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/11287

Issue Date:21/11/2022

Solutions for Sustainable Tomorrow

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11287/2
M/s MOIL LIMITED,	Date of Monitoring	09/11/2022
	Type of Monitoring	Ambient Air
Gumgaon Manganese Mines L2=1.330 Ha Site, Dist: Nagpur (M.S)	Test Location	Near Check Post ( Main Gate)
	Monitoring Done By	MITCON
	Date of Analysis	11/11/2022

### **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
31	31	15	34	1440	0.0	10.0 km/ hrs.(Avg)	ENE

#### RESULT

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO₂)	µg/M³	12.0	<i>₂</i> ≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	μg/M³	18.2	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	69.3	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 mlcron	μg/M³	34.5	≤ 60	USEPA 40 CFRCH
05	Ozone (O₃)	μg/M³	4.3	≤100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤ 1.0	APHA - AAS
. 07	Carbon Monoxide (CO)	mg/M³	0.442	≤ 2.0	/s IS 5182
08	Ammonia (NH <sub>3</sub> )	μg/M³	4.8	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	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)

MITCON CO.

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/11287

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11287/3
M/s MOIL LIMITED,  Gumgaon Manganese Mines L2=1.330 Ha Site, Dist- Nagpur (M.S).	Date of Monitoring	09/11/2022
	Type of Monitoring	Ambient Air
	Test Location	Near Gumgaon Village
	Monitoring Done By	MITCON
	Date of Analysis	11/11/2022

#### **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
31	31	15	34	1440	0.0	10.0 km/ hrs.(Avg)	ENE

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	μg/M³	11.0	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	μg/M³	15.3	≤80	IS 5182(Part 6)
03	Particulate Matter PM10 micron			≤100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 mlcron	μg/M³	28.0	≤ 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	0.326	≤ 2.0	IS 5182
08	Ammonia (NH₃)	μg/M³	4.0	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	μg/M³	BDL	≤5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M³	BDL	<u> </u>	IS 5182
11	Arsenic (As)	ng/ M³ 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 All Quality standards.

➢ BDL: - Below Detection Limit.

For MITCON Consultancy & Engineering Services Ltd.

Checked By

(Mrs. Kadambari Deshmukh)

Śignatory Dr. Sandeep Jadhav Septor vice president

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

### **Test Report**

Report Number: MITCON/2022-23/November/11287

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022-23/November/11287/4
M/s MOIL LIMITED,	Date of Monitoring	09/11/2022
·	Type of Monitoring	Ambient Noise
Gumgaon Manganese Mines L2=1.330 Ha Site, Dist:-Nagpur (M.S).	Monitoring Done By	MITCON

### READINGS

Sr. No.	Test Location	Unit	Readings
01	Near Check Post ( Main Gate)	dB(A)	65.7
02	Gumgaon Village	dB(A)	51.2 <sup>-</sup>

### **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)



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/11287

Issue Date:21/11/2022

Client's Name & Address		Sample Details
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11287/1
_	Name of Sample	Ground Water
Gumgaon Manganese Mines L2=1.330 Ha Site, Dist:-Nagpur (M.S)	Sample Details	Old Office Bore well water
	Container Details	1 lit plastic can
	Sample Collected By	MITCON
	Method of sampling	IS 3025(Part I)
	Sample Collected On	09/11/2022
	Date of Sample Receipt	11/11/2022
	Analysis Start Date	11/11/2022
	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	British 4	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended sollds	₹5	mg/l	N.S	APHA 2540 D,2-70 to 2-71 23rd ed 2017
03	Turbidity	<1	NTU	≤1	IF 200F
04	Total Dissolved Solids	245.6	mg/l	≤500	IS: 3025 Part-10 (R.A : 2002)
05	Total Hardness as CaCO3	132.25	mg/i	≤200	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017 APHA 2340 C ,2-48 to 2-50,23rd Ed 2017
06	Calcium as Ca	45.05	mg/l	≤ 75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017
07	Magnesium as Mg	23.25	mg/I	≤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	120.15	Mg/l	<200	APHA 2320 B ,2-37 to 2-39 23rd Ed 2017
10	Fluoride as F	< 0.1	Mg/i	% <b>&lt;1</b>	APHA 4500 E D 4 00 to 4 0100 d 5 100 to
11	Chloride as Cl	12.25	mg/l	≤ 250	ATTICA 300 F- D 4-90 to 4-9123rd Ed 2017
12	Sulphate as 504	8.25	mg/l	≤ 200	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
13	Iron as Fe	< 0.05	mg/l	≤0.3	APHA 4500 – SO4E, 4-199 TO 4-200, 23rd Ed 2017
14	Nitrate as NO3	6.3	mg/i	<u></u> ≤45	APHA 3111 B, 3-18 TO 3-21, 23rd Ed 2017 (using AAS)
15	E.coli	Absent	MPN/100ml	Absent	APHA 4500 NO3-B,4-127 23rd Ed 2017
16	Total Coliform	Absent	MPN/100ml	Absent	IS: 1622 (R.A : 2014)
17	colour	<5	HZ	Absent ≤ 5	iS: 1622 (R.A : 2014) iS: 3025 Part-4 (Rev.1, RA 2012)
18	odour	Aggreable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

