

Central Coalfields Limited
Office of the Project Officer (Sirka Group)
P.O: Sirka, Dist: Ramgarh

Ref No: P.O/SG/Env Stmt/ 2016/ 2036

Date: 20/10/16

To
The Regional Officer
Ministry of Environment Forest & Climate Change,
Ranchi Regional Office (ECZ)
Bungalow No. A-2,
Shyamali Colony, Ranchi

**Sub: Submission of Environmental Statement of Argada Colliery for the period
from April-2015 to March-2016.**

Dear Sir,

Enclosed please find herewith the Environmental Statement for the period from **April-2015 to March-2016** in respect of Air, Water & Noise quality & solid waste management report as analysed by CMPDIL, Ranchi in respect of Argada Colliery (SG) duly signed by the project proponent.

Thanking You.

Enclosed: As above with C.D.

Yours faithfully


Project Officer
Sirka Group (SG)

Copy to :

1. Member Secretary, JSPCB
2. The Dy.GM/HOD (Env), CCL HQ, Ranchi
3. The G.M(A)/Sirka, for kind information



ENVIRONMENTAL STATEMENT

OF

ARGADA COLLIERY

FOR

2015-16



CENTRAL COALFIELDS LIMITED

**ENVIRONMENT DIVISION
CCL, RANCHI**

EXECUTIVE SUMMARY

- E.1 This Environmental Statement Report has been prepared with a view to fulfil the statutory obligations laid down by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India vide their gazette notification no. G.S.R. 329 (E) dated 13th March 1992. The 'Environmental Audit' has been made mandatory through this notification. The 'Environmental Audit' has been subsequently renamed to 'Environmental Statement' vide MoEFCC gazette notification no. G.S.R. 386 (E) dated 22nd April, 1993.
- E.2 Argada UG Project is operating in Argada Area of Central Coalfields Ltd. The planned normative capacity of the Project is to produce 0.085 Million Tonnes per year of raw coal and the peak capacity is 0.097 Million Tonnes per year. The Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India vide no. J11015/462/2008-IA.II (M) dated 25th September, 2014 has granted Environmental Clearance to the underground mine.
- E.3 The coal is being produced by Bord and Pillar mining method through underground mines. Total 25,403 tonnes of coal was produced during year 2015-16.
- E.4 The water although not used directly during the coal winning process, water is being consumed mainly for domestic purpose. The water consumption for the assessment year 2015-16 was 2180 m³/day. Out of this 250 m³/day was used for industrial purpose and 1930 m³/day was used for domestic purpose.
- E.5 The raw material i.e. High Speed Diesel (HSD) and Lubricant are being used for automobiles (mainly HEMMs) and machines while Explosive is being used for overburden and coal removal purpose. The consumption of lubricants and explosives for the assessment year 2015-16 were 1,049 litres and 3,899 Kg. respectively.
- E.6 The quarterly ambient air quality monitoring is being carried out by CMPDI Ltd. as per the guidelines of Ministry of Environment Forest & Climate Change (MoEFCC). The results reveal that concentration of parameters i.e. SPM, SO₂, NO_x in ambient air for most of the time, are within the prescribed standards. The quality of mine water at the disposal point is meeting the permissible limit with respect to all the parameters. The noise level in the core as well as buffer zone are well within the prescribed norms.
- E.7 Hazardous waste are not being produced either from mining operations or from any pollution control facilities.
- E.8 No solid waste is generated from the mine.

CHAPTER ONE

PROJECT DESCRIPTION

1.1 General

The Argada UG project is under the administrative control of Argada area of Central Coalfields Limited. It is one of the taken over mine and it belonged to M/s Bird & Co. Ltd. at the time of nationalisation in 1973. At the time of nationalisation the production of coal was 0.35 Million Tonnes per Year.

1.2 Location

Argada UG project is located in the eastern part of South Karanpura coalfields in Argada area and is surrounded by metamorphic rocks in the north and south. It lies between latitudes $23^{\circ} 30'$ and $23^{\circ} 40'$ and longitude $85^{\circ} 25'$ and $85^{\circ} 28'$. It is included in the Survey of India Toposheet no. 73E/6. Argada colliery is situated in the east whereas Damodar River makes its western and southern boundaries. It is situated in the Ramgarh district of Jharkhand state.

1.3 Communication

Argada UG Project is connected by all-weather metalled road from Ramgarh on the National Highway (NH) no. 33 between Ranchi and Hazaribagh. It is situated at a distance of 10 km from Ramgarh. The nearest Railway station is Argada, on Gomoh - Barwadih line of Eastern Railway that is within 2 km of the mine. The nearest airport is at Ranchi at a distance 80 km.

1.4 Topography and Drainage

Argada UG forms a part of lowland between Hazaribagh plateau in the north and Ranchi plateau in the south and represents undulating sloping towards south topography. An ephemeral stream, called Patratu nalla flows in the east of the property, along N-S alignment, discharging water into Damodar River. The Damodar River flows along the western and southern boundary of Argada UG block.

1.5 Mining System

Underground mining system is being practiced in the project considering geo mining conditions of the deposits namely:

- (i) Gradient of seams
- (ii) Multiple seams
- (iii) The property being faulted with as many as 10 faults
- (iv) Argada UG Project is developing seam I & J through manual Bord & Pillar mining system.

