



Odisha
Coal and
Power
Limited

Odisha Coal and Power Limited
(A Government of Odisha Company)
CIN U10100OR2015SGC018623
Website: www.ocpl.org.in

Letter No: OCPL/04

Date: 03/01/2020

To
The Member Secretary,
State Pollution Control Board, Odisha
Paribesh Bhawan, A/118
Nilakantha Nagar, Unit-VIII
Bhubaneswar-751012

Sub: Submission of Annual Environmental Statement in Form –V for the year 2018-2019 of M/s. Odisha Coal & Power Ltd.

Ref: (i) Environmental Clearance Letter No. J-11015/139.2008-IA.II(M) dated 21.02.2014

(ii) Environment Clearance transferred in favour of OCPL vide Letter No: J-11015/139/2008-IA-II(M) dated.30.12.2015.

Sir,

Please find enclosed the Annual Environmental Statement in Form –V for the financial year 2018-2019 for Manoharpur Coal Mine Project of M/s. Odisha Coal & Power Ltd. (Clearance Letter No.: J-11015/ 139/ 2008- IA -II (M) dated.30.12.2015) situated at Village Manoharpur, Tehsil: Hemgir, IB Valley Coal Field in Sundargarh District, Odisha.

This is for your kind information.

Thanking you.

Yours faithfully,

Authorized Signatory

Encl: As above.

Copy to: The Joint Director (s)
Regional Office, Eastern Region
Ministry of Environment & Forest and Climate Change
A-3, Chandrasekharapur
Bhubaneswar

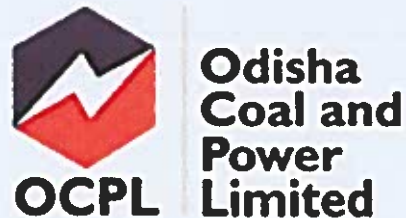
**ENVIRONMENTAL STATEMENT
IN FORM-V**

(Under Rule-14, Environmental protection Rules, 1986)

(2018-2019)

FOR

**Manoharpur Opencast Coal Mine Project of
Odisha Coal & Power Limited**



Odisha Coal and Power Limited,
Zone-A, Ground Floor, Fortune Tower,
Chandrasekharpur, Bhubaneswar-751023, Odisha

SM

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EXECUTIVE SUMMARY

- E-1** Odisha Coal and Power Limited (OCPL) is a company incorporated under the Companies Act 2013, India. OCPL is a Government company as defined by Section 2(45) of the Companies Act, 2013, which was formed as a joint venture Company of Odisha Power Generation Corporation Limited (OPGC) and Odisha Hydro Power Corporation Limited (OHPC), with a shareholding pattern of 51% and 49% respectively. OCPL has been allocated with two coal blocks, namely Manoharpur and Dip-side of Manoharpur by Ministry of Coal, Government of India. The coal blocks are located in IB Valley Area in Sundargarh District, Odisha.
- E-2** In compliance with the Environment (Protection) Rules, 1986, Environmental statement of Manoharpur Opencast Coal Mine Project for the FY 2018-2019 has been prepared. This report is prepared with a view to fulfil the statutory obligations laid down by Ministry of Environment, Forests and Climate Change (MoEF &CC).



CHAPTER – I

INTRODUCTION

1.1. GENESIS:

The environmental statement for each financial year ending 31st March in Form-V is mandated to be submitted by the Project Proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986 and as amended subsequently, and shall also be uploaded in the Company's web-site along with the compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF &CC by E-mail.

In compliance with the above, the work of Environmental Statement ending with 31st March, 2019 in Form-V for Manoharpur Opencast Coal Mine Project of OCPL has been prepared.

1.2. COAL BLOCK/ PROJECT DESCRIPTION:

OCPL has been allocated with two coal blocks, namely Manoharpur and Dip-side of Manoharpur by Ministry of Coal, Government of India. The coal blocks are located in IB Valley Coal Field in Sundargarh District, Odisha. Manoharpur and Dip side of Manoharpur blocks are contiguous blocks having a common boundary. Manoharpur block is fully explored and Dip side of Manoharpur block is regionally explored at the time of allocation. Latter, the exploration of Dip-side of Manoharpur is completed and an Integrated Geological Report has been prepared by CMPDI. As per the IGR, the net geological reserve of Manoharpur coal block is 252 MT and the net geological reserve of Dip- side Manoharpur coal block is 726 MT. The ultimate depth of the Manoharpur coal mine will be around 214m. OCPL plans to mine the Manoharpur coal block by shovel Dumper combination for OB removal & surface miner for coal production. There is a plan to have IPCC (In Pit Crushing & conveying) system as a future technology upgradation.