**REMARKS / OBSERVATIONS:** 

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

For MITCON Consultancy & Engineering Sever's Ltd. Kupeamp

(Mrs. Kadambari Deshmukh)

Checked By

AuthoNzed Signatory (Dr.Sandeep Jadhav) Senior Vice President

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

### **Test Report**

Report Number: MITCON/2022-23/November/11287

IssueDate:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11287/4
M/s MOIL LIMITED,	Date of Monitoring	09/11/2022
·	Type of Monitoring	Ambient Air
Gumgaon Manganese Mines L3=35.970 Ha Site, Dist:-	Test Location	High Speed Vertical Shaft
Nagpur (M.S)	Monitoring Done By	MITCON
	Date of Analysis	11/11/2022

### **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
31	31	15	34	1440	0.0	10.0 km/ hrs.(Avg)	ENE

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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 (NO2)	μg/M³	18.6	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	67.0	ି≲ 100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 micron	μg/M³	32.4	≤ 60	USEPA 40 CFRCH
05	Ozone (O₃)	μg/M³	4.0	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M³	0.354	≤ 2.0	IS 5182
08	Ammonia (NH3)	μg/M <sup>3</sup>	4.5	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	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 & ENGIN

Checked By

(Mrs.Kadambari Deshmukh)



Authorized Signatory Dr. Sapdeep Jadhav Senior vice president

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

### **Test Report**

Report Number: MITCON/2022-23/November/11287

IssueDate:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11287/5
M/s MOIL LIMITED,	Date of Monitoring	09/11/2022
·	Type of Monitoring	Ambient Air
Gumgaon Manganese Mines L3=35.970 Ha Site, Dist:-	Test Location	Tigai Village
Nagpur (M.S).	Monitoring Done By	MITCON
	Date of Analysis	11/11/2022
	<u> </u>	

### **OBSERVATION**

Те	bient mp. ℃	Dry Bulb Temp. °C	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
	31	31	15	34	1440	0.0	10.0 km/ hrs.(Avg)	ENE

#### RESULT

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	μg/M³	10.2	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO₂)	μg/M³	14.9	≤80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	55.7	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM <sub>2.5 micron</sub>	μg/M³	26.5	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	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 (NH₃)	μg/M³	3.4	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	μg/M³	BDL	<b>\$</b> 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 Ltd.

KUDUM).

(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/11287

IssueDate:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11287/6
M/s MOIL LIMITED,  Gumgaon Manganese Mines L3=35.970 Ha Site, Dist:-Nagpur (M.S).	Date of Monitoring	09/11/2022
	Type of Monitoring	Ambient Air
	Test Location	Khapa Village
	Monitoring Done By	MITCON
	Date of Analysis	11/11/2022
	3	1

#### **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
31	31	<b>1</b> 5	34	1440	0.0	10.0 km/ hrs.(Avg)	ENE

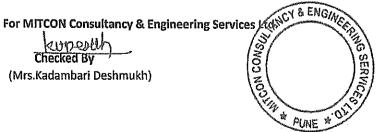
Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	μg/M³	11.8	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO2)	μg/M³	15.2	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	63.4	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 micron	μg/M³	31.2	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	μg/M³	3.4	≤ 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 <sub>3</sub> )	μg/M³	3.4	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	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.

