



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)

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha
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ULR-TC744019000000320P

Test Report Format No.: ERSIPL/FM/37

TEST REPORT (AMBIENT AIR)

Pg No: 1 of 1

Date: 25 Nov 2019**Test Report No: ERSIPL/TR/AA/348**

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 : 05-06.11.2019
Sample Received on : 11.11.2019
Analysis Started on : 11.11.2019
Analysis Completed on : 19.11.2019
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 : Sunny

Sample ID. No.**Locations (Core Zone)**

1. ERSIPL/AA/2268
2. ERSIPL/AA/2269
3. ERSIPL/AA/2270
4. ERSIPL/AA/2271

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/2268	ERSIPL/AA/2269	ERSIPL/AA/2270	ERSIPL/AA/2271
1	Suspended Particulate Matter (SPM)	IS: 5182 (Part 4)- 1999, Reaffirmed 2014, Gravimetric Method	$\mu\text{g}/\text{m}^3$	xx	191.22	184.68	205.59	211.32
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	75.87	72.96	78.64	82.26
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	25.94	28.18	33.71	34.76
4	Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, Reaffirmed-2017, Improved West & Gaeke Method	$\mu\text{g}/\text{m}^3$	80.0	7.95	6.96	7.89	<6.0
5	Oxides of Nitrogen (NO _x)	IS 5182 (Part 6): 2006, Reaffirmed -2017	$\mu\text{g}/\text{m}^3$	80.0	12.89	15.07	11.07	16.47
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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ULR-TC744019000000321P

Test Report Format No.: ERSIPL/FM/37

TEST REPORT (AMBIENT AIR)

Pg No: 1 of 1

Date: 25 Nov 2019

Test Report No: ERSIPL/TR/AA/349

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 : 06-07.11.2019
Sample Received on : 11.11.2019
Analysis Started on : 11.11.2019
Analysis Completed on : 19.11.2019
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 : Sunny

Sample ID. No.

1. ERSIPL/AA/2272
2. ERSIPL/AA/2273
3. ERSIPL/AA/2274
4. ERSIPL/AA/2275

Locations (Buffer Zone)

1. Near Village Bendrichua
2. Near Village Rengalmunr
3. Near Village Khuntjharia
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/2272	ERSIPL/AA/2273	ERSIPL/AA/2274	ERSIPL/AA/2275
1	Suspended Particulate Matter (SPM)	IS: 5182 (Part 4)- 1999, Reaffirmed 2014, Gravimetric Method	$\mu\text{g}/\text{m}^3$	xx	258.57	238.23	187.72	191.83
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	72.61	81.22	83.74	68.08
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	38.86	27.55	31.59	26.46
4	Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, Reaffirmed-2017, Improved West & Gaeke Method	$\mu\text{g}/\text{m}^3$	80.0	7.82	6.78	8.31	8.22
5	Oxides of Nitrogen (NO _x)	IS 5182 (Part 6): 2006, Reaffirmed -2017	$\mu\text{g}/\text{m}^3$	80.0	12.15	11.80	13.40	10.02
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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ULR-TC744019000000322P

Test Report Format No.: ERSIPL/FM/37

TEST REPORT (AMBIENT AIR)

Pg No: 1 of 1

Date: 25 Nov 2019

Test Report No: ERSIPL/TR/AA/350

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	:	20-21.11.2019
Sample Received on	:	23.11.2019
Analysis Started on	:	23.11.2019
Analysis Completed on	:	25.11.2019
Method of Sampling	:	IS 5182 : Part 5 : 1975, Reaffirmed 2014
Quantity of Sample	:	01 sample for each parameter
Environment Condition	:	Sunny

Sample ID. No.

Locations (Core Zone)

- ERSIPL/AA/2314
- ERSIPL/AA/2316
- ERSIPL/AA/2317
- ERSIPL/AA/2315

- Near Site Office (NTPC), Kapurikachhar
- Near Coal Lab
- Near Work Shop
- Near Village Dulanga

Sl. No	Test Parameters	Test method	Unit	Permissible Limit as per NAAQ Standards CPCB Nov-2009	Results			
					ERSIPL/AA/2314	ERSIPL/AA/2316	ERSIPL/AA/2317	ERSIPL/AA/2315
1	Suspended Particulate Matter (SPM)	IS: 5182 (Part 4)- 1999, Reaffirmed 2014, Gravimetric Method	$\mu\text{g}/\text{m}^3$	xx	211.53	254.17	286.34	199.23
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	71.25	80.15	75.95	68.46
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	28.16	36.88	35.62	29.35
4	Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, Reaffirmed-2017, Improved West & Gaeke Method	$\mu\text{g}/\text{m}^3$	80.0	7.30	7.50	6.03	<6.0
5	Oxides of Nitrogen (NO _x)	IS 5182 (Part 6): 2006, Reaffirmed -2017	$\mu\text{g}/\text{m}^3$	80.0	9.02	12.22	10.53	13.22
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.....

