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An ISO 9001, ISO 14001 & OHSAS 18001
Certified Company



SEML/ENV/MAN/4853
27.09.2018

The Member Secretary,
Chhattisgarh Environmental Conservation Board,
Paryavash Bhawan, North Block, Sector -19
Atal Nagar, Raipur 492002 (C.G.)

**Sub: Submission of environmental statement for the year 2017-18 for
Pelletization Plant at Sarda Energy & Minerals Limited at Phase I,
of Siltara Industrial Growth Center, Mandhar, Raipur (C.G.).**

Dear Sir,

We are enclosing herewith Environmental Statement for the year 2017-18 for Pelletization Plant, as per the notification of Ministry of Environment and Forest, Government of India, provision of Environment (Protection) amendment Rule, 1993, for your kind perusal.

Kindly acknowledge the receipt of the same.

Thanking you,

Yours faithfully,
For Sarda Energy & Minerals Limited,


P.S. Dutta Gupta
Authorized Signatory

Encl: a/a.

Copy to: **The Regional Officer**
Chhattisgarh Environment Conservation Board
Commercial Complex, Housing Board Colony,
Kabir Nagar, RAIPUR (C.G.)

ENVIRONMENTAL STATEMENT

2017-18

**AS PER
PROVISION OF
ENVIRONMENTAL PROTECTION
AMENDMENT RULE 1993**

FOR



SARDA ENERGY & MINERALS LTD
(Formerly Chhattisgarh Electricity Company Ltd.)

PELLETISATION PLANT

***PHASE-I, SILTARA INDUSTRIAL GROWTH CENTER,
MANDHAR, RAIPUR, CHHATTISGARH***

PART - A

NAME & ADDRESS OF INDUSTRY SARDA ENERGY & MINERALS LIMITED
(Formerly Chhattisgarh Electricity Co. Ltd.)
PHASE- I, SILTARA INDUSTRIAL
GROWTH CENTRE, MANDHAR, RAIPUR

NAME & ADDRESS OF FULL TIME DIRECTOR OF INDUSTRY**NAME OF DIRECTOR****ADDRESS**

KAMAL KISHORE SARDA

18/19, Anupam Nagar, Raipur

PANKAJ SARDA

18/19, Anupam Nagar, Raipur

CATEGORY

Medium

PROCESS

Pellet Production

**DATE OF THE LAST
ENVIRONMENTAL STATEMENT
SUBMITTED**

26.09.2017

PART - B

PRODUCT DETAILS

PELLET PLANT of SARDA ENERGY & MINERALS LIMITED at PHASE – I of SILTARA INDUSTRIAL GROWTH CENTRE, MANDHAR, RAIPUR, is PRODUCING IRON ORE PELLET.

	LICENSED CAPACITY	ACTUAL PRODUCTION (2017-18)
A) NAME OF PRODUCT		
Pellet	6,00,000 TPA	5,99,950 T
B) NAME OF BY-PRODUCT	--	--

RAW MATERIAL CONSUMPTION

Following main raw material were consumed by Sarda Energy & Minerals Limited for manufacturing of Iron Ore Pellet in the year 2017-18.

S N	NAME OF MATERIAL	Raw material Consumption in previous financial year(2016-17)		Raw material Consumption in current financial year(2017-18)	
		QUANTITY (M.T.)	Consumption Per ton of product	QUANTITY (M.T.)	Consumpti on Per ton of product
1	IRON ORE	692635	1.15	659,616	1.10
2	COAL/ COKE	23552	0.04	23,424	0.04
3	LIME STONE	3135.7	0.01	6,198	0.01
4	BENTONITE	3602.59	0.01	2,376	0.00
6	LDO	221972 L	0.37 L	160,339 L	0.27 L

WATER CONSUMPTION

To produce Pellet technically water is required for process mixing, equipment cooling, plantation & sprinkling and domestic purpose. The process water evaporates at the time of heating of pellets. The cooling blow down water re-circulating in a close system and some makeup water added for evaporation loses. The details of water consumption in the year 2017-18 are as follows:-