kupesuh Checked By

(Mrs.Kadambari Deshmukh)



**Authorized Signatory** Dr. Sandeep Jadhav Sénior vice president

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

### **Test Report**

Report Number: MITCON/2022-23/November/11287

IssueDate:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022-23/November/11287/7
M/s MOIL LIMITED,	Date of Monitoring	09/11/2022
	Type of Monitoring	Ambient Noise
Gumgaon Manganese Mines L3=35.970 Ha Site, Dist:-Nagpur (M.S).	Monitoring Done By	MITCON

### READINGS

Sr. No.	Test Location	Unit	Readings
01	Near High speed vertical shaft	dB(A)	61.8
02	Tigai Village	dB(A)	52.0
03	Khapa Village	dB(A)	53.2

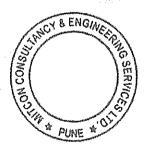
### **REMARKS / OBSERVATIONS:**

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.

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/11287

IssueDate:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11287/1		
	Name of Sample	Ground Water		
Gumgaon Manganese Mines L3=35.970 Ha Site,	Sample Details	Khapa Village Handpump		
Dist:-Nagpur (M.S)	Container Details	1 lit plastic can		
	Sample Collected By	MITCON		
	Method of sampling	IS 3025(Part I)		
	Sample Collected On	09/11/2022		
	Date of Sample Receipt	11/11/2022		
	Analysis Start Date	11/11/2022		
	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	7,22	-	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	UTU	≤1	ls: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	272.3	mg/l	≤500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
O5	Total Hardness as CaCO3	148.25	mg/l	≤200	APHA 2340 C;2-48 to 2-50,23rd Ed 2017
06	Calcium as Ca	49,25	mg/l	≤75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017
07	Magnesium as Mg	10.25	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	135.25	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	25.23	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	27.45	mg/l	≤ 200	APHA 4500 –SO4 - E, 4-199 TO 4-200, 23rd Ed 2017
13	Iron 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	18.25	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:** 

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

For MITCON Consultancy & Engineering Services (13)
Checked By

(Mrs. Kadambari Deshmukh)

ALINE \* GIT STATE

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/11287

IssueDate:21/11/2022

Client's Name & Address		Sample Details
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11287/2
	Name of Sample	Waste Water
Gumgaon Manganese Mines L3=35.970 Ha Site,	Sample Details	STP Outlet
Dist:-Nagpur (M.S)	Container Details	1 lit plastic can
	Sample Collected By	MITCON
	Method of sampling	IS 3025(Part I)
	Sample Collected On	09/11/2022
	Date of Sample Receipt	11/11/2022
	Analysis Start Date	11/11/2022
	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	7.13	10 (C. 35 (St. 5	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	71.3	mg/l	250	APHA 5220 C,5-20 to 5-21 23 <sup>rd</sup> Ed 2017
04	Biochemical Oxygen	21,8	mg/l	30	IS :3025 (Part 44)
05	Total suspended solids	32.2	mg/l	100	APHA 2540 D,2-70 to 2-71 23rd Ed 2017
06	Oil and grease	< 5.0	mg/I	10	APHA 5520 B,S-42 to 5-43 23rd Ed 2017
07	Manganese	0.43	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)



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/11287

IssueDate:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11287/3		
	Name of Sample	Waste Water		
Gumgaon Manganese Mines L3=35.970 Ha Site,	Sample Details	Mine Discharge 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	09/11/2022		
	Date of Sample Receipt	11/11/2022		
	Analysis Start Date	11/11/2022		
	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 <sup>0</sup> C	7.34	frag Avraga	5.5 to 9.0	APHA 4500 H+ A, 4-95, 23rd Ed. 2017
02	Dissolved Oxygen	3.6	mg/l		IS: 3025 Part 38
03	Chemical Oxygen Demand	58.9	mg/l	250	APHA 5220 C,5-20 to 5-21 23rd Ed 2017
04	Biochemical Oxygen	19.6	mg/l	30	IS:3025 (Part 44)
05	Total suspended solids	26.0	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 23 <sup>rd</sup> Ed 2017

**REMARKS / OBSERVATIONS:** 

For MITCON Consultancy & Engineering Services Ltd.

