ENVIRONMENTAL MONITORING REPORT

November, 2024

PROJECT: RAMANADURGA IRON ORE MINE

ML NO. 2141
Dharmapura Village
Sandur Taluk, Ballari District,
Karnataka

Lessee

M/S. Sri. KUMARASWAMY MINERAL EXPORTS PVT. LTD.,
D. No. 462, SMIORE Colony,
Near Fire Station, Kudligi Road
SANDUR - 583119
BELLARY, KARNATAKA

ENVIRONMENTAL LABORATORY
(Unit of Mineral Engineering Services)
(Accredited by NABL &, MOEF&CC Under E(P) 1986)
#948, 2nd Cross, Kammanahalli Main Road,
St Thomas Town Post, Bangalore- 560 084, Karnataka,

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TEST REPORT

Table No. 1

AMBIENT AIR QUALITY

Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd

Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)

Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)

Station at & Code : A - I, Dharmapura

Duration : 24 Hrs

Issue date : 02.12.2024

Reference IS 5182 & Lab SOP

Date of Sampling	Lab Code	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter	
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)
08.11.2024	N/24/11/3-0134	12	10	55	27
09.11.2024	N/24/11/3-0209	6	9	43	23
15.11.2024	N/24/11/4-0137	10	12	35	18
16.11.2024	N/24/11/4-0199	8	9	38	22
18.11.2024	N/24/11/5-0007	11	16	56	30
19.11.2024	N/24/11/5-0051	9	13	51	26
27.11.2024	N/24/11/5-0141	7	11	46	25
28.11.2024	N/24/11/5-0173	9	11	54	28
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs

ARSHIYA KOUSAR
Dy. T.M. - Chemical
Govt. Analyst / Authorised Signatory

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.
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Table No. 2

AMBIENT AIR QUALITY

Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd

Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)

Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)

Station at & Code : A - II, Yeshwanthanagar

Duration : 24 Hrs

Issue date : 02.12.2024

Reference IS 5182 & Lab SOP

Date of Sampling	Lab Code	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter	
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)
08.11.2024	N/24/11/3-0121	8	12	49	32
09.11.2024	N/24/11/3-0197	8	17	52	29
11.11.2024	N/24/11/4-0014	7	9	40	21
12.11.2024	N/24/11/4-0057	13	16	56	30
22.11.2024	N/24/11/5-0124	11	12	49	26
23.11.2024	N/24/11/5-0184	12	18	53	27
25.11.2024	N/24/11/5-0012	11	15	59	29
26.11.2024	N/24/11/5-0077	9	11	45	25
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs

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Table No. 3

AMBIENT AIR QUALITY

Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd

Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)

Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)

Station at & Code : A - III, Sushila Nagar village

Duration : 24 Hrs

Issue date : 02.12.2024

Reference IS 5182 & Lab SOP

Date of Sampling	Lab Code	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter	
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)
04.11.2024	N/24/11/3-0003	7	11	58	20
05.11.2024	N/24/11/3-0038	13	14	40	23
15.11.2024	N/24/11/4-0123	7	9	30	18
16.11.2024	N/24/11/4-0191	12	13	56	33
18.11.2024	N/24/11/5-0015	11	15	51	23
19.11.2024	N/24/11/5-0057	11	13	35	19
27.11.2024	N/24/11/5-0147	12	15	48	25
28.11.2024	N/24/11/5-0179	9	10	40	25
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs

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Table No. 4

AMBIENT AIR QUALITY

Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd

Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)

Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)

Station at & Code : A - IV Sandur Town

Duration : 24 Hrs

Issue date : 02.12.2024

Reference IS 5182 & Lab SOP

Date of Sampling	Lab Code	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter	
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)
06.11.2024	N/24/11/3-0070	9	15	55	27
07.11.2024	N/24/11/3-0094	11	15	42	22
14.11.2024	N/24/11/4-0105	9	11	35	20
15.11.2024	N/24/11/4-0127	10	15	30	18
20.11.2024	N/24/11/5-0086	8	16	58	31
21.11.2024	N/24/11/5-0102	12	15	44	24
27.11.2024	N/24/11/5-0149	11	12	49	27
28.11.2024	N/24/11/5-0181	11	15	50	32
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs

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Table No. 5

AMBIENT AIR QUALITY

Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd

Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)

Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)

Station at & Code : A - V Core zone Within ML Area

Duration : 24 Hrs

Issue date : 02.12.2024

Reference IS 5182 & Lab SOP

Date of Sampling	Lab Code	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter	
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)
04.11.2024	N/24/11/3-0004	12	11	55	30
05.11.2024	N/24/11/3-0039	10	13	46	26
15.11.2024	N/24/11/4-0124	7	10	38	29
16.11.2024	N/24/11/4-0192	10	11	44	24
18.11.2024	N/24/11/5-0016	7	10	53	28
19.11.2024	N/24/11/5-0058	11	14	58	33
27.11.2024	N/24/11/5-0148	13	15	50	26
28.11.2024	N/24/11/5-0180	10	10	46	25
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs

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TEST REPORT

Table No. 6

Fugitive Emission

Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd
Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)
Sample Collected by : Environmental Laboratory
(Unit of Mineral Engineering Services)
Station at & Code : A - VI, Loading point
Duration : 08 Hrs
Issue date : 02.12.2024

Date of sample	Lab Code	Particulate mater (µg/m^3)
04.11.2024	N/24/11/3-0005	265
15.11.2024	N/24/11/4-0125	215

Station at & Code : A - VII, Crushing & Screening
Duration : 08 Hrs

Date of sample	Lab Code	Particulate mater (µg/m^3)
05.11.2024	N/24/11/3-0040	391
16.11.2024	N/24/11/5-0017	345

