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SARDA
SARDA METALS & ALLOYS LTD.

Dt.. 31.12.2012

Ref. No. - SMAL/HSE/08

To

The Chief Conservator of Forests (Central)
Ministry of Environment & Forests
Regional Office (SZ) Kendriya Sadan, IV Floor
E & F Wing, 17th Main Road, Koramangala
Bangalore-560034.

Dear Sir,

Sub: Submission of Half Yearly Compliance Report of Environmental Clearance – Reg.

Ref: Environmental Clearance Letter no. F.No.J11011/164/2009 IA.II (I) dtd. 26.11.2009 & subsequent amendment on Dt. 04.05.2010.

Enclosed please find herewith our half Yearly compliance report as per the stipulated condition imposed in Environmental Clearance (EC), General Condition no.xiv). In this context, we would like inform you that our plant is ready to commence for operation from January'2013. This is for your kind information please.

Thanking you with regards.

Yours truly,

For Sarda Metals & Alloys Ltd.

Rajendra Vdu

Authorized Signatory

SARDA METALS & ALLOYS LIMITED * VISAKHAPATNAM *

Copy to:

1. The Member Secretary,Andhra Pradesh Pollution Control Board, PARYAVARAN BHAVAN, A-3, Industrial Estate, Sanath Nagar, Hyderabad-500018, Andhra Pradesh.
2. Regional Officer, Andhra Pradesh Pollution Control Board, Flat No.- 11, Shivaji Colony, Pradeep Nagar,Vizianagaram, A.P.

Compliances for the Conditions Imposed as Per Environmental Clearance Issued by MoEF Letter no.- F. No. J-11011/164/2009-IA.II(I), Dt. 26.11.2009 and subsequent amendment on Dt. 04.05.2010 for M/s. Sarda Metals & Alloys Ltd., APIIC Industrial Area, At village- Kantakapalli, Mandal- Kothavalasa, Dist.- Vizianagaram, Andhara Pradesh.

A. SPECIFIC CONDITIONS

Sl. No.	Conditions	Compliances
1	Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), gas cleaning plant, multi-cyclone, bag filter, de-duster etc. shall be provided to keep the emission levels below 100 mg/Nm^3. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit. Analysis reports shall be submitted to the Ministry's Regional Office at Bangalore, CPCB and APPCB.	Online ambient air quality monitoring and continuous stack monitoring facilities are under installation to keep emission levels below 100 mg/Nm^3. Interlocking facilities is being provided for automatic shut down of the system in case emission level exceeds the limit.
2	Hot gases from DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in waste heat recovery boiler (WHRB). The gas then shall be cleaned in ESP before leaving out into the atmosphere through ID fan and stack. Electrostatic precipitator (ESP) shall be provided to DRI plant, WHRB and ABC boilers to control air emissions within 100 mg/Nm^3.	Shall be planned whenever is required in future phases
3	Electrostatic precipitator (ESP) to sinter plant; ESP/multi-cyclone bag filter, de-duster to pellet plant; ESP and bag filter to power plant and DRI plant shall be provided to control air emissions within 100 mg/Nm^3. Bag filter and de-duster to coke oven plant; dust extraction system with bag filters to blast furnace stock house, ferro alloys plant and ladle furnace; gas cleaning plant and bag filter to blast furnace; fume extraction system with cyclone to Induction furnace and heat recuperator shall be provided to rolling mill. The flue gas from rolling mill shall be discharged into the atmosphere through stacks of adequate height. Stacks of adequate height shall also be provided to all the concerned plants for effective dispersion of	ESP for power plant and bag house for ferro alloys plant has been installed.

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	emissions into the atmosphere.	
4	Dry coke quenching method shall be adopted in the proposed coke oven plant as per the commitment submitted.	Shall be complied with as per required standards, whenever required.
5	All the standards prescribed for the coke oven plants vide notification no. GSR 46 (E) dated 3rd February, 2006 shall be followed as per the latest guidelines. Proper and full utilization of coke oven gases in power plant using waste heat recovery steam generators shall be ensured and no flue gases shall be discharged into the air.	Shall be complied with as per standards, whenever required
6	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed. The emission standards issued by the Ministry in May, 2008 for the sponge plants shall be followed.	Shall be complied with as per required standards and equipments are under installation to control gaseous emission levels.
7	Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.	All arrangements shall be made to control the emission due to transport of Raw material. Provision for covered shed with stacker reclaimer has been made to suppress the dust emission.
8	In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Dust suppression system with spray nozzles shall be provided to raw material handling area and material transfer points. Cyclones, bag filters, ventuary scrubber shall be provided to transfer points to control fugitive emissions. Fume extraction and dry de-dusting system with bag filters shall be provided at the screening stations of ore, coke and other raw material handling areas to control fugitive emissions. Dust suppression system shall be provided in unloading areas. All internal roads shall be asphalted to prevent the fugitive dust emissions. Further, specific measures like water sprinkling around the stockpiles shall be done to control fugitive emissions.	Dust suppression with spray nozzle system has installed for raw material unloading/ handling area & dust collection system at transfer points. Furthermore to control fugitive emissions; water spray/ sprinkling system shall be arranged.