kupeault Checked By

(Mrs. Kadambari Deshmukh)



Authorized Signatory (Dr.Sańdeep Jadhav) Senior Vice President

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

### **Test Report**

Report Number: MITCON/2022-23/November/11286

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11286/4
M/s MOIL LIMITED,	Date of Monitoring	09/11/2022
	Type of Monitoring	Ambient Air
Gumgaon Manganese Mines L1=48.596 Ha Site, Dist:-	Test Location	Near Pit Office
Nagpur (M.S)	Monitoring Done By	MITCON
	Date of Analysis	11/11/2022

#### **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
31	31	15	34	1440	0.0	10.0 km/ hrs.(Avg)	ENE

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 (NO2)	μg/M³	18.4	(≤ 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	32.0	≤ 60	USEPA 40 CFRCH
05	Ozone (O₃)	μg/M³	4.2	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M³	0.382	≤ 2.0	IS 5182
80	Ammonia (NH <sub>3</sub> )	μg/M³	4.2	≤ 400	APHA - 401
09	Benzene (C₀H₀)	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 Ltd.

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/11286

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11286/5
M/s MOIL LIMITED,	Date of Monitoring	09/11/2022
	Type of Monitoring	Ambient Air
Gumgaon Manganese Mines L1=48.596 Ha Site, Dist:-	Test Location	Near Work Shop
Nagpur (M.S).	Monitoring Done By	MITCON
	Date of Analysis	11/11/2022

### **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
28	28	23	95	1440	12.0	13.0 km/ hrs.(Avg)	wsw

#### RESULT

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	μg/M³	12.2	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	μg/M³	17.6	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM <sub>10 micron</sub>	μg/M³	62.3	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 micron	μg/M³	30.4	్: ≤60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	μg/M³	3.8	≤ 100	IS 5182
. 06	Lead (Pb)	μg/M³	, BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M³	0.360	≤ 2.0	IS 5182
08	Ammonia (NH <sub>3</sub> )	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 Ltd.

(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/11286

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11286/6
M/s MOIL LIMITED,	Date of Monitoring	09/11/2022
	Type of Monitoring	Ambient Air
Gumgaon Manganese Mines L1=48.596 Ha Site, Dist:	Test Location	Near Crushing Plant
Nagpur (M.S).	Monitoring Done By	MITCON
	Date of Analysis	11/11/2022

### **OBSERVATION**

Ambient Temp. °C	Dry Bulb Temp. ℃	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
28	28	23	95	1440	12,0	13.0 km/	wsw
			<u> </u>			hrs.(Avg)	

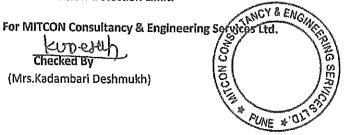
Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	μg/M³	12.4	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	μg/M³	18.0	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM <sub>10 micron</sub>	μg/M³	68.7	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM <sub>2.5 micron</sub>	µg/М³	34.6	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	μg/M³	4,2	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M³	0.416	≤ 2.0	IS 5182
08	Ammonia (NH <sub>3</sub> )	μg/M³	4.5	≤ 400	APHA - 401
09	Benzene (C₅H₅)	μg/M³	BDL	≤5	IS 5182
10	Benzo(a)Pyrene (BaP)	ng/ M <sup>3</sup>	BDL	<u> </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.

**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/11286

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022-23/November/11286/7
M/s MOIL LIMITED,	Date of Monitoring	09/11/2022
Gumgaon Manganese Mines L1=48.596 Ha Site,	Type of Monitoring	Ambient Noise
Dist-Nagpur (M.S).	Monitoring Done By	MITCON

#### **READINGS**

Sr. No.	Test Location	Unit	Readings
01	Near Cable Bottling operation	dB(A)	68.5
02	Jack Hammer Drill Machine	dB(A)	69.5
03	Vertical Fan	dB(A)	71.0