1.2.1. COMMUNICATION:

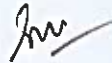
Manoharpur block is about 45km away from Sundargarh along Sundargarh-Hemgir road which passes near the block. It is also connected by black top road with two important towns of Odisha viz. Rourkela (145km) and Jharsuguda (75km). The nearest railway station is Hemgir, lying on the Mumbai-Howrah main line and is about 20 km. away from Manoharpur Block.



1.3. ENVIRONMENTAL SCENARIO:

Currently, monthly environmental monitoring i.e. Ambient Air Quality, Ambient Noise Quality, Ground Water Quality, Surface Water Quality etc. is being carried out by MoEF&CC/NABL/OSPCB accredited laboratory i.e. M/s Visiontek Consultancy Services Pvt. Ltd. in the core zone and buffer zone of the proposed project site. Also, the daily meteorological data (i.e. Temperature, RH, Rainfall etc.) is being collected on site. The monitoring reports showing the results of above mentioned environmental parameters is being submitted monthly basis to Odisha State Pollution Control Board (OSPCB). The copy of acknowledgement receipt for the Month Feb'19 and March'19 in this regards is attached as **Annexure 1** for your ready reference.

Further in addition to above, we would like to submit that, the mine has not yet commenced coal production.



CHAPTER – II

ENVIRONMENTAL STATEMENT

FORM – V

Environmental Statement for the financial year ending 31st March, 2019

PART – A

a. NAME AND ADDRESS OF THE OWNER/ OCCUPIER

Name : Odisha Coal and Power Limited
: (Authorized Signatory – Sri Saroj Kumar Kar, DGM-Mech.

Address : -

Place : Manoharpur Opencast Coal Mine Project

Tehsil : Hemgir

District : Sundargarh

State : Odisha

b. INDUSTRY CATEGORY : Primary (Coal Mining)

c. PRODUCTION CAPACITY : 8 MTY

d. YEAR OF ESTABLISHMENT : 2016

e. DATE OF THE LAST ENVIRONMENTAL STATEMENT SUBMITTED : 29.06.2018



PART – B
WATER AND RAW MATERIAL CONSUMPTION

(I) WATER CONSUMPTION (Cu. m/day):

		During Previous financial year (2017-2018)	During current financial year (2018-2019) m ³ /day
A.	MINING	NIL The mine has not yet commenced operation	MINING (Water Utilized)
i.	Dust suppression		Haul Road Dust Suppression – 41 m ³ /day
ii.	Fire fighting		Other activities – 0.8 m ³ /day
iii.	Workshop		Domestic Purpose – 17 m ³ /day
iv.	Others (service building etc.)		Note : The mine has not yet commenced coal production ; only top soil and over burden has been excavated from 27.4 hectare of mine area to expose the coal surface.
B.	COOLING		
C.	DOMESTIC		
i.	Colony		
ii.	Others (service building etc.)		
	TOTAL		

WATER CONSUMPTION PER UNIT OF PRODUCT

Name of product	Water consumption per unit of product	
	During Previous financial year (2017-2018)	During current financial year (2018-2019)
ROM Coal	NIL The mine has not yet commenced operation	Coal Production - NIL The mine has not yet commenced coal production; only top soil and over burden has been excavated from few portion of mine to expose the coal surface.

