8/C

HIRA

GODAWARI POWER & ISPAT

GPIL/EMS/2018-19/ 3267 *Date: 14.06.2018*

To,
The Additional Principal Chief Conservator Forest (C),
Ministry of Environment. Forest & CC
Regional Office (WCZ), Ground Floor,
East Wing, New Secretariat Building,
Civil Lines, **NAGPUR - 440001**

Subject: Submission of six monthly reports on status of compliance of the conditions stipulated in Environment Clearance.

Reference: EC letter no. J-11011/326/2005-1A.II (I) Dated 02.03.2006.

Dear Sir,

With reference to the above letter, we are submitting herewith the status of progress on compliance of the conditions stipulated in Environment Clearance granted to Godawari Power & Ispat Limited at Siltara - Raipur, for the **period October, 2017 to March, 2018.**

This is for your kind information and necessary record please.

Thanking you,

Yours faithfully,
For, **GODAWARI POWER & ISPAT LTD.**

Mansoor Ali
(HOD - Environment)

21-06-18

वन एवं जलवायु परिवर्तन मंत्रालय
of Environment, Forest & Climate Change
कार्यालय (पश्चिम मध्य क्षेत्र)
Office (Western Central Zone)
पूर्व खंड / Ground Floor, East Wing
सचिवालय भवन / New Secretariat Building
सिविल लाईन्स / Civil Lines
नागपुर / Nagpur-440 001

Copy to: 1. Zonal Officer CPCB, Bhopal (M.P.)
2. Member Secretary CECB, Raipur (C.G.)

COMPLIANCE STATUS OF CONDITIONS IMPOSED BY MINISTRY OF ENVIRONMENT & FORESTS
IN LETTER NO.J-11011/326/2005-IA.II (I), DATED 02.03.2006

(PERIOD: 1ST OCTOBER, 2017 TO 31ST MARCH, 2018)

A. SPECIFIC CONDITIONS:

SN	SPECIFIC CONDITIONS	COMPLIANCE STATUS
1	The gaseous emission from various process units shall conform to the load/mass based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of industry and its size and location. At no time the emission level shall go beyond the prescribed standards. On line continuous monitoring system shall be installed in stacks to monitor SPM and interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.	○ WHRB had already been installed along with ESP in all Kilns and ESP in AFBC Boiler as per load mass based standards notified by the Ministry on 19th May, 1993 and standards prescribed. ○ All APCD's is being maintained regularly to maintain the emission level within the standards prescribed by the Board. ○ Industry has already installed six nos. On-line continuous monitoring system (opacity meter) for continuous monitoring of particulate matter at following locations:- 1. Chimney no. 1 connected with AFBC Boiler & WHRB-I. 2. Chimney no. 2 connected with WHRB - II & AFBC. 3. Chimney no. 3 connected with WHRB - III & WHRB - IV. 4. Chimney no. 4 connected with 0.6 MTPA Pellet Plant. 5. Chimney no. 5 connected with Sub-merged Arc Furnace (Ferro Alloy Division). 6. Chimney no. 7 connected with 1.5 MTPA Pellet Plant. ○ Interlocking facility is provided between the Electrostatics Precipitators (ESP) and the process operation. Process will be automatically stopped in case emission level exceeds the limit or in case ESP trips.
2	In plant control measures for checking fugitive emissions from all the vulnerable sources like spillage/raw materials/ coal handling etc. shall be provided. Further, specific measures like provision of dust suppression system consisting of water sprinkling, suction hoods, fans and bag filter etc. shall be installed at material transfer points, blast furnace stock house and other enclosed raw material handling areas, Centralized Deducting system i.e. collection of fugitive emissions through suction hood and subsequent treatment through bag filter or any other device and finally emitted through a stack of	○ Dry fog dust suppression system is already installed at crusher & conveyor belt and transfer points of materials. ○ Screw conveyor system is installed on char/ dolochar unloading point. ○ Continuous Water sprinkling system is installed at all roads & raw material storage yard to suppress fugitive emissions. ○ Blast furnace is not installed in our plant. ○ Suction hoods attached with bag filter are provided in all furnaces. ○ Bulk spout system is adopted at the material

	appropriately designed height conforming to the standards for induction furnace existing in the industry and proposed induction and arc furnaces. Fugitive emissions shall be regularly monitored and records maintained.	(sponge iron) transfer point to check the fugitive emission. ○ Monitoring and recording of fugitive emissions is being carried out regularly.
3	As indicated in the EIA/EMP report, the company shall install Waste Heat Recovery Boilers (WHRB) to recover the waste heat and generate power from the steam produced by the WHRB. The particulate emissions from the WHRB shall be controlled by installation of ESP as per the CPCB specification and particulate emissions shall not exceed 50 mg/NM^3. Further the company shall install bag filter, After Burner Chamber (ABC), suction hood, dust extraction device and fume extraction system.	○ As suggested in the EIA/EMP report, Waste Heat Recovery Boilers (WHRB) was installed to recover the waste heat. Generation of power from the steam produced by the WHRB is going on. ○ The particulate emission from the WHRB is being controlled by the installed ESP. ○ De-dusting system, dust extraction device and After Burner Chamber (ABC) is already installed in our Sponge Iron unit. ○ The photographs of pollution control equipment is enclosed as **Annexure - I.**
4	Total requirement of the water shall not exceed 1, 494 m^3/d. Zero discharge shall be followed strictly as proposed. As reflected in the EIA/EMP report, the waste water generation from the various units and its proper recycling ensured. The effluent during the monsoon shall be discharged after conforming to the prescribed standards. The domestic waste water after treatment in STP shall be used for green belt development.	○ Water requirement is under limit of 1, 494 m^3/d and zero discharge is being maintained by using generated waste water for cooling system in Sponge iron division, plantation and dust suppression measures. ○ No residential colony exists within the plant premises. Domestic effluents of canteen, office etc. is being treated in soak pits via septic tanks.
5	Solid waste will be generated in the form of char, kiln accretions, fly ash from ESP and bottom ash etc. Char generated shall be used in the FBC Boiler having sufficient capacity to utilize the char expected to be generated after the expansion. 100 MT kiln accretions generated presently every 6 months and the quantity which will be further enhanced during expansion project, shall be utilized for filling low lying areas. The entire quantity of fly ash generated during the process will be utilized for making brick manufacturing plant already in operation. Granulated Slag shall be used for brick making and non granulated in road making. ETP sludge shall be used in brick making and filling low lying areas. Mill scale shall be reused in Ferro Alloys / Pig Iron furnace. ESP fly ash shall be made available to the cement plants and brick making plants whereas bottom ash shall be disposed off in a suitably designed landfill as per CPCB guidelines to prevent leaching to the sub-soil and underground aquifer. Solid waste generated in the form of Iron ore fines, blast furnace slag, BF scrap scales from slab caster and scales from steel	The generated solid waste is being used in the following manners: **1.** Char / Dolochar in-house use & sold to outside parties. 2. Generated kiln accretions used for filling low lying areas and road base making in-side factory premises. ○ Dry ash collection system has been installed for Fly Ash of AFBC being sent to cement plant for cement making/ Bricks plant for Brick and Block making. ○ Generated slag is being reprocess steel making & being utilized for filling of low lying areas in plant. ○ Waste water recycling system having settling pond is installed. ○ Generated Mill scale from H.B wire unit is less quantity and it is being reused in the furnace. ○ No Pig Iron Unit exists. ○ No Blast Furnace exists. ○ Iron ore fines are used in Pelletization

	mill will be sold to the scrap dealers except for BF slag which will be sold to the cement manufactures.	process. The report on toxic content of the solid waste is enclosed as **Annexure - II.**
6	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Four nos. of recharge trenches, 11 nos. of recharge wells and one recharge pit has been established for rain water harvesting having capacity to recharge about 200000 Ltr. of water per year. Two nos. of reservoirs already exists for surface water harvesting.
7	Green belt shall be developed at least 17 ha area (33%) within and around the plant premises as per the CPCB guidelines in consultation with DFO.	The total land area of the entire plant is 213.657 acre. Out of which we have covered 73.41 acre for greenbelt development. Total 73439 saplings have been planted with 34.35% area covered. The year wise plantation details are enclosed as **Annexure - III.**
8	Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	One MBBS doctor has been engaged for Occupational Health Surveillance of the workers and staff on regular basis.
9	Recommendations made in the CREP for the steel plants should be implemented.	Recommendations of the Charter on Corporate Responsibility for Environment Protection (CREP) have been complied.