#### **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)

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/11286

Issue Date:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11286/1		
	Name of Sample	Ground Water		
Gumgaon Manganese Mines L1=48.596 Ha Site, Dist:-Nagpur (M.S)	Sample Details	Officer colony Bore well water		
	Container Details	1 lit plastic can		
	Sample Collected By	MITCON		
	Method of sampling	IS 3025(Part I)		
	Sample Collected On	09/11/2022		
	Date of Sample Receipt	11/11/2022		
	Analysis Start Date	11/11/2022		
	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	7.19	i zaremi akt.	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	5:1	mg/l	N:5	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	296.8	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	145.25	mg/l	≤200	APHA 2340 C ,2-48 to 2-50,23 rd Ed 2017
06	Calcium as Ca	48.12	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
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	136.7	Mg/I	<200	APHA 2320 B ,2-37 to 2-39 23rd Ed 2017
10	Fluoride as F	< 0.1	Mg/l	<1	ADUA ADOL DA OO TOO TOO
11	"Chloride as CI	45.23	mg/l	≤ 250	APHA 4500 F- D 4-90 to 4-9123rd Ed 2017
12	Sulphate as SO4	21.12	mg/l	≤ 200	APHA 4500 CI, B, 4-75 to 4-76, 23rd Ed 2017
13	Iron as Fe	< 0.05	mg/i	≤0.3	APHA 4500 – SO4 - E, 4-199 TO 4-200, 23rd Ed 2017 APHA 3111 B, 3-18 TO 3-21, 23rd Ed 2017 (using AAS)
14	Nitrate as NO3	7.23	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 Coliform	Absent	MPN/100ml	Absent	
17	colour	<5	HZ	≤5	IS: 1622 (R.A : 2014) IS: 3025 Part-4 (Rev.1, RA 2012)
18	odour	Aggreable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

**REMARKS / OBSERVATIONS:** 

• The above water sample is complying with Wedning its as per IS 10500:2012.

For MITCON Consultancy & Engineering Services Ltd. Checked By Kunexill

(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/11286

Issue Date:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11286/2		
	Name of Sample	Waste Water		
Gumgaon Manganese Mines L1=48.596 Ha Site,	Sample Details	Pit water Underground source		
Dist:-Nagpur (M.S)	Container Details	1 lit plastic can		
	Sample Collected By	MITCON		
	Method of sampling	IS 3025(Part I)		
	Sample Collected On	09/11/2022		
	Date of Sample Receipt	11/11/2022		
	Analysis Start Date	11/11/2022		
	End Date of Analysis	21/11/2022		

**ANALYSIS RESULTS** 

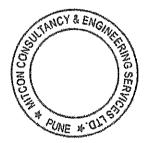
Sr. No.	Characteristic	Results	Unit	Permissible Limit as per Consent Condition	Test Methods
01	pH at 25°C	7.18		5.5 to 9.0	APHA 4500 H+ A, 4-95, 23rd Ed. 2017
02	Dissolved Oxygen	3.2	mg/l	<u> </u>	IS: 3025 Part 38
03	Chemical Oxygen Demand	73.2	mg/l	250	APHA 5220 C,5-20 to 5-21 23rd Ed 2017
04	Biochemical Oxygen	21.8	mg/l	30	IS :3025 (Part 44)
05	Total suspended solids	38.3	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 23 <sup>rd</sup> Ed 2017
07	Manganese	0.47	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)



Authorized Signatory (Dr.Sandeep Jadhav) Senjor Vice President

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

### **Test Report**

Report Number: MITCON/2022-23/November/11286

Issue Date:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11286/3		
•	Name of Sample	Ground water		
Gumgaon Manganese Mines L1=48.596 Ha Site,	Sample Details	Staff Quarter Bore well 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	09/11/2022		
	Date of Sample Receipt	11/11/2022		
	Analysis Start Date	11/11/2022		
	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	-	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	NTU	<b>≤1</b>	IS: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	304.2	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	151.24	mg/l	≤200	APHA 2340 C ,2-48 to 2-50,23rd Ed 2017
06	Calcium as Ca	32.25	mg/l	≤75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017
07	Magnesium as Mg	18.67	mg/i	≤ 30	APHA 3500 Mg B, 3-86 , 23rd Ed, 2017
08	Mangnese as mn	< 0.1	mg/i	₹0.1	APHA 3111 B, 3-18 to 3-21 23rd Ed. 2017
09	Total Alkalinity as Caco3	140.25	Mg/l	<200	APHA 2320 B ,2-37 to 2-39 23rd Ed 2017
10	Fluoride as F	< 0.1	Mg/l	# <1 a	APHA 4500 F- D 4-90 to 4-9123rd Ed 2017
11	Chloride as Cl	12.25	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	8.13	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	5.54	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