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9	Total water requirement from Tatipudi reservoir shall not exceed 396 m^3/hr. No ground water shall be used. Air cooled condenser shall be provided to reduce the water consumption. Acidic and Alkaline effluent from DM water plant shall be neutralized and reused in the plant through ash pond. All the effluent shall be treated and recycled in the re-circulating system or used for ash handling, dust suppression and green belt development. All the wastewater from process and domestic sources shall be treated and recycled and reused. No wastewater shall be discharged outside the premises and Zero effluent discharge shall be ensured.	Shall be complied with as per required standards & to be within prescribed limits. Air cooled condesor and neutralizing pit are provided. Effluent treatment facility is also provided to maintain zero effluent discharge.
10	Prior permission for the drawl of 396 m^3/hr water from Tatipudi reservoir from the concerned department shall be obtained and a copy of the permission letter shall be submitted to the Ministry and its Regional Office at Bangalore	At present, permission for supply of 2700 KL/day is obtained from the Greater Visakhapatnam Municipal Corporation for Phase-I production.Copy already submitted with previous reports.
11	The water consumption shall not exceed 16 m^3/Ton of Steel as per prescribed standard.	Shall be complied.
12	Ground water monitoring around the solid waste disposal site / secured landfill (SLF) shall be carried out regularly and report submitted to the Ministry's Regional Office at Bangalore, CPCB and APPCB.	Being complied
13	No coal fines shall be imported as proposed. DRI Fines, coke breeze, sinter dust, GCP dust, blast furnace dust, SMS dust, scale, iron ore fines shall be used in sinter plant. Scrap from rolling mill shall be used as raw material in SMS. Char/dolochar shall be used in power plant / brick manufacturing plants. Manganese slag from ferro alloy plant shall be used as raw material for Silico-Manganese production. All the other solid wastes including broken refractory mass shall be properly disposed off in environment-friendly manner. Oily waste shall be provided to authorized recyclers/reprocessors.	Not Applicable; however shall be complied whenever required.
14	AFBC Plant shall be installed before installation of sponge iron plant so that utilization of char in the AFBC boiler is ensured. All the char from DRI plant shall be utilized in AFBC boiler of power plant and no char shall be disposed off anywhere else. All the blast furnace (BF) slag shall be granulated and	Not Applicable; however shall be complied whenever required.

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	provided to cement manufacturers for further utilization. Sludge from STP shall be used as manure for green belt development.	
15	All type of slag shall be used for road making only after passing through Toxic Chemical Leachability Potential (TCLP) test. Otherwise, toxic waste shall be recovered from the slag and output waste shall be disposed in secured landfill as per CPCB guidelines. Spent oil shall be sold to APPCB authorized recyclers.	Shall be complied.
16	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Bangalore, APPCB and CPCB.	Shall be complied.
17	A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.	Shall be complied.
18	Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Bangalore.	Being complied
19	As proposed, green belt shall be developed in 92.72 acres (33 %) out of total 280.96 acres in and around the plant as per the CPCB guidelines in consultation with DFO.	Out of 280.96 acres, about 86 acres is with greenbelt and balance development is in progress at the designated areas of the plant site to meet requirement of 33% of the total project area.
20	Proper rain water harvesting measures shall be adopted to make use of water within the plant premises for various activities including dust suppression and green belt development	Arrangements of internal cannels and rain water harvesting pond is done and already in use.
21	All the environment management measures given in the EIA/EMP shall be implemented and complied with.	Is being planned for onward implementation.

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22	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Sector including Coke Oven Plants shall be shall be implemented.	Is being planned for onward implementation.
23	Permission and recommendations of the State Forest Department regarding impact of proposed plant on Adanapalem RF shall be obtained regarding likely impact of the proposed steel plant on the surrounding reserve forest and recommendations, if any, shall be implemented.	As per the Study report made by the Divisional Forest Officer, Vizianagaram & Principal Chief Conservator of Forests; it is concluded that there will be no impact on the nearby Forest blocks due the proposed SMAL Project. A copy of the NOC issued by PCCF, Hyderabad is already provided with previous report.
24	The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Provided with all the necessary amenities

GENERAL CONDITIONS

Sl. No.	Conditions	Compliances
1	The project authorities shall strictly adhere to the stipulations made by the Andhra Pradesh Pollution Control Board (APPCB).	Being complied
2	At no time, the emissions shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	Shall be complied
3	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional	Noted

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	environmental protection measures required, if any.	
4	The gaseous emissions 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 APPCB may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.	Interlocking facility is being provided for automatic shut down of the systm in case emmission level exceeds the limit.
5	The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 and January, 2000. Authorization from the APPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes.	Shall be complied
6	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules, 2003. Authorization from the A. P. Pollution Control Board must be obtained for collection / treatment / storage / disposal of hazardous wastes.	Shall be strictly complied
7	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	Shall be strictly complied
8	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Developed and in use.
9	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as	Being maintained

	per the Factories Act.	
10	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the environmental management and monitoring functions.	Being complied
11	As proposed, Rs. 100.00 Crores and Rs. 5.00 Crores shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures shall be judiciously used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. A time bound implementation schedule shall be submitted to the Ministry and its Regional Office at Bangalore to implement all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	Shall be complied
12	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Copies have been sent and available at website: www.seml.co.in
13	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF at Bangalore, the respective Zonal Office of CPCB and the APPCB. The criteria pollutant levels namely; SPM, RSPM, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Being complied; the monitoring reports are enclosed as **Annexure**
14	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF, the respective	Being complied

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	Zonal Office of CPCB and the APPCB. The Regional Office of this Ministry at Bangalore / CPCB / APPCB shall monitor the stipulated conditions.	
15	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.	Shall be complied
16	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 APPCB and may also be seen at Website of the Ministry of Environment and Forests at http:/envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers 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.	Has been complied
17	Project authorities shall 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.	Financial closures have been completed, term loans sanctioned by Bank/ FI. Project construction work is in progress.

