



GSTIN : 21AAACE6224D1ZE



Environmental Research and Services (India) Pvt. Ltd.

(An ISO/IEC 17025 : 2005 (NABL) Accredited Laboratory, OSPCB Empanelled Laboratory and ISO 9001 : 2015 Certified Company)

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ULR-TC744019000000259P

Test Report Format No.: ERSIPL/FM/37

TEST REPORT (AMBIENT AIR)

Pg No: 1 of 1

Date: 29 Oct 2019

Test Report No: ERSIPL/TR/AA/320

Name and Address of the Customer : Dulanga Coal Mine of M/s NTPC Limited in Sundargarh district, Odisha.
Sample Collected by : Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of : Representative of Client.
Date of Sampling/Monitoring : 02-03.10.2019
Sample Received on : 11.10.2019
Analysis Started on : 14.10.2019
Analysis Completed on : 19.10.2019
Method of Sampling : As per guidelines for sampling & measurement of notified AAQ parameters (NAAQS 2009)-CPCB
Quantity of Sample : 01 sample for each parameter
Environment Condition : Rainy

Sample ID. No.

Locations (Core Zone)

1. ERSIPL/AA/2122
2. ERSIPL/AA/2123
3. ERSIPL/AA/2124
4. ERSIPL/AA/2125

1. Near Site Office (NTPC), Kapurikachhar
2. Near Coal Lab
3. Near Work Shop
4. Near Village Dulanga

Sl. No	Test Parameters	Test method	Unit	Permissible Limit as per NAAQ Standards CPCB Nov-2009	Results			
					ERSIPL/AA/2122	ERSIPL/AA/2123	ERSIPL/AA/2124	ERSIPL/AA/2125
1	Suspended Particulate Matter (SPM)	IS: 5182 (Part 4)- 1999, Reaffirmed 2014, Gravimetric Method	$\mu\text{g}/\text{m}^3$	xx	212.67	197.82	194.63	190.00
2	Particulate Matter (size less than 10 μm) or PM 10	IS 5182 (Part 23): 2006, Reaffirmed -2017, Gravimetric Method	$\mu\text{g}/\text{m}^3$	100.0	78.14	71.64	70.13	69.37
3	Particulate Matter (size less than 2.5 μm) or PM 2.5	ERSIPL/SOP/01 Issue No:03, Revision Date: 01.02.2019	$\mu\text{g}/\text{m}^3$	60.0	31.88	30.40	33.05	27.57
4	Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, Reaffirmed-2017, Improved West & Gaeke Method	$\mu\text{g}/\text{m}^3$	80.0	6.46	8.51	6.09	7.16
5	Oxides of Nitrogen (NO _x)	IS 5182 (Part 6): 2006, Reaffirmed -2017	$\mu\text{g}/\text{m}^3$	80.0	10.15	13.55	14.78	11.19
6	Carbon Monoxide (CO)	By CO Monitor	mg/m^3	2.0	<1.14	<1.14	<1.14	<1.14

(Authorized Signatory)
S.P.Pattanayak
Tech.Manager

.....END OF TEST REPORT.....



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Test Report Format No.: ERSIPL/FM/37

TEST REPORT (AMBIENT AIR)

Pg No: 1 of 1

Date: 29 Oct 2019

Test Report No: ERSIPL/TR/AA/321

Name and Address of the Customer : Dulanga Coal Mine of M/s NTPC Limited in Sundargarh district, Odisha.
Sample Collected by : Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of : Representative of Client.
Date of Sampling/Monitoring : 01-02.10.2019
Sample Received on : 11.10.2019
Analysis Started on : 14.10.2019
Analysis Completed on : 19.10.2019
Method of Sampling : As per guidelines for sampling & measurement of notified AAQ parameters (NAAQS 2009)-CPCB
Quantity of Sample : 01 sample for each parameter
Environment Condition : Rainy

Sample ID. No.