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/11288

Issue Date:21/11/2022

Reference No.	MITCON/2022- 23/November/11288/5
Date of Monitoring	09/11/2022
Type of Monitoring	Ambient Air
Test Location	Near Rest House
Monitoring Done By	MITCON
Date of Analysis	11/11/2022
	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
31	31	15	34	1440	0.0	10.0 km/ hrs.(Avg)	ENE

#### RESULT

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	μg/M³	11.0	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	μg/M³	15.6	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	59,8	∞ ≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 micron	μg/M³	24.5	≤ 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/M <sup>3</sup>	0.308	≤ 2.0	IS 5182
08	Ammonia (NH3)	μg/M³	3.8	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	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 Service ENGINE

**Checked By** 

(Mrs.Kadambari Deshmukh)

PUNE #

Signatory Authorize Dr. Sandeep Jadhav Senior vice president

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

### **Test Report**

Report Number: MITCON/2022-23/November/11288

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11288/6
M/s MOIL LIMITED,	Date of Monitoring	09/11/2022
	Type of Monitoring	Ambient Air
Rajna Ramdongri Gumgaon Sand Lease, Dist:-	Test Location	Near Sand Plant
Nagpur (M.S).	Monitoring Done By	MITCON
	Date of Analysis	11/11/2022

### **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
31	31	15	34	1440	0.0	10.0 km/ hrs.(Avg)	ENE

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Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	μg/M³	12.4	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO₂)	μg/M³	18.0	≤80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	61.3	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM <sub>2.5 mlcron</sub>	μg/M³	28.9	≤ 60	USEPA 40 CFRCH
05	Ozone (O <sub>3</sub> )	μg/M³	3.7	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M³	0.328	≤ 2.0	IS 5182
08	Ammonia (NH₃)	μg/M³	3.9	≤ 400	APHA - 401
09	Benzene (C <sub>6</sub> H <sub>6</sub> )	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 Ltd.

KUBERUL **Checked By** 

(Mrs. Kadambari Deshmukh)

Authorized Signatory Dr., Sandeep Jadhav Sénior vice president

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

### **Test Report**

Report Number: MITCON/2022-23/November/11288

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11288/7
M/s MOIL LIMITED,	Date of Monitoring	09/11/2022
, , , , , , , , , , , , , , , , , , ,	Type of Monitoring	Ambient Air
Rajna Ramdongri Gumgaon Sand Lease, Dist:-	Test Location	Near Sand Lease Area
Nagpur (M.S).	Monitoring Done By	MITCON
	Date of Analysis	11/11/2022

#### **OBSERVATION**

Ambient Temp. °C	Dry Bulb Temp. ℃	Wet Bulb Temp. °C	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
31	31	15	34	1440	0.0	10.0 km/	ENE
a malponia	Silver and State of the State o	, m. Konaga ilija i ja	514 sec 1991 .	artar tir på Sillitisa.	t pyddi.	hrs.(Avg)	Small.

#### RESULT

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Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO <sub>2</sub> )	μg/M³	11.9	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	μg/M³	15.7	≤80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	54.4	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 micron	μg/M³	23.0	<b>≤ 60</b>	USEPA 40 CFRCH
05	Ozone (O₃)	μg/M³	3.0	≤ 100	IS 5182
06	Lead (Pb)	μg/M³	BDL	≤ 1.0	APHA - AAS
07	Carbon Monoxide (CO)	mg/M³	0.312	≤ 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. ANCY & ENGINE

➤ BDL: - Below Detection Limit.