B. GENERAL CONDITIONS

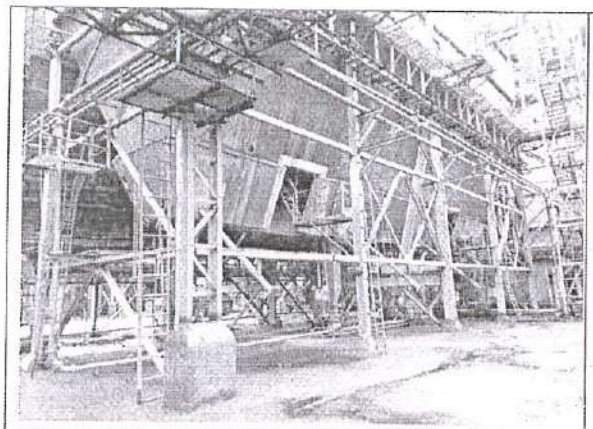
S.N.	GENERAL CONDITIONS	COMPLIANCE STATUS
1.	The project authorities must strictly adhere to the stipulations made by the Chhattisgarh Environment Conversation Board (CECB) and the State Government.	The stipulations made by Chhattisgarh Environment Conversation Board (CECB) and the State Government are being strictly adhered.
2	No further expansion or modification in the plant should be carried out without prior approval of the Ministry of Environment and Forest.	Prior approval from the Ministry of Environment, Forests and Climate Change will be obtained for further expansion or modifications in the plant.
3	At least four ambient air quality –monitoring stations should be established in the downward direction as well as where maximum ground level concentration of SPM, SO2 and NOx are anticipated in consultation with the CECB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Bhopal and the CECB/CPCB once in six months.	Four ambient air quality monitoring stations are already installed in all four directions of the factory as mentioned below- 1. North direction (Near Phase II boundary) 2. South direction (Near Material Gate) 3. East direction (Near Guest House) 4. West direction (Near boundary) ○ We have also established four Nos. of Continuous Ambient Air Quality Monitoring Stations for measurement of PM_{10}, $PM_{2.5}$, SO_2, NOx , CO etc. ○ Monthly monitoring report of ground level concentration of PM_{10}, $PM_{2.5}$, SO_2 and NOx are being regularly submitted to CECB. (Please refer **Annexure -IV**)
4	Industrial waste water shall be properly collected, treated so as to conform to the standard prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. The treated waste water shall be utilized for plantation purpose.	Industrial waste water is collected in settling tank and after treatment it is being utilized for plantation and dust suppression measures. (Please refer **Annexure -IV**).
5	The overall noise level in and around the plant area shall be kept well within the standards 85 dB (A) by providing noise control measures including acoustic hoods, silencers enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) (day time) and 70 dB(A) (night time).	All possible action is taken to keep noise level below the prescribed standards 85 dB (A) for the operational/working zone. Noise levels is being monitored and recorded regularly. Ear plugs (PPEs) are being provided to employees, working at noise prone areas.
6	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programs, educational programs, drinking water supply and health care etc.	All Environmental protection measures are being implemented as per the recommendation of EIA/EMP report. Socio-economic development activities in the spheres of health, education, water supply & sanitation, roads development, sports & culture and relief funds is being carried out in the surrounding villages under Corporate Social

		Responsibility (CSR) activities. The expenditure details are enclosed in - **Annexure-V.**
7	The project authorities will provide requisite funds both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated here in. The fund so provided should not be diverted for any other purpose.	An environmental cell with qualified personnel and well equipped laboratory is established in plant premises. Requisite funds are allotted and the same are being spent towards infrastructure development like making pucca roads, setting up Laboratory, plantation, monitoring equipment, road sweeping machine etc.
8	The Regional Office of this Ministry at Bhopal/CPCB/CECB will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	Six monthly compliance reports along with the monitoring data is being submitted to Regional Office of MOEF regularly..
9	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the CECB/Committee and may also be seen at Website of the Ministry of Environment and Forests at http:/envfor.nic.in. This should be advertised within seven days from the date of issue of the clearance letter, at least in two local news papers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional Office.	Complied.
10	Project authorities should inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Complied.