1. ERSIPL/AA/2126
2. ERSIPL/AA/2127
3. ERSIPL/AA/2128
4. ERSIPL/AA/2129

Locations (Buffer Zone)

1. Near Village Bendrichua
2. Near Village Rengalmunr
3. Near Village Khuntjharua
4. Near Village Kathfali

TEST FINDINGS:

Sl. No	Test Parameters	Test method	Unit	Permissible Limit as per NAAQ Standards CPCB Nov-2009	Results			
					ERSIPL/ AA/ 2126	ERSIPL/ AA/ 2127	ERSIPL/ AA/ 2128	ERSIPL/ AA/ 2129
1	Suspended Particulate Matter (SPM)	IS: 5182 (Part 4)- 1999, Reaffirmed 2014, Gravimetric Method	$\mu\text{g}/\text{m}^3$	xx	186.34	204.65	194.93	212.89
2	Particulate Matter (size less than 10 μm) or PM 10	IS 5182 (Part 23): 2006, Reaffirmed -2017, Gravimetric Method	$\mu\text{g}/\text{m}^3$	100.0	73.02	72.82	72.94	75.38
3	Particulate Matter (size less than 2.5 μm) or PM 2.5	ERSIPL/SOP/01 Issue No:03, Revision Date: 01.02.2019	$\mu\text{g}/\text{m}^3$	60.0	32.36	36.81	33.56	29.41
4	Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, Reaffirmed-2017, Improved West & Gaeke Method	$\mu\text{g}/\text{m}^3$	80.0	7.78	6.23	7.83	8.66
5	Oxides of Nitrogen (NO _x)	IS 5182 (Part 6): 2006, Reaffirmed -2017	$\mu\text{g}/\text{m}^3$	80.0	13.82	9.40	15.49	10.97
6	Carbon Monoxide (CO)	By CO Monitor	mg/m^3	2.0	<1.14	<1.14	<1.14	<1.14

.....END OF TEST REPORT.....

(Authorized Signatory)

S.P.Pattanayak

Tech.Manager



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Test Report Format No.: ERSIPL/FM/37

TEST REPORT (AMBIENT AIR)

Pg No: 1 of 1

Date: 29 Oct 2019

Test Report No: ERSIPL/TR/AA/322

Name and Address of the Customer : Dulanga Coal Mine of M/s NTPC Limited in Sundargarh district, Odisha.
Sample Collected by : Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of : Representative of Client.
Date of Sampling/Monitoring : 24-26.10.2019
Sample Received on : 28.10.2019
Analysis Started on : 28.10.2019
Analysis Completed on : 29.10.2019
Method of Sampling : IS 5182 : Part 5 : 1975, Reaffirmed 2014
Quantity of Sample : 01 sample for each parameter
Environment Condition : Rainy

Sample ID. No.

Locations (Core Zone)

1. ERSIPL/AA/2183 (24.10.2019)
2. ERSIPL/AA/2184 (25.10.2019)
3. ERSIPL/AA/2185 (25.10.2019)
4. ERSIPL/AA/2186 (24.10.2019)

1. Near Site Office (NTPC), Kapurikachhar
2. Near Coal Lab
3. Near Work Shop
4. Near Village Dulanga

Sl. No	Test Parameters	Test method	Unit	Permissible Limit as per NAAQ Standards CPCB Nov-2009	Results			
					ERSIPL/AA/2183	ERSIPL/AA/2184	ERSIPL/AA/2185	ERSIPL/AA/2186
1	Suspended Particulate Matter (SPM)	IS: 5182 (Part 4)- 1999, Reaffirmed 2014, Gravimetric Method	$\mu\text{g}/\text{m}^3$	xx	201.52	246.91	180.12	211.96
2	Particulate Matter (size less than 10 μm) or PM 10	IS 5182 (Part 23): 2006, Reaffirmed -2017, Gravimetric Method	$\mu\text{g}/\text{m}^3$	100.0	72.87	70.56	75.01	68.99
3	Particulate Matter (size less than 2.5 μm) or PM 2.5	ERSIPL/SOP/01 Issue No:03, Revision Date: 01.02.2019	$\mu\text{g}/\text{m}^3$	60.0	29.01	32.07	33.63	26.89
4	Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, Reaffirmed-2017, Improved West & Gaeke Method	$\mu\text{g}/\text{m}^3$	80.0	<6.0	6.56	<6.0	6.55
5	Oxides of Nitrogen (NO _x)	IS 5182 (Part 6): 2006, Reaffirmed -2017	$\mu\text{g}/\text{m}^3$	80.0	11.66	13.25	10.86	12.59
6	Carbon Monoxide (CO)	By CO Monitor	mg/m^3	2.0	<1.14	<1.14	<1.14	<1.14

.....END OF TEST REPORT.....

(Authorized Signatory)

S.P.Pattanayak
Tech Manager