Rajendra Vohra

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Compliances for the Conditions Imposed as Per Consent for Establishment Issued by Andhra Pradesh Pollution Control Board Vide Letter no.- 200/PCB/CFE/RO-VZM/HO/2009-2770, Dt.- 24.01.2011 & subsequent amendment vide letter no.- 200/PCB/CFE/RO-VZM/HO/2009-417, Dt. 11.05.2011 for M/s. Sarda Metals & Alloys Ltd., APIIC Industrial Area, At village- Kantakapalli, Mandal- Kothavalasa, Dist.- Vizianagaram, Andhara Pradesh.

SCHEDULE-A

Sl. No.	Conditions	Compliances
1	Progress on implementation of the project shall be reported to the concerned Regional Office, A.P Pollution Control Board once in six months	Being complied
2	Separate energy meters shall be provided for Effluent Treatment Plant (ETP) and Air pollution control equipments to record energy consumed.	Enery meters provide for ESP & bag houses
3	The Proponent shall obtain Consent for Operation (CFO) from APPCB, as required Under Sec. 25/26 of Water (P&C of P) Act, 1974 and under sec. 21/22 of the Air (P & C of P) Act, 1981, before commencement of the activity.	Consent for Operation (CFO) received from Regional Office of APPCB, Vizianagaram Under Sec. 25/26 of Water (P&C of P) Act, 1974 and under sec. 21/22 of the Air (P & C of P) Act, 1981.
4	Notwithstanding anything contained in this conditional letter or consent, the Board hereby reserves its right and power Under Sec. 27(2) of Water (Prevention and Control of Pollution) Act, 1974 and Under Sec. 21(4) of Air (Prevention and Control of Pollution) Act, 1981 to review any or all the conditions imposed herein and to make such alternation as deemed fit and stipulate any additional conditions by the Board.	Noted and shall be followed.
5	The consent of the Board shall be exhibited in the factory premises at a conspicuous place for the information of the inspecting officers of different departments.	Displayed at security main gate
6	Compensation is to be paid for any environmental damage caused by it, as fixed by the Collector and District Magistrate as civil liability.	Noted & shall be followed
7	Floor washing shall be admitted into the effluent collection system only and shall not be allowed to find their way in storm drains or open areas. The industry shall maintain a	Noted & good housekeeping shall be maintained at all work places. All the pipe valves, sewares have been made

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	good housekeeping. All pipe valves, sewers, drains shall be leak proof. Dyke walls shall constructed around storage of chemicals.	leak proof; and dyke walls have been constructed around the chemical storage yards.
8	Rain Water Harvesting (RWH) structure(s) shall be established on the plant site. The proponent shall ensure that effluent shall not enter the Rain Water Harvesting structure.	Several contour trenches along with check dams/ siltation pits are constructed to collect the rainwater; which shall lead into a common Rainwater Harvesting pond constructed within the plant over an area about 15 Acres for recharging rainwater into the ground/ aquifer.
9	The rules and regulations notified by Ministry of Law and Justice, GOI, regarding the Public Liability Insurance Act, 1991 shall be followed.	Noted and shall be followed.
10	This Order is valid for period of 5 years form the date of issue.	Noted.

SCHEDULE- B

Water

<table>
<tr><th>Sl. No.</th><th>Conditions</th><th>Compliances</th></tr>
<tr><td>1</td><td>The source of water is Tatipudi Reservoir and the maximum permitted water consumption for total project (i.e. for phase-I, II & III) is 9504 KLD.
<table>
<tr><th>Sl. No.</th><th>Facility</th><th>Water Required For</th><th>Make up water requirement (m^3/day)</th></tr>
<tr><td>1</td><td>Ferro Alloys (1,50,000 TPA) (Phase-I (75,000 TPA) & Phase- II (75,000 TPA)</td><td>Cooling</td><td>240</td></tr>
<tr><td>2</td><td>Captive Power Plant (240 MW) (Phase-I (80 MW), Phase-II(80 MW) & Phase-III (80 MW)</td><td>DM softener regeneration</td><td>2500</td></tr>
<tr><td>3</td><td>DRI Klin (Sponge Iron Plant) Phase- II (3,00,000 TPA))</td><td>Cooling</td><td>1920</td></tr>
<tr><td>4</td><td>Sinter Plant (Phase-I (1,25,000 TPA))</td><td>Water to aid to the sinter mix for moistening</td><td>170</td></tr>
<tr><td>5</td><td>Blast Furnace (Phase-III (2,50,000 TPA)</td><td>BF cooling, GCP & Slag</td><td>890</td></tr>
</table></td><td>Permission for abstracting 2700 KLD has already obtained from GVMC for present operation (Phase-I of CPP & Phase- I & II of FAP).

Noted & shall be followed during execution</td></tr>
</table>

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		granulation plant	
6	Steel Melting shop includes Induction furnace (2,50,000 TPA) & Electrical Arc Furnace (LRF) (2,50,000 TPA) (Phase-III)	Cooling water Bleed off	1490
7	Rolling Mill (4,50,000 TPA) (Phase- III)	Cooling water Bleed off	1200
8	Coke Oven (Non-Recovery with Stamp Charging) Phase-I (2,00,000TPA) & Phase-III (2,00,000 TPA))	Coke Quenching	150
9	Billet Casters (SMS Plant) Phase- III	Cooling water Bleed off	96
10	Pellet Plant	Cooling	441
11	Drinking	Domestic	53
12	Miscellaneous	(Fire Fighting & for different services)	399
Total			**9504**

2 The maximum Waste Water Generation (KLD) from total project (i.e. from Phase- I, II & III) shall not exceed following:

Sl. No.	Facility	Waste Water Generated from	Waste Water generation (m^3/day)	Remarks
1	Captive Power Plant (240 MW) (P-I (80 MW), Phase-II (80 MW) & Phase -III (80 MW)	DM softener regeneration	375	After treatment, it shall be reused for Ash quenching, coal yard sprinkling and dust suppression
2	Blast Furnace (P-III (2,50,000 TPA)	BF cooling, GCP & slag granulation plant	140	Shall be reused for plant washings & dust suppression after treatment

Noted and shall be followed during the project operation of the plant 1x80MW phase-1.