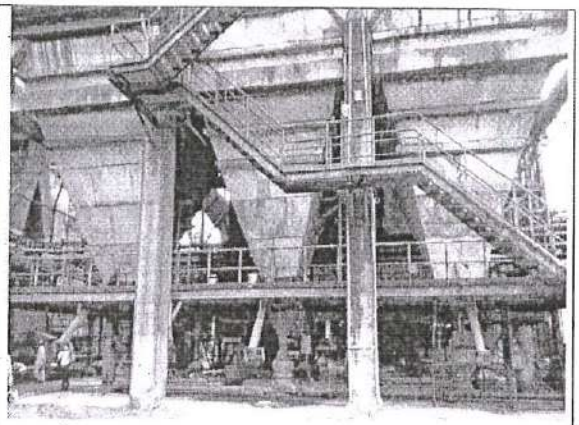
Annexure - I

PHOTOGALLERY

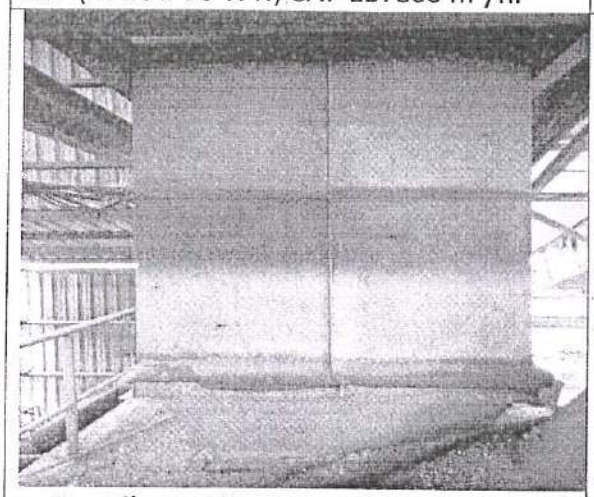
POWER PLANT PHASE - I



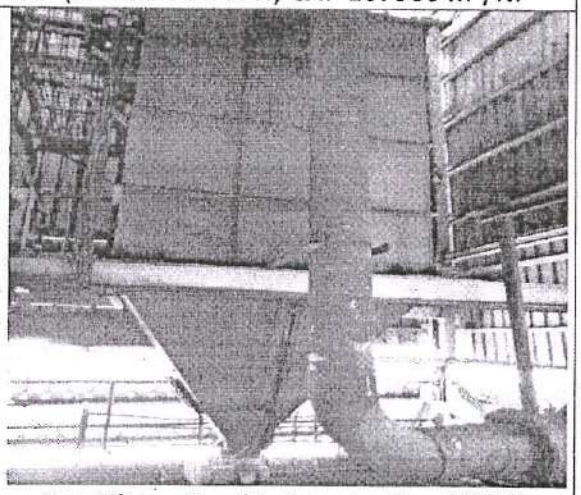
ESP (AFBC # 70 TPH) CAP 137800 m^3/hr



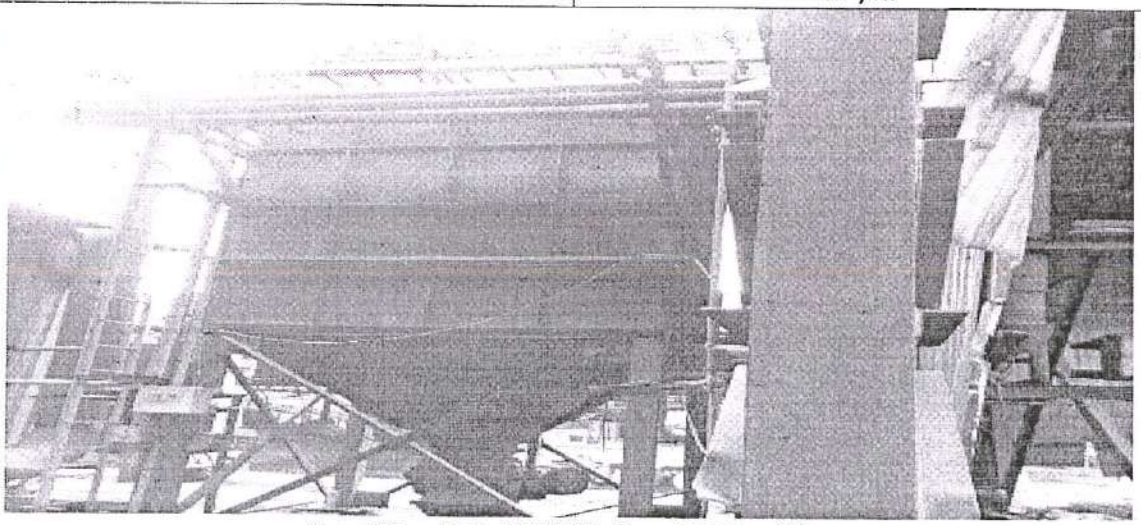
ESP (AFBC # 100 TPH) CAP 187560 m^3/hr



Bag Filter - 100 TPH Bunker Cap. 8500 m^3/hr

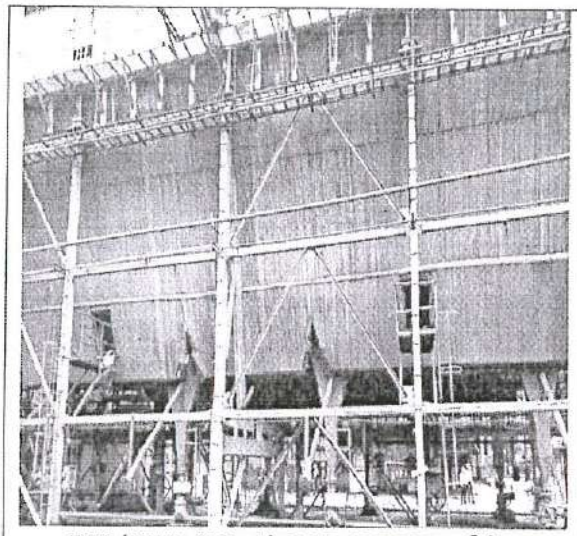


Bag Filter - Day bin hopper Cap 12500 m^3/hr

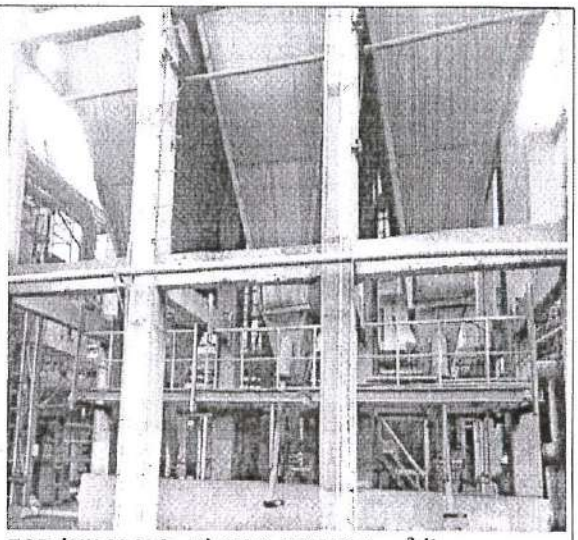


Bag Filter U.G, TUNNEL Cap 16500 m^3/hr

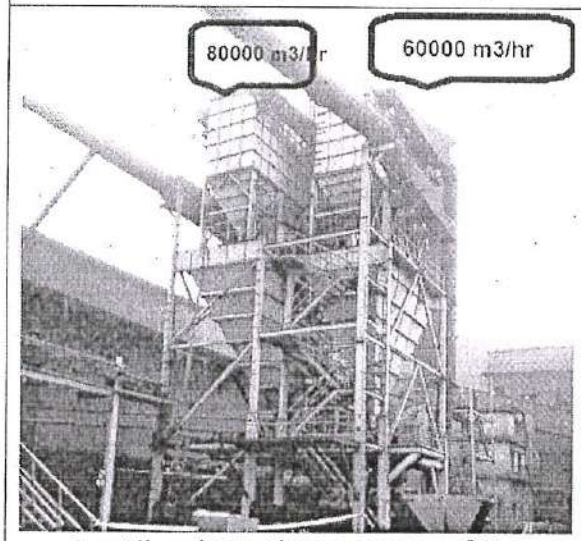
SID PHASE - I



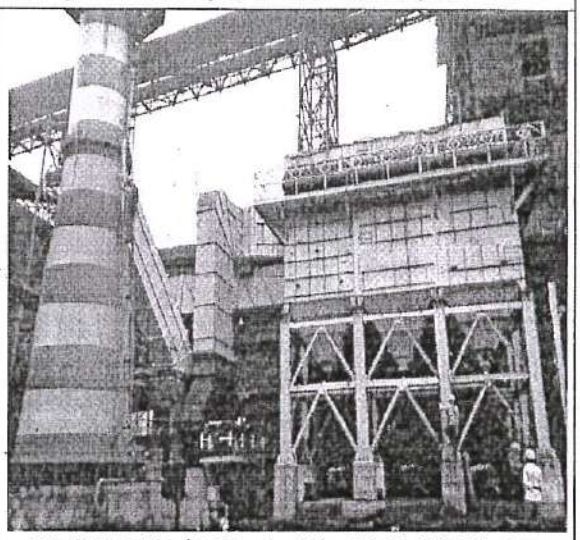
ESP (KILN NO. 1) CAP 137800 m^3/hr



ESP (KILN NO. 2) CAP 207418 m^3/hr

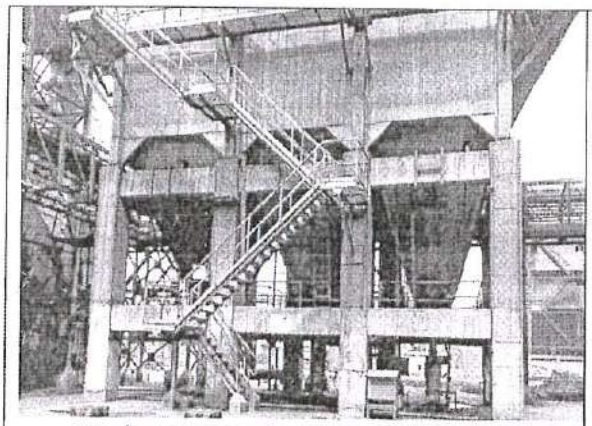


Bag Filter (PSB II) CAP 60000 m^3/hr,
80000 m3/hr &
20000 m^3/hr (Coal injector K#1 & K#2)

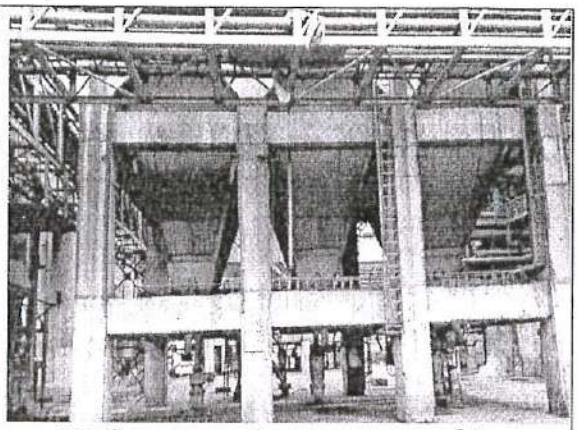


BAG FILTER (PSB - I , Kiln #1 & K#2 & CD Belt ,BUCKET) CAP 140000 m^3/hr

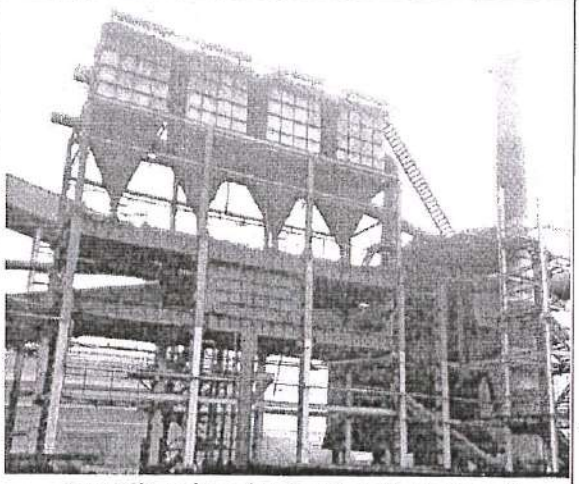
SID PHASE - II



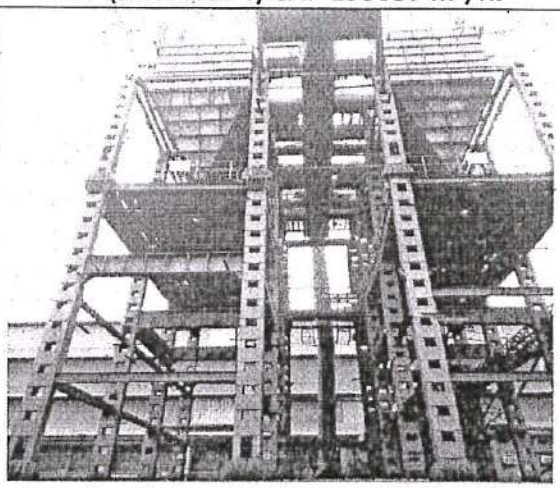
ESP (KILN NO. 3) CAP 195037 m^3/hr



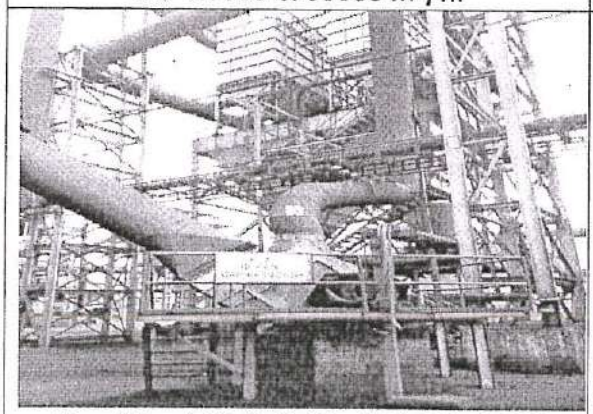
ESP (KILN NO. 4) CAP 195037 m^3/hr



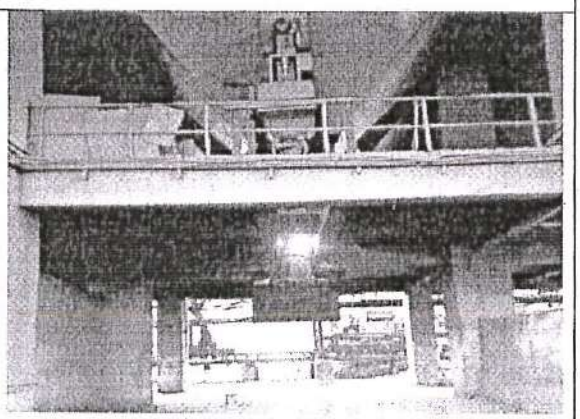
Bag Filter (Coal Injection & By Pass) CAP 20000 & 60000 m^3/hr



