

D. No. 50-96-4/1, Floor II & III
Srigowri Nilayam, Seethammadhara NE
Visakhapatnam -530013
CIN : U51420MH2008PLC187689

Tel : +91 891 2858200
Fax : +91 891 2700864
www.seml.co.in



Date: 10.02.2022

To,
The Regional Office,
Integrated Regional Office (IRO), Vijayawada,
Ministry of Environment, Forest & Climate change,
Green House Complex, Gopalareddy Road,
Vijayawada-520010, Andhra Pradesh.

Sir,

Sub: Submission of EC Six Monthly Compliance report for Our Industry M/s. **Sarda Metals & Alloys Ltd.**, APIIC, Industrial Area, Kantakapalli (V), Kothavalasa (M), Vizianagaram District,

Ref: 1) Environmental Clearance No: **J-11011/164/2009-IA II (I) Dated: 02.07.2018**

2) Environmental Clearance NO: **F.NO.J-11011/164/2009-IA II (I) Dated: 26-11-2009**

We wish to inform you that the State Environmental Impact Assessment Authority (SEIAA), Andhra Pradesh has accorded Environmental Clearance for **M/s. Sarda Metals & Alloys Ltd.**, APIIC, Industrial Area, Kantakapalli (V), Kothavalasa (M), Vizianagaram District, Andhra Pradesh.

We here with submit compliance report for the period of **01st April 2021 to 30th September 2021 (as on December 2021)** for the said project vide reference (1) & (2) for your kind perusal.

Thanks and Regards,

For **M/s. Sarda Metals & Alloys Ltd.**,

A handwritten signature in blue ink, appearing to read "Surya Sharma", is written over a horizontal line.

(Authorized Signatory)

SIX MONTHLY COMPLIANCE

ENVIRONMENTAL CLEARANCE COMPLIANCE REPORT

01st APRIL 2021 TO 30th SEPTEMBER 2021

For

INDUSTRY

**M/s .SARDA METALS & ALLOYS LTD.,
APIIC, INDUSTRIAL AREA KANTAKAPALLI (V),
KOTHAVALASA (M), VIZIANAGARAM DISTRICT**

Submitted to

The Regional Office,
Integrated Regional Office (IRO), Vijayawada,
Ministry Of Environment, Forest, & Climate change,
Green house Complex, Gopalareddy Road,
Vijayawada-520010, Andhra Pradesh

Prepared By

SV ENVIRO LABS & CONSULTANTS

Environmental Engineers & Consultants in Pollution Control

H.O: Enviro House, Block-B, B-1, IDA, Autonagar,
Visakhapatnam – 530 012

Ph: 0891-2755528, Tel/Fax: 0891-2755529,

E-mail: svenviro_labs@yahoo.co.in

Recognized by MoE&F and NABL



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ANNEXURE-1
(COMPLIANCES OF ENVIRONMENTAL
CLEARANCE ORDERS)

M/s. Sarada Metals & Alloys Ltd.,

COMPLIANCE FOR ENVIRONMENTAL CLEARANCE

F.No: J-11011/164/2009-IA II (I) dt: 02.07.2018

S.No	Specific Conditions	Compliance															
1	<p>The EC will be construed to the above faculties and valid up to 25th November 2019 for implementation and start of production operations.</p> <p>Compliance: The industry has applied for:</p> <table border="1" data-bbox="211 661 1453 1155"> <thead> <tr> <th>Description</th> <th>Order No</th> <th>Issue Date</th> <th>Validity Period</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>EC Amendment</td> <td>F.NO.J-11011/164/2009-IA II (I)</td> <td>2nd July 2018</td> <td>25-11-2019</td> <td>14 Months time period</td> </tr> <tr> <td>CFE Amendment</td> <td>200/APPC B/CFE/RO - VZM/HO/2018</td> <td>26-09-2018</td> <td>25-11-2019</td> <td>12 Months time period</td> </tr> </tbody> </table>	Description	Order No	Issue Date	Validity Period	Remarks	EC Amendment	F.NO.J-11011/164/2009-IA II (I)	2 nd July 2018	25-11-2019	14 Months time period	CFE Amendment	200/APPC B/CFE/RO - VZM/HO/2018	26-09-2018	25-11-2019	12 Months time period	
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2	<p>In case the Project Proponent fail to implement and start of production operations before 25th November 2019, shall obtain the environmental clearance as de-novo as per the procedure envisaged in the EIA Notification, 2006.</p>	<p>Noted and being followed by the industry Now the industry have applied for TOR for EC Expansion with BS. Envi Tech Pvt Ltd NABET & NABAL accredited consultancy. Public hearing is planned on 10th December 2021 for expansion purpose.</p>															
1	<p>B. General conditions: The project proponent shall (Air Quality Monitoring):</p> <p>a. Install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012(Integrated iron & steel); S.O. 3305 (E) dated 7th December</p>	<p>Industry has installed continuous emission monitoring system to process stacks and connected to SPCB and CPCB. Instruments are being calibrated as scheduled by equipment supplier.</p>															