Noted and shall be followed during execution

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				in the ETP
3	Steel Melting Shop includes Induction furnace (2,50,000 TPA) & Electrical Arc Furnace (LRF) (2,50,000 TPA) (Phase- III)	Cooling water Bleed off	223	Shall be reused for washing & dust suppression after treatment in the ETP
4	Rolling Mill (4,50,000 TPA) (Phase-III)	Cooling water Bleed off	60	Shall be reused for washing & dust suppression after treatment in the ETP.
5	Billet Casters (SMS Plant) (Phase-III)	Cooling water Bleed off	15	Shall be reused for dust suppression after treatment in the ETP
6	Domestic	Domestic	42	Shall be used for plantation for on land plantation with own premises.
	Total		**855 KLD**	

Treatment Disposal

Effluent source	Treatment Facilities	Disposal
DRI Plant, Furnace cooling, Power plant, Sinter plant, Blast furnace	Collection, Screening, neutralization, clariflocculation, sludge dewatering	Shall be Reused for ash quenching, dust suppression at transfer points, suppression at coal yard & greenery development within own premises.
Domestic waste water	Sewage treatment plant consisting of screening, chemical treatment, aeration, clarification & chlorination.	Onland for gardening within own premises.

3	Air cooled condenser shall be provided to reduce the water consumption. Acidic and Alkaline effluent from DM water plant shall be nutralised and	Air cooled condenser has

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	reused in the plant through ash pond. All the effluent shall be treated and recycled in the re-circulating system or used for ash handling, dust supression and greenbelt development.	been installed. All the effluent shall be treated & used for ash handling/ dust suppression & greenbelt development.
4	Total waste water generated from the process and domestic sources shall be treated and recycled and reused. No wastewater shall be discharged outside the premises and **Zero Effluent Discharge** shall be maintained.	Noted
5	The water consumption shall not exceed 16 m^3/ Ton of Steel as per prescribed standard.	Noted
6	The Effluent Treatment Plant (ETP) and Sewage Treatment Plant (STP) shall be constructed and commissioned along with the commissioning of the activity. All the units of the ETP and STP shall be impervious to prevent ground water pollution.	Nutralisation pit has been made of RCC/PCC structure. It has been made impervious to ensure that no ground water pollution shall arise. Sewage generated from the plant site at various work places shall be treated anaerobically followed by septic tanks and soak pits. Moreover regular monitoring / quality testing shall be carried out at different places within the plant site.
7	The effluents shall be treated to the on land for irrigation standards, stipulated under Environment (Protection) Rules, 1986, notified by Ministry of Environment and Forests, Government of India as specified in Schedule VI vide G.S.R. 422 (E), Dt. 19.05.1993 and its amendments thereof.	Noted

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8	The industry shall install flow meters with totaliser for the purpose of measuring the quantity of treated effluents recycled for cooling water make-up.	Shall be complied
9	Separate meters with necessary pipe-line shall be provided for assessing the quantity of water used for each of the purposes mentioned below: a). Industrial cooling, boiler feed. b). Domestic purposes. c). Processing, whereby water gets polluted and pollutants are easily bio-degradable. d). Processing, whereby water gets polluted and the pollutants are not easily bio-degradable.	Noted

Air

Sl. No.	Conditions	Compliances
10	The Air pollution Control equipment shall along with the commissioning of the activity shall comply with the following for controlling air pollution.	Noted. Installed ESP for power plant and bag house for Ferro alloys and shall be followed during execution of sinter plant and coke oven

Phase- I

Sl. no.	Details of Stack	Stack-1	Stack-2	Stack-3	Stack-4
a	Attached to	Coke Oven Plant + WHRB Boiler (60 TPH)	Sinter Plant	Ferro Alloys Furnace	Power Plant
b	Capacity	2,00,000 TPA	1 X 24 Sq. mts.	33 MVA	1 x 309 TPH
c	Fuel	Coal & Flue Gases	Blast Furnace	Electricity	Non Coking coal
d	Stack Height	50.0 mts.	40 mts	50.0 mts	120 mts
e	Diameter	1.5 mts.	1.2 mts	2.0 mts	2.2 mts
f	Control Equipment	ESP	ESP	RABH	ESP
g	Concentration of Particulate matter	<50 mg/ Nm^3	<50 mg/ Nm^3	<50 mg/ Nm^3	<50 mg/ Nm^3

Phase- II

Sl.	Details of Stack	Stack-5	Stack-6	Stack-7	Stack-8	Noted and shall

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Sl. No.	Conditions						Compliances
	No.						be followed during execution of phase-II & phase-III
	a	Attached to	Ferro Alloys Furnace	Power Plant	DRI Plant + WHRB (50 TPH)	DRI Plant + WHRB (50 TPH)	
	b	Capacity	33 MVA	1 x 309 TPH	500 TPD	500 TPD	
	c	Fuel	Electricity	Non coaking coal	Coal	Coal	
	d	Stack Height	50.0 mtrs	120 mtrs	80.0 mtrs	80.0 mtrs.	
	e	Diameter	2.0 mtrs	2.2 mtrs	2.0 mtrs	2.0 mtrs	
	f	Control Equipment	RABH	ESP	ESP	ESP	
	g	Concentration of Particulate matter	<50 mg/ Nm^3	<50 mg/ Nm^3	<50 mg/ Nm^3	<50 mg/ Nm^3	