Bag Filter (PSB III & IV) CAP 125000 m^3/hr

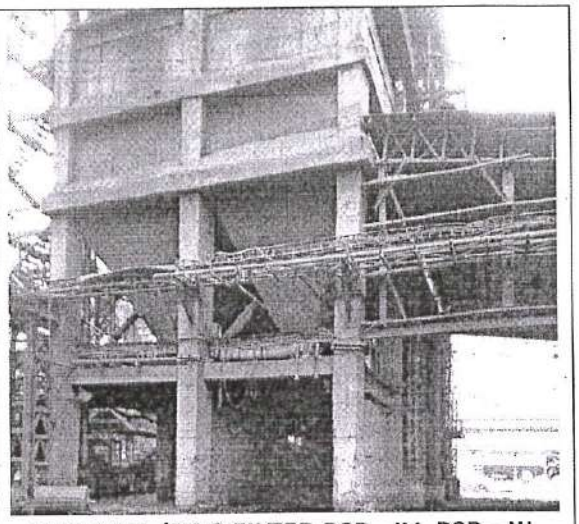


Bag Filter (CD Belt Kiln # 3) CAP 60000 m3/Hr & 60000 m^3/hr

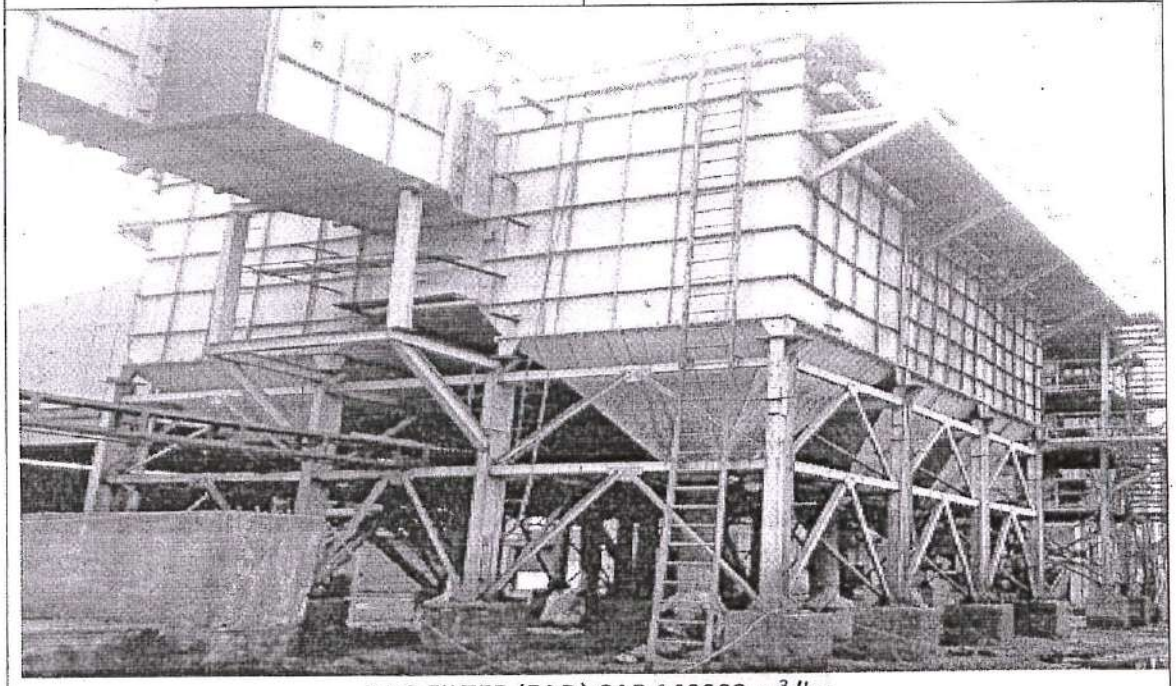


BULK SPOUT (PSB III A BIN) CAP 40 TPH

BULK SPOUT (PSB IV A BIN) CAP 40 TPH

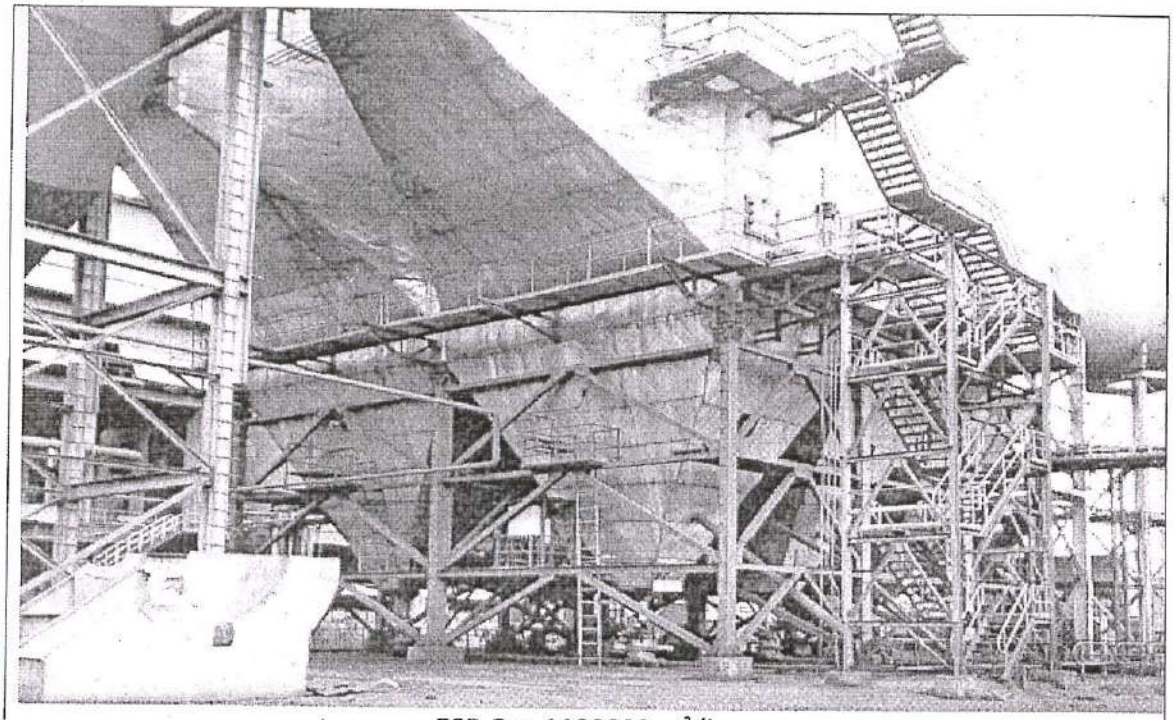


PUG MILL (BAG FILTER PSB - IV, PSB - III, BYPASS BAGFILTER) CAP 40 TPH each

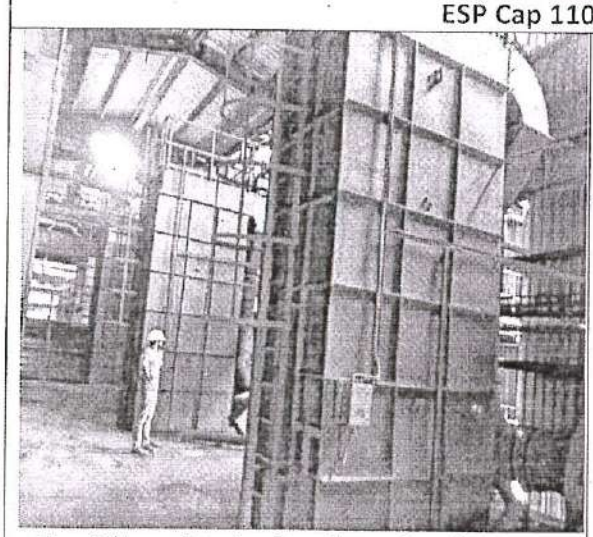


BAG FILTER (FAD) CAP 140000 m^3/hr

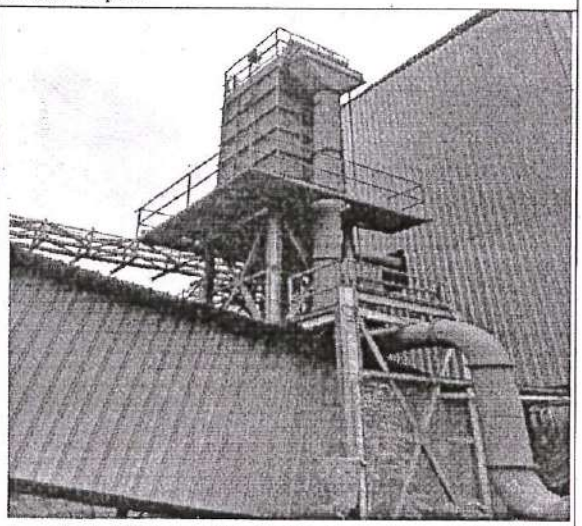
PELLET PLANT 1.5 MPTA



ESP Cap 1100000 m^3/hr

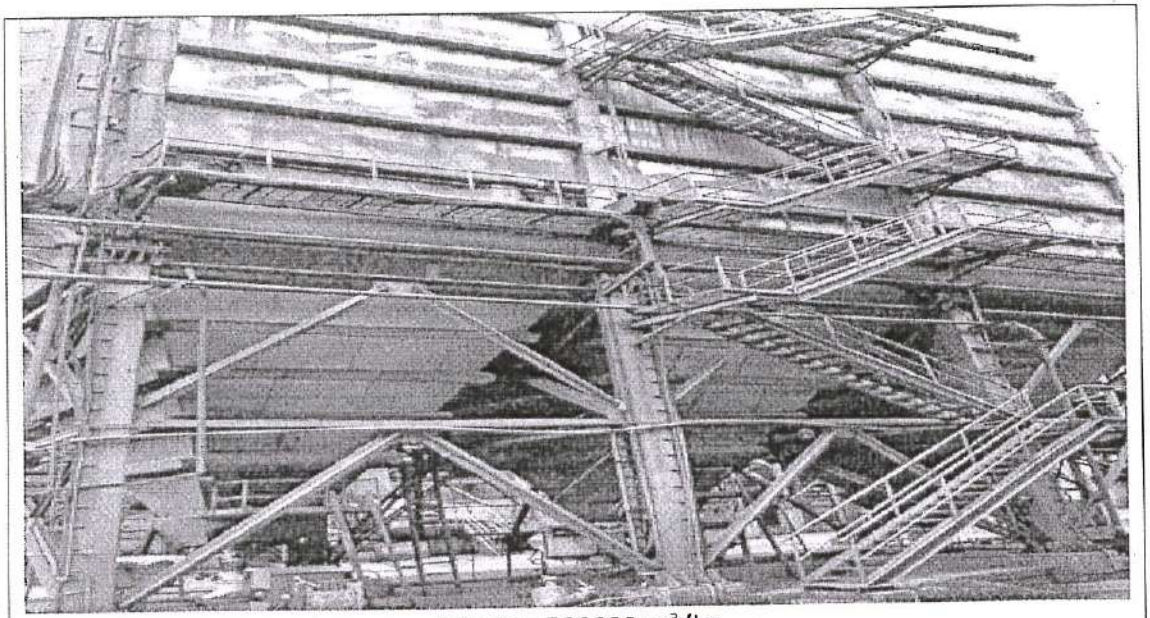


Bag Filter - Bentonite, Lime & Ash Hopper (Proportionate Building) Cap. 9530 m^3/hr each.