For MITCON Consultancy & Engineering Services

Kunesuh Checked By

(Mrs.Kadambari Deshmukh)

Signatory Dr. Sandeep Jadhav Senior vice president

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### **Test Report**

Report Number: MITCON/2022-23/November/11288

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022- 23/November/11288/8
M/s MOIL LIMITED,	Date of Monitoring	09/11/2022
	Type of Monitoring	Ambient Air
Rajna Ramdongri Gumgaon Sand Lease, Dist:-	Test Location	Near Water Filtration Plant
Nagpur (M.S).	Monitoring Done By	MITCON
	Date of Analysis	11/11/2022

#### **OBSERVATION**

Ambient Temp. °C	Dry Bulb Temp. °C	Wet Bulb Temp. ℃	Relative Humidity % RH	Sampling Duration In Min	Rainfall (mm)	Wind Velocity	Wind Direction
31	31	15	34	1440	0.0	10.0 km/	ENE
	Maranista (*) Maranisas (*)	5 75 75 75 75 75 75 75 75 75 75 75 75 75		Section 1	4437-144380	hrs.(Avg)	Philips (c.)

Sr. No.	Description	Unit	Results	CPCB standard	Test Method
01	Sulphur Dioxide (SO₂)	μg/M³	12.8	≤80	IS 5182(Part 2)
02	Oxides of Nitrogen (NO <sub>2</sub> )	μg/M³	18.2	≤ 80	IS 5182(Part 6)
03	Particulate Matter PM10 micron	μg/M³	61.5	≤ 100	IS 5182 (Part 23)
04	Particulate Matter PM2.5 micron	μg/M³	29.7	≤ 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	0.348	≤ 2.0	IS 5182
08	Ammonia (NH <sub>3</sub> )	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	<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. For MITCON Consultancy & Engineering Serginges Ltd.

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/11288

Issue Date:21/11/2022

Client's Name & Address	Reference No.	MITCON/2022-23/November/11288/9
M/s MOIL LIMITED,	Date of Monitoring	09/11/2022
TARREST TARGET TOTAL	Type of Monitoring	Ambient Noise
Rajna Ramdongri Gumgaon Sand Lease, Dist:- Nagpur (M.S).	Monitoring Done By	MITCON

#### **READINGS**

Sr. No.	Test Location	Unit	Readings	
01	Near Rest House	dB(A)		52.9
02	Near Sand Lease Area	dB(A)	adagos con	53.0
03	Near Sand Plant	dB(A)		59.2
04	Near Water Filtration Plant	dB(A)		61.2

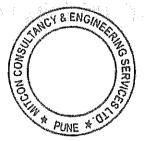
**REMARKS / OBSERVATIONS:** 

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.

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/11288

Issue Date:21/11/2022

Client's Name & Address	Sample Details			
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11288/1		
	Name of Sample	Ground Water		
Rajna Ramdongri Gumgaon Sand Lease, Dist:-	Sample Details	Rest House Bore well water		
Nagpur (M.S)	Container Details	1 lit plastic can		
	Sample Collected By	MITCON		
	Method of sampling	IS 3025(Part I)		
	Sample Collected On	09/11/2022		
	Date of Sample Receipt	11/11/2022		
	Analysis Start Date	11/11/2022		
	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	-	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	<5	mg/l	NS	APHA 2540 D,2-70 to 2-71 23rd ed 2017
03	Turbidity	<1	NTU	S1	IS: 3025 Part-10 (R.A : 2002)
. 04 🚈	Total Dissolved Solids	248.0	mg/l grand	≤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	12.25	mg/l	≤75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017
07	Magnesium as Mg	6.25	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	115.25	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 4-9123rd Ed 2017
11	Chloride as Cl	27.18	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	10.05	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/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:

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

### Test Report

Report Number: MITCON/2022-23/November/11288

Issue Date:21/11/2022

Client's Name & Address	Sample Details		
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11288/2	
	Name of Sample	Ground water	
Rajna Ramdongri Gumgaon Sand Lease, Dist:- Nagpur (M.S)	Sample Details	Gumgaon Village Grampanchayat water supply	
	Container Details	1 lit plastic can	
	Sample Collected By	MITCON	
	Method of sampling	IS 3025(Part I)	
	Sample Collected On	09/11/2022	
	Date of Sample Receipt	11/11/2022	
	Analysis Start Date	11/11/2022	
	End Date of Analysis	21/11/2022	

