	Near Beldongri road			39	55.9	
03	22 10 10 10 10 10 10 10 10 10 10 10 10 10		dB(A)		49.0	
10.00000000	Near Satak Road		dB(A)	0.871.00	51.3	
04	Near Pit no. 2	value in destructions and destruction of the second		150 to 100 to	31.3	
1. (This limes forms)	200 March 200 Ma	88 ( 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	dB(A)		64.2	

## REMARKS / OBSERVATIONS:

Limits: The Maharashtra Pollution Control Board has prescribe 75 dB (A) as an upper limit of Noise Level during daytime.

For MITCON Consultancy & Engineering Services Ltd.

(Mrs. Kadambari Deshmukh)



Dr. Sandeep Jadhav (Senior Vice President)

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## Quarter October- November- December 2022

#### **Test Report**

Report Number: MITCON/2022-23/November/11284

Issue Date:21/11/2022

Client's Name & Address	Sample Details		
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11284/1	
	Name of Sample	waste Water	
Satak Manganese Mines L1=8.680 Ha Site, Dist:- Nagpur (M.S)	Sample Details	Pit No. 2	
	Container Details	1 lit plastic can	
	Sample Collected By	MITCON	
	Method of sampling	IS 3025(Part I)	
	Sample Collected On	11/11/2022	
	Date of Sample Receipt	14/11/2022	
	Analysis Start Date	14/11/2022	
_	End Date of Analysis	21/11/2022	

**ANALYSIS RESULTS** 

				<u> </u>	
Sr.	Characteristic	Results	Unit	Permissible	Test Methods
No.		nyi . Shelish ar		Limit as per Consent	Militaria de la Militaria de l
		44 . L. 185		Condition	
01	pH at 250€	7.12	<b>.</b>	5.5 to 9.0	APHA 4500 H+ A, 4-95, 23rd Ed. 2017
02	Dissolved Oxygen	2.8	mg/l	# some V	IS: 3025 Part 38
03	Chemical Oxygen Demand	71.0	mg/l	250	APHA 5220 C,5-20 to 5-21 23rd Ed 2017
√04	Biochemical Oxygen	21.3	mg/l	30	IS :3025 (Part 44)
05	Total suspended solids	32.8	mg/l	100	APHA 2540 D,2-70 to 2-71 23rd Ed 2017
06	Oil and grease	<5	mg/l	10	APHA 5520 B,5-42 to 5-43 23rd Ed 2017
07	Manganese	0.38	mg/l	2	APHA 3111 B,3-18 to 3-21 23rd Ed 2017

**REMARKS / OBSERVATIONS:** 

For MITCON Consultancy & Engineering Services Ltd.

(Mrs. Kadambari Deshmukh)

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## Quarter October- November- December 2027

#### **Test Report**

Report Number: MITCON/2022-23/November/11284

Issue Date:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11284/2		
	Name of Sample	Waste water		
Satak Manganese Mines L1=8.680 Ha Site, Dist:-	Sample Details	Pit No. 4		
Nagpur (M.S)	Container Details	1 lit plastic can		
	Sample Collected By	MITCON		
	Method of sampling	IS 3025(Part I)		
	Sample Collected On	11/11/2022		
	Date of Sample Receipt	14/11/2022		
•	Analysis Start Date	14/11/2022		
	End Date of Analysis	21/11/2022		

**ANALYSIS RESULTS** 

Sr. No.	Characteristic	Results	Unit	Permissible Limit as per Consent Condition	Test Methods
01	pH at 25°C	7.19	\$ <b>-</b> 4	5.5 to 9.0	APHA 4500 H+ A, 4-95, 23rd Ed. 2017
02	Dissolved Oxygen	2.9	mg/l		IS: 3025 Part 38
03	Chemical Oxygen Demand	54.3	mg/l	250	APHA 5220 C,5-20 to 5-21 23rd Ed 2017
04	Biochemical Oxygen	19.5	mg/l	30	IS :3025 (Part 44)
05	Total suspended solids	33.4	mg/l	100	APHA 2540 D,2-70 to 2-71 23rd Ed 2017
06	Oil and grease	<5	mg/I	10	APHA 5520 B,5-42 to 5-43 23rd Ed 2017
07	Manganese	0.31	mg/l	2	APHA 3111 B,3-18 to 3-21 23 rd Ed 2017

**REMARKS / OBSERVATIONS:** 

For MITCON Consultancy & Engineering Services Ltd.