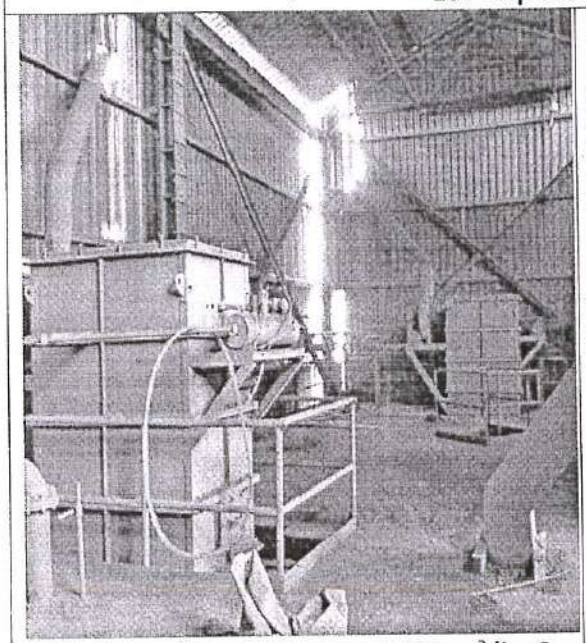


Bag Filter - Eirich Mixture Cap. 11054 m^3/hr

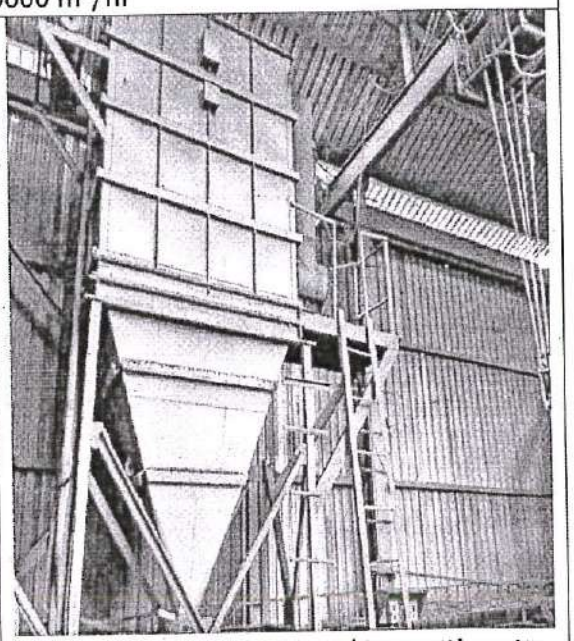
Pellet Plant 0.6 MTPA



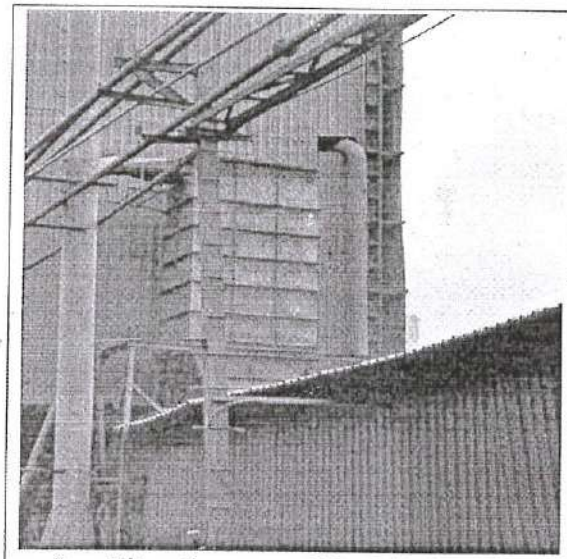
ESP Cap 500000 m^3/hr



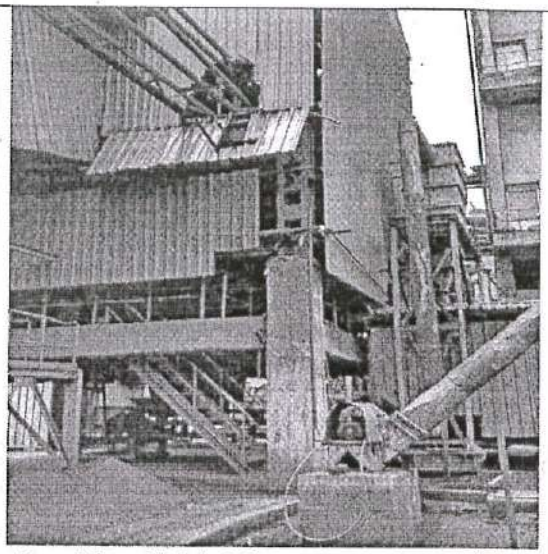
Bag Filter Bentonite cap. 5000 m^3/hr & Ash Hopper (Proportionate Building) cap. 3000 m3/hr



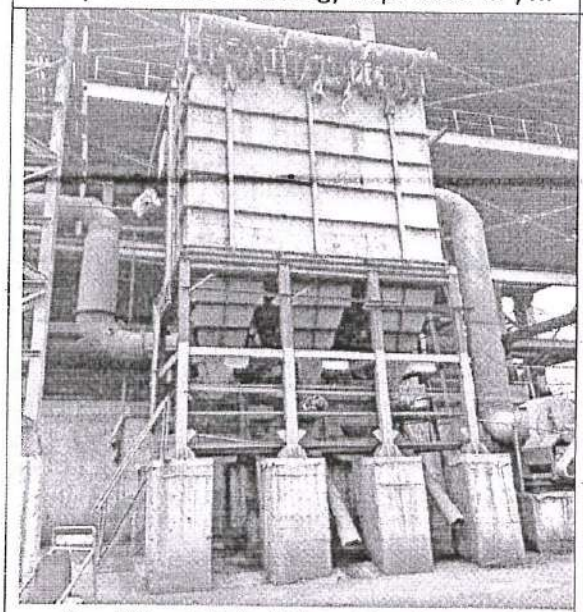
Bag Filter Lime Hopper (Proportionate Building) Cap. 3000 m^3/hr



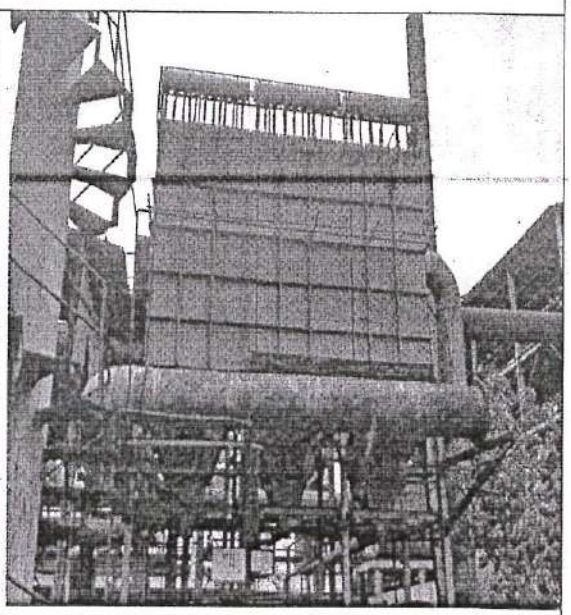
Bag Filter Conveyor BC - 8 (Ash Dich - Proportionate Building) Cap. 8000 m^3/hr



Bag Filter Eirich Mixter Cap. 4000 m^3/hr



Bag Filter TG Building BC - 13 recycle Material Cap. 25000 m^3/hr



Bag Filter Annuler Cooler (Product Discharge BC - 14) Cap. 20000 m^3/hr

Annexure - II

ENVIRO ANALYSTS & ENGINEERS PVT. LTD.

NABET Accredited & MoEF (Govt. of India) approved

CIN No.: U28900MH1995PTC093129

B - 1003, Enviro House, 10th Flr., Western Edge II, Western Express Highway, Borivali (E), Mumbai - 400 066
Tel.: +91 22 2854 1647 / 48 / 49 / 67 / 68 Fax : +91 22 2854 1290 E-mail : info@eaepl.com
Website : www.eaepl.com / www.enviroanalysts.com

ENV/SW/2016-17/060 Date: 27.08.2016

ISSUED TO:
M/s Godavari Power & Ispat Limited
Siltara, Raipur (C.G.)

Ref : W.O. No. 1647000469
Dtd.: 3.08.2016

Sample Particulars : Fly Ash

Sample Registration Date	: 5.08.2016	Analysis Starting Date	: 6.08.2016
Quantity received	: 1 kg	Analysis Completion Date	: 26.08.2016
Sample Type:	: Solid Waste	Sampled by	: EAEPL Representative

TEST RESULTS

Sr. No.	Test Parameters	Unit	Limit as per Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 of Schedule II	Results
1	Alumina (as Al_2O_3)	% by mass	-	21.80
2	Iron Oxide (as Fe_2O_3)	% by mass	-	11.6
3	Silica (as SiO_2)	% by mass	-	54.37
4	Reactive Silica	% by mass	-	0.012
5	Magnesium Oxide (as MgO)	% by mass	-	0.45
6	Sulphur Trioxide (as SO_3)	% by mass	-	0.12
7	Alkalies (as Na_2O)	% by mass	-	3.95
8	Chloride (as Cl)	% by mass	-	0.036
9	Loss on ignition (as LOI)	% by mass	-	0.41
10	Cadmium	mg/kg	50	0.74
11	Chromium	mg/kg	5050	73.8
12	Arsenic	mg/kg	50	1.66
13	Mercury	mg/kg	50	0.158
14	Selenium	mg/kg	50	Nil
15	Cyanide	mg/kg	50	Nil
16	Cobalt	mg/kg	5000	27.3
17	Copper	mg/kg	5000	58.2
18	Lead	mg/kg	5000	49.3
19	Molybdenum	mg/kg	5000	Nil
20	Nickel	mg/kg	5000	48.3

For Enviro Analysts & Engineers Pvt. Ltd.

Authorized Signatory

Nagpur Branch :
Shiv Kunj, Bunglow No. 65,
Old Verma Layout,
Ambazari, Nagpur - 440 010
Tel. : 0712 - 2241835,
Telefax : 2241836

Factory :
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Lab. :
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ENVIRO ANALYSTS & ENGINEERS PVT. LTD.

NABET Accredited & MoEF (Govt. of India) approved

CIN No.: U28900MH1995PTC093129

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Website : www.eaepl.com / www.enviroanalysts.com

ENV/SW/2016-17/060

Date: 27.08.2016

ISSUED TO:
M/s Godavari Power & Ispat Limited
Siltara, Raipur (C.G.)

