

FORM- V**Environmental Statement for the Financial Year ending 31st March 2018****PART- A**

(i)	Name and Address of the Owner/ Occupier of the industry operation or process	Mr. Giriraj Kumar Jhawar Inland Power Ltd. Inland Nagar, Vill: Tonagtu, P.O: Saram, Gola Dist: Ramgarh, Jharkhand.
(ii)	Industry category	Large
(iii)	Production capacity	63MW
(iv)	Year of establishment	2014
(v)	Date of last Environmental statement submitted	4 th Environmental Statement. Company has started the commercial production on 21.05.2014.

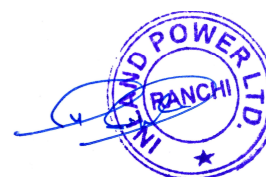
PART – B**Water and Raw Material Consumption****(1) Water Consumption m³ / day: for FY(17-18)**

Process	: 252 m ³ / day
Cooling	: 3765 m ³ / day
Domestic	: 60 m ³ /day

Name Of the Products	Water consumption per unit of product output (M3/MWH)	
	Previous Year(16-17)	Current FY(17-18)
Electricity	3.32	3.36

(2) Raw Material consumption

Name of the Raw Materials	Name of Product	Consumption of Raw Material per unit of output(Ton/MWH)	
		Previous Year(16-17)	Current Year (17-18)
Coal	Electricity	0.383	0.343
W.Reject	Electricity	0.704	0.731
Dolochar	Electricity	0.013	0.018
HSD(Liter\MWH)	Electricity	0.971	0.936



PART – C

Pollution discharge to Environment

1. Water

Plant is running on the concept of Zero Discharge System. So, there is no discharge of water to outside of plant boundary. All the waste water after treatment has been utilized in the plantation, dust separation and brick plant within the plant premises. In the Year 17-18 IPL has utilized 13,80,560 KL of water from the Senegarha Nala.

Quality of surface and ground water are regularly on quarterly basis monitored by NABL accreted lab. (Reports are attached herewith on Annexure(i)).

2. Air (Stack)

Inland power has installed a 95 mtrs. high stack and ESP to control the emission of particulate matters under the limit of 50 mg/nm³.

We have also installed Continues Emission Monitoring System for PM, SO₂ and NO_x.

We have also done the third-party monitoring for Core and Buffer Zone on quarterly basis by NABL approved lab. (Reports are attached herewith on Annexure(ii)).

Yearly Average Concentration of Discharges

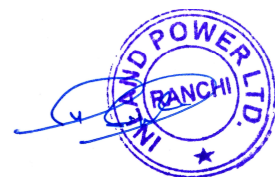
Pollutants	Average Concentration of pollutants in discharges(mass/volume) mg/Nm ³	Remarks
PM	34.76	Within Limit
SO ₂	27.75	
NO _x	14.43	
CO	25.5	
Hg	0.0035	

3. Air (Ambient)(Core Zone)- Yearly Average(Annexure(iii))

	Site A	Site B	Site C	Site D	Remarks
PM 2.5	40.69	35.10	44.28	27.78	Within Limit
PM 10	86.91	83.35	91.95	72.96	
SO ₂	14.03	14.12	13.97	12.68	
NO _x	26.91	22.08	25.24	21.08	

*Monitored by Yugantar Bharati, NABL Accredited Lab.

PART – D



Hazardous Wastes

Hazardous Waste	Previous Year(16-17)	Current Year (17-18)
From Process -Used Lub. Oil	845 liters	1260 liters

Total waste oil has been utilized for the Boiler light-up.

PART – E Solid Waste

A. Solid Waste Generation:

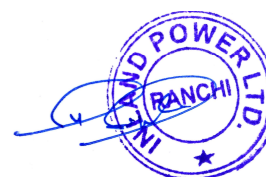
Solid Waste		Previous Year (16-17) Quantity(MT/Annum)	Current Year (17-18) Quantity(MT/Annum)
a. From Process	Bottom Ash	79653	18719
b. From Pollution Control facilities:	Fly Ash	161721	215263

B. Solid Waste Disposal:

	Previous Year (16-17) Quantity(MT/Annum)	Current Year (17-18) Quantity(MT/Annum)
1. Re-utilized within the unit		
i) Road Construction	Nil	NIL
ii) In house bricks manufacturing Plant	1563	3144
2. Disposed outside plant		
i) Supplied to other brick manufacturer	691	5105
ii) For backfilling in abandoned mines	156894	NIL
iii) Cement Plant	2894	3132
iv) Highway (Ring Road)Construction	32863	271925
v) Road Construction, Charhi		26374
3. Balance yet to disposed off	81025	5326

PART – F

Please specify the characterizations (in terms of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.