CHAPTER TWO
ENVIRONMENTAL STATEMENT FOR COAL MINING PROJECT

Environmental Statement for the Assessment Year **2015-16**

Part-A

(I) **Name and address of the Project:**

Name: Argada UG Project

Address: Project Officer

Place: Argada

District: Ramgarh

(II) Industry category: Primary

(III) Production capacity: 0.085 million tonnes /year

(IV) Year of Establishment: -----

(V) Date of the last Environment Report submitted: September, 2015

Part-B

Water and Raw Material Consumption

(I) **Water Consumption (m³/day)**

	<u>Industrial</u>	<u>2015 -16</u>
(a)	Haul road dust suppression :	110
(b)	Workshop :	75
(c)	Fire-fighting :	40
(d)	Others (service building etc.) :	25
	Sub Total :	250 m ³ /day

Domestic**2015 -16**

(a)	Colony	:	1930
(b)	Arboriculture	:	Nil
Sub Total		:	1930 m ³ /day
<u>Total</u>		:	2180 m³/day

Name of product	Water consumption (per tonne of coal produced)	
	During Financial year (2015-16)	During Financial year (2014-15)
ROM Coal	Nil	Nil

Note: There is no direct relationship between water consumption and coal production.

(II) Raw Material consumption:

Name of raw material	Name of product	Consumption of raw materials (per tonne of coal produced)	
		During Financial year (2015-16)	During Financial year (2014-15)
		Nil	Nil

However, the following materials are being consumed for coal production

S.No.	Materials	2015-16	2014-15
01.	Explosives (in kg.)	15,821	19,800
02.	Lubricants (in litres)	1,049	3,824
03.	Detonators (in nos.)	10,235	49,666

Part-C**Pollution Generated**

Pollutants	Quantity of pollutants Generated	% variations from prescribed standards with reasons
Water		
(a) Discharge from mine	Nil	The results reveal that all the parameter is under the prescribed limit. The quality of mine water at the disposal point vis-a-vis the prescribed standards are given in Annexure.
(b) Workshop Effluent	Nil	Not applicable
(c) Domestic	Nil	Not applicable

Discharge		
<u>Air</u>		
The SPM, SO ₂ and NO _x are main pollutants generated from coal mining project.	The quantity of air pollutants from mine is difficult to quantify. However, concentration of air pollutants are measurable & is given in Annexure.	The results of air pollutants are under the prescribed limits.
<u>Noise</u>		
Operation of HEMMS generated noise	Recorded noise level are placed as Annexure.	The noise level in and around the project is under the prescribed limits.

Part-D

Hazardous wastes

(as specified under Hazardous Waste Management & Handling Rules, 1989)

Hazardous Waste	Total Quantity	
	During Financial year (2015-16)	During Financial year (2014-15)
From mining process	Nil	Nil
From pollution control facilities	Nil	Nil

Part-E

Solid Wastes

Solid Wastes	Total quantity of Solid Waste Generated in million cubic metres (Mm ³)	
	During Financial year (2015-16)	During Financial year (2014-15)
From mining process		
(i) Top Soil	Nil	Nil
(ii) OB	Nil	Nil
From pollution control facilities	Nil	Nil
Quantity recycled or reutilized	NA as it is an underground mine	

Part-F

Characteristics of Hazardous and Solid Waste and Their Disposal practice

Hazardous wastes are not being produced or released either from coal mining operations or pollution control facilities. No solid waste is generated either during mining operation as it is an underground mine project.

Part-G

Impact of Pollution Control Measures on Conservation of Natural Resources and Consequently on Cost of Production

AIR POLLUTION CONTROL MEASURES

In order to carry out mining in an eco-friendly manner, following air pollution control measures have been implemented:

- Plantation has been done within the mine leasehold area.
- Water spraying over coal stock is practised.

WATER POLLUTION CONTROL MEASURES

- Mine water is pumped into the sedimentation lagoon created naturally in the dip side of the mine. This water is then passed to natural drains through sedimentation lagoon.
- Colony and other service buildings are provided with septic tank and soak pit.

NOISE POLLUTION CONTROL MEASURES

- Tree plantation has been done in the core zone for noise attenuation.
- Result of noise monitoring reveals that the noise level is well below the prescribed limit.

Part-H

Additional Investment Proposal for Environmental Protection Including Abatement of Pollution

- The Project will continue to carry regular environmental monitoring for air, water and noise pollutants as per the guidelines of MoEFCC.
- The Environmental Statement Report will be prepared for each assessment year as per the guidelines of Ministry of Environment Forest & Climate Change (MoEFCC).
- The project will continue to take Air & Water consent from Jharkhand State Pollution Control Board (JSPCB) for each year.
- Water consumption for the project for each year is submitted to Jharkhand State Pollution Control Board (JSPCB) in Water Cess Return Format.

- The other proposal for additional investment for environmental protection and pollution abatement in the project is under consideration.

Part-I

Any other particulars in Respect of Environmental Protection and Abatement of Pollution

The suggestions made by different statutory agency e.g. Ministry of Environment Forest & Climate Change, Central pollution Control Board and Jharkhand State Pollution Control Board etc. are being implemented from time to time in the project for better environmental conditions in and around the project.

Bs/harmc
18/10/16

Nodal Officer
Sirka Group, Sirka

K. Singh
19/10/16

Project officer (SG)
Sirka Group, Sirka