Note- Only for Production Purpose



(II) RAW MATERIAL CONSUMPTION:

Sl.	Name of raw material	Name of products	Consumption of raw material (per unit of output)	
			During Previous FY (2017-2018)	During current FY (2018-2019)
1.	Explosive	Coal	NIL The mine has not yet commenced coal production operation	NIL The mine has not yet commenced coal production operation
2.	Diesel			
3.	Lubricants	Top Soil & Over Burden (OB)	Explosive - Nil	Explosive - Nil
			Diesel - Nil	Diesel – 0.14 Ltr/m ³
			Lubricants - Nil	Lubricants – 0.006 Ltr/m ³

PART – C**POLLUTION GENERATED**

Pollution	Quantity of pollution generated	Percentage variation from prescribed standards with reasons
WATER	NIL No effluent has been generated from the mining operation as the coal production has not yet started	NIL The mine has not yet commenced coal production
AIR	Not Possible to Quantify	The environmental parameters for ambient air quality (i.e. PM ₁₀ , PM _{2.5} , SO _x , NO _x) are within the permissible limits. The ambient air quality monitoring has been carried out by MoEF&CC/NABL/OSPCB accredited laboratory i.e. M/s Visiontek Consultancy Services Pvt. Ltd. in the core zone. The latest report in this regard for the month February'19 and March'19 is enclosed as Annexure 2 for your kind reference.



PART – D

HAZARDOUS WASTE

(As specified under Hazardous Waste Management and Handling Rules, 1989)

	Hazardous waste	Total quantity	
		During Previous financial year (2017-2018)	During current financial year (2018-2019)
A.	From process i)Used oil ii)Automobile batteries	NIL The mine has not yet commenced operation	The quantity of generated used oil / spent was very less and has been handed over to local vender for further reprocess/ reuse purpose.
B.	From pollution control facilities		

PART – E

SOLID WASTE

Sl	Particulars	Total quantity (In Million Cu.m)	
		During Previous financial year (2017-2018)	During current financial year (2018-2019)
a.	From process (Top Soil and Over Burden from Mining)	NIL The mine has not yet commenced operation	Top Soil & Over Burden (OB) – 1.81 MCum
b.	From pollution control facilities		The excavated top soil and OB is stored at the earmarked places as per the approved Mining Plan.
c.	Quantity recycled or reutilized		



PART – F

PLEASE SPECIFY THE CHARACTERISTICS (IN TERMS OF CONCENTRATION AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTE AND INDICATE THE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTE.

(I) Hazardous Waste

Name of Hazardous waste	Quantity generated in the Year 2018-19	Disposal Practices
Used Oil / Spent Oil from machineries / DG sets etc.	-	The quantity of generated used oil / spent was very less and has been handed over to local vender for further reprocess/ reuse purpose.

(II) Solid Waste

Name of Hazardous waste	Quantity generated in the Year 2018-19	Disposal Practices
Top Soil and Over Burden (OB)	1.81 Mcum	The excavated top soil and OB is stored at the earmarked places and will be reutilized as per the approved Mining Plan.

PART – G

IMPACT OF POLLUTION CONTROL MEASURES ON CONSERVATION OF NATURAL RESOURCES AND CONSEQUENTLY ON COST OF PRODUCTION

In order to carry out mining in an eco-friendly manner the following pollution control measures will be implemented.

1. AIR POLLUTION CONTROL MEASURES:

The following measures will be taken to control air pollution.

- i) Water sprinkling will be carried out on haul roads and coal transportation roads with the help of water sprinklers.
- ii) Regular sprinkling of water at coal transfer and loading / unloading points.



2. WATER POLLUTION CONTROL MEASURES:

The following measures will be taken to control water pollution from mine:

- i) Most of the parameters of mine water conform to General Standard of MOEF &CC for Class- A effluent as mentioned earlier. The mine water will be discharged to Nala after passing through the settling tank.
- ii) Some portions of mine water will be also used for different purposes in dust suppression and for industrial use after passing it through slow sand filtration plant.
- iii)

3. NOISE POLLUTION CONTROL MEASURES:

The following measures will be taken to control noise pollution from mine:

- i) Regular maintenance of machines and other equipment at workshop.
- ii) Providing green belt around core activity area, along road side and in other vacant areas.

4. LAND DEGRADATION CONTROL MEASURES

Overburden will be backfilled in the de-coaled area and adequate plantation measures will be taken up, land will be restored as per approved mine closure plan.

PART – H

ADDITIONAL INVESTMENT PROPOSAL FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT OF POLLUTION

OCPL will do the necessary investment as per the Environment Management Plan and Environment Clearance issued by MoEF &CC.