Phase- III

Sl. No.	Details of Stack	Stack-9	Stack-10	Stack-11	Stack-12
a	Attached to	Coke Oven Plant+ WHRB Boiler (60 TPH)	Blast Furnace+ WHRB Boiler (40 TPH)	Rolling Mill	Power Plant
b	Capacity	2,00,000 TPA	1 X 350 Cum	4,50,000 TPA	1 x 309 TPH
c	Fuel	Coal and Flue Gases	Blast Furnace Gas and Waste flue gases.	Electricity	Non Coking Coal
d	Stack Height	50.0 mts	75.0 mts	30.0 mts	120 mts
e	Diameter	1.5 mts	2.2 mts.	1.1 mts	2.2 mts
f	Control Equipment	ESP	GCT followed by ESP	Demisting system	ESP
g	Concentration of Particulate matter	<50 mg/ Nm^3	<50 mg/ Nm^3	<50 mg/ Nm^3	<50 mg/ Nm^3

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Sl. No.	Conditions	Compliances

Sl. No.	Details of Stack	Stack-13	Stack-14	Stack-15
a	Attached to	SMS (Induction Furnace)	SMS (Ladle Refine) or Electric Arc Furnace	Rolling mill
b	Capacity	2,50,000	2,50,000	4,50,000
c	Fuel	Electricity	Electricity	Electricity
d	Stack Height	30.0 mts.	30.0 mts	30.0 mts.
e	Diameter	1.1 mts.	1.1 mts	1.1 mts.
f	Control Equipment	RABH	Bag filters	Bag Filters
g	Concentration of Particulate matter	<50 mg/ Nm^3	<50 mg/ Nm^3	<50 mg/ Nm^3

Fugitive emission

	Emissions	Control Equipments
1	BF Stock House	Dust extraction system comprising of pulse jet type bag filter, centrifugal fan and motor, dust work including suction hoods, duct supports, stack, dust hopper, rotary air lock valves etc.
2	Blast Furnace	GCP, ETP and its sludge disposal system
3	Raw material handling area, material transfer points	Dust supression system comprising of spray nozzles, piping network, valves pumps, instrumentation and controls, electrics, water tank etc.
4	Electrical Arc Furnace – Gas Cleaning Plant	Dust extraction system comprising of pulse jet type bag filter, centrifugal fan and motor, dust work including suction hoods, dust supports, stack, duct hopper, rotary air lock valves etc.,
5	Ladle Furnace – Gas Cleaning Plant	Dust extraction system comprising of pulse jet type bag filter, centrifugal fan and motor, duct work including suction hoods, duct supports, stack, duct hopper, rotary air lock valves etc.

11	The industry shall install adequate dust extraction system and water spray	installed

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Sl. No.	Conditions	Compliances
	system in coal handling areas, stock piles, ash handling points, transfer areas and other dusty areas to control dust emissions.	
12	The industry shall provide dust suppression system at all discharge and feed points. The industry shall install necessary air control equipments. Viz, Bag filters in coal crushing & screening, stock house, cooler discharge, products separation areas etc. All the conveyors shall be covered with G.I sheets to prevent fugitive emissions. All the internal roads shall be concreted/ asphalted to control fugitive emissions.	installed
13	Continuous online monitoring facilities for all the stacks and requisite air pollution control equipments viz. Fume extraction system with bag filters, ID fan and stack of adequate height to furnace, Coke oven plant, Power plant, Kiln and Sinter plant shall be provided to control emission level below 50 mg/ Nm^3 as committed by the industry vide letter dtd. 30.04.2010.	Noted and under installation
14	The bag filters proposed to be installed for the furnace shall be designed such that 25% of additional buffer capacity in the Bag house to be made available to meet the emergency requirements.	complied
15	The industry shall take adequate measures for controlling fugitive emissions during tapping operations of Arc/ Induction Furnaces.	Noted
16	The continuous online stack monitoring & ambient air quality monitoring data shall be networked with the APPCB, HO.	Being complied
17	The raw material storage shall be in closed roof sheds and water sprinkling arrangement shall be provided around the stockpiles to control fugitive emissions.	Arrangement of closed sheds/ Stacker reclaimers are constructed.At the stock piles regular water sprinkling being carried out to control fugitive emission.
18	Dry coke quenching method shall be adopted in the proposed coke oven plant as per the commitment submitted.	Noted for future projects
19	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the permissible limits. Guidelines / Codes of Practice issued by the CPCB shall be followed. The emission standards issued for the sponge plants shall be followed.	Noted for future projects
20	The proponent shall ensure compliance of the National Ambient Air	Noted& complied

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Sl. No.	Conditions	Compliances
	Quality standard notified by MoEF, GoI vide notification No. GSR 826 (E), dtd. 16.11.2009 during construction and regular operational phase of the project.	
21	The proponent shall provide interlocking system for air pollution control equipments provide with raw material feeding system so that the feeding of raw material shall be stopped automatically in case the air pollution control equipments fails.	Interlocking facilities is being provided for automatic shut down of the system in case emission level exceeds the limit.
22	A sampling port with removable dummy of not less than 15 cm diameter shall be provided in the stack at a distance of 8 times the diameter of the stack from the nearest constraint such as bends etc. A platform with suitable ladder shall be provided below 1 meter of sampling port to accommodate three persons with instruments. A 15 AMP 250 V plug point shall be provided on the platform.	Complied
23	The generator shall be installed in a closed area with a silencer and suitable noise absorption systems. The ambient noise level shall not exceed 75 dB(A)during day time and 70 dB(A)during night time.	Installed

Solid Waste

Sl. No.	Conditions	Compliances
24	The proponent shall comply with the following for total (i.e. from Phase – I, II & III)	Noted and shall be followed during execution of phase-II & phase-III

Sl. No.	Solid waste generated from	Quantity in TPA	Mode of Disposal
1	Dust from De- Dusting Units from Raw material handling Points	1500	Shall be sold to brick manufacturing plant
2	ESP Dust from Sinter Plant in Phase- I (1,25,000 TPA)	1500	Shall be used as Raw material for respective plant
3	ESP Dust from Pellet Plant Phase-III (6,00,000 TPA)	3500	Shall be used as Raw material for sinter plant
4	GCP Dust from Blast Furnace Phase-III (2,50,000 TPA)	250	Shall be used as Raw material for Sinter Plant.