Ref : W.O. No. 1647000469
Dtd.: 3.08.2016

Sample Particulars : Fly Ash

Sample Registration Date	: 5.08.2016	Analysis Starting Date	: 6.08.2016
Quantity received	: 1 kg	Analysis Completion Date	: 26.08.2016
Sample Type:	: Solid Waste	Sampled by	: EAEPL Representative

TEST RESULTS

Sr. No.	Test Parameters	Unit	Limit as per Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 of Schedule II	Results
21	Tin	mg/kg	5000	Nil
22	Barium	mg/kg	20,000	424
23	Calcium	mg/kg	-	10878
24	Zinc	mg/kg	20,000	69.8
25	Manganese	mg/kg	-	255.7
26	Antimony	mg/kg	50	Nil
27	Beryllium	mg/kg	50	Nil

For Enviro Analysts & Engineers Pvt. Ltd.

Note: 1. Results relate to tested sample only.
2. Test report should not be reproduced partially.

REMARKS: Based upon request of party, sample was tested for above mentioned parameters only.

Authorized Signatory

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ENV/SW/2016-17/060/1 Date: 27.08.2016

ISSUED TO:
M/s Godavari Power & Ispat Limited
Siltara, Raipur (C.G.)

Ref : W.O. No. 1647000469
Dtd.: 3.08.2016

Sample Particulars : Bottom Ash (ESP Dust)

Sample Registration Date	: 5.08.2016	Analysis Starting Date	: 6.08.2016
Quantity received	: 1 kg	Analysis Completion Date	: 26.08.2016
Sample Type:	: Solid Waste	Sampled by	: EAEPL Representative

TEST RESULTS

Sr. No.	Test Parameters	Unit	Limit as per Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 of Schedule II	Results
1	Alumina (as Al_2O_3)	% by mass	-	14.63
2	Iron Oxide (as Fe_2O_3)	% by mass	-	11.02
3	Silica (as SiO_2)	% by mass	-	51.20
4	Reactive Silica	% by mass	-	0.0074
5	Magnesium Oxide (as MgO)	% by mass	-	0.38
6	Sulphur Trioxide (as SO_3)	% by mass	-	0.12
7	Alkalies (as Na_2O)	% by mass	-	3.82
8	Chloride (as Cl)	% by mass	-	0.032
9	Loss on ignition (as LOI)	% by mass	-	0.52
10	Cadmium	mg/kg	50	0.35
11	Chromium	mg/kg	5050	85
12	Arsenic	mg/kg	50	1.30
13	Mercury	mg/kg	50	0.114
14	Selenium	mg/kg	50	Nil
15	Cyanide	mg/kg	50	Nil
16	Cobalt	mg/kg	5000	23.8
17	Copper	mg/kg	5000	61.6
18	Lead	mg/kg	5000	37.7
19	Molybdenum	mg/kg	5000	Nil
20	Nickel	mg/kg	5000	47.1

For Enviro Analysts & Engineers Pvt. Ltd.

Authorized Signatory

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ENV/SW/2016-17/060/1 Date: 27.08.2016

ISSUED TO:
M/s Godavari Power & Ispat Limited
Siltara, Raipur (C.G.)

Sample Particulars : Bottom Ash (ESP Dust)

Sample Registration Date	: 5.08.2016	Analysis Starting Date	: 6.08.2016
Quantity received	: 1 kg	Analysis Completion Date	: 26.08.2016
Sample Type:	: Solid Waste	Sampled by	: EAEPL Representative

TEST RESULTS

Sr. No.	Test Parameters	Unit	Limit as per Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 of Schedule II	Results
21	Tin	mg/kg	5000	Nil
22	Barium	mg/kg	20,000	324
23	Calcium	mg/kg	-	12700
24	Zinc	mg/kg	20,000	136
25	Manganese	mg/kg	-	182
26	Antimony	mg/kg	50	Nil
27	Beryllium	mg/kg	50	Nil

For Enviro Analysts & Engineers Pvt. Ltd.

Note: 1. Results relate to tested sample only.
2. Test report should not be reproduced partially.

REMARKS: Based upon request of party, sample was tested for above mentioned parameters only.

Authorized Signatory

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Website : globalmining.in

Report No.: GEMS/TR/16-17/1465			Date: 21.12.2016
Name and Address of Customer	GODAVARI POWER AND ISPAT LTD., 428/2 PHASE-1 INDUSTRIAL AREA, SILTARA, RAIPUR.		
Order /Reference:	As Per Verbal Communication.		
Sample Drawn By	Laboratory	Date of Sampling	10.12.2016
Sample Received On	10.12.2016		
Start of Analysis	11.12.2016	End of Analysis	20.12.2016
Sample Details	Solid Waste - STEEL MELTING SHOP (SLAG)		

TEST REPORT

SR. NO	TEST PARAMETERS	UNIT	SCHEDULE – II, CPCB REFERANCE MANUAL	LIMIT AS PER HAZARDOUS WASTES (MANAGEMENT HANDLING AND TRANS-BOUNDARY MOVEMENT) RULES, 2008 OF SCHEDULE II	RESULTS
1	Copper as Cu	mg/kg	B3, Method 5.4	5000	**5.42**
2	Chromium as Cr	mg/kg	B1, Method 5.4	5000	**0.12**
3	Manganese as Mn	mg/kg	D4	50000	**30.12**
4	Lead as pb	mg/kg	B4, Method 5.4	5000	**3.63**
5	Arsenic as As	mg/kg	A2, Method 5.6	50	**N.D.**
6	Mercury as Hg	mg/kg	A6, Method 5.7	50	**N.D.**
7	Iron as Fe	mg/kg	D4	50000	**60.58**

Remark: N.D.- Not Detected

For Global Environment & Mining Services

S. N. Gulhane
Chief (Laboratory)

GLOBAL ENVIRONMENT & MINING SERVICES * HOSPET 583201

Note:
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Report No.: GEMS/TR/16-17/1466			Date: 21.12.2016
Name and Address of Customer	GODAVARI POWER AND ISPAT LTD., 428/2 PHASE-1 INDUSTRIAL AREA, SILTARA, RAIPUR.		
Order /Reference:	As Per Verbal Communication.		
Sample Drawn By	Laboratory	Date of Sampling	10.12.2016
Sample Received On	10.12.2016		
Start of Analysis	11.12.2016	End of Analysis	20.12.2016
Sample Details	Solid Waste - SILICO MANGNESE (SLAG)		

TEST REPORT

SR. NO	TEST PARAMETERS	UNIT	SCHEDULE – II, CPCB REFERANCE MANUAL	LIMIT AS PER HAZARDOUS WASTES (MANAGEMENT HANDLING AND TRANS-BOUNDARY MOVEMENT) RULES, 2008 OF SCHEDULE II	RESULTS
1	Copper as Cu	mg/kg	B3, Method 5.4	5000	**12.62**
2	Chromium as Cr	mg/kg	B1, Method 5.4	5000	**2.45**
3	Manganese as Mn	mg/kg	D4	50000	**23.2**
4	Lead as pb	mg/kg	B4, Method 5.4	5000	**0.58**
5	Arsenic as As	mg/kg	A2, Method 5.6	50	**N.D.**
6	Mercury as Hg	mg/kg	A6, Method 5.7	50	**N.D.**
7	Iron as Fe	mg/kg	D4	50000	**47.74**

Remark: N.D.- Not Detected

For Global Environment & Mining Services

S. N. Gulhane
Chief (Laboratory)

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Report No.: GEMS/TR/16-17/1467			Date: 21.12.2016
Name and Address of Customer	GODAVARI POWER AND ISPAT LTD., 428/2 PHASE-1 INDUSTRIAL AREA, SILTARA, **RAIPUR.**		
Order /Reference:	As Per Verbal Communication.		
Sample Drawn By	Laboratory	Date of Sampling	10.12.2016
Sample Received On	10.12.2016		
Start of Analysis	11.12.2016	End of Analysis	20.12.2016
Sample Details	Solid Waste - GASIFIRE (CLINKER ASH)		

TEST REPORT

SR. NO	TEST PARAMETERS	UNIT	SCHEDULE – II, CPCB REFERANCE MANUAL	LIMIT AS PER HAZARDOUS WASTES (MANAGEMENT HANDLING AND TRANS-BOUNDARY MOVEMENT) RULES, 2008 OF SCHEDULE II	RESULTS
1	Copper as Cu	mg/kg	B3, Method 5.4	5000	**4.69**
2	Chromium as Cr	mg/kg	B1, Method 5.4	5000	**1.32**
3	Manganese as Mn	mg/kg	D4	50000	**2.41**
4	Lead as pb	mg/kg	B4, Method 5.4	5000	**0.25**
5	Arsenic as As	mg/kg	A2, Method 5.6	50	**N.D.**
6	Mercury as Hg	mg/kg	A6, Method 5.7	50	**N.D.**
7	Iron as Fe	mg/kg	D4	50000	**25.34**

Remark: N.D.- Not Detected

For Global Environment & Mining Services

S. N. Gulhane
Chief (Laboratory)

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Report No.: GEMS/TR/16-17/1468			Date: 21.12.2016
Name and Address of Customer	GODAVARI POWER AND ISPAT LTD., 428/2 PHASE-1 INDUSTRIAL AREA, SILTARA, RAIPUR.		
Order /Reference:	As Per Verbal Communication.		
Sample Drawn By	Laboratory	Date of Sampling	10.12.2016
Sample Received On	10.12.2016		
Start of Analysis	11.12.2016	End of Analysis	20.12.2016
Sample Details	Solid Waste - ESP DUST		

TEST REPORT

SR. NO	TEST PARAMETERS	UNIT	SCHEDULE – II, CPCB REFERANCE MANUAL	LIMIT AS PER HAZARDOUS WASTES (MANAGEMENT HANDLING AND TRANS-BOUNDARY MOVEMENT) RULES, 2008 OF SCHEDULE II	RESULTS
1	Copper as Cu	mg/kg	B3, Method 5.4	5000	**1.69**
2	Chromium as Cr	mg/kg	B1, Method 5.4	5000	**0.82**
3	Manganese as Mn	mg/kg	D4	50000	**10.28**
4	Lead as pb	mg/kg	B4, Method 5.4	5000	**1.06**
5	Arsenic as As	mg/kg	A2, Method 5.6	50	**N.D.**
6	Mercury as Hg	mg/kg	A6, Method 5.7	50	**N.D.**
7	Iron as Fe	mg/kg	D4	50000	**49.66**