PART - I

ANY OTHER PARTICULARS IN RESPECT OF ENVIRONMENTAL PROTECTION AND ABATEMENT OF POLLUTION

As mentioned above in Chapter 1, The Environmental Monitoring is being carried out by MoEF&CC/NABL/OSPCB accredited laboratory M/s Visiontek Consultancy Services Pvt. Ltd. in the core zone and buffer zone of the proposed project site as per the guideline of MoEF &CC/CPCB and based on the result there of, company will take necessary pollution preventive action, if needed.

A handwritten signature in black ink, consisting of a stylized 'J' followed by a horizontal line.



Odisha
Coal and
Power
Limited

Odisha Coal and Power Limited
(A Government of Odisha Company)
CIN: U10100OR2015GCL1463
Website: www.ocpl.in

Letter No - MCNP/Environment/2019/11 S

Date : 23-04-2019

To

The Member Secretary
State Pollution Control Board
Paribesh Bhawan, A/118
Nilakantha Nagar, Unit-VIII
Bhubaneswar-751012
Odisha

Sub: Submission of monthly environmental monitoring reports in respect of Manoharpur Coal Mine Project of M/s Odisha Coal and Power Limited.

Sir,

We are submitting herewith the environmental monitoring reports in respect of Manoharpur Coal Mine Project of M/s Odisha Coal and Power Limited for the month of Feb., 2019.

This is for your kind perusal.

Thanking you,

Yours faithfully,

For M/s Odisha Coal and Power Limited

[Signature]
23/04/2019
Authorized Signatory
Sr. Manager (Mines)
Odisha Coal and Power Ltd.



Encl: as above

Copy to: The Regional Officer, State Pollution Control Board, Bhubaneswar

[Handwritten mark]



**Odisha
Coal and
Power
Limited**

Odisha Coal and Power Ltd.
(A Subsidiary of Odisha State Power Corporation Ltd.)
CIN: U10100OR2015PLC000001
Website: www.ocpl.co.in

Letter No. MCMP/Environment/2019/110

Date: 23.04.2019

To

The Member Secretary
State Pollution Control Board
Paribesh Bhawan, A/118
Nilakantha Nagar, Unit-VIII
Bhubaneswar-751012
Odisha

Sub: Submission of monthly environmental monitoring reports in respect of Manoharpur Coal Mine Project of M/s Odisha Coal and Power Limited.

Sir,

We are submitting herewith the environmental monitoring reports in respect of Air Quality, Noise and ground water in respect of Manoharpur Coal Mine Project of M/s Odisha Coal and Power Limited for the month of March, 2019.

This is for your kind perusal.

Thanking you,

Yours faithfully,

For M/s Odisha Coal and Power Limited

Haran Kumar
23/04/2019

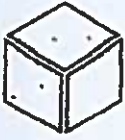
Authorized Signatory Manager (Mines)
Odisha Coal and Power Ltd.

Encl: as above

Copy to: The Regional Officer, State Pollution Control Board, Bhubaneswar

Regd. Office: Zone A, Odisha State Power Corporation Ltd., Bhubaneswar
S/O: Mr. Haran Kumar, Manager (Mines), Odisha Coal and Power Ltd., Bhubaneswar

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Visiontek Consultancy Services Pvt. Ltd.

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ISO 9001 : 2008

ISO 14001 : 2004
OHSAS 18001 : 2007

ANNEXURE-2

Ref: En/ab/19/R-1808

Date: 13/03/19

AAQ MONITORING REPORT FOR FEB-2019 (CORE ZONE)

1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-2: Vocational Training Center
4. Sample collected by : VCSPL representative in presence of OCPL representative.

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
07.02.2019	65.6	34.5	26.3	34.5
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Geake Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$



For Visiontek Consultancy Services Pvt. Ltd



Visiontek Consultancy Services Pvt. Ltd.

(An Enviro Engineering Consulting Cell)



ISO 9001 : 2008

ISO 14001 : 2004
OHSAS 18001 : 2007

Ref.: Enfab/19/R - 1309

Date: 18/08/19

AAQ MONITORING REPORT FOR FEB-2019 (CORE ZONE)

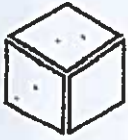
1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-3: CHPL OCPL Office
4. Sample collected by : VCSPL representative in presence of OCPL representative.