S. No	Name of section	Qty. (KL) 2017-18
From Rain Water Harvesting		
1	PROCESS MIXING	174,000
2	COOLING	58,000
3	OTHERS (PLANTATION & SPRINKLING)	1,450
SUB TOTAL		233,450
From Bore well		
4	Domestic	1,095
TOTAL		234,545

PART - C

POLLUTION DISCHARGED TO ENVIRONMENT / UNIT OF OUTPUT

NAME OF POLLUTANT	QUANTITY OF POLLUTANT DISCHARGED	CONCENTRATION OF POLLUTANT IN DISCHARGE	PERCENT OF VARIATION PRESCRIBED LIMIT
A) Effluent	There is no Effluent generation.		
B) Flue Gas	Stack monitoring was conducted and the result is given below.		

RESULT OF STACK MONITORING

Sample & Analysed by: In house Laboratory

Date of Monitoring: Average for the year 2017-18

Sl.No.	Test Conducted	Result (at 12% CO ₂ Correction)	Emission Limit(Mg/Nm ³)
1	Particulate Matter(PM)mg/Nm ³ (Isokinetic Sampling)	39.89	50

RESULT OF AMBIENT AIR QUALITY MONITORING

Sample & Analysed by: In house Laboratory

Date of Monitoring: Average for the year 2017-18

Location	PM 10	PM 2.5	Sox	NOx
In Motion Weigh Bridge	70.37	26.45	26.69	29.16
Nr. Security Post	69.48	26.14	25.25	26.87
Nr. Substation	73.22	26.28	26.86	29.62
Nr. Old Civil Office	69.73	26.01	25.50	28.02

CHARACTERISTICS OF EFFLUENT

THERE IS NO EFFLUENT GENERATION

PART - D

HAZARDOUS WASTE

	HAZARDOUS WASTE	QUANTITY (Kg)	
		During the last financial year 2016-17	During the current financial year 2017-18
1	Hazardous waste from process	Nil	Nil
2	From pollution control facilities	Nil	Nil



We will take authorization of Hazardous waste as per category no. 5.1 of schedule (I) used / spent oil.

PART - E

SOLID WASTE

Generation Step	Quantity (MT)	
	During the previous financial year 2016-17	During the current financial year 2017-18
1. From Process		
2. From pollution control facilities (ESP & Bag Filter Dust)	2003 MT	5,212 MT
3. Quantity recycled or reutilised within the unit	2003 MT	5,212 MT

* Note – 100% Recycled back to process.

		Format No.: UES/FORM/09 HDD-272, PHASE III- NEAR JP CHOWK, RING ROAD NO -2, KABIR NAGAR, RAIPUR, C.G. -99 PH - 0771-2972364 EMAIL-ultimatenviro@gmail.com			
Name & Address Of The Customer TO, SARDA ENERGY & MINERALS LIMITED, INDUSTRIAL GROWTH CENTER, SILTARA, RAIPUR (C.G.)			REPORT NO UES/TR/18-19/0714	DATE OF REPORT 05/07/2018	
			LAB REF NO UES/18-19/MISC/0714	DATE OF RECEIPT 29/06/2018	
			DATE OF ANALYSIS START: 29/06/2018	END: 05/07/2018	
SAMPLE DETAILS					
CUSTOMER SAMPLE ID	ESP DUST - PELLET PLANT	CUSTOMER REF. NO. & DATE	6000023189 Dated. - 18/06/2018		
SAMPLE TYPE	MISCELLANEOUS	SAMPLE CONDITION AT RECEIPT	OK		
SAMPLE COLLECTED BY	LAB. CHEMIST	QUANTITY RECEIVED	1 kg		