Remark: N.D.- Not Detected

For Global Environment & Mining Services

S. N. Gulhane
Chief (Laboratory)

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Report No.: GEMS/TR/16-17/1469			Date: 21.12.2016
Name and Address of Customer	GODAVARI POWER AND ISPAT LTD., 428/2 PHASE-1 INDUSTRIAL AREA, SILTARA, RAIPUR.		
Order /Reference:	As Per Verbal Communication.		
Sample Drawn By	Laboratory	Date of Sampling	10.12.2016
Sample Received On	10.12.2016		
Start of Analysis	11.12.2016	End of Analysis	20.12.2016
Sample Details	Solid Waste - BAGFILTER DUST		

TEST REPORT

SR. NO	TEST PARAMETERS	UNIT	SCHEDULE – II, CPCB REFERANCE MANUAL	LIMIT AS PER HAZARDOUS WASTES (MANAGEMENT HANDLING AND TRANS-BOUNDARY MOVEMENT) RULES, 2008 OF SCHEDULE II	RESULTS
1	Copper as Cu	mg/kg	B3, Method 5.4	5000	**41.1**
2	Chromium as Cr	mg/kg	B1, Method 5.4	5000	**3.12**
3	Manganese as Mn	mg/kg	D4	50000	**8.33**
4	Lead as pb	mg/kg	B4, Method 5.4	5000	**2.64**
5	Arsenic as As	mg/kg	A2, Method 5.6	50	**N.D.**
6	Mercury as Hg	mg/kg	A6, Method 5.7	50	**N.D.**
7	Iron as Fe	mg/kg	D4	50000	**732.0**

Remark: N.D.- Not Detected

For Global Environment & Mining Services

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Chief (Laboratory)

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Report No.: GEMS/TR/16-17/1470			Date: 21.12.2016
Name and Address of Customer	GODAVARI POWER AND ISPAT LTD., 428/2 PHASE-1 INDUSTRIAL AREA, SILTARA, **RAIPUR.**		
Order /Reference:	As Per Verbal Communication.		
Sample Drawn By	Laboratory	Date of Sampling	10.12.2016
Sample Received On	10.12.2016		
Start of Analysis	11.12.2016	End of Analysis	20.12.2016
Sample Details	Solid Waste - CHAR		

TEST REPORT

SR. NO	TEST PARAMETERS	UNIT	SCHEDULE – II, CPCB REFERANCE MANUAL	LIMIT AS PER HAZARDOUS WASTES (MANAGEMENT HANDLING AND TRANS-BOUNDARY MOVEMENT) RULES, 2008 OF SCHEDULE II	RESULTS
1	Copper as Cu	mg/kg	B3, Method 5.4	5000	**15.87**
2	Chromium as Cr	mg/kg	B1, Method 5.4	5000	**5.42**
3	Manganese as Mn	mg/kg	D4	50000	**12.56**
4	Lead as pb	mg/kg	B4, Method 5.4	5000	**1.24**
5	Arsenic as As	mg/kg	A2, Method 5.6	50	**N.D.**
6	Mercury as Hg	mg/kg	A6, Method 5.7	50	**N.D.**
7	Iron as Fe	mg/kg	D4	50000	**643.6**

Remark: N.D.- Not Detected

For Global Environment & Mining Services

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Chief (Laboratory)

HOSPET 583201

Note:
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Report No.: GEMS/TR/16-17/1471			Date: 21.12.2016
Name and Address of Customer	GODAVARI POWER AND ISPAT LTD., 428/2 PHASE-1 INDUSTRIAL AREA, SILTARA, RAIPUR.		
Order /Reference:	As Per Verbal Communication.		
Sample Drawn By	Laboratory	Date of Sampling	10.12.2016
Sample Received On	10.12.2016		
Start of Analysis	11.12.2016	End of Analysis	20.12.2016
Sample Details	Solid Waste - KILN ACCRETION		

TEST REPORT

SR. NO	TEST PARAMETERS	UNIT	SCHEDULE – II, CPCB REFERANCE MANUAL	LIMIT AS PER HAZARDOUS WASTES (MANAGEMENT HANDLING AND TRANS-BOUNDARY MOVEMENT) RULES, 2008 OF SCHEDULE II	RESULTS
1	Copper as Cu	mg/kg	B3, Method 5.4	5000	**2.2**
2	Chromium as Cr	mg/kg	B1, Method 5.4	5000	**1.54**
3	Manganese as Mn	mg/kg	D4	50000	**20.15**
4	Lead as pb	mg/kg	B4, Method 5.4	5000	**0.58**
5	Arsenic as As	mg/kg	A2, Method 5.6	50	**N.D.**
6	Mercury as Hg	mg/kg	A6, Method 5.7	50	**N.D.**
7	Iron as Fe	mg/kg	D4	50000	**310.2**

Remark: N.D.- Not Detected

For Global Environment & Mining Services

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GLOBAL ENVIRONMENT & MINING SERVICES HOSPET 583201

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Website : globalmining.in

Report No.: GEMS/TR/16-17/1472			Date: 21.12.2016
Name and Address of Customer	GODAVARI POWER AND ISPAT LTD., 428/2 PHASE-1 INDUSTRIAL AREA, SILTARA, RAIPUR.		
Order /Reference:	As Per Verbal Communication.		
Sample Drawn By	Laboratory	Date of Sampling	10.12.2016
Sample Received On	10.12.2016		
Start of Analysis	11.12.2016	End of Analysis	20.12.2016
Sample Details	Solid Waste - Dolachar		

TEST REPORT

SR. NO	TEST PARAMETERS	UNIT	SCHEDULE – II, CPCB REFERANCE MANUAL	LIMIT AS PER HAZARDOUS WASTES (MANAGEMENT HANDLING AND TRANS-BOUNDARY MOVEMENT) RULES, 2008 OF SCHEDULE II	RESULTS
1	Copper as Cu	mg/kg	B3, Method 5.4	5000	**1.15**
2	Chromium as Cr	mg/kg	B1, Method 5.4	5000	**0.69**
3	Manganese as Mn	mg/kg	D4	50000	**6.5**
4	Lead as pb	mg/kg	B4, Method 5.4	5000	**0.13**
5	Arsenic as As	mg/kg	A2, Method 5.6	50	**N.D.**
6	Mercury as Hg	mg/kg	A6, Method 5.7	50	**N.D.**
7	Iron as Fe	mg/kg	D4	50000	**203.9**

Remark: N.D.- Not Detected

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Chief (Laboratory)

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Annexure - III

PLANTATION DURING THE YEAR 2006 – 2018

BY M/S GODAWARI POWER & ISPAT LIMITED

YEAR	TOTAL LAND AREA	GPIL				TOTAL
		INSIDE	AREA COVERED	ROAD SIDE/OUT SIDE	AREA COVERED	
2006-07	213.657 Acre	7000	7.00	1000	1 KM	8000
2007-08		1166	1.16	3000	3 KM	4166
2008-09		4813	4.81	4000	4 KM	8813
2009-10		12761	12.76	7000	7 KM	19761
2010-11		9460	9.46	1000	1 KM	10460
2011-12		11229	11.22	23000	23 KM	34229
2012-13		3150	3.15	11000	11 KM	14150
2013-14		10474	10.47	14000	14 KM	24474
2014-15		4511	4.51	9000	9 KM	13511
2015-16		5475	5.47	20000 Siltara sub station	60 ACRE	25475
2016-17		3400	3.40	17000 Siltara sub station	Gap filling	20400
2017-18		800	Gap filling	7000	13 acre	7800
TOTAL		**73539**	**73.41**	**117000**		**191239**
		34.35 %	**ACRE**			

Update Report as on 31.03.2018

Annexure – IV

AMBIENT AIR QUALITY MONITORING REPORT

(PERIOD - OCTOBER, 17 to MARCH, 18)

SN	Location	Parameter	Result (µg/m³)					
			Oct, 17	Nov,17	Dec,17	Jan,18	Feb,18	Mar,18
1	Guest House (East)	PM10 (µg/m³)	45.7	51.5	51.0	54.4	60.7	67.1
		PM2.5 (µg/m³)	22.5	25.5	26.1	28.1	29.9	33.1
		SO_2 (µg/m³)	06.3	07.0	07.0	07.8	10.0	09.2
		NOx (µg/m³)	06.2	06.5	06.7	07.3	09.8	09.8
2	Silttara Boundary (West)	PM10 (µg/m³)	51.4	59.7	56.3	64.4	63.6	67.8
		PM2.5 (µg/m³)	26.8	29.9	29.0	31.6	31.6	35.7
		SO_2 (µg/m³)	07.1	07.9	07.0	08.3	10.4	09.9
		NOx (µg/m³)	07.1	07.5	07.1	07.4	09.4	09.2
3	Tada Boundary (North)	PM10 (µg/m³)	52.4	57.0	57.2	62.2	67.6	69.6
		PM2.5 (µg/m³)	25.6	28.9	28.6	29.8	31.6	38.5
		SO_2 (µg/m³)	06.6	07.3	07.5	07.8	09.3	11.2
		NOx (µg/m³)	07.0	07.2	07.5	07.5	09.4	10.7
4	Brick Unit (South)	PM10 (µg/m³)	41.7	51.2	49.4	54.2	60.7	57.1
		PM2.5 (µg/m³)	21.6	27.1	24.4	26.3	26.5	29.3
		SO_2 (µg/m³)	05.7	07.3	07.0	06.6	09.9	09.7
		NOx (µg/m³)	06.1	06.6	06.5	06.1	08.6	09.0

STACK EMISSION MONITORING REPORT

(PERIOD - OCTOBER, 17 to MARCH, 18)