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
08.02.2019	72.6	58.7	45.6	59.8
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Geake Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$

For Visiontek Consultancy Services Pvt.Ltd





Visiontek Consultancy Services Pvt. Ltd.

(An Enviro Engineering Consulting Cell)



ISO 9001 : 2008

ISO 14001 : 2004
OHSAS 18001 : 2007

Ref: Enu/lab/19/R-1310

Date: 18/08/19

AAQ MONITORING REPORT FOR FEB-2019 (CORE ZONE)

1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-4: Mines Area
4. Sample collected by : VCSPL representative in presence of OCPL representative.

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
12.02.2019	92	53	72.3	52.3
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Geake Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$

For Visiontek Consultancy Services Pvt.Ltd





Visiontek Consultancy Services Pvt. Ltd.

(An Enviro Engineering Consulting Cell)



ISO 9001 : 2008

ISO 14001 : 2004
OHSAS 18001 : 2007

Ref: Enulab/19/R-1311

Date: 13/03/19

AAQ MONITORING REPORT FOR FEB-2019 (BUFFER ZONE)

1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-1: Dulinga
4. Sample collected by : VCSPL representative in presence of OCPL representative.

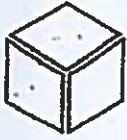
Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
13.02.2019	35.6	19.8	10.3	11.5
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Geake Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$

For Visiontek Consultancy Services Pvt.Ltd



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Visiontek Consultancy Services Pvt. Ltd.

(An Enviro Engineering Consulting Cell)



ISO 9001 : 2008

ISO 14001 : 2004
OHSAS 18001 : 2007

Ref: Enlab/19/R1312

Date: 12/08/19

AAQ MONITORING REPORT FOR FEB-2019 (BUFFER ZONE)

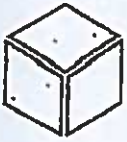
1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-2: Kalamegha
4. Sample collected by : VCSPL representative in presence of OCPL representative.

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
14.02.2019	32.6	18.9	10.2	15.6
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Geake Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$



For Visiontek Consultancy Services Pvt.Ltd



Visiontek Consultancy Services Pvt. Ltd.

(An Enviro Engineering Consulting Cell)



ISO 14001 : 2004
OHSAS 18001 : 2007

Ref: Eaulab/19/R-1313

Date: 13/03/19

AAQ MONITORING REPORT FOR FEB-2019 (BUFFER ZONE)

1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-3: Paramanandpur
4. Sample collected by : VCSPL representative in presence of OCPL representative.

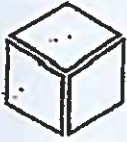
Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
14.02.2019	35.9	20.5	15.6	17.8
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Geake Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$

For Visiontek Consultancy Services Pvt.Ltd



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Visiontek Consultancy Services Pvt. Ltd.

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ISO 9001 : 2008

ISO 14001 : 2004
OHSAS 18001 : 2007

Ref: Enu/lab/19/R-1314

Date: 13/03/19

AAQ MONITORING REPORT FOR FEB-2019 (BUFFER ZONE)

1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-4: Kripsira
4. Sample collected by : VCSPL representative in presence of OCPL representative.

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
15.02.2019	42.3	18.9	12.6	15.8
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Geake Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$



For Visiontek Consultancy Services Pvt.Ltd

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Visiontek Consultancy Services Pvt. Ltd.

(An Enviro Engineering Consulting Cell)



ISO 9001 : 2008
ISO 14001 : 2004
OHSAS 18001 : 2007

Ref.: Envtob/19/R-1947

Date: 09.04.19

AAQ MONITORING REPORT FOR MARCH-2019 (CORE ZONE)

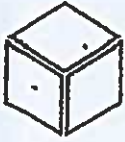
1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-1: BGR Office Camp
4. Sample collected by : VCSPL representative in presence of OCPL representative.

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
08.03.2019	64.3	35.6	21.6	36.5
29.03.2019	66.8	37.5	23.9	38.9
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Genke Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$


For Visiontek Consultancy Services Pvt. Ltd.





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ISO 5001 : 2008
ISO 14001 : 2004
OHSAS 18001 : 2007

Ref: Env/66/19/R-1948

Date: 09.04.19

AAQ MONITORING REPORT FOR MARCH -2019 (CORE ZONE)

1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-2: Vocational Training Center
4. Sample collected by : VCSPL representative in presence of OCPL representative.