### **ANALYSIS RESULTS**

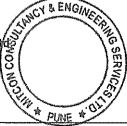
Sr. No.	Parameters	Results	Unit	Limits as per IS 10500:2012	Test Methods
01	pH at 25C	7.27	in value and t	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	5.7	mg/l	N.S	APHA 2540 D,2-70 to 2-71 23rd ed 2017
03	Turbidity	<1	NTU	≤1	IS: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	257.9	mg/l	≤ 500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	130,52	mg/l	≤200	APHA 2340 C ,2-48 to 2-50,23rd Ed 2017
06	Calcium as Ca	40.26	mg/l	≤75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017
07	Magnesium as Mg	13.25	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	135.25	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	45.25	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Suiphate as SO4	12.25	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	7.45	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/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)
				1 1	

**REMARKS / OBSERVATIONS:** 

For MITCON Consultancy & Engineering Services Ly

Checked By

(Mrs. Kadambari Deshmukh)



Authorized Signatory (Dr. Sandeep Jadhav)

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

### Test Report

Report Number: MITCON/2022-23/November/11288

Issue Date:21/11/2022

Client's Name & Address	Sample Details		
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11288/3	
MANA MOTE FIRM LED,	Name of Sample	Ground Water	
Rajna Ramdongri Gumgaon Sand Lease, Dist:-	Sample Details	Rajna Kanhan River Upstream	
Nagpur (M.S)	Container Details	1 lit plastic can	
	Sample Collected By	MITCON	
	Method of sampling	IS 3025(Part I)	
	Sample Collected On	09/11/2022	
	Date of Sample Receipt	11/11/2022	
	Analysis Start Date	11/11/2022	
	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	-	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	231.1	mg/l	≤500	APHA 2540 C, 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	110.25	mg/l	≤200	APHA 2340 C ,2-48 to 2-50,23rd Ed 2017
06	Calcium as Ca	21.25	mg/l	≤75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017
07	Magnesium as Mg	9.43	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	105.54	Mg/l	<200	APHA 2320 B ,2-37 to 2-39 23rd Ed 2017
10	Fluoride as F	< 0.1	Mg/l		APHA 4500 F- D 4-90 to 4-9123rd Ed 2017
11	Chloride as Cl	20.25	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	17.25	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	6.12	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	Aggreable	Agreeable	Agreeable	IS: 3025 Part-5 (Rev.1, RA 2012)

REMARKS / OBSERVATIONS:

For MITCON Consultancy & Engineering Services Ltd.

PUNE \* 0

Checked By Kunevilly
(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/11288

Issue Date:21/11/2022

Client's Name & Address	Sample Details		
M/s MOIL LIMITED,	Sample Code	MITCON/2022-23/November/11288/4	
	Name of Sample	Ground water	
Rajna Ramdongri Gumgaon Sand Lease, Dist:-	Sample Details	Rajna Kanhan River Down stream	
Nagpur (M.S)	Container Details	1 lit plastic can	
	Sample Collected By	MITCON	
	Method of sampling	IS 3025(Part I)	
	Sample Collected On	09/11/2022	
	Date of Sample Receipt	11/11/2022	
	Analysis Start Date	11/11/2022	
	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	7.24	*	6.5 to 8.5	APHA 4500 H+, A, 4-95, 23rd Ed 2017
02	Total suspended solids	<b>&lt;5</b>	mg/l	N.S	APHA 2540 D,2-70 to 2-71 23rd ed 2017
03	Turbidity	<1	NTU	≤1	ls: 3025 Part-10 (R.A : 2002)
04	Total Dissolved Solids	234.1	mg/i	≤ 500	APHA 2540 C; 2-69 to 2-70, 23rd Ed 2017
05	Total Hardness as CaCO3	115.25	mg/l	≤200	APHA 2340 C ,2-48 to 2-50,23rd Ed 2017
06	Calcium as Ca	25.25	mg/l	≤75	APHA 3500 Ca B , 3-69 to 3-70 , 23rd Ed. 2017
07	Magnesium as Mg	10.25	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	115.25	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	12.25	mg/l	≤ 250	APHA 4500 Cl, B, 4-75 to 4-76, 23rd Ed 2017
12	Sulphate as SO4	13.25	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	8.40	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 Services

Checked By

(Mrs. Kadambari Deshmukh)



Authorized Signatory (Dr. Sandeep Jadhav) Senjor Vice President

<sup>•</sup> This Report is valid for tested sample only.

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Customer complaint register is available in the laboratory.