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Sl. No.	Conditions				Compliances
	5	Slag from Blast Furnace	62500	Shall be sold to cement plant after granulation	
	6	SMS Slag from Steel Melting Shop in Phase -III			
		A). Induction Furnace (2,50,000 TPA)	7000	Shall be used as Road ballast of Road fill material	
		B). Electrical Arc Furnace (2,50,000 TPA)	7000		
	7	Edge Cutting Scrap from Rolling Mill (4,50,000 TPA)	5000	Shall be used as Raw material for SMS	
	8	Char/ Dolochar from DRI Kiln (Sponge Iron Plant)	1,20,000	Shall be used in Power Plant	
	9	Si-Mn Slag from Ferro Alloys from EAFs in P-I & P-III (1,50,000 TPA)	1,20,000	Shall be reused in the Silico Manganese Plant	
	10	Ash from Power Plant from P-I (80MW), P-II (80 MW) & P-III (80 MW)	41,392.51 TPA (Fly Ash: 37,253.26 TPA & Bottom Ash: 4,139.25 TPA) as per industry's Ltr. dt. 10.05.2011	To dispose to M/s. Sri Chakra Cements, Alamanda, Jami Mandal, Vizianagaram Dist. and to M/s. Andhra Cements Ltd., Kantakapalli (V), Vizianagaram, Dist. As per Industry's letter dated. 17.01.2011.	
25	No coal fines shall be imported. DRI fines, coke breeze, sinter dust, GCP dust, blast furnace dust, scale iron ore fines shall be used in sinter plant.				Noted
26	Proper handling, storage, utilization and disposal of all the solid waste should be ensured and shall regularly report toxic metal content in the waste material and its composition, end use of solid / hazardous waste should be submitted to the Regional Office.				Noted
27	The Industry shall dispose all kinds of Ferro Alloys Slag for land filling inside the plant premises or used as building material only after passing through Toxic Chemical Leachability Potential (TCLP) test. Otherwise, the hazardous substances shall be recovered from the slag and output				Noted

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Sl. No.	Conditions	Compliances
	waste shall be disposed as per CPCB guidelines.	
28	The following rules and regulations notified by MoEF, GoI shall be implemented. a). Hazardous waste rule (Management, Handling and Transboundary Movement) Rule, 2008. b). Manufacture, storage and Import of Hazardous Chemical Rules, 1989. c). Batteries (Management & Handling) Rules, 2010. d). Fly ash notification S.O 2804 (E), dt. 03.11.2009.	Noted
29	Proper utilization of fly ash shall be ensured as per Fly Ash notification, 1999 and subsequent amendment in 2003.	Noted

Other Conditions:

Sl. No.	Conditions	Compliances
30	Greenbelt of width 15 mts. Shall be developed along the boundary of the industry. Greenbelt shall be developed in minimum area of 92.72 acres and shall be started along with the construction activity.	Out of the total project area of 280.96 acres, about 86 acres under greenbelt with good canopy cover. Balance area is under the process for greenbelt development at the designated areas with local dominant species in consultation with Local Forest Dept.
31	The representative of the industry attended the CFE Committee meeting held on 05.01.2011 has informed that they have owned captive coal mines at Indonesia to meet the coking coal requirements for the project. As per the details furnished in the EIA (page-24), the ash content is 8-9% & sulphur content is less than 1% in the imported coking coal proposed to use in the project. The industry shall ensure that the only imported coking coal will be used in the total project & quality of the coking coal shall be strictly maintained as furnished in the EIA report.	Noted
32	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and monitoring functions.	It is in place
33	The proponent shall obtain clearance from	Presently, permission for abstracting 2700

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	concerned Department to draw water from Tatipudi Reservior.	KLD water from Tatipudi Reservior has been obtained from Greater Visakhapatnam Municipal Corporation. Copy submitted with last report.
34	All the recommendation made in the CREP for the steel sector including Coke Oven plants shall be implemented.	Noted
35	The industry shall comply with all the conditions stipulated in the Environmental Clearance issued vide order dt. 26.11.2009 issued by MoE & F, GoI..	Noted
36	The proponent shall comply with all the directions issued by the Board from time to time.	Noted
37	Concealing the factual data or submission of false information/ fabricated data and failure to comply with any of the conditions mentioned in this order and attract action under the provisions of relevant pollution control Acts.	Noted
38	The Board reserves its right to modify above conditions or stipulate any additional conditions in the interest of environment protection.	Noted

Specific Conditions: (As per amended CFE Order Dt. 11.05.2011):