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Checked By

(Mrs. Kadambari Deshmukh)



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## Quarter October- November- December 2022

## Test Report

Report Number: MITCON/2022-23/November/11284

Issue Date:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11284/3		
•	Name of Sample	Ground water		
Satak Manganese Mines L1=8.680 Ha Site, Dist:-	Sample Details	Mine Bore well		
Nagpur (M.S)	Container Details	1 lit plastic can .		
	Sample Collected By	MITCON		
	Method of sampling	IS 3025(Part I)		
	Sample Collected On	11/11/2022		
	Date of Sample Receipt	14/11/2022		
	Analysis Start Date	14/11/2022		
	End Date of Analysis	21/11/2022		

#### **ANALYSIS RESULTS**

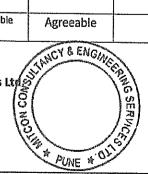
Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.17	egiglise e sig	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	5.6	mg/l	N.S	APHA 2540 D,2-70 to 2-71 23rd ed 2017
03	Turbidity	<1	NTU	≤1	IS: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	312.2	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	154.05	mg/l	≤200	APHA 2340 C/2-48 to 2-50,23rd Ed 2017
: 06 : :	Calcium as Cà	35.12	mg/l	≤75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017
07	Magnesium as Mg	12.52	mg/l	≤30	APHA 3500 Mg B, 3-86 , 23rd Ed. 2017
08	Mangnese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as Caco3	148.25	Mg/I	<200	APHA 2320 B ,2-37 to 2-39 23rd Ed 2017
10	Fluoride as F	< 0.1	Mg/l	<1	APHA 4500 F- D 4-90 to 4-9123rd Ed 2017
11	Chloride as Cl	56.25	mg/l	≤ 250	APHA 4500 CI, 8, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	12.52	mg/l	≤ 200	APHA 4500 –SO4 – E, 4-199 TO 4-200, 23rd Ed 2017
13	Iron as Fe	< 0.05	mg/l	≤0,3	APHA 3111 B, 3-18 TO 3-21, 23rd Ed 2017 (using AAS)
14	Nitrate as NO3	7.52	mg/l	≤45	APHA 4500 NO3-B,4-127 23rd Ed 2017
15	E.coli	Absent	MPN/100ml	Absent	IS: 1622 (R.A ; 2014)
16	Total Coliform	Absent	MPN/100ml	Absent	IS: 1622 (R.A : 2014)
17	colour	<5	HZ	≤5	IS: 3025 Part-4 (Rev.1, RA 2012)
18	adour	Aggreable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)
	l		L		

**REMARKS / OBSERVATIONS:** 

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## Quarter October- November- December 2022

#### Test Report

Report Number: MITCON/2022-23/November/11284

Issue Date:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11284/4		
	Name of Sample	Waste water (Mine Discharge Water)		
	Sample Details	Mine Discharge Water		
Satak Manganese Mines L1=8.680 Ha Site, Dist:-	Container Details	1 lit plastic can		
Nagpur (M.S)	Sample Collected By	MITCON		
	Method of sampling	IS 3025(Part I)		
	Sample Collected On	11/11/2022		
	Date of Sample Receipt	14/11/2022		
	Analysis Start Date	14/11/2022		
	End Date of Analysis	21/11/2022		

**ANALYSIS RESULTS** 

			1		
Sr.	Characteristic	Results	Unit	Permissible	Test Methods
No.				Limit as per	
: 2017/201	en la	: 4(6:3): st	10.000.000.000.000	Consent Condition	April 200 in 1990
01	pH at 25°C	7.18		5.5 to 9.0	APHA 4500 H+ A, 4-95, 23rd Ed. 2017
02	Dissolved Oxygen	3,6	mg/l	<del>.</del> %	IS: 3025 Part 38
03	Chemical Oxygen Demand	65,3	mg/l	250	APHA 5220 C,5-20 to 5-21 23 rd Ed 2017
04	Biochemical Oxygen	20.3	mg/l	30	IS :3025 (Part 44)
05	Total suspended solids	29.8	mg/l	100	APHA 2540 D,2-70 to 2-71 23rd Ed 2017
06	Oil and grease	<5	mg/l	10	APHA 5520 B,5-42 to 5-43 23rd Ed 2017
07	Manganese	0.32	mg/I	2	APHA 3111 B,3-18 to 3-21 23rd Ed 2017

**REMARKS / OBSERVATIONS:** 

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## **Quarter October- November- December 2022**

