

Format No. EME/LAB/Format 7.8/TR

Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3078

Issue Date:09/03/2023

Client's Name & Address M/s MOIL LIMITED,  Tirodi Manganese Mines L3=4.419 Ha Site, Dist:- Balaghat (M.P)	Reference No.	MITCON/2022-23/March/3078/2
	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Air
	Test Location	Near Pit Office
	Monitoring Done By	MITCON
	Date of Analysis	02/03/2023

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
32	32	18	12	1440	0.0	6.0 km/ hrs.(Avg)	SSE

RESULT

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	µg/M <sup>3</sup>	12.8	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	µg/M <sup>3</sup>	16.0	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM <sub>10</sub> micron	µg/M <sup>3</sup>	63.8	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM <sub>2.5</sub> micron	µg/M <sup>3</sup>	34.7	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	µg/M <sup>3</sup>	3.9	≤ 100	IS 5182
06	Lead (Pb)	µg/M <sup>3</sup>	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M <sup>3</sup>	0.326	≤ 2.0	IS 5182
08	Ammonia (NH <sub>3</sub> )	µg/M <sup>3</sup>	4.1	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/M <sup>3</sup>	BDL	≤ 5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M <sup>3</sup>	BDL	≤ 1	IS 5182
11	Arsenic (As)	ng/ M <sup>3</sup>	BDL	≤ 6	APHA - AAS
12	Nickel (Ni)	ng/ M <sup>3</sup>	BDL	≤ 20	APHA - AAS

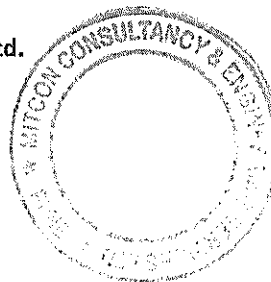
REMARKS/OBSERVATIONS:

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

For MITCON Consultancy &amp; Engineering Services Ltd.

*Kadambari*  
Checked By

(Mrs.Kadambari Deshmukh)



*Dr. Sandeep*  
Authorized Signatory

Dr. Sandeep Jadhav  
Senior vice president

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Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3078

Issue Date:09/03/2023

Client's Name & Address	Reference No.	MITCON/2022-23/March/3078/3
M/s MOIL LIMITED,  Tirodi Manganese Mines L3=4.419 Ha Site, Dist:- Balaghat (M.P).	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Noise
	Monitoring Done By	MITCON

READINGS

Sr. No.	Test Location	Unit	Readings
01	Near Pit Office	dB(A)	63.4

**REMARKS / OBSERVATIONS:**

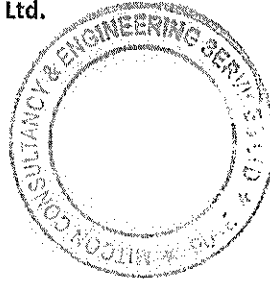
Limits: The Madhya Pradesh Pollution Control Board has prescribe 75 dB (A) as an upper limit of Noise Level during daytime.

For MITCON Consultancy & Engineering Services Ltd.



Checked By

(Mrs. Kadambari Deshmukh)





Authorized Signatory

Dr. Sandeep Jadhav  
(Senior Vice President)

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Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3078

Issue Date:09/03/2023

Client's Name & Address	Sample Details	
M/s MOIL LIMITED,  Tirodi Manganese Mines L3=4.419 Ha Site, Dist:- Balaghat (M.P)	Sample Code	MITCON/2022-23/March/3078/1
	Name of Sample	Ground Water
	Sample Details	Near Pit office Water supply
	Container Details	1 lit plastic can
	Sample Collected By	MITCON
	Method of sampling	IS 3025(Part I)
	Sample Collected On	28/02/2023
	Date of Sample Receipt	02/03/2023
	Analysis Start Date	02/03/2023
	End Date of Analysis	09/03/2023

ANALYSIS RESULTS

Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.20	-	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	< 5.0	mg/l	N.S	APHA 2540 D, 2-70 to 2-71 23rd ed 2017
03	Turbidity	< 1.0	NTU	≤ 1	IS: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	247.8	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO <sub>3</sub>	125.25	mg/l	≤ 200	APHA 2340 C, 2-48 to 2-50, 23rd Ed 2017
06	Calcium as Ca	51.20	mg/l	≤ 75	APHA 3500 Ca B, 3-69 to 3-70, 23rd Ed. 2017
07	Magnesium as Mg	23.12	mg/l	≤ 30	APHA 3500 Mg B, 3-86, 23rd Ed. 2017
08	Manganese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as CaCO <sub>3</sub>	111.24	Mg/l	< 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 4-91 23rd Ed 2017
11	Chloride as Cl	52.32	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO <sub>4</sub>	18.34	mg/l	≤ 200	APHA 4500 -SO <sub>4</sub> - -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 NO <sub>3</sub>	3.34	mg/l	≤ 45	APHA 4500 NO <sub>3</sub> -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	Agreeable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

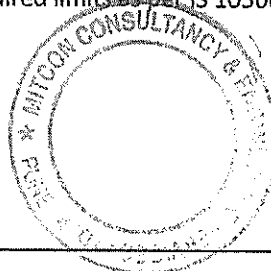
REMARKS / OBSERVATIONS:

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

For MITCON Consultancy &amp; Engineering Services Ltd.

Checked By

(Mrs. Kadambari Deshmukh)



Authorized Signatory

(Dr. Sandeep Jadhav)  
Senior Vice President

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Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3292

Issue Date:09/03/2023

Client's Name & Address	Reference No.	MITCON/2022-23/March/3292/3
M/s MOIL LIMITED,  Tirodi Manganese Mines L2=37.090 Ha Site, Dist:- Balaghat (M.P)	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Air
	Test Location	Near Sampling Room
	Monitoring Done By	MITCON
	Date of Analysis	02/03/2023

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
32	32	18	12	1440	0.0	6.0 km/ hrs.(Avg)	SSE

RESULT

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	µg/M <sup>3</sup>	11.8	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	µg/M <sup>3</sup>	15.6	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM <sub>10</sub> micron	µg/M <sup>3</sup>	61.5	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM <sub>2.5</sub> micron	µg/M <sup>3</sup>	29.6	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	µg/M <sup>3</sup>	3.5	≤ 100	IS 5182
06	Lead (Pb)	µg/M <sup>3</sup>	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M <sup>3</sup>	0.324	≤ 2.0	IS 5182
08	Ammonia (NH <sub>3</sub> )	µg/M <sup>3</sup>	3.8	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/M <sup>3</sup>	BDL	≤ 5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M <sup>3</sup>	BDL	≤ 1	IS 5182
11	Arsenic (As)	ng/ M <sup>3</sup>	BDL	≤ 6	APHA - AAS
12	Nickel (Ni)	ng/ M <sup>3</sup>	BDL	≤ 20	APHA - AAS

REMARKS/OBSERVATIONS:

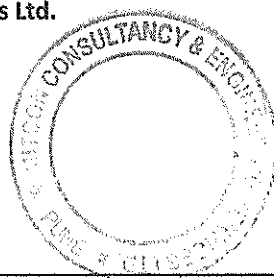
- > All above results are within National Ambient Air Quality standards.
- > BDL: - Below Detection Limit.