Stack no.	Stack Connected with	Result (mg/Nm^3)					
		Oct, 17	Nov,17	Dec,17	Jan,18	Feb,18	Mar,18
1	Kiln No. 01 & AFBC (70tph Boiler)	36.0	35.0	37.0	34.0	35.0	32.0
2	Kiln No. 02 & Biomass (100*tph* Boiler)	35.0	34.0	30.0	21.0	29.0	30.0
3	Kiln No. 03 & 04	38.0	32.0	39.0	32.0	39.0	39.0
4	Pellet Plant (0.6 MTPA)	28.0	19.0	17.0	18.0	16.0	21.0
5	Ferro Alloy	25.0	23.0	25.0	24.0	18.0	22.0
6	SMS (BF)	26.0	27.0	25.0	26.0	25.0	21.0
7	Pellet (1.5 MTPA)	23.0	22.0	20.0	17.0	23.0	24.0

TREATED WATER QUALITY ANALYSIS REPORT

(PERIOD - OCTOBER, 17 to MARCH, 18)

S N	Characteristics	Permissible Limits	Analysis Result						Analysis Method
			Oct, 17	Nov,17	Dec,17	Jan,18	Feb,18	Mar,18	
A) Physical Tests									
1	TEMPERATURE	Not more than 5 ºC to intake water	25.4	26.3	25.7	26.4	28.2	30.3	IS 3025: Part 09
2	pH	6.0-8.5	7.62	7.69	7.45	7.42	7.53	7.73	IS 3025: Part 11
3	TSS	100.0 mg/l	29.0	38.0	34.0	28.0	32.0	36.0	IS 3025: Part 17
B) Inorganic/General Tests									
4	Cyanide	0.02 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025: Part 44
C) Organic Tests									
5	Chemical Oxygen Demand (COD)	250.00 mg/l	80.0	76.0	80.0	84.0	96.0	92.0	ASTM: D1252-06
6	Biochemical Oxygen Demand (BOD) at 27°C	30.00 mg/l	11.0	14.0	17.0	19.0	17.0	13.0	IS 3025: Part 27
7	Oil & Grease	10.00 mg/l	1.0	1.1	1.2	1.0	1.1	1.2	IS 3025: Part 39
8	Phenolic Compound	1.00 mg/l	Nil	Nil	Nil	Nil	Nil	Nil	IS 3025: Part 43
D) Trace Metals									
9	Iron (Fe)	3.0 mg/l	1.4	1.2	1.3	1.1	1.2	1.3	IS 3025: Part 53
10	Manganese (Mn)	2.0 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025: Part 44
11	Lead (Pb)	0.1 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025: Part 47
12	Zinc (Zn)	5.0 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	IS 3025: Part 49

GROUND WATER ANALYSIS REPORT

(November - 2017)

PHYSICAL ANALYSIS							
S.N	Parameter	Unit	Tanda Village	Kunra Village	Urla area	As per IS 10500 : 2012	
						Acceptable Limit	Permissible limit
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	0.9	0.6	0.8	01	05
5	Dissolved Solids	mg/ltr	375	352	250	500	2000
CHEMICAL ANALYSIS							
6	pH value	-	7.62	7.53	7.40	6.5 - 8.5	No Relaxation
7	Total Hardness as CaCO3	mg/ltr	302	283	352	200	600
8	Calcium Hardness as Ca	mg/ltr	154	140	130	75	200
9	Magnesium Hardness as Mg	mg/ltr	52	34	58	30	100
10	Iron as Fe	mg/ltr	0.10	0.13	0.16	0.3	No Relaxation
11	Chloride as Cl	mg/ltr	78	70	56	250	1000
12	Free residual chlorine	mg/ltr	0.12	0.10	0.13	0.2	1
13	Lead as Pb	mg/ltr	ND	ND	ND	0.01	No Relaxation
14	Manganese as Mn	mg/ltr	0.08	0.10	0.14	0.1	0.3
BIOLOGICAL ANALYSIS							
15	E.Coli (Bacteria Count)	-	NIL	NIL	NIL	0/100 ml	-

GROUND WATER ANALYSIS REPORT

(January-2018)

PHYSICAL ANALYSIS							
S.N	Parameter	Unit	Tanda Village	Kunra Village	Urla area	As per IS 10500:2012	
						Acceptable Limit	Permissible limit
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	0.5	0.9	0.8	01	5
5	Dissolved Solids	mg/ltr	458	412	398	500	2000
CHEMICAL ANALYSIS							
6	pH value	-	7.41	7.63	7.80	6.5 - 8.5	No Relaxation
7	Total Hardness as CaCO3	mg/ltr	330	352	412	200	600
8	Calcium Hrdness as Ca	mg/ltr	78	180	102	75	200
9	Magnesium Hardness asMg	mg/ltr	48	62	46	30	100
10	Iron as Fe	mg/ltr	0.11	0.20	0.16	0.3	No Relaxation
11	Chloride as Cl	mg/ltr	80	74	96	250	1000
12	Free residual chlorine	mg/ltr	0.19	0.22	0.13	0.2	1
13	Lead as Pb	mg/ltr	ND	ND	ND	0.01	No Relaxation
14	Manganese as Mn	mg/ltr	0.21	0.12	0.17	0.1	0.3
BIOLOGICAL ANALYSIS							
15	E.Coli (Bacteria Count)	-	NIL	NIL	NIL	0/100 ml	-

Annexure -V

CSR Expenses of HIRA GROUP Companies (GPIL Siltara, Kachche Aridongri Iron Ore Mines, Boria Tibu Iron Ore Mines, Gidhali Crushing Unit, HIRA Arcade-City Office & R.R.Ispat) for FY: 2017-18

Unit Name: GPIL-Siltara, Corporate Office & R.R. Ispat

S.No.	CSR project or activity identified.	Sector in which the Project is covered. (Environment Conservation, Infrastructure Development, Sports, Health Care, Drinking Water, Infrastructural Development & Environment, Educational Support, Environment,any other)	Projects or Programs (1) Local area or other (2) Specify the State and district where projects or programs was undertaken.	Cumulative Expenditure upto the reporting Period.	Amount spent: Direct or through implementing agency
1	Piyau hut & drinking water in Siltara, Tada & Mandhar in summer for 3 months & Manpower Engaged in Piyau Hut	Drinking Water	Gram Panchayat Tada, Siltara & Mandhar	3.96	Direct
2	Providing salary of 02 night guard & 03 teachers of Govt. Primary & Middle School of village Mandhar, Siltara & Tada	Education	Gram Panchayat Siltara, Mandhar & Tada	1.72	Direct
3	Expenses incurred in manpower engaged for maintenance of Plantation & Garden in Janpad Office Dharsiwa & Dharsiwa Police Station under CSR	Environment Conservation	Dhasiwa Block	0.42	Horticulture Dept of GPIL
4	Expenses incurred in plantation & Labour payment engaged in plantation work at CSIDC Land (60Acre), Siltara & AKVN Land (4 Acre), Tada	Environment Conservation	Gram Panchayat Siltara & Tanda	0.89	Horticulture Dept of GPIL
5	Free Health Checkup Camp for students of Village Tanda on the eve of Children's Day	Health	Gram Panchayat Tanda	0.13	Direct

S.No.	CSR project or activity identified.	Sector in which the Project is covered. (Environment Conservation, Infrastructure Development, Sports, Health Care, Drinking Water, Infrastructural Development & Environment, Educational Support, Environment,any other)	Projects or Programs (1) Local area or other (2) Specify the State and district where projects or programs was undertaken.	Cumulative Expenditure upto the reporting Period.	Amount spent: Direct or through implementing agency
6	Scholorship provided to 103 poor students of Govt. Hr.Sec. School of village Mandhar for the session-2017	Education	Gram Panchayat Mandhar	0.89	Direct
7	Provided School Fee for 02 meritorious students of village-Siltara for the session-2017	Education	Gram Panchayat Siltara	0.30	Direct
8	Financial Aid provided to Aakanksha Lions School for Mentally Handicapped Children for smooth operation of school	Education	Raipur City	12.00	Direct to Aakanksha Lions School
9	Painting work in Govt. Primary & Middle School of village Tada	Infrastructure Development	Gram Panchayat Tanda	0.05	Direct
10	Construction of C.C. Road at Tanda	Infrastructure Development	Gram Panchayat Tanda	3.71	Direct
11	Construction of C.C. Road at Mandhar	Infrastructure Development	Gram Panchayat Mandhar	2.83	Direct
12	Expenses on Maintenance of Garden & Plantation at Swami Vivekanada International Airport, Raipur	Environment	Raipur City	1.63	By HIRA POWER & STEELS LTD.
13	Expenses on Plantation in premises of Udyog Bhavan, Raipur	Environment	Raipur City	2.93	By R.R.Ispat
14	Expenses on Plantation & Garden maintenance of Tatibandh Chowk	Environment	Tatibandh Square, Raipur	7.06	By R.R.Ispat
15	Expenses on Plantation at Industial Area Siltara Chowk	Environment	Siltara	51.13	By R.R.Ispat
16	Maintenance expenses on Plantation at RKC Compound	Environment	Raipur City	3.65	By R.R.Ispat

S.No.	CSR project or activity identified.	Sector in which the Project is covered. (Environment Conservation, Infrastructure Development, Sports, Health Care, Drinking Water, Infrastructural Development & Environment, Educational Support, Environment,any other)	Projects or Programs (1) Local area or other (2) Specify the State and district where projects or programs was undertaken.	Cumulative Expenditure upto the reporting Period.	Amount spent: Direct or through implementing agency
17	Maintenance expenses on Plantation at Raipur Railway Station	Environment	Raipur City	1.79	By R.R.Ispat
18	Expenses on Plantation in Urla & Birgaon area	Environment	Raipur City	17.10	By R.R.Ispat
19	Maintenance of Garden & Fountain in Telibandha (Manpower, Land escaping, Plantation etc.)	Environment	Telibandha Pond, Raipur	7.40	By R.R.Ispat
			TOTAL (In Lac)	119.57	