#### **Test Report**

Report Number: MITCON/2022-23/November/11285

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11285/5
M/s MOIL LIMITED,	Date of Monitoring	11/11/2022
	Type of Monitoring	Ambient Air
Satak Manganese Mines L2=16.840Ha Site, Dist:-	Test Location	Near Mine Pit
Nagpur (M.S)	Monitoring Done By	MITCON
	Date of Analysis	14/11/2022

#### **OBSERVATION**

Ambient Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
30	30	19	45	1440	0.0	8.3 km/	Е
- Annual Control of the Control of t		A California de la composição		A constant of the	e e e	hrs.(Avg)	r0

#### RESULT

	gandelings (and all the control of t	27.5 (15/ase) 2.15.			Rible Control of the
Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO₂)	µg/M³	11.8	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO ₂ )	μg/M³	17.2	≥ 80	IS 5182(Part 6)
03 🤎	Particulate Matter PM10 micron	μg/M³	69.2	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 micron	μg/M³	33.4	∉_≤60	USEPA 40 CFRCH
05	Ozone (O ₃ )	μg/M³	3.6	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M³	0.326	≤2.0	IS 5182
08	Ammonia (NH ₃ )	μg/M³	4.0	≤ 400	APHA - 401
09	Benzene (C ₆ H ₆ )	μg/M³	BDL	≤5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M³	BDL	<u>≤1</u>	IS 5182
11	Arsenic (As)	ng/M³	BDL	≤6	APHA - AAS
12	Nickel (Ni)	ng/ M³	BDL	≤ 20	APHA - AAS

#### **REMARKS/OBSERVATIONS:**

> All above results are within National Ambient Air Quality standards.

➤ BDL: - Below Detection Limit.

For MITCON Consultancy & Engineering Services Cd.

Checked By

(Mrs.Kadambari Deshmukh)

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#### **Test Report**

Report Number: MITCON/2022-23/November/11285

Issue Date:21/11/2022

Cilent's Name & Address	Reference No.	MITCON/2022- 23/November/11285/6
M/s MOIL LIMITED,	Date of Monitoring	11/11/2022
	Type of Monitoring	Ambient Air
Satak Manganese Mines L2=16.840Ha Site, Dist:-	Test Location	Near East Boundary Wall
Nagpur (M.S).	Monitoring Done By	MITCON
	Date of Analysis	14/11/2022

#### **OBSERVATION**

Ambient Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
30	30	19	45	1440	0.0	8.3 km/ hrs.(Avg)	E

		j. 5,50,00	261247.1 m.c		
Sr. No.	Description	Unit	Results	CPCB standard	Test Method
. 01	Sulphur Dioxide (SO₂)	μg/M³	10.8	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO2)	μg/M³	16.3	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	59.2	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 mlcron	μg/M³	26.4	≤ 60	USEPA 40 CFRCH
05	Ozone (O₃)	μg/M³	3.3	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M³	0.270	≤ 2.0	IS 5182
08	Ammonia (NH₃)	μg/M³	3.6	≤ 400	APHA - 401
09	Benzene (C ₆ H ₆ )	μg/M³	BDL	≤5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M ³	BDL	<u>33</u> ≤1	
11	Arsenic (As)	ng/ M³	BDL	≤6 ≤6	IS 5182
12	Nickel (Ni)	ng/M³	BDL	≤ 20	APHA - AAS APHA - AAS

#### **REMARKS/OBSERVATIONS:**

> All above results are within National Ambient Air Quality standards. JUTANCY & ENG

> BDL: - Below Detection Limit.

For MITCON Consultancy & Engineering Service

KUDEHU Checked By-

(Mrs.Kadambari Deshmukh)

**Authorized Signatory** Dr. Sandgep Jadhav Senior vice president

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## Quarter October- November- December 2022

#### **Test Report**

Report Number: MITCON/2022-23/November/11285

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11285/7
M/s MOIL LIMITED,	Date of Monitoring	11/11/2022
	Type of Monitoring	Ambient Air
Satak Manganese Mines L2=16.840Ha Site, Dist:-	Test Location	Near west Boundary Wall
Nagpur (M.S).	Monitoring Done By	MITCON
	Date of Analysis	14/11/2022

#### **OBSERVATION**

Ambient Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
30	30	19	45	1440	0.0	8.3 km/ hrs.(Avg)	E

#### RESULT

n beloka A. Sintak pilina		RESULT			
Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO₂)	μg/M³	12.0	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO ₂ )	μg/M³	15.6	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM10 micros	μg/M³	56.8	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM _{2.5 micron}	μg/M³	24.4	≤ 60	USEPA 40 CFRCH
05	Ozone (O ₃ )	μg/M³	3.2	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤1,0	APHA - AAS
. 07	Carbon Monoxide (CO)	mg/M³	0.294	≤ 2.0	IS 5182
08	Ammonia (NH ₃ )	μg/M³	3.4	≤ 400	APHA - 401
09	Benzene (C ₆ H ₆ )	μg/M³	BDL	≤5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/M³	BDL	≤1	IS 5182
11	Arsenic (As)	ng/ M³	BDL	<u> </u>	APHA - AAS
12	Nickel (NI)	ng/ M³	BDL	≤ 20	APHA - AAS

#### **REMARKS/OBSERVATIONS:**

- > All above results are within National Ambient Air Quality standards.
- > BDL: Below Detection Limit.

For MITCON Consultancy & Engineering Services 1

Checked By

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## Quarter October- November- December 2022

#### **Test Report**

Report Number: MITCON/2022-23/November/11285

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11285/8
M/s MOIL LIMITED,	Date of Monitoring	11/11/2022
Satak Manganese Mines L2=16.840Ha Site, Dist:- Nagpur (M.S).	Type of Monitoring	Ambient Air
	Test Location	South Boundary wall
	Monitoring Done By	MITCON
	Date of Analysis	14/11/2022

#### **OBSERVATION**

Amblent Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
30	30	19	45	1440	0.0	8.3 km/ hrs.(Avg)	ing <b>E</b>

	timasanda Halalida A	North Control	544A		21.20 A G 32.02 Teles To 1961 A 1971
Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO₂)	μg/M³	11.4	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO ₂ )	μg/M³	15.0	≤80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	54.6	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM _{2.5 micron}	µg/M³	22.7	≤ 60	USEPA 40 CFRCH
05	Ozone (O ₃ )	μg/M³	3.1	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤1.0	APHA-AAS
07	Carbon Monoxide (CO)	mg/M ³	0.294	≤ 2.0	IS 5182
08	Ammonia (NH₃)	μg/M³	3.3	≤ 400	APHA - 401
09	Benzene (C ₆ H ₆ )	μg/M ³	BDL	<u></u>	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/M³	BDL	 ≤1	
11	Arsenic (As)	ng/M ³	BDL		IS 5182
12	Nickel (Ni)	ng/ M ³	BDL	≤ 6 ≤ 20	APHA - AAS APHA - AAS

#### **REMARKS/OBSERVATIONS:**

> All above results are within National Ambient An Quality standards.

➢ BDL: - Below Detection Limit.

For MITCON Consultancy & Engineering Service

Checked By (Mrs.Kadambari Deshmukh)

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Authorized Signatory Dr. Sandeep Jadhav Senior vice president

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## Quarter October- November- December 2022

#### **Test Report**

Report Number: MITCON/2022-23/November/11285

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022-23/November/11285/9
M/s MOIL LIMITED,	Date of Monitoring	11/11/2022
	Type of Monitoring	Ambient Noise
Satak Manganese Mines L2=16.840Ha Site, Dist:- Nagpur (M.S).	Monitoring Done By	MITCON

#### READINGS

Sr. No.	Test Location	Unit	Readings
01	Near Mine Pit	dB(A)	56.7
02	Near East Boundary Wall	dB(A)	54.9
	Near West Boundary Wall	dB(A)	53.2
04	Near South Boundary Wall	dB(A)	59.0
o agotterasia	iveal South Boulluary Wall	dB(A)	59.0

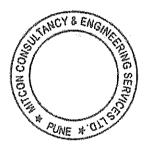
#### **REMARKS / OBSERVATIONS:**

Limits: The Maharashtra Pollution Control Board has prescribe 75 dB (A) as an upper limit of Noise Level during daytime.

For MITCON Consultancy & Engineering Services Ltd.

Checked By

(Mrs. Kadambari Deshmukh)



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## **Quarter October- November- December 2022**

#### Test Report

Report Number: MITCON/2022-23/November/11285

Issue Date:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11285/1		
	Name of Sample	waste Water (Mine Discharge Water)		
Satak Manganese Mines L2=16.840Ha Site, Dist:-	Sample Details	Mine Discharge Water		
Nagpur (M.S)	Container Details	1 lit plastic can		
	Sample Collected By	MITCON		
	Method of sampling	IS 3025(Part I)		
	Sample Collected On	11/11/2022		
	Date of Sample Receipt	14/11/2022		
	Analysis Start Date	14/11/2022		
	End Date of Analysis	21/11/2022		

**ANALYSIS RESULTS** 

Sr. No.	Characteristic	Results	Unit	Permissible Limit as per Consent	Test Methods
	Six Browns 12. Harden State of the State of	Jan 1944 – wi	en akiny by olientes	Condition	Secretary and the contract of
01	pH at 25°C	7.19		5.5 to 9.0	APHA 4500 H+ A, 4-95, 23rd Ed. 2017
02	Dissolved Oxygen	3.4	mg/l		IS: 3025 Part 38
03	Chemical Oxygen Demand	55 <i>.</i> 7	mg/l	250	APHA 5220 C,5-20 to 5-21 23rd Ed 2017
04	Biochemical Oxygen	19.5	mg/l	30	IS :3025 (Part 44)
05	Total suspended solids	25.8	mg/l	100	APHA 2540 D,2-70 to 2-71 23rd Ed 2017
06	Oil and grease	<5	mg/i	10	APHA 5520 B,5-42 to 5-43 23rd Ed 2017
07	Manganese	0.41	mg/l	2	APHA 3111 B,3-18 to 3-21 23rd Ed 2017

REMARKS / OBSERVATIONS:

For MITCON Consultancy & Engineering Services Ltd.

checked By

(Mrs. Kadambari Deshmukh)



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## Quarter October- November- December 2022

#### Test Report

Report Number: MITCON/2022-23/November/11285

Issue Date:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11285/2		
Satak Manganese Mines L2=16.840Ha Site, Dist:-	Name of Sample	Waste water		
Nagpur (M.S)	Sample Details	Mine Pit Water		
	Container Details	1 lit plastic can		
	Sample Collected By	MITCON		
	Method of sampling	IS 3025(Part I)		
	Sample Collected On	11/11/2022		
	Date of Sample Receipt	14/11/2022		
	Analysis Start Date	14/11/2022		
	End Date of Analysis	21/11/2022		

**ANALYSIS RESULTS** 

Sr. No.	Characteristic Results Unit		Permissible Limit as per Consent Condition	Test Methods	
01	pH at 25°C	7.29	3.00 - 7.00	5.5 to 9.0	APHA 4500 H+ A, 4-95, 23rd Ed. 2017
02	Dissolved Oxygen	3.4	mg/l	720775 (28)	IS: 3025 Part 38
03	Chemical Oxygen Demand	65.4	mg/l	250	APHA 5220 C,5-20 to 5-21 23 rd Ed 2017
04	Biochemical Oxygen	21.3	mg/l	30	IS :3025 (Part 44)
05	Total suspended solids	29.5	mg/l	100	APHA 2540 D,2-70 to 2-71 23 rd Ed 2017
06	Oll and grease	<5	mg/l	10	APHA 5520 B,5-42 to 5-43 23rd Ed 2017
07	Manganese	0.47	mg/l	2	APHA 3111 B,3-18 to 3-21 23 rd Ed 2017

**REMARKS / OBSERVATIONS:** 

For MITCON Consultancy & Engineering Services Ltd.

Koneullh Checked By

(Mrs. Kadambari Deshmukh)



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Environment Management and Engineering Division (Environmental Laboratory)

Agriculture College Campus, Next to DIC office, Shivaji Nagar, Pune. 411 005, Ph. No. 66289405/400, email: emelab@mitconindia.com

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## **Quarter October- November- December 2022**

### Test Report

Report Number: MITCON/2022-23/November/11285

Issue Date:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11285/3		
	Name of Sample	Ground water		
Satak Manganese Mines L2=16.840Ha Site, Dist:-	Sample Details	Hiwra Village Bore well		
Nagpur (M.S)	Container Details	1 lit plastic can		
	Sample Collected By	MITCON		
	Method of sampling	IS 3025(Part I)		
	Sample Collected On	11/11/2022		
	Date of Sample Receipt	14/11/2022		
	Analysis Start Date	14/11/2022		
	End Date of Analysis	21/11/2022		

#### **ANALYSIS RESULTS**

Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.30	1987 (Con. 1	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	6.0	mg/l	N.S	APHA 2540 D,2-70 to 2-71 23rd ed 2017
03	Turbidity	<1	NTU	≤1	IS: 3025 Part-10 (R.A: 2002)
.04	Total Dissolved Solids	267.8	mg/i	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	132.25	mg/l	≤200	APHA 2340 C ,2-48 to 2-50,23rd Ed 2017
06	Cálcium as Cá	54.25	mg/l	≤ 75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017
07	Magnesium as Mg	23.25	mg/l	≤30	APHA 3500 Mg B, 3-86, 23rd Ed. 2017
80	Mangnese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as Caco3	128.25	Mg/I	<200	APHA 2320 B ,2-37 to 2-39 23rd Ed 2017
10	Fluoride as F	< 0.1	Mg/I	<1	APHA 4500 F- D 4-90 to 4-9123rd Ed 2017
11	Chloride as Cl	22.52	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	20.25	mg/l	≤ 200	APHA 4500 -SO4E, 4-199 TO 4-200, 23rd Ed 2017
13	Iron as Fe	< 0.05	mg/l	≤ 0.3	APHA 3111 B, 3-18 TO 3-21, 23rd Ed 2017 (using AAS)
14	Nitrate as NO3	8.45	mg/l	≤45	APHA 4500 NO3-B,4-127 23rd Ed 2017
15	E.coli	Absent	MPN/100ml	Absent	IS: 1622 (R.A : 2014)
16	Total Coliform	Absent	MPN/100mi	Absent	IS: 1622 (R.A.: 2014)
17	colour	<5	HZ	≤5	IS: 3025 Part-4 (Rev.1, RA 2012)
18	odour	Aggreable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)
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**REMARKS / OBSERVATIONS:** 

For MITCON Consultancy & Engineering Services

Checked By

(Mrs. Kadambari Deshmukh)

Authorized Signatory (Dr. Sandeep Jadhav) Senior Vice President

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## Quarter October- November- December 2022

#### **Test Report**

Report Number: MITCON/2022-23/November/11285

Issue Date:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11285/4		
	Name of Sample	Ground Water		
Satak Manganese Mines L2=16.840Ha Site, Dist:-	Sample Details	Bankuri Village Bore well		
Nagpur (M.S)	Container Details	1 lit plastic can		
	Sample Collected By	MITCON		
	Method of sampling	IS 3025(Part I)		
	Sample Collected On	11/11/2022		
	Date of Sample Receipt	14/11/2022		
	Analysis Start Date	14/11/2022		
	End Date of Analysis	21/11/2022		

#### **ANALYSIS RESULTS**

Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.23	iRiaouriki€.	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	6.5	mg/l	N.S	APHA 2540 D,2-70 to 2-71 23rd ed 2017
03	Turbidity	<1	NTU	≤1	IS: 3025 Part-10 (R.A : 2002)
D4	Total Dissolved Solids	289.8	mg/l	≤500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	145.25	mg/i	≤200	APHA 2340 C,2-48 to 2-50,23rd Ed 2017
06	Calcium as Ca	54.25	mg/l	≤75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017
07	Magnesium as Mg	23.25	mg/l	≤30	APHA 3500 Mg B, 3-86 , 23rd Ed. 2017
08	Mangnese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as Caco3	132.25	Mg/I	<200	APHA 2320 B ,2-37 to 2-39 23rd Ed 2017
10	Fluoride as F	< 0.1	Mg/I	<1	APHA 4500 F- D 4-90 to 4-9123rd Ed 2017
11	Chloride as Cl	50.25	mg/l	°≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	21.25	mg/l	≤ 200	APHA 4500 –SO4E, 4-199 TO 4-200, 23rd Ed 2017
13	Iron as Fe	< 0.05	mg/l	≤0.3	APHA 3111 B, 3-18 TO 3-21, 23rd Ed 2017 (using AAS)
14	Nitrate as NO3	5.52	mg/l	≤45	APHA 4500 NO3-B,4-127 23rd Ed 2017
15	E.coli	Absent	MPN/100ml	Absent	IS: 1622 (R.A : 2014)
16	Total Coliform	Absent	MPN/100ml	Absent	IS: 1622 (R.A : 2014)
17	colour	<5	HZ	≤5	IS: 3025 Part-4 (Rev.1, RA 2012)
18	odour	Aggreable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)
REMAR	KS / OBSERVATION:	<b>5</b> ;	SULTANCY	ENGINE	

For MITCON Consultancy & Engineering Services Ltd.

(Mrs. Kadambari Deshmukh)

Authorized Signatory (Dr.Sandeep Jadhav) Senjor Vice President

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