For MITCON Consultancy &amp; Engineering Services Ltd.



Checked By

(Mrs.Kadambari Deshmukh)




Authorized Signatory

Dr. Sandeep Jadhav

Senior vice president

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Quarter January- February- March 2023

**Test Report**

Report Number : MITCON/2022-23/March/3292

Issue Date:09/03/2023

Client's Name & Address	Reference No.	MITCON/2022-23/March/3292/4
M/s MOIL LIMITED, Tirodi Manganese Mines L2=37.090 Ha Site, Dist:- Balaghat (M.P).	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Air
	Test Location	Near Dumping area
	Monitoring Done By	MITCON
	Date of Analysis	02/03/2023

**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
32	32	18	12	1440	0.0	6.0 km/ hrs.(Avg)	SSE

**RESULT**

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	µg/M <sup>3</sup>	12.6	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	µg/M <sup>3</sup>	17.9	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM <sub>10</sub> micron	µg/M <sup>3</sup>	63.7	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM <sub>2.5</sub> micron	µg/M <sup>3</sup>	21.5	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	µg/M <sup>3</sup>	3.8	≤ 100	IS 5182
06	Lead (Pb)	µg/M <sup>3</sup>	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M <sup>3</sup>	0.338	≤ 2.0	IS 5182
08	Ammonia (NH <sub>3</sub> )	µg/M <sup>3</sup>	4.0	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/M <sup>3</sup>	BDL	≤ 5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M <sup>3</sup>	BDL	≤ 1	IS 5182
11	Arsenic (As)	ng/ M <sup>3</sup>	BDL	≤ 6	APHA - AAS
12	Nickel (Ni)	ng/ M <sup>3</sup>	BDL	≤ 20	APHA - AAS

**REMARKS/OBSERVATIONS:**

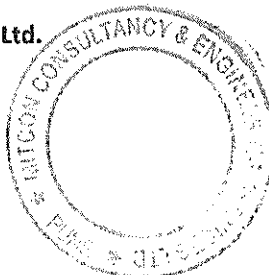
- All above results are within National Ambient Air Quality standards.
- BDL: - Below Detection Limit.

For MITCON Consultancy &amp; Engineering Services Ltd.



Checked By

(Mrs.Kadambari Deshmukh)




Authorized Signatory

Dr. Sandeep Jadhav

Senior vice president

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Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3292

Issue Date:09/03/2023

Client's Name & Address	Reference No.	MITCON/2022-23/March/3292/5
M/s MOIL LIMITED,  Tirodi Manganese Mines L2=37.090 Ha Site, Dist:- Balaghat (M.P).	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Noise
	Monitoring Done By	MITCON

READINGS

Sr. No.	Test Location	Unit	Readings
01	Near Sampling Room	dB(A)	59.9
02	Near Dumping Area	dB(A)	61.3

**REMARKS / OBSERVATIONS:**

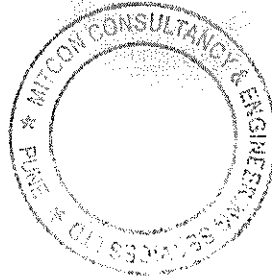
**Limits:**

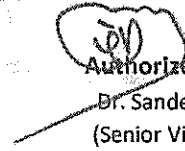
The Madhya Pradesh Pollution Control Board has prescribe 75 dB (A) as an upper limit of Noise Level during daytime.

For MITCON Consultancy & Engineering Services Ltd.

  
Checked By

(Mrs. Kadambari Deshmukh)



  
Authorized Signatory  
Dr. Sandeep Jadhav  
(Senior Vice President)

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Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3292

Issue Date:09/03/2023

Client's Name & Address	Sample Details	
M/s MOIL LIMITED,  Tirodi Manganese Mines L2=37.090 Ha Site, Dist:- Balaghat (M.P)	Sample Code	MITCON/2022-23/March/3292/1
	Name of Sample	Ground Water
	Sample Details	Near Sampling Room Water supply
	Container Details	1 lit plastic can
	Sample Collected By	MITCON
	Method of sampling	IS 3025(Part I)
	Sample Collected On	28/02/2023
	Date of Sample Receipt	02/03/2023
	Analysis Start Date	02/03/2023
	End Date of Analysis	09/03/2023

**ANALYSIS RESULTS**

Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.10	-	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	< 5.0	mg/l	N.S	APHA 2540 D, 2-70 to 2-71 23rd ed 2017
03	Turbidity	< 1.0	NTU	≤ 1	IS: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	232.4	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	110.24	mg/l	≤ 200	APHA 2340 C, 2-48 to 2-50, 23rd Ed 2017
06	Calcium as Ca	32.14	mg/l	≤ 75	APHA 3500 Ca B, 3-69 to 3-70, 23rd Ed. 2017
07	Magnesium as Mg	15.24	mg/l	≤ 30	APHA 3500 Mg B, 3-86, 23rd Ed. 2017
08	Manganese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as CaCO3	91.14	Mg/l	< 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 4-91 23rd Ed 2017
11	Chloride as Cl	20.56	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	7.53	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	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	Agreeable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

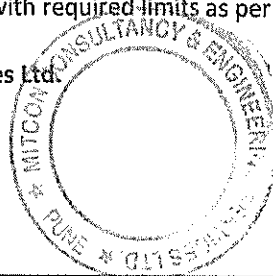
**REMARKS / OBSERVATIONS:**

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

For MITCON Consultancy &amp; Engineering Services Ltd.