2015(Thermal Power Plants)as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

- b. Monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.
- c. Install system carryout to Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120each), covering upwind and downwind directions.
- d. submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

This condition is complied and the monitoring is carried out by the NABAL accredited Laboratory and we are under the limits. To control the fugitive emissions we have deployed one mobile water tanker of 5KL capacity for haul road dust suppression and portable mechanical sweeping machine etc.

3 No's of Continuous Ambient Air Quality Monitoring Stations installed for Captive Power Plant and Ferro Alloy Division etc, based on the micro meteorological data in 120° angle each covering upwind and downwind directions and cross wind direction ,& the data is synchronized to SPCB & CPCB servers respectively. The data is uploading to APPCB server. The APPCB URL: <http://aprtpps.ap.gov.in>.

The report is attached as **annexure**

This condition is complied by providing the Online Continuous Emission monitoring system for Ferro Alloy Division RABH Stack Parameter- PM (Particulate Matter) and Captive Power Plant for PM & Remote calibration system facility to SO₂,NO_x parameter and the data is synchronized to APPCB &CPCB servers respectively.

The APPCB URL: <http://aprtpps.ap.gov.in/#/login>
CPCBURL: <http://cpcbtdms.nic.in/>.

		The report are attached as annexure
2.	<p>The project proponent shall (Water Quality Monitoring):</p> <ul style="list-style-type: none"> a) Install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); SO 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. b) Monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers /sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories; and c) Submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report. 	<p>Continuous Effluent Water Quality monitoring system is provided at Neutralization Pond for Captive Power Plant and the data is synchronized to APPCB & CPCB servers.</p> <p>The industry using water is surface water for industrial cooling from GVMC (Thatipudi Reservoir) and for drinking purpose we are using the ground water. The water is tested with NABL accredited laboratory M/s. S.V. Enviro Labs (IS: 10500 BIS Portable water Standards) once in a quarter and it was observed that all the parameters are well within the stipulated norms. The reports are attached as annexure</p> <p>Online Effluent water quality system is established and alternate to that manual monitoring is carried out once in a quarter and the reports are submitted to the board. The manual monitoring is carried out by M/s. S.V. Enviro Labs a NABL accredited laboratory and the reports are annexed</p>
3.	The project proponent shall (Air Pollution	To minimize the Stack emissions Two No's

<p>Control):</p> <ol style="list-style-type: none"> a. Provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards; b. Provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags; c. provide secondary emission control system at SMS Converters d. Provide pollution control system in the steel plant as per the CREP Guidelines of CPCB. e. Provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly. 	<p>RABH-Reverse Air Bag House (2*33MVA) is provided at Ferro alloy division and auxiliary bag filters are provided at all transfer points.etc with dust extraction system facility. All the conveyor belts are in closed condition cladding conveyors and proper hoods are provided at material drop points etc. The raw materials are stored in closed storage sheds and some raw materials are covered with tarpaulin coverings Water sprinkling system is provided to minimize the haul road fugitive emissions Green belt of broad leaf, dust tolerant and pollution resistant native species have been developed adjacent to the haul roads for fugitive emissions.</p> <p>This condition is complied by providing the Digital DP system at Bag filter points and manually also is measured and accordingly the bags have been replaced and regular time schedule maintenance by isolating the fields and checks have been taken place to control the stack emissions.</p> <p>This condition is not applicable as the industry has not constructed SMS.</p> <p>As it is a Ferro Alloy Division and the Product is Silico Manganese and required APCD's are provided to control the stack emissions and CREP guidelines are not applicable as it is not a steel plant</p> <p>This condition is complied by providing the small portable stationery manual sweeping machines are provided for haulage road dust cleaning and the industry deployed one 5KL Mobile water tanker for haulage road dust suppression and in addition to that permanent water sprinkling system is provided in the notified areas to control the fugitive dust</p>
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	<p>f. Recycle and reuse iron ore fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.</p> <p>g. Use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.</p> <p>h. provide wind shelter fence and chemical spraying on the raw material stock piles; and</p> <p>i. Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, oil Cellars.</p>	<p>emissions. All the shop floors ,roofs are cleaned regularly and good housekeeping is maintained</p> <p>The bag filter dust generated from RABH and GCP fine dust is used as a feed material in making mineral briquettes in briquetting plant. The mineral briquette is mixed with raw material again with required ratio in metal alloy making as sustainable resource management.</p> <p>The raw material is transported is covered with tarpaulin coverings and leak proof doors (Truck/Dumpers)are provided and accordingly the speed of the vehicle is reduced in the plant to minimize the spillage of material and accidents.etc</p> <p>Most of raw materials are in lumpy nature dust emission is very less. Mobile water sprinklers are provided as dust suppression</p> <p>Ventilation system provided for Raw material Ground Hopper. There are no motor houses and oil cellars.</p>
4.	<p>The project proponent shall (Water Pollution Control):</p> <p>a. provide the ETP for to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time</p>	<p>Neutralization pond /Gourd Pond is provided for effluent water and we are under the specified limiting standards.</p>