TEST REPORT					
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	RESULT	
1	Arsenic as As	mg / kg	USEPA METHOD-1311	N.D.	
2	Cadmium as Cd	mg / kg	USEPA METHOD-1311	N.D.	
3	Lead as Pb	mg / kg	USEPA METHOD-1311	N.D.	
4	Cobalt as Co	mg / kg	USEPA METHOD-1311	N.D.	
5	Mercury as Hg	mg / kg	USEPA METHOD-1311	N.D.	
6	Nickel as Ni	mg / kg	USEPA METHOD-1311	N.D.	
7	Chromium as Cr	mg / kg	USEPA METHOD-1311	112	
8	Zinc as Zn	mg / kg	USEPA METHOD-1311	14.5	
9	Copper as Cu	mg / kg	USEPA METHOD-1311	6.5	

Note: N.D. - Not Detected

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

- > The above analysis report refers to the particular sample received at our end and the use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be returned for 07 days after issue of test report unless otherwise agreed with customer.

	For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----

PART – F

None of the waste generation is hazardous from toxicity point of view.
The disposal practice of the solid wastes in the plant is as follows:

- | | | |
|----|---|--|
| a) | Dust collected from Pollution Control Units | All generated dust from various pollution control units in the plant recycled back in the process automatically through chain conveyors in the factory premises. |
|----|---|--|

PART – G

- We have installed & commissioned four field Electro Static Precipitator having efficiency of 99.5% at travelling grate for control gas emission and are running very efficiently. We are maintaining particulate matter emission less than 50mg/Nm³ from the stack.
- For online emission monitoring from stack, we have installed Opacity Meter (PM) and
- Adopted rain water harvesting technique in the plant.
- Four Ambient Air Quality monitoring station established in the premises.
- Garland drains and boundary walls are built all around the raw material storage area so that the rainwater run off does not carry any solid particles to the surroundings.
- All the internal roads are concreted to reduce the emission during the vehicular movement.
- Company has installed water sprinklers at various locations.
- In order to green belt development, we have planted about 13000 no of saplings in the plant premises up to 31th March, 2018, thus the total Plantation done is 79,270 No of Saplings
- Chemical based dry fog system (FILSPRAY – 51) installed at raw material handling section, coal fines been etc.
- Concrete flooring work filter cake yard.
- Concrete flooring work near ESP ground floor area

PART - H

- ❖ Installation of Online Continuous Gaseous Emission Monitoring System for monitoring of SO₂ and NO_x emission from the Stack.
- ❖ More plantations we are carried out along the boundary towards village Mandhar and Ground side.
- ❖ Regular maintenance of plantation inside factory premises will be carried out by SEML.
- ❖ Water sprinkling points will be increased in the coming year.
- ❖ We will made concrete balance road in the factory premises.
- ❖ Company has proposed to plant 5000 nos. of sapling in the year 2017-18.
- ❖ We will improve standards of House Keeping in the plant premises.

PART - I**EXPENDITURE AGAINST POLLUTION CONTROL IN 2017-18**

S. NO.	NAME OF SECTION	AMOUNT
1	Energy charges for running of ESPs	13,136,879
2	Maintenance charges for Pollution Control Equipments	161,254
3	ESPs Cleaning charges	14,500
4	Cleaning charges	
5	Purchase of Chemicals & Calibration Charges	1,534,570
6	Environmental Monitoring Charges	853,000
7	Third party monitoring	336,000
8	Green Belt Development / Plantation	1,501,500
	TOTAL	17,537,703

AIR POLLUTION CONTROL DEVICE

Sarda Energy & Minerals Limited has installed bag filters, & cyclone to control air pollution from different sources. As the laden air enters the cyclone then to bag filter, the air velocity drop down allowing coarse particle to fall in the hopper. Fine particle are borne into bag area and allowing the filtered air passes through the felt media depositing the dust outside of bags. The dust collected outside of bags is cleaned by burst of metered compressed air injected through tubes. The intensity and volume of air controlled by quick acting pilot operated diaphragm valve.

Company has installed & commissioned four field Electro Static Precipitator having efficiency of 99.5% at travelling grate for control the flue gas emission. The flue gas is being treated in ESP and cleaned gas is being released through 60 meter high stack in the atmosphere.