1. The hazardous waste: 1260 liters of used lube oil was generated and stored in barrels at site as per norms and has been utilized in the boiler during the lightup.
2. Solid waste: 233982 tones of fly ash and bottom ash was generated and utilized by in house/outside bricks manufacturing plant, Road construction.

3. Fly ash Heavy Metal Report : (Annexure(iv))

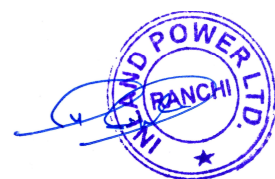
Tested Parameters	Unit	Bottom Ash	Fly Ash
Arsenic	ppm	< 0.01	< 0.01
Mercury	ppm	< 0.01	< 0.01
Chromium	ppm	0.04	0.02
Lead	ppm	0.06	0.03
Cadmium	ppm	0.04	0.01
Copper	ppm	0.06	0.04
Nickel	ppm	0.03	0.01
Selenium	ppm	0.02	0.01
Zinc	ppm	0.3	0.2
Unborn Carbon	%	1.5	0.13

PART – G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

Domestic water is being treated through soak pit and has re-utilized in the plantation and gardening purposes.

Process water is being treated through n-pits and being re-utilized in brick plant, dust separations etc.



The above process has saved the utilization fresh water and resulting conservation of natural resource like water.

We are utilizing Washery Reject and Dolochar as fuel for the generation of electricity that conserve the coal which is a limited natural resource.

We have installed fly ash bricks manufacturing plant of 50000 brick per day capacity which conserved the top soil of agriculture fields. Utilization of fly ash bricks in comparison of conventional red bricks also helps in reduction of carbon footprint of atmosphere.

Details of expenditure for abatement of pollution are as under and which costs Rs. 0.11\kWh of gross generation.

DETAIL EXPENSES INCURRED FOR THE PERIOD FROM 01/04/17 TO 31/03/18		
Sl no	Particular	Amount (in Rs.)
a	Any capital expenditure for purchase of pollution control equipment	-
b	O & M expenses on ESP and bag filters	7,306,248.00
c	O & M Expenses for online monitoring equipment	2,724,900.00
d	Water Sprinkling Expenses	956,645.55
e	Plantation	173,563.00
f	Ash disposal expenses	34,283,112.00
g	Expenses for monitoring of pollution	483,800.00
G. TOTAL AMOUNT IN RS.		45,928,268.55

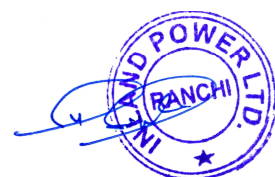
PART – H

Additional measures / investment proposal for environmental protection including abatement of pollution, prevention of pollution:

Following Pollution control equipments has been installed to control the pollution:

A. Equipment Details:

SN	EQUIPMENT/SYSTEM	LOCATION	DESCRIPTION
1	Silencer	Outside TG Building	Noise Control
2	Turbine Enclosure	Turbine Building, 11 Mtr. Level	Noise Control 90 dBA at 1 Mtr. Distance



3	Electro Static Precipitator	ESP Double Pass, Five Field Each Between Boiler and Chimney	<50 mg/ Nm ³ With 8 Out of 10 field in service
4	SPM Analyser	ID Fan outlet Duct before Stack	<50 mg/ Nm ³ With 8 Out of 10 field in service
5	Dust Extraction System 1	Crusher House	35000 M ³ /hr, <50 mg/ Nm ³
6	Dust Extraction System 1	Screening House	35000 M ³ /hr, <50 mg/ Nm ³
7	Dust Extraction System 1	Bunker Floor	35000 M ³ /hr, <50 mg/ Nm ³
8	Bed Ash Silo 1	Near CHP	700 M ³
9	Fly Ash Silo 1 & 2	Near CHP	1300 M ³ Each
10	Bag Filter Fly Ash Silo	Top of Fly Ash Silo	2200 M ³ /hr, <50 mg/ Nm ³
11	Bag Filter Bed Ash Silo	Top of Bed Ash Silo	1100 M ³ /hr, <50 mg/ Nm ³
12	Bag Filter Bunker Bed Material	Bunker	1100 M ³ /hr, <50 mg/ Nm ³
13	Chimney	After ESP	Height of 96 Mtrs and Diameter Ø 4.5 Mtr.
14	Neutralisation Pit	Outside DM plant	45 M ³
15.	Water Sprinkler	Coal stock yard	
16.	Water Tanker with sprayer	For Water Sprinkling at Road side.	

PART – I

Any other particular for improving the quality of the environment

1. Regular check-ups and timely Maintenance of pollution control equipments.
2. Regular sprinkling of water on the roads outside the plant area also for controlling of fugitive dust.
3. Transportation of material by the covered trucks.
4. Maintaining Zero discharge.