Sl. No.	Conditions	Compliances
1	There shall provide adequate space provision shall be kept for retrofitting of FGD, if required later date	Noted
2	120 mts stack height shall be provided for each boiler connected to 3 X 80 MW power plant	Noted, provided 120 mts stack for 1 X 80 MW power plant.
3	The ash and Sulphur content in the fuel 1.019 million TPA of proposed to be used after change in power plant configuration from 4 x 60 MW to 3 x 80 MW shall be less than 4.06% & 0.85% respectively as per industry's ltr dt. 10.05.2011.	Noted & shall be followed
4	The industry shall regularly monitor the quantity of fuel as per industry's ltr dt. 10.05.2011 and ensure fuel quantity to comply before unloading at on-site of the	Noted & shall be followed

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	industry's premises. The records shall be regularly submitted to the Board.	
5	The proponent shall ensure that there shall not be any change in the process technology and scope of working without prior approval from the Board.	Noted
6	The order is issued without prejudice to the right and contentions of this Board in any court of law.	Noted
7	The proponent shall comply with all the directions issued by the Board from time to time.	Noted
8	Concealing the factual data or submission of false information/ fabricated data and failure to comply with any of the conditions mentioned in this order may result in withdrawal of this order and attract action under the provisions of relevant Pollution Control Acts.	Noted.
9	The Board reserves its right to modify above conditions or stipulate any additional conditions in the interest of environment protection.	Noted

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PRAGATHI LABS & CONSULTANTS PVT.LTD.

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(ISO 9001:2008, OHSAS 18001:2007)

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Tadbund 'X' Roads, Secunderabad-500 009. Tele Fax : 040-27897213
www.pragathilabs.com

TEST REPORT

Issued to

Sarda Metals & Alloys Limited.,
APIIC, Industrial Park,
Kantakapalli, Kothavalasa Mandal,
Vizianagaram-535240, AP.
Phone No. 0891-2701648,
Fax no. 0891-2700864.

Date of Monitoring	17th December, 2012	*Date of Reporting*	20th December, 2012
Our Ref. No.	PLCPL/SMAL/12-13/268/879	*PO. No.*	6000009929
Sample particulars	Ambient Air Quality, No. of sample 1 (one)		
Instruments used	PM 2.5 FPS, Make Aero Vironment Engineers INC. Model/S.No. FPS 9000 / 101023 Due date 10.10.2013		
Test required	$PM_{2.5}$, PM_{10}, SO_2 ,NO_x & CO.		
Method of analysis	IS: 5182 & APHA	*Page No.*	1 of 5

Ambient Air Quality

Location	*Concentration µg/m³*				*mg/m3*
	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO
Near Main Gate	51	19	10.3	11.7	0.088

Prescribed Limit (*Revised Norms*)

No.	Pollutant	Units	Time Weight average	Concentration In Ambient Air	
				Industrial Area	Methods of Measurement
1	Sulphur dioxide SO_2	µg/m³	24 hrs	80	-Improved West &Gaeke
2	Nitrogen Oxide NO_2		24 hrs	80	- Modified Jacob &Hochheiser(No Arsenite)
3	Particulate Matter (Size <10µ) or PM_{10}		24 hrs	100	-Gravimetric
4	Particulate Matter (Size <2.5µ) or $PM_{2.5}$		24 hrs	60	-Gravimetric
5	Carbon monoxide (CO)	mg/m³	8 hrs	2	-Non Dispersive infra red (NDIR) Spectroscopy

Note: All parameters sampling as per APPCB/CPCB/MoEF Guidelines

Analyst Signature

Authorized Signature

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Phone No. 0891-2701648,
Fax no. 0891-2700864.

Date of Monitoring	17th December, 2012	*Date of Reporting*	20th December, 2012
Our Ref. No.	PLCPL/SMAL/12-13/268/880	*PO. No.*	6000009929
Sample particulars	Ambient Air Quality, No. of sample 1 (one)		
Instruments used	PM 2.5 FPS, Make Aero Vironment Engineers INC. Model/S.No. FPS 9000 / 101023 Due date 10.10.2013		
Test required	$PM_{2.5}$, PM_{10}, SO_2 ,NO_x & CO		
Method of analysis	IS. 5182 & APHA	*Page No.*	2 of 5

Ambient Air Quality

Location	*Concentration µg/m³*				*mg/m3*
	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO
Coal Handling Plant area	47	18	7.4	9.1	0.069

Prescribed Limit (*Revised Norms*)

No.	Pollutant	Units	Time Weight average	Concentration In Ambient Air	
				Industrial Area	Methods of Measurement
1	Sulphur dioxide SO_2	µg/m³	24 hrs	80	-Improved West &Gaeke
2	Nitrogen Oxide NO_2		24 hrs	80	- Modified Jacob &Hochheiser(No Arsenite)
3	Particulate Matter (Size <10µ) or PM_{10}		24 hrs	100	-Gravimetric
4	Particulate Matter (Size <2.5µ) or $PM_{2.5}$		24 hrs	60	-Gravimetric
5	Carbon monoxide (CO)	mg/m³	8 hrs	2	-Non Dispersive infra red (NDIR) Spectroscopy

Note: All parameters sampling as per APPCB/CPCB/MoEF Guidelines

Analyst Signature

Authorized Signature

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Date of Monitoring	17th December, 2012	*Date of Reporting*	20th December, 2012
Our Ref. No.	PLCPL/SMAL/12-13/268/881	*PO. No.*	6000009929
Sample particulars	Ambient Air Quality, No. of sample 1 (one)		
Instruments used	PM 2.5 FPS, Make Aero Vironment Engineers INC. Model/S.No. FPS 9000 / 101023 Due date 10.10.2013		
Test required	$PM_{2.5}$, PM_{10}, SO_2, NO_x & CO.		
Method of analysis	IS: 5182 & APHA	*Page No.*	3 of 5

Ambient Air Quality

Location	*Concentration µg/m³*				*mg/m3*
	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO
DM Plant area	42	20	6.5	7.6	0.051