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
09.03.2019	69.8	36.8	22.7	35.8
28.03.2019	70.5	39.8	20.5	38.9
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Gaeke Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$


For Visiontek Consultancy Services Pvt. Ltd





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ISO 9001 : 2008
ISO 14001 : 2004
OHSAS 18001 : 2007

Ref: Env/lab/19/R-1949

Date: 09.04.19

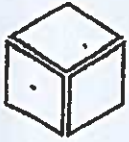
AAQ MONITORING REPORT FOR MARCH -2019 (CORE ZONE)

1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-3: CHPL OCPL Office
4. Sample collected by : VCSPL representative in presence of OCPL representative.

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
11.03.2019	59.8	29.3	23.7	39.4
29.03.2019	62.4	34.5	21.9	36.5
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Genke Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$





Visiontek Consultancy Services Pvt. Ltd.

(An Enviro Engineering Consulting Cell)



ISO 9001 : 2008

ISO 14001 : 2004

OHSAS 18001 : 2007

Ref.: Env/ob/19/R-1950

Date: 09.04.19

AAQ MONITORING REPORT FOR MARCH -2019 (CORE ZONE)

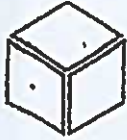
1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-4: Mines Area
4. Sample collected by : VCSPL representative in presence of OCPL representative.

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
11.03.2019	73.0	42.5	29.1	55.6
29.03.2019	70.2	39.8	27.4	57.8
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Geake Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$



For Visiontek Consultancy Services Pvt. Ltd



Visiontek Consultancy Services Pvt. Ltd.

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ISO 9001 : 2008

ISO 14001 : 2004

OHSAS 18001 : 2007

Ref: Env/06/19/R-1951

Date: 09.04.19

AAQ MONITORING REPORT FOR MARCH -2019 (BUFFER ZONE)

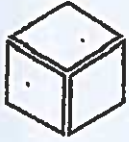
1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-1: Dulinga
4. Sample collected by : VCSPL representative in presence of OCPL representative.

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
13.03.2019	38.6	21.4	11.4	16.8
15.03.2019	39.5	23.5	11.7	17.5
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Geake Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$


For Visiontek Consultancy Services Pvt. Ltd





Visiontek Consultancy Services Pvt. Ltd.

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ISO 9001 : 2008

ISO 14001 : 2004

OHSAS 18001 : 2007

Ref: Envlab/19/R-1952

Date: 09.04.19

AAQ MONITORING REPORT FOR MARCH -2019 (BUFFER ZONE)

1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-2: Kalamegha
4. Sample collected by : VCSPL representative in presence of OCPL representative.

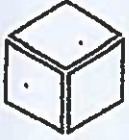
Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
14.03.2019	35.6	20.7	8.3	14.2
16.03.2019	39.5	21.3	9.1	14.8
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Genke Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$



For Visiontek Consultancy Services Pvt. Ltd

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Ref: Envlab/19/R-1953

Date: 09.04.19

AAQ MONITORING REPORT FOR MARCH -2019 (BUFFER ZONE)

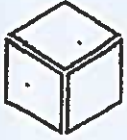
1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-3: Paramanandpur
4. Sample collected by : VCSPL representative in presence of OCPL representative.

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
13.03.2019	39.5	22.4	7.9	14.5
15.03.2019	42.3	25.6	7.3	15.2
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Geake Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$



For Visiontek Consultancy Services Pvt.Ltd



Ref: EnvLab/19/R-1954

Date: 09.04.19

AAQ MONITORING REPORT FOR MARCH -2019 (BUFFER ZONE)

1. Name of Industry : M/s Odisha Coal and Power Limited, Sundargarh
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
3. Sampling Location : AAQMS-4: Kripsira
4. Sample collected by : VCSPL representative in presence of OCPL representative.

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
14.03.2019	47.2	22.6	7.0	13.4
16.03.2019	44.7	21.2	7.5	15.2
CPCB, New Delhi AAQ Standard	100	60	80	80
Testing Method	Gravimetric IS 5182: Part 23	Gravimetric EPA CFR-40 (pt 50) Appendix-1	Improved West & Geake Method IS 5182 (Part-2) RA2006	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2006

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$



For Visiontek Consultancy Services Pvt. Ltd