Checked By

(Mrs. Kadambari Deshmukh)




Authorized Signatory

(Dr. Sandeep Jadhav)

Senior Vice President

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**Quarter January- February- March 2023**

Test Report

Report Number : MITCON/2022-23/March/3292

Issue Date:09/03/2023

Client's Name & Address	Sample Details	
M/s MOIL LIMITED,  Tirodi Manganese Mines L2=37.090 Ha Site, Dist:- Balaghat (M.P)	Sample Code	MITCON/2022-23/March/3292/2
	Name of Sample	Ground water
	Sample Details	Near Dumping area water supply
	Container Details	1 lit plastic can
	Sample Collected By	MITCON
	Method of sampling	IS 3025(Part I)
	Sample Collected On	28/02/2023
	Date of Sample Receipt	02/03/2023
	Analysis Start Date	02/03/2023
	End Date of Analysis	09/03/2023

**ANALYSIS RESULTS**

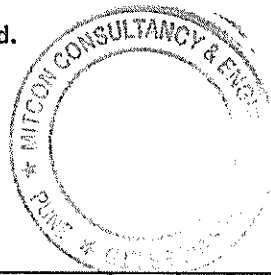
Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.14	-	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	<5.0	mg/l	N.S	APHA 2540 D, 2-70 to 2-71 23rd ed 2017
03	Turbidity	< 1.0	NTU	≤ 1	IS: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	290.6	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	140.25	mg/l	≤ 200	APHA 2340 C, 2-48 to 2-50, 23rd Ed 2017
06	Calcium as Ca	35.14	mg/l	≤ 75	APHA 3500 Ca B, 3-69 to 3-70, 23rd Ed. 2017
07	Magnesium as Mg	13.26	mg/l	≤ 30	APHA 3500 Mg B, 3-86, 23rd Ed. 2017
08	Manganese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as CaCO3	113.25	Mg/l	<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 4-91 23rd Ed 2017
11	Chloride as Cl	41.25	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	21.15	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	10.20	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	Agreeable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

**REMARKS / OBSERVATIONS:**

For MITCON Consultancy & Engineering Services Ltd.

Checked By

(Mrs. Kadambari Deshmukh)




Authorized Signatory

(Dr. Sandeep Jadhav)

Senior Vice President

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Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3291

Issue Date:09/03/2023

Client's Name & Address M/s MOIL LIMITED,  Tirodi Manganese Mines L1=254.593 Ha Site, Dist- Balaghat (M.P)	Reference No.	MITCON/2022-23/March/3291/5
	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Air
	Test Location	Near Mine Office
	Monitoring Done By	MITCON
	Date of Analysis	02/03/2023

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
32	32	18	12	1440	0.0	6.0 km/hrs.(Avg)	SSE

RESULT

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	µg/M <sup>3</sup>	13.0	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	µg/M <sup>3</sup>	17.2	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM <sub>10</sub> micron	µg/M <sup>3</sup>	60.1	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM <sub>2.5</sub> micron	µg/M <sup>3</sup>	29.8	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	µg/M <sup>3</sup>	3.8	≤ 100	IS 5182
06	Lead (Pb)	µg/M <sup>3</sup>	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M <sup>3</sup>	0.340	≤ 2.0	IS 5182
08	Ammonia (NH <sub>3</sub> )	µg/M <sup>3</sup>	4.0	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/M <sup>3</sup>	BDL	≤ 5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M <sup>3</sup>	BDL	≤ 1	IS 5182
11	Arsenic (As)	ng/ M <sup>3</sup>	BDL	≤ 6	APHA - AAS
12	Nickel (Ni)	ng/ M <sup>3</sup>	BDL	≤ 20	APHA - AAS

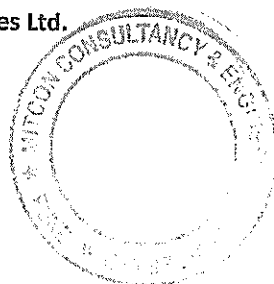
REMARKS/OBSERVATIONS:

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

For MITCON Consultancy &amp; Engineering Services Ltd.

*Kupesh*  
Checked By

(Mrs.Kadambari Deshmukh)



*Dr. Sandeep Jadhav*

Authorized Signatory

Dr. Sandeep Jadhav

Senior vice president

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Format No. EME/LAB/Format 7.8/TR

Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3291

Issue Date:09/03/2023

Client's Name & Address M/s MOIL LIMITED,  Tirodi Manganese Mines L1=254.593 Ha Site, Dist:- Balaghat (M.P).	Reference No.	MITCON/2022-23/March/3291/6
	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Air
	Test Location	Officer Colony
	Monitoring Done By	MITCON
	Date of Analysis	02/03/2023

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
32	32	18	12	1440	0.0	6.0 km/ hrs.(Avg)	SSE

RESULT

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	µg/M <sup>3</sup>	12.0	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	µg/M <sup>3</sup>	15.4	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM <sub>10</sub> micron	µg/M <sup>3</sup>	59.9	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM <sub>2.5</sub> micron	µg/M <sup>3</sup>	28.2	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	µg/M <sup>3</sup>	3.6	≤ 100	IS 5182
06	Lead (Pb)	µg/M <sup>3</sup>	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M <sup>3</sup>	0.310	≤ 2.0	IS 5182
08	Ammonia (NH <sub>3</sub> )	µg/M <sup>3</sup>	3.8	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/M <sup>3</sup>	BDL	≤ 5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M <sup>3</sup>	BDL	≤ 1	IS 5182
11	Arsenic (As)	ng/ M <sup>3</sup>	BDL	≤ 6	APHA - AAS
12	Nickel (Ni)	ng/ M <sup>3</sup>	BDL	≤ 20	APHA - AAS

REMARKS/OBSERVATIONS:

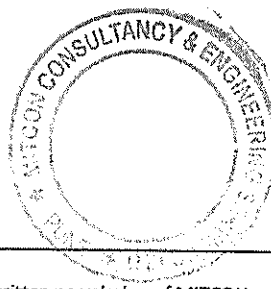
- > All above results are within National Ambient Air Quality standards.
- > BDL: - Below Detection Limit.

For MITCON Consultancy &amp; Engineering Services Ltd.