Prescribed Limit *(Revised Norms)*

No.	Pollutant	Units	Time Weight average	Concentration In Ambient Air	
				Industrial Area	Methods of Measurement
1	Sulphur dioxide SO_2	µg/m³	24 hrs	80	-Improved West &Gaeke
2	Nitrogen Oxide NO_2		24 hrs	80	- Modified Jacob &Hochheiser(No Arsenite)
3	Particulate Matter (Size <10µ) or PM_{10}		24 hrs	100	-Gravimetric
4	Particulate Matter (Size <2.5µ) or $PM_{2.5}$		24 hrs	60	-Gravimetric
5	Carbon monoxide (CO)	mg/m³	8 hrs	2	-Non Dispersive infra red (NDIR) Spectroscopy

Note: All parameters sampling as per APPCB/CPCB/MoEF Guidelines

Analyst Signature

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Phone No. 0891-2701648.

TEST REPORT

Date of Sampling	17th December,2012	*Date of Reporting*	20th December, 2012
P.O.No.	6000009929	*Report No.*	PLCPL/SMAL/12-13/268/882
Sample particulars	Ground Water from Bore well (near Canteen) No. of sample 1 (One) and packed in 1000 ml bsgb.		
Method of analysis	APHA 20th edition, 2000		
Test required	As per IS:10500		
Sample collected by	PLCPL	*Page No.*	4 of 5

Drinking Water Analysis

No	Parameters	Units	Sample	IS: 10500 Desirable
Essential Parameters				
1	Color (Max.)	Hazen	<5	5
2	Odour	--	UOB	UOB
3	Taste	--	Agreeable	Agreeable
4	Turbidity (Max.)	NTU	1.6	5
5	pH	--	7.73	6.5-8.5
6	T. Hardness as $CaCO_3$ (Max.)	mg/l	196	300
7	Iron as Fe	mg/l	0.05	0.3
8	Chlorides as Cl (Max.)	mg/l	118	250
9	Residual, free Chlorine, (Min.)	mg/l	0.01	0.2
Desirable Parameters				
10	Fluorides as F (Max.)	mg/l	0.4	1.0
11	Total Dissolved Solids (Max.) at 105 °C	mg/l	433	500
12	Calcium (as Ca^{++}) Max	mg/l	53	75
13	Magnesium (as Mg^{++}) Max	mg/l	15	30
14	Copper as Cu (Max.)	mg/l	<0.03	0.05
15	Manganese (as Mn) (Max.)	mg/l	<0.05	0.1
16	Sulphates as SO_4 (Max.)	mg/l	58	200
17	Nitrate (as NO_3) (Max.)	mg/l	0.5	45
18	Phenolic compounds (as C_6H_5OH) (Max.)	mg/l	<0.001	0.001
19	Mercury (as Hg) (Max.)	mg/l	<0.001	0.001
20	Cadmium (as Cd)(Max.)	mg/l	<0.004	0.01
21	Selenium (as Se)(Max.)	mg/l	Nil	0.01
22	Arsenic (as As) (Max.)	mg/l	<0.001	0.05
23	Cyanide (as CN) (Max.)	mg/l	Nil	0.05
24	Lead (as Pb) (Max.)	mg/l	<0.001	0.05
25	Zinc (as Zn) (Max.)	mg/l	0.1	5
26	Anionic Detergent as MBAS, Max	mg/l	Nil	0.2
27	Chromium (as Cr^{6+})(Max.)	mg/l	<0.03	0.05
28	Polynuclear aromatic hydrocarbon as PAH, Max	mg/l	NA	--
29	Mineral Oil, Max	mg/l	Nil	0.01
30	Pesticides	µg/l	Absent	Absent
31	Radioactive materials: Alpha emitters & Beta Emitters, Max	Bq/l, pci/l	NA	--
32	T. Alkalinity as $CaCO_3$ (Max.)	mg/l	103	200
33	Aluminum (as Al) (Max.)	mg/l	<0.01	0.03
34	Boron (as B) (Max.)	mg/l	0.1	1

Note: NA-Not Analyzed, UOB-Unobjectionable

Analyst Signature

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Phone No. 0891-2701648,
Fax no. 0891-2700864.

Date of Monitoring	17th December, 2012	*Date of Reporting*	20th December, 2012
Our Ref. No.	PLCPL/SMAL/12-13/268/883	*PO. No.*	6000009929
Sample particulars	Noise, No. of samples 30.		
Instrument used	Sound Level Meter		
Test required	Sound Levels		
Method of analysis	As per Rao & Wootan	*Page No.*	5 of 5

RESULTS

S.No.	Location	Noise Levels in dB(A)
1	Near Main Gate	65.5
2	Weigh Bridge	56.3
3	Batching plant area	53.7
4	Reservoir area	51.4
5	Labour Colony area	45.2
6	New Canteen area	48.9
7	Switch yard area	53.6
8	ACC Area	61.4
9	TG Building area	68.1
10	Auxiliary Cooling tower area	54.6
11	Coal mill area	65.2
12	Boiler area	68.9
13	Air Heater area	67.5
14	ESP area	68.0
15	HSD/ LDO Tanker area	62.5
16	Chimney area	63.8
17	Silo area	64.1
18	Coal shed area	67.9
19	Project Office area	52.4
20	DM Plant area	61.7
21	Store yard area	50.5
22	Furnace-I Area	68.3
23	Furnace-II Area	69.1
24	Pump House area	66.4
25	Bag House-I Area	67.5
26	Bag House-II Area	65.4
27	Chimney area	64.1
28	Compressor area	69.8
29	Proportionate building area	62.4
30	FAD Raw Material area	67.5

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