Station at & Code : A - VIII, Dumping point
Duration : 08 Hrs

Date of sample	Lab Code	Particulate mater (µg/m^3)
04.11.2024	N/24/11/3-0006	411
15.11.2024	N/24/11/4-0126	275

Station at & Code : A - IX, Haulage Road
Duration : 08 Hrs

Date of sample	Lab Code	Particulate mater (µg/m^3)
05.11.2024	N/24/11/3-0041	368
16.11.2024	N/24/11/5-0018	375

Ref : Environmental (Protection) Rules, 2010 (Sixth Amendment)

	Particulate mater (µg/m^3)
Permissible limits for Fugitive Emissions	**600 µg/m^3**

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Table No. 7

STATISTICAL AIR QUALITY DATA

Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)

Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd

Month : November, 2024

Station Code	A - I, Dharmapura				A - II, Yeshwanthanagar				A - III, Sushila Nagar village			
	SO_2	NO_2	PM_{10}	$PM_{2.5}$	SO_2	NO_2	PM_{10}	$PM_{2.5}$	SO_2	NO_2	PM_{10}	$PM_{2.5}$
Min.	6	9	35	18	7	9	40	21	7	9	30	18
10%	7	9	37	21	8	10	44	24	7	10	34	19
25%	8	10	42	23	8	12	48	26	9	11	39	20
50%	9	11	49	26	10	14	51	28	11	13	44	23
75%	10	12	54	27	11	16	54	29	12	14	52	25
98%	12	16	56	30	13	18	59	32	13	15	58	32
Max.	12	16	56	30	13	18	59	32	13	15	58	33
Avg.	9	11	47	25	10	14	50	27	10	13	45	23
SD	2	2	8	4	2	3	6	3	2	2	10	5
No. of obs	8				8				8			

Station Code	A - IV Sandur Town				A - V Core zone Within ML Area			
	SO_2	NO_2	PM_{10}	$PM_{2.5}$	SO_2	NO_2	PM_{10}	$PM_{2.5}$
Min.	8	11	30	18	7	10	38	24
10%	9	12	34	19	7	10	42	25
25%	9	14	40	22	9	10	46	26
50%	11	15	47	26	10	11	48	27
75%	11	15	51	28	11	13	54	29
98%	12	16	58	32	13	15	58	33
Max.	12	16	58	32	13	15	58	33
Avg.	10	14	45	25	10	12	49	28
SD	1	2	10	5	2	2	7	3
No. of obs	8				8			

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TEST REPORT

Table No. 8

Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd
Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
Particulars of sample collected : SW1 - Nari Halla Up Stream water,
SW2 - Nari Halla Down Stream water
Date of sample collection : 05.11.2024
Issue Date : 18.11.2024
Ref:IS : 2296, 1982 Class C Norms (Stream Water Standards)

Lab Code		ED/24/11/2-0056	ED/24/11/2-0057	Limits For Stream Water Standards	Method of Testing
Sl.No.	Parameters	Results			
		SW1	SW2		
1	Colour (Hazen Units), Max	25	20	300	IS:3025(Part-4)2021
2	pH	7.77	7.69	6.5 to 8.5	IS:3025(Part-11)2022
3	Dissolved Oxygen (as O_2), mg/l, Max	5.6	5.4	Min 4	IS:3025(Part-38)1989RA 2019
4	Oil & Greease, mg/l	<0.1	<0.1	0.1	IS:3025(Part 39)2021
5	Total Dissolved Solids (mg/l), Max	372	386	1500	IS:3025(Part-16)2023
6	Nitrates (as NO_3),mg/l, Max	1.73	1.65	50	APHA 4500B
7	Anionic detergents (as MBAS),mg/l, Max	<0.1	<0.1	1.0	IS:3025(Part-68)
8	Copper (as Cu),mg/l, Max	<0.005	<0.005	1.5	IS:3025(Part-2) 2019
9	Chloride (as Cl),mg/l, Max	109.1	74.84	600	IS:3025(Part-32) ;1988RA2019
10	Fluoride (as F),mg/l, Max	0.78	0.71	1.5	APHA 4500F
11	Iron (as Fe),mg/l, Max	0.031	0.074	50	IS:3025(P-2) 2019
12	Phenolic compounds (as C_6H_5OH),mg/l, Max	<0.001	<0.001	0.005	IS:3025(P-43)Sec 1 2022
13	Selenium (as Se), mg/l, Max	<0.005	<0.005	0.05	IS:3025(P-2) 2019
14	Sulphates as SO_4 (mg/l), Max	30.6	31.64	400	IS:3025(P-24)Sec 1 2022
15	Zinc (as Zn),mg/l, Max	<0.005	<0.005	15	IS:3025(P-2) 2019
16	Cadmium (as Cd), mg/l, Max	<0.001	<0.001	0.01	IS:3025(P-2) 2019
17	Cyanides (as CN), mg/l, Max	<0.01	<0.01	0.05	IS:3025(P-27) Sec 1 2021
18	Lead (as Pb) mg/l, Max	<0.005	<0.005	0.1	IS:3025(P-2) 2019
19	Total Arsenic as As (mg/l), Max	<0.002	<0.002	0.2	IS:3025(P-2) 2019
20	Hexavalent Chromium (as Cr^{+6}), mg/l, Max	<0.03	<0.03	0.05	IS:3025(P-52) 2014
21	Biochemical Oxygen Demand (as O_2), mg/l	<3.0	<3.0	3	IS:3025(P-44) 2014
22	Total Coliform (MPN/100ml)	221	240	5000	IS:1622:1981

"'END OF REPORT"

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Govt. Analyst / Authorised Signatory

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