Checked By

(Mrs.Kadambari Deshmukh)




Authorized Signatory

Dr. Sandeep Jadhav

Senior vice president

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Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3291

Issue Date:09/03/2023

Client's Name & Address M/s MOIL LIMITED,  Tirodi Manganese Mines L1=254.593 Ha Site, Dist:- Balaghat (M.P).	Reference No.	MITCON/2022-23/March/3291/7
	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Air
	Test Location	Near Guest House
	Monitoring Done By	MITCON
	Date of Analysis	02/03/2023

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
32	32	18	12	1440	0.0	6.0 km/hrs.(Avg)	SSE

RESULT

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	µg/M <sup>3</sup>	11.2	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	µg/M <sup>3</sup>	14.6	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM <sub>10</sub> micron	µg/M <sup>3</sup>	53.6	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM <sub>2.5</sub> micron	µg/M <sup>3</sup>	25.6	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	µg/M <sup>3</sup>	3.0	≤ 100	IS 5182
06	Lead (Pb)	µg/M <sup>3</sup>	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M <sup>3</sup>	0.214	≤ 2.0	IS 5182
08	Ammonia (NH <sub>3</sub> )	µg/M <sup>3</sup>	3.2	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/M <sup>3</sup>	BDL	≤ 5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M <sup>3</sup>	BDL	≤ 1	IS 5182
11	Arsenic (As)	ng/ M <sup>3</sup>	BDL	≤ 6	APHA - AAS
12	Nickel (Ni)	ng/ M <sup>3</sup>	BDL	≤ 20	APHA - AAS

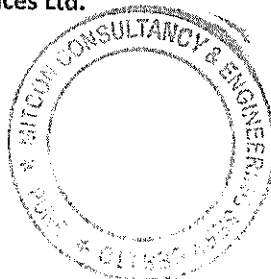
REMARKS/OBSERVATIONS:

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

For MITCON Consultancy &amp; Engineering Services Ltd.

*Kadambari*  
Checked By

(Mrs.Kadambari Deshmukh)



*Dr. Sandeep*  
Authorized Signatory

Dr. Sandeep Jadhav  
Senior vice president

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Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3291

Issue Date:09/03/2023

Client's Name & Address	Reference No.	MITCON/2022-23/March/3291/8
M/s MOIL LIMITED,  Tirodi Manganese Mines L1=254.593 Ha Site, Dist:- Balaghat (M.P).	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Air
	Test Location	Near Tirodi Village
	Monitoring Done By	MITCON
	Date of Analysis	02/03/2023

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
32	32	18	12	1440	0.0	6.0 km/ hrs.(Avg)	SSE

RESULT

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	µg/M <sup>3</sup>	11.8	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	µg/M <sup>3</sup>	15.0	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM <sub>10</sub> micron	µg/M <sup>3</sup>	55.8	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM <sub>2.5</sub> micron	µg/M <sup>3</sup>	25.0	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	µg/M <sup>3</sup>	3.2	≤ 100	IS 5182
06	Lead (Pb)	µg/M <sup>3</sup>	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M <sup>3</sup>	0.254	≤ 2.0	IS 5182
08	Ammonia (NH <sub>3</sub> )	µg/M <sup>3</sup>	3.4	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/M <sup>3</sup>	BDL	≤ 5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M <sup>3</sup>	BDL	≤ 1	IS 5182
11	Arsenic (As)	ng/ M <sup>3</sup>	BDL	≤ 6	APHA - AAS
12	Nickel (Ni)	ng/ M <sup>3</sup>	BDL	≤ 20	APHA - AAS

REMARKS/OBSERVATIONS:

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

For MITCON Consultancy &amp; Engineering Services Ltd



Checked By

(Mrs.Kadambari Deshmukh)




Authorized Signatory

Dr. Sandeep Jadhav

Senior vice president

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**Quarter January- February- March 2023**

Test Report

Report Number : MITCON/2022-23/March/3291

Issue Date:09/03/2023

Client's Name & Address	Reference No.	MITCON/2022-23/March/3291/9
M/s MOIL LIMITED,  Tirodi Manganese Mines L1=254.593 Ha Site, Dist:- Balaghat (M.P).	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Noise
	Monitoring Done By	MITCON

READINGS

Sr. No.	Test Location	Unit	Readings
01	Mine Office Premises	dB(A)	57.8
02	Dumper Loader	dB(A)	68.2
03	Jack hammer Drill Machine	dB(A)	70.2
04	Near Excavator	dB(A)	72.0

**REMARKS / OBSERVATIONS:**

Limits: The Madhya Pradesh 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)





Authorized Signatory  
Dr. Sandeep Jadhav  
(Senior Vice President)

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Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3291

Issue Date:09/03/2023

Client's Name & Address	Sample Details	
M/s MOIL LIMITED,  Tirodi Manganese Mines L1=254.593 Ha Site, Dist:- Balaghat (M.P)	Sample Code	MITCON/2022-23/March/3291/1
	Name of Sample	Ground Water
	Sample Details	Open Dugwell No. 3
	Container Details	1 lit plastic can
	Sample Collected By	MITCON
	Method of sampling	IS 3025(Part I)
	Sample Collected On	28/02/2023
	Date of Sample Receipt	02/03/2023
	Analysis Start Date	02/03/2023
	End Date of Analysis	09/03/2023

**ANALYSIS RESULTS**

Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.20	-	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	< 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)
04	Total Dissolved Solids	289.4	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO <sub>3</sub>	142.23	mg/l	≤ 200	APHA 2340 C, 2-48 to 2-50, 23rd Ed 2017
06	Calcium as Ca	38.16	mg/l	≤ 75	APHA 3500 Ca B, 3-69 to 3-70, 23rd Ed. 2017
07	Magnesium as Mg	16.24	mg/l	≤ 30	APHA 3500 Mg B, 3-86, 23rd Ed. 2017
08	Manganese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as CaCO <sub>3</sub>	120.25	Mg/l	< 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 4-91 23rd Ed 2017
11	Chloride as Cl	21.56	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO <sub>4</sub>	20.74	mg/l	≤ 200	APHA 4500 -SO <sub>4</sub> - 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 NO <sub>3</sub>	5.53	mg/l	≤ 45	APHA 4500 NO <sub>3</sub> -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	Agreeable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

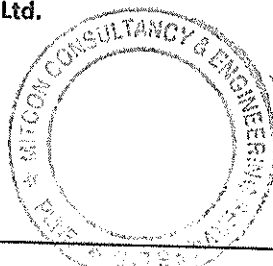
**REMARKS / OBSERVATIONS:**

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

For MITCON Consultancy &amp; Engineering Services Ltd.