	<p>b. adhere to 'zero liquid discharge'</p> <p>c. Provide Sewage Treatment Plant for domestic wastewater.</p> <p>d. provide garland drains and collection pits for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off;</p> <p>e. provide tyre washing facilities at the entrance of the plant gates;</p> <p>f. introduce CO₂ injection in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning; and</p>	<p>Complied. The industry is adhering to Zero Liquid discharge whatever the Effluents generated from the Captive Power Plant has been recycled and reused in dust suppression system and green belt development only.</p> <p>The industry has established 2* 10 KLD capacity STP provided at Ferro Alloys Plant one in RMHS & other near to FAD area.</p> <p>Noted by the industry</p> <p>Noted by the industry SMS is not established. Hence it is not applicable.</p>
5.	<p>'The project proponent shall (Water conservation):</p> <p>a. practice rainwater harvesting to maximum possible extent</p> <p>b. provide water meters at the inlet to all unit processes in the steel plants;</p>	<p>Rain water harvesting system is maintained by the industry</p> <p>Ferro Alloy Plant is provided with 1*80 MW</p>

	<p>c. make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.</p>	<p>captive Thermal Power Plant. The products are Ferro Alloy Plant-Silico Manganese Alloy metal. 1*80 MW CPP- Electric Power Generation etc. To measure the industrial cooling/process and domestic water consumption the industry has installed the Digital water flow meter at all the key note areas and water consumption is recorded. The water meter locations are given below.</p> <ol style="list-style-type: none"> 1. Inlet of DM Plant. 2. Cooling tower CPP 3. Cooling tower FAD 4. Boiler feed. <p>Domestic water etc.</p>
<p>6.</p>	<p>The project proponent shall (Energy Conservation):</p> <ol style="list-style-type: none"> a. practice waste heat recovery from Sinter Plants coolers and Sinter Machines b. use torpedo ladle for hot metal transfer as far as possible. If not use ladles covers for open top ladles c. use hot charging of slabs and billets/blooms as far as possible d. provide waste heat recovery systems in all units where the flue gas or process gas exceeds 300 °C 	<p>This condition is not applicable as the industry has not established Sinter Plant</p> <p>As it is a Ferro Alloy Division (FAD) hot liquid handling system doesn't permit torpedo ladle use. Metal and slag taken in the same ladle where the slag layer covers the metal layer and distance for transportation of materials is very less.</p> <p>The hot metals is directly enters from furnace-1 to the PIG Casting machine. The other is to CAST IRON PAN's etc.</p> <p>The Slag is collected in Cast Iron slag Pot and it is transported through EOT Crane by whistle blowing horn as a safety purpose. In addition to that for supervision one ladle man is present while transporting the Slag material.</p> <p>As it is a Ferro Alloy Plant there is no scope for Use hot charging of slabs and billets/blooms etc. So this condition is not applicable</p> <p>The management is very keen in energy conservation and has a proposal for WHRB after the detailed study and on the possible</p>

	<p>e. explore feasibility to install WHRS at Waste Gases from Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed</p> <p>f. provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;</p> <p>g. provide LED lights in their offices and residential areas</p> <p>h. ensure installation of regenerative type burners on all reheating furnaces</p>	<p>grounds exploring the possibilities of WHRB. Sinter plant is not established .Hence this condition is not applicable.</p> <p>The industry is checking the feasibility areas for this as all the offices are in containers and scattered manner.</p> <p>This condition is complied by providing the LED lights in all office areas.</p> <p>As it is a Ferro Alloy Division there is no scope for such arrangements for reheating the furnace. So this condition is not applicable</p>
7.	The project proponent shall install Dry Gas Cleaning Plant with bag filter for SMS converter.	The industry has provided the 2 No's of RABH are provided to reduce the stack gas emissions As it is Ferro Alloy Plant not a Steel plant division this condition is not applicable.
8.	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.	This condition is not applicable as there is no scope for generation of GCP Slurry in Ferro Alloy Plant .The dust generated is GCP Dust and is reused in making mineral briquettes. This briquette is reused as a feed material in furnace.
9.	Waste recycling plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.	The industry has not established the Sinter plant and SMS .Hence this condition is not applicable
10	Used refractoriness shall be recycled as far as possible.	Noted for compliance the used refractories are used internally in construction of waste bins etc
11.	SMS slag after metal recovery in waste	The industry has not established the Sinter

	recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.	plant and SMS .Hence this condition is not applicable
12.	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.	The fly ash generated in the CPP is sent to the brick manufacturing units as raw material in making bricks The list is enclosed as annexure
13.	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	Noted for compliance GHG emissions were calculating on the basis of production for Ferro Alloy Plant.
14.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Noted for compliance Emergency Preparedness Plan is prepared based on HIRA.
15.	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.	Noted for compliance the industry is providing the Aluminum PPE with radiation temperature tolerance of 100°-150°c to workmen working at high temperature work zone.
16.	The project proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.	The industry has a QEHS policy in Corporate level in terms of Quality, Environment, Health and Safety. The management is stick to environment protection and in terms of pollution, energy conservation, resource conservation & awareness etc in plant level and customer also. The industry is accorded with Quality Management Certification ISO:9001:2008 , Environment Management Certification ISO 14001 Occupational Health Safety Management certification ISO 45001:201 etc by third party DNVGL. Now the industry is going for TPM- Total

		Productive Maintenance. Accordingly internal audit is also carried out to improve the gaps with Correction, Corrective Action and Preventive action, EAI, HIRA etc. In addition to that the industry has given the 2nd Half yearly compliance to NABL & NABET accredited certified agency M/s. Team Labs for auditing the condition wise compliance and gaps to improve the environment, quality as well as health.
17.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented.	The industry has not established the Steel plant .Hence this condition is not applicable.
18.	A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.	This condition is complied.
19.	Provision shall be made for the housing of 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	The industry is not providing camp for labor
20.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government	The industry is bound by the mentioned condition
21.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climatic Change (MoEF&CC).	The industry is bound by the mentioned condition and there are no modifications will be carried out without prior approval from MoEF&CC
22.	The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanizing, chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.	This condition is not applicable as the industry does not have any galvanizing, chrome plating mills. The waste oil & waste grease generated is collected and stored in closed iron barrels and kept in an isolated place of oil storage shed provided with collection pit. This waste oil is disposed to the authorised recycler authorised by APPCB. The industry is following the

		Hazardous & Other waste (Management & Trans boundary Movement) Rules, 2016 and its amendments etc.
23	Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.	This condition is not applicable as the industry do not have any oil cellars. The used waste oil is collected and stored in the closed iron barrels and kept in an isolated area.
24.	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz.. 75 dB(A) during day time and 70 dB(A) during night time.	This condition is complied .The monitoring is carried out by NABL accredited laboratory M/s. S.V. Enviro Labs .The noise monitoring reports are annexed
25.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	The occupational health surveillance checkup of the workers and employee are carried out once in a year and the records are maintained. The reports are attached as annexure
26.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.	The industry is bound to the mentioned condition and complying all the conditions in given order and environment safeguards recommended in the EIA/EMP report.
27.	Kitchen waste shall be composted or converted to biogas for further use.	The industry has established one Bio gas plant for the Canteen Kitchen waste in the industry as an environmental initiative. The photo is annexed
28.	The project proponent shall (Post-EC monitoring): <ul style="list-style-type: none"> a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government; b. put on the clearance letter on the web site of the company for access to the public. c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely 	<p>This condition is complied at the time of EC is granted to the industry.</p> <p>This condition is complied and the copy is displayed in the company website itself for public access. The URL is www.seml.co.in</p> <p>This condition is complied and published in the two local newspapers that are widely circulated in the region one in vernacular language and the other in English language and details are depicted in the Ministry of</p>

circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at <http://envfor.nic.in>.

d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically

e. monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;

f. 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&CC, the respective Zonal Office of CPCB and the SPCB;

g. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and

Environment, Forests and Climate Change (MoEF&CC) at <http://envfor.nic.in>

The industry is complying all the conditions imposed in the consent order and the results as well as the condition wise compliance report is uploaded in the company's website www.seml.co.in, APPCB <https://pcb.ap.gov.in> and MOEFCC website <http://parivesh.nic.in> accordingly.

The industry has established one Digital Display Board at the Company Entrance, to display the Emission and Effluent data for easy access to Public. The photo is annexed

This condition is complied the condition wise compliance report is uploaded in the company's website www.seml.co.in APPCB <https://pcb.ap.gov.in> and MOEFCC website <http://parivesh.nic.in> accordingly.

The Last Environment Audit Statement is submitted on 30-09-2021. The photo is of acknowledgement is annexed

	<p>put on the website of the company;</p> <p>h. 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.</p>	Noted and being followed.
29	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	Noted and being followed.
30	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	The industry is bound to the consent conditions and its amendments laid by the board. The management is very co-operative towards improving the quality of environment
31	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and that during their presentation to the EAC. The commitment made by the project proponent to the issue raised during Public Hearing shall be implemented by the proponent.	The industry is abide by the EIA/EMP report recommendations and the commitments given the EAC presentation and complying all the conditions
32	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes(Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and rules,	The industry is abide by the mentioned condition and following all the rules and regulations and its timely amendments towards improving the quality of Environment in terms of Air quality, water quality, waste management -Solid Waste and Hazardous Waste and health safety-Occupational health safety of the worker etc
33.	All other terms prescribed in the environmental clearance letter vide F.No. J1101 1/164/2009-IA. II(I) dated 26.11.2009 shall remain same.	The industry is bound to the previous and present mentioned conditions of the accorded Environmental clearance letter. The order Copy is attached as annexure

M/S. SARDA METALS AND ALLOYS LIMITED
ENVIRONMENTAL CLEARANCE LETTER VIDE: F.NO.J-11011/164/2009-IA II (I)
DATED 26-11-2009
COMPLIANCE FOR ENVIRONMENTAL CLEARANCE

SPECIFIC CONDITIONS		
S.NO	CONDITION	COMPLIANCE
i.	<p>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. Electro Static Precipitator (ESP), gas cleaning plant, multi-cyclone, bag filter, DE-duster etc. shall be provided to keep the emission levels below 100 mg/Nm³. 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</p>	<p>To minimize the RSPM level in the ambient air quality in the plant the industry has adopted one 5KL capacity mobile water tanker for haulage road dust suppression and accordingly water sprinkling system in the key note areas.</p> <p>In addition to that manual mechanical sweeping for haul road cleaning is adopted for haulage road dust suppression.</p> <p>Green belt of broad leafed; dust tolerant and pollution resistant native species have been developed adjacent to the haul roads for fugitive emissions.</p> <p>3 No's of Continuous Ambient Air Quality Monitoring stations are adopted in Up wind, down wind and cross wind direction to monitor the ambient air quality in the industry premises.</p> <p>All the stacks are connected to Continuous Emission Monitoring system and the effective air pollution control devices are connected .2 No's of RBAH are connected to Furnace -1 & 2 in Ferro Alloy Plant.</p> <p>1 No's of Electro Static Precipitator is attached to Boiler Stack of Captive Power Plant the emission are below the mentioned norms.</p> <p>Interlocking system is adopted if any change in the raw material feed in excess all the pollution control equipments got tripped and leads to process equipments trip.</p>
ii.	<p>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. Electro Static Precipitator (ESP) shall be provided to DRI plant, WHRB</p>	<p>The industry has not established DRI Kiln .Hence this is condition is not applicable</p>

	and ABC boilers to control air emissions within 100 mg/Nm ³ .	
iii.	Electro Static 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 remunerator 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 emissions into the atmosphere.	<p>The industry has not established Sinter plant & DRI plant, Blast furnace & Coke oven plants.</p> <p>To control the emissions 2 No's RABH Reverse Air Bag Houses are provided at Ferro Alloy plant.</p> <p>For 1*80MW capacity Captive Power Plant One Number ESP is provided to control the air emissions.</p> <p>Stack height for Ferro Alloy Plant & Captive Power Plant designed according to the air dispersion model with respect to the pollution load and it is submitted to the board at the time of EIA, EC process. The height of the Ferro Alloy Plant Stack is 65 mts (Stack attached to RABH) and Captive Power Plant is 120 mts (stack attached to ESP).</p>
iv.	Dry coke quenching method shall be adopted in the proposed coke oven plant as per the commitment submitted	The industry has not established Dry coke plant. Hence this condition is not applicable.
v.	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	The industry has not established Dry coke plant. Hence this condition is not applicable.
vi.	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	<p>The industry has not established sponge iron plant.</p> <p>To control the fugitive emission, raw materials are stored in the closed sheds and covered with tarpaulin coverings.</p> <p>Water sprinkling system is provided in crushers and conveyor belts to arrest the fugitive emissions. The raw materials are transported in the closed conveyors provided with dust extraction system with auxiliary bag filters.</p> <p>One 5KL capacity mobile water tanker is adopted for haul road dust suppression and green belt is developed all the haul roads and some pockets in the industry</p>

vii.	<p>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</p>	<p>The raw materials are covered with tarpaulin coverings and finished product is transported in the Closed containers. High pressure water sprinkling water system and dry fog system is adopted in the crusher areas. Stacker reclaimer with inbuilt sprinkler system provided inside coal yard. The raw material from the yards is transported through the closed conveyor and auxiliary bag filters are arranged at each conveyor point. The photos are annexed</p>
viii.	<p>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, venturi 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</p>	<p>Noted and being followed by the industry</p>
ix.	<p>Total water requirement from Thatipudi reservoir shall not exceed 396 m³/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</p>	<p>Water required from Thatipudi reservoir is being maintained within the stipulated limit of less than 396 m³ /hr. No Ground water is being used for process cooling purpose. Provided Air cooled condenser at captive power plant neutralizing pit for Boiler bow down water and DM plant back wash and softener regeneration water for zero effluent discharge. Effluent water and treated domestic waste water being used for dust suppression & green belt development. The waste water is totally recycled within the plant & Zero liquid discharge is attained.</p>
x.	<p>Prior permission for the drawl of 396 m³/hr water from Thatipudi reservoir from the concerned department shall be obtained</p>	<p>At present, permission for supply of 62.5m³/hr (1500 KL/day) is obtained from the Greater Visakhapatnam</p>

	and a copy of the permission letter shall be submitted to the Ministry and its Regional Office at Bangalore	Municipal Corporation for existing Captive Power Plant and Ferro Alloys Plant. Permission letter Copy enclosed as annexure
xi.	The water consumption shall not exceed 16 m ³ /Ton of Steel as per prescribed standard	The industry has not established steel plant. Hence this condition is not applicable.
xii.	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	Noted and being followed by the industry
xiii.	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/re processors.	Noted for compliance this condition is not applicable as the industry has not established sinter plant and steel melting shop. The GCP dust generated is used as a feed raw material in making mineral briquette in briquette plant. The Oil generated is used waste oil and it is disposed to the authorised recycler authorised by APPCB. The refractory is consumed in furnace areas.
xiv.	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 the AFBC boiler of power plant and no char shall be disposed off anywhere else. All the blast Furnace (BF) slag shall be granulated and provided to cement manufacturers for further utilization. Sludge from STP shall be used as manure for green belt development.	This condition is not applicable.
xv.	All type of slag shall be used for road making only after passing through Toxic Chemical Leach-ability 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	Noted and being followed by the industry
xvi.	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic	Noted and being followed by the industry

	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	
xvii.	A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal	Noted and being followed by the industry
xviii.	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	Fly ash generated is disposed to the brick manufacturing industries as feed raw material in making bricks.
xix.	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	Noted and being followed by the industry
xx.	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	Noted and being followed by the industry
xxi.	All the environment management measures given in the EIA/EMP shall be implemented and complied with	The industry is bound to the mentioned condition and complying all the conditions in given order and environment safeguards recommended in the EIA/EMP report
xxii.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Sector including Coke Oven Plants shall be implemented	The industry has not established