Checked By

(Mrs. Kadambari Deshmukh)



Authorized Signatory

(Dr. Sandeep Jadhav)  
Senior Vice President

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Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3291

Issue Date:09/03/2023

Client's Name & Address	Sample Details	
M/s MOIL LIMITED,  Tirodi Manganese Mines L1=254.593 Ha Site, Dist:- Balaghat (M.P)	Sample Code	MITCON/2022-23/March/3291/2
	Name of Sample	Waste Water
	Sample Details	Mine discharge water Block No. A-B Pit
	Container Details	1 lit plastic can
	Sample Collected By	MITCON
	Method of sampling	IS 3025(Part I)
	Sample Collected On	28/02/2023
	Date of Sample Receipt	02/03/2023
	Analysis Start Date	02/03/2023
	End Date of Analysis	09/03/2023

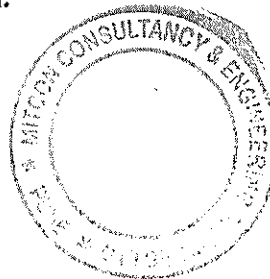
**ANALYSIS RESULTS**


Sr. No.	Characteristic	Results	Unit	Permissible Limit as per Consent Condition	Test Methods
01	pH at 25°C	7.19	-	5.5 to 9.0	APHA 4500 H+ A, 4-95, 23rd Ed. 2017
02	Dissolved Oxygen	3.1	mg/l	--	IS: 3025 Part 38
03	Chemical Oxygen Demand	75.0	mg/l	250	APHA 5220 C,5-20 to 5-21 23rd Ed 2017
04	Biochemical Oxygen	23.1	mg/l	30	IS :3025 (Part 44)
05	Total suspended solids	27.0	mg/l	100	APHA 2540 D,2-70 to 2-71 23rd Ed 2017
06	Oil and grease	< 5.0	mg/l	10	APHA 5520 B,5-42 to 5-43 23rd Ed 2017
07	Manganese	0.34	mg/l	2	APHA 3111 B,3-18 to 3-21 23rd Ed 2017

REMARKS / OBSERVATIONS:

For MITCON Consultancy &amp; Engineering Services Ltd.

  
Checked By  
(Mrs. Kadambari Deshmukh)



  
Authorized Signatory  
(Dr. Sandeep Jadhav)  
Senior Vice President

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**Quarter January- February- March 2023**

**Test Report**

Report Number : MITCON/2022-23/March/3291

Issue Date:09/03/2023

Client's Name & Address	Sample Details	
M/s MOIL LIMITED,  Tirodi Manganese Mines L1=254.593 Ha Site, Dist:- Balaghat (M.P)	Sample Code	MITCON/2022-23/March/3291/3
	Name of Sample	Ground water
	Sample Details	Officer colony water supply
	Container Details	1 lit plastic can
	Sample Collected By	MITCON
	Method of sampling	IS 3025(Part I)
	Sample Collected On	28/02/2023
	Date of Sample Receipt	02/03/2023
	Analysis Start Date	02/03/2023
	End Date of Analysis	09/03/2023

**ANALYSIS RESULTS**

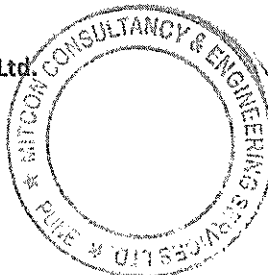
Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.21	-	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	< 5.0	mg/l	N.S	APHA 2540 D, 2-70 to 2-71 23rd ed 2017
03	Turbidity	< 1.0	NTU	≤ 1	IS: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	260.3	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3		mg/l	≤ 200	APHA 2340 C ,2-48 to 2-50,23rd Ed 2017
06	Calcium as Ca		mg/l	≤ 75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017
07	Magnesium as Mg		mg/l	≤ 30	APHA 3500 Mg B, 3-86 , 23rd Ed. 2017
08	Manganese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as CaCO3		Mg/l	< 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 4-91 23rd Ed 2017
11	Chloride as Cl		mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4		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		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	Agreeable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

**REMARKS / OBSERVATIONS:**

For MITCON Consultancy & Engineering Services Ltd.

Checked By

(Mrs. Kadambari Deshmukh)



Authorized Signatory

(Dr. Sandeep Jadhav)  
Senior Vice President

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**Quarter January- February- March 2023**

**Test Report**

Report Number : MITCON/2022-23/March/3291

Issue Date:09/03/2023

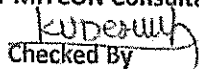
Client's Name & Address	Sample Details	
<b>M/s MOIL LIMITED,</b>  Tirodi Manganese Mines L1=254.593 Ha Site, Dist:- Balaghat (M.P)	Sample Code	MITCON/2022-23/March/3291/4
	Name of Sample	Ground Water
	Sample Details	Staff Quarter water supply
	Container Details	1 lit plastic can
	Sample Collected By	MITCON
	Method of sampling	IS 3025(Part I)
	Sample Collected On	28/02/2023
	Date of Sample Receipt	02/03/2023
	Analysis Start Date	02/03/2023
	End Date of Analysis	09/03/2023

**ANALYSIS RESULTS**

Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.19	-	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	< 5.0	mg/l	N.S	APHA 2540 D, 2-70 to 2-71 23rd ed 2017
03	Turbidity	< 1.0	NTU	≤ 1	IS: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	230.9	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3		mg/l	≤ 200	APHA 2340 C, 2-48 to 2-50, 23rd Ed 2017
06	Calcium as Ca		mg/l	≤ 75	APHA 3500 Ca B, 3-69 to 3-70, 23rd Ed. 2017
07	Magnesium as Mg		mg/l	≤ 30	APHA 3500 Mg B, 3-86, 23rd Ed. 2017
08	Manganese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as CaCO3		Mg/l	< 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 4-91 23rd Ed 2017
11	Chloride as Cl		mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4		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		mg/l	≤ 45	APHA 4500 NO3-B, 4-127 23rd Ed 2017
15	E.coll	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	Agreeable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

**REMARKS / OBSERVATIONS:**

For MITCON Consultancy & Engineering Services Ltd.

Checked By 

(Mrs. Kadambari Deshmukh)





Authorized Signatory  
(Dr. Sandeep Jadhav)  
Senior Vice President

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Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3079

Issue Date:09/03/2022

Client's Name & Address	Reference No.	MITCON/2022-23/March/3079/3
M/s MOIL LIMITED,  Tirodi Manganese Mines North Railway Siding, Dist:- Balaghat (M.P).	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Air
	Test Location	North Railway Siding office
	Monitoring Done By	MITCON
	Date of Analysis	02/03/2023

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
32	32	18	12	1440	0.0	6.0 km/ hrs.(Avg)	SSE

RESULT

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	µg/M <sup>3</sup>	11.5	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	µg/M <sup>3</sup>	16.3	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM <sub>10</sub> micron	µg/M <sup>3</sup>	60.7	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM <sub>2.5</sub> micron	µg/M <sup>3</sup>	31.6	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	µg/M <sup>3</sup>	3.8	≤ 100	IS 5182
06	Lead (Pb)	µg/M <sup>3</sup>	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M <sup>3</sup>	0.336	≤ 2.0	IS 5182
08	Ammonia (NH <sub>3</sub> )	µg/M <sup>3</sup>	4.1	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/M <sup>3</sup>	BDL	≤ 5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M <sup>3</sup>	BDL	≤ 1	IS 5182
11	Arsenic (As)	ng/ M <sup>3</sup>	BDL	≤ 6	APHA - AAS
12	Nickel (Ni)	ng/ M <sup>3</sup>	BDL	≤ 20	APHA - AAS

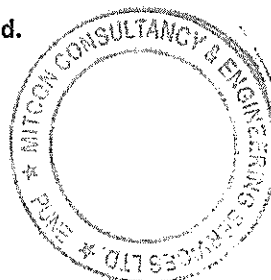
REMARKS/OBSERVATIONS:

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

For MITCON Consultancy &amp; Engineering Services Ltd.

Checked By

(Mrs.Kadambari Deshmukh)



Authorized Signatory

Dr. Sandeep Jadhav

Senior vice president

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Quarter January- February- March 2023

**Test Report**

Report Number : MITCON/2022-23/March/3079

Issue Date:09/03/2022

Client's Name & Address	Reference No.	MITCON/2022-23/March/3079/4
M/s MOIL LIMITED,  Tirodi Manganese Mines North Railway Siding, Dist:- Balaghat (M.P).	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Air
	Test Location	End of North Railway siding
	Monitoring Done By	MITCON
	Date of Analysis	02/03/2023

**OBSERVATION**

Ambient Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity hrs.(Avg)	Wind Direction
32	32	18	12	1440	0.0	6.0 km/hrs.(Avg)	SSE

**RESULT**

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	µg/M <sup>3</sup>	12.8	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	µg/M <sup>3</sup>	17.0	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM <sub>10</sub> micron	µg/M <sup>3</sup>	66.5	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM <sub>2.5</sub> micron	µg/M <sup>3</sup>	33.7	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	µg/M <sup>3</sup>	3.9	≤ 100	IS 5182
06	Lead (Pb)	µg/M <sup>3</sup>	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M <sup>3</sup>	0.355	≤ 2.0	IS 5182
08	Ammonia (NH <sub>3</sub> )	µg/M <sup>3</sup>	4.3	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/M <sup>3</sup>	BDL	≤ 5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M <sup>3</sup>	BDL	≤ 1	IS 5182
11	Arsenic (As)	ng/ M <sup>3</sup>	BDL	≤ 6	APHA - AAS
12	Nickel (Ni)	ng/ M <sup>3</sup>	BDL	≤ 20	APHA - AAS

**REMARKS/OBSERVATIONS:**

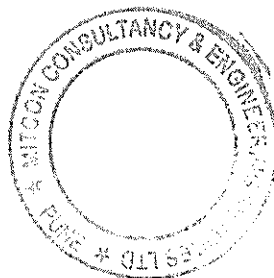
- All above results are within National Ambient Air Quality standards.
- BDL: - Below Detection Limit.

For MITCON Consultancy &amp; Engineering Services Ltd.



Checked By

(Mrs.Kadambari Deshmukh)




Authorized Signatory

Dr. Sandeep Jadhav

Senior vice president

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**Quarter January- February- March 2023**

**Test Report**

Report Number : MITCON/2022-23/March/3079

Issue Date:09/03/2022

Client's Name & Address	Reference No.	MITCON/2022-23/March/3079/5
M/s MOIL LIMITED, Tirodi Manganese Mines North Railway Siding, Dist:- Balaghat (M.P).	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Noise
	Monitoring Done By	MITCON

**READINGS**

Sr. No.	Test Location	Unit	Readings
01	North Railway Siding office	dB(A)	58.9
02	End of North Railway siding	dB(A)	61.3

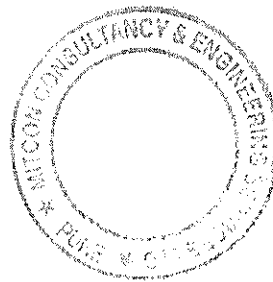
**REMARKS / OBSERVATIONS:**

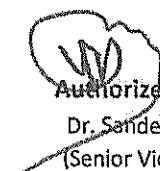
Limits: The Madhya Pradesh Pollution Control Board has prescribe 75 dB (A) as an upper limit of Noise Level during daytime.

For MITCON Consultancy & Engineering Services Ltd.

  
Checked By

(Mrs. Kadambari Deshmukh)



  
Authorized Signatory  
Dr. Sandeep Jadhav  
(Senior Vice President)

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Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3079

Issue Date:09/03/2022

Client's Name & Address	Sample Details	
M/s MOIL LIMITED,  Tirodi Manganese Mines North Railway Siding, Dist:- Balaghat (M.P)	Sample Code	MITCON/2022-23/March/3079/1
	Name of Sample	Ground Water
	Sample Details	North Railway siding water supply
	Container Details	1 lit plastic can
	Sample Collected By	MITCON
	Method of sampling	IS 3025(Part I)
	Sample Collected On	28/02/2023
	Date of Sample Receipt	02/03/2023
	Analysis Start Date	02/03/2023
	End Date of Analysis	09/03/2023

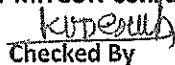
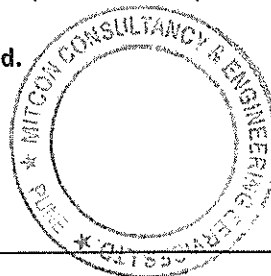
ANALYSIS RESULTS

Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.27	-	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	8.0	mg/l	N.S	APHA 2540 D, 2-70 to 2-71 23rd ed 2017
03	Turbidity	< 1.0	NTU	≤ 1	IS: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	301.3	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	152.21	mg/l	≤ 200	APHA 2340 C, 2-48 to 2-50, 23rd Ed 2017
06	Calcium as Ca	38.12	mg/l	≤ 75	APHA 3500 Ca B, 3-69 to 3-70, 23rd Ed. 2017
07	Magnesium as Mg	17.34	mg/l	≤ 30	APHA 3500 Mg B, 3-86, 23rd Ed. 2017
08	Manganese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as CaCO3	145.24	Mg/l	< 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 4-91 23rd Ed 2017
11	Chloride as Cl	48.72	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	18.25	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	8.93	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	Agreeable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

REMARKS / OBSERVATIONS:

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

For MITCON Consultancy &amp; Engineering Services Ltd.


Checked By  
(Mrs. Kadambari Deshmukh)

Authorized Signatory  
(Dr. Sandeep Jadhav)  
Senior Vice President

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Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3079

Issue Date:09/03/2022

Client's Name & Address	Sample Details	
M/s MOIL LIMITED,  Tirodi Manganese Mines North Railway Siding, Dist:- Balaghat (M.P)	Sample Code	MITCON/2022-23/March/3079/2
	Name of Sample	Ground water
	Sample Details	End of North railway siding water supply
	Container Details	1 lit plastic can
	Sample Collected By	MITCON
	Method of sampling	IS 3025(Part I)
	Sample Collected On	28/02/2023
	Date of Sample Receipt	02/03/2023
	Analysis Start Date	02/03/2023
	End Date of Analysis	09/03/2023

**ANALYSIS RESULTS**

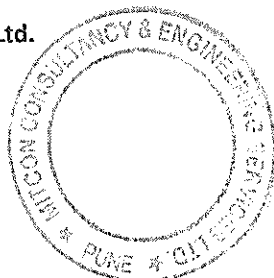
Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.20	-	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	12.0	mg/l	N.S	APHA 2540 D, 2-70 to 2-71 23rd ed 2017
03	Turbidity	< 1.0	NTU	≤ 1	IS: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	301.3	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	140.28	mg/l	≤ 200	APHA 2340 C, 2-48 to 2-50, 23rd Ed 2017
06	Calcium as Ca	42.24	mg/l	≤ 75	APHA 3500 Ca B, 3-69 to 3-70, 23rd Ed. 2017
07	Magnesium as Mg	14.26	mg/l	≤ 30	APHA 3500 Mg B, 3-86, 23rd Ed. 2017
08	Manganese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as CaCO3	135.25	Mg/l	< 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 4-91 23rd Ed 2017
11	Chloride as Cl	32.20	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	10.25	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	3.72	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	Agreeable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

**REMARKS / OBSERVATIONS:**

For MITCON Consultancy & Engineering Services Ltd.

*Kudambari*  
Checked By

(Mrs. Kadambari Deshmukh)



*(Signature)*

Authorized Signatory  
(Dr. Sandeep Jadhav)  
Senior Vice President

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**Quarter January- February- March 2023**

**Test Report**

Report Number : MITCON/2022-23/March/3712

Issue Date:09/03/2023

Client's Name & Address	Reference No.	MITCON/2022-23/March/3712/3
M/s MOIL LIMITED,  Tirodi Manganese Mines South Railway Siding, Dist:- Balaghat (M.P).	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Air
	Test Location	South Railway Siding office
	Monitoring Done By	MITCON
	Date of Analysis	02/03/2023

**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
32	32	18	12	1440	0.0	6.0 km/ hrs.(Avg)	SSE

**RESULT**

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	µg/M <sup>3</sup>	12.2	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	µg/M <sup>3</sup>	17.4	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM <sub>10</sub> micron	µg/M <sup>3</sup>	60.5	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM <sub>2.5</sub> micron	µg/M <sup>3</sup>	31.8	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	µg/M <sup>3</sup>	3.6	≤ 100	IS 5182
06	Lead (Pb)	µg/M <sup>3</sup>	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M <sup>3</sup>	0.318	≤ 2.0	IS 5182
08	Ammonia (NH <sub>3</sub> )	µg/M <sup>3</sup>	4.0	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/M <sup>3</sup>	BDL	≤ 5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M <sup>3</sup>	BDL	≤ 1	IS 5182
11	Arsenic (As)	ng/ M <sup>3</sup>	BDL	≤ 6	APHA - AAS
12	Nickel (Ni)	ng/ M <sup>3</sup>	BDL	≤ 20	APHA - AAS

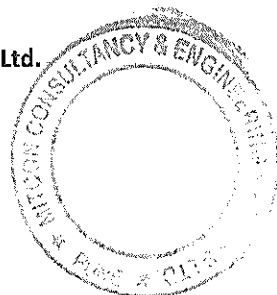
**REMARKS/OBSERVATIONS:**

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

For MITCON Consultancy & Engineering Services Ltd.

*Kadambari*  
Checked By

(Mrs.Kadambari Deshmukh)



*SJD*

Authorized Signatory  
Dr. Sandeep Jadhav  
Senior vice president

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**Quarter January- February- March 2023**

**Test Report**

Report Number : MITCON/2022-23/March/3712

Issue Date:09/03/2023

<b>Client's Name &amp; Address</b>	<b>Reference No.</b>	MITCON/2022-23/March/3712/4
M/s MOIL LIMITED,  Tirodi Manganese Mines South Railway Siding, Dist- Balaghat (M.P).	<b>Date of Monitoring</b>	28/02/2023
	<b>Type of Monitoring</b>	Ambient Air
	<b>Test Location</b>	End of South Railway siding
	<b>Monitoring Done By</b>	MITCON
	<b>Date of Analysis</b>	02/03/2023

**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	13	50	1440	0.0	5.0 km/ hrs.(Avg)	E

**RESULT**

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	µg/M <sup>3</sup>	11.8	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	µg/M <sup>3</sup>	16.2	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM <sub>10</sub> micron	µg/M <sup>3</sup>	59.3	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM <sub>2.5</sub> micron	µg/M <sup>3</sup>	29.4	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	µg/M <sup>3</sup>	3.7	≤ 100	IS 5182
06	Lead (Pb)	µg/M <sup>3</sup>	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M <sup>3</sup>	0.314	≤ 2.0	IS 5182
08	Ammonia (NH <sub>3</sub> )	µg/M <sup>3</sup>	3.9	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/M <sup>3</sup>	BDL	≤ 5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M <sup>3</sup>	BDL	≤ 1	IS 5182
11	Arsenic (As)	ng/ M <sup>3</sup>	BDL	≤ 6	APHA - AAS
12	Nickel (Ni)	ng/ M <sup>3</sup>	BDL	≤ 20	APHA - AAS

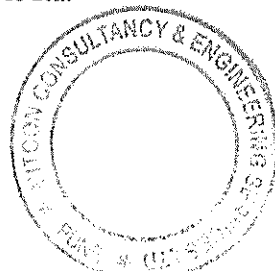
**REMARKS/OBSERVATIONS:**

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

For MITCON Consultancy & Engineering Services Ltd.

*Kadambari*  
Checked By

(Mrs.Kadambari Deshmukh)



*SD*

Authorized Signatory

Dr. Sandeep Jadhav

Senior vice president

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Quarter January- February- March 2023

Test Report

Report Number : MITCON/2022-23/March/3712

Issue Date:09/03/2023

Client's Name & Address	Reference No.	MITCON/2022-23/March/3712/5
M/s MOIL LIMITED,  Tirodi Manganese Mines South Railway Siding, Dist:- Balaghat (M.P).	Date of Monitoring	28/02/2023
	Type of Monitoring	Ambient Noise
	Monitoring Done By	MITCON

READINGS

Sr. No.	Test Location	Unit	Readings
01	South Railway Siding office	dB(A)	58.7
02	End of South Railway siding	dB(A)	56.5

**REMARKS / OBSERVATIONS:**

Limits: The Madhya Pradesh 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)





Authorized Signatory

Dr. Sandeep Jadhav

(Senior Vice President)

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**Quarter January- February- March 2023**

Test Report

Report Number : MITCON/2022-23/March/3712

Issue Date:09/03/2023

Client's Name & Address	Sample Details	
M/s MOIL LIMITED,  Tirodi Manganese Mines South Railway Siding, Dist:- Balaghat (M.P)	Sample Code	MITCON/2022-23/March/3712/1
	Name of Sample	Ground Water
	Sample Details	South Railway siding water supply
	Container Details	1 lit plastic can
	Sample Collected By	MITCON
	Method of sampling	IS 3025(Part I)
	Sample Collected On	28/02/2023
	Date of Sample Receipt	02/03/2023
	Analysis Start Date	02/03/2023
	End Date of Analysis	09/03/2023

**ANALYSIS RESULTS**

Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.12	-	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	12.0	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	235.3	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	115.20	mg/l	≤ 200	APHA 2340 C, 2-48 to 2-50, 23rd Ed 2017
06	Calcium as Ca	40.08	mg/l	≤ 75	APHA 3500 Ca B, 3-69 to 3-70, 23rd Ed. 2017
07	Magnesium as Mg	16.52	mg/l	≤ 30	APHA 3500 Mg B, 3-86, 23rd Ed. 2017
08	Manganese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as CaCO3	108.10	Mg/l	< 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 4-91 23rd Ed 2017.
11	Chloride as Cl	20.12	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	15.40	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	10.12	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	Agreeable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

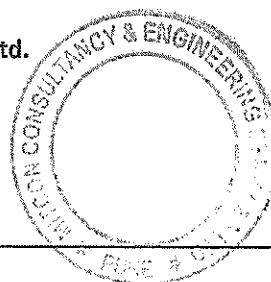
**REMARKS / OBSERVATIONS:**

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

For MITCON Consultancy & Engineering Services Ltd.

Checked By

(Mrs. Kadambari Deshmukh)



Authorized Signatory

(Dr. Sandeep Jadhav)

Senior Vice President

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Format No. EME/LAB/Format 7.8/TR

**Quarter January- February- March 2023**

**Test Report**

Report Number : MITCON/2022-23/March/3712

Issue Date:09/03/2023

Client's Name & Address	Sample Details	
M/s MOIL LIMITED,  Tirodi Manganese Mines South Railway Siding, Dist:- Balaghat (M.P)	Sample Code	MITCON/2022-23/March/3712/2
	Name of Sample	Ground water
	Sample Details	End of South railway siding water supply
	Container Details	1 lit plastic can
	Sample Collected By	MITCON
	Method of sampling	IS 3025(Part I)
	Sample Collected On	28/02/2023
	Date of Sample Receipt	02/03/2023
	Analysis Start Date	02/03/2023
	End Date of Analysis	09/03/2023

**ANALYSIS RESULTS**

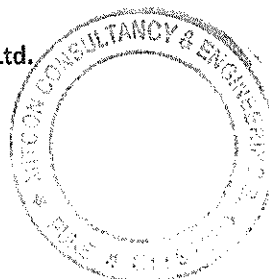
Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.19	-	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	10.0	mg/l	N/S	APHA 2540 D, 2-70 to 2-71 23rd ed 2017
03	Turbidity	< 1	NTU	≤ 1	IS: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	212.3	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	101.2	mg/l	≤ 200	APHA 2340 C, 2-48 to 2-50, 23rd Ed 2017
06	Calcium as Ca	37.4	mg/l	≤ 75	APHA 3500 Ca B, 3-69 to 3-70, 23rd Ed. 2017
07	Magnesium as Mg	13.7	mg/l	≤ 30	APHA 3500 Mg B, 3-86, 23rd Ed. 2017
08	Manganese as mn	< 0.1	mg/l	< 0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as CaCO3	95.25	Mg/l	< 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 4-91 23rd Ed 2017
11	Chloride as Cl	13.25	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	11.02	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	5.23	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 Colliform	Absent	MPN/100ml	Absent	IS: 1622 (R.A : 2014)
17	colour	< 5	HZ	≤ 5	IS: 3025 Part-4 (Rev.1, RA 2012)
18	odour	Agreeable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

**REMARKS / OBSERVATIONS:**

For MITCON Consultancy & Engineering Services Ltd.

Checked By

(Mrs. Kadambari Deshmukh)



Authorized Signatory  
(Dr. Sandeep Jadhav)  
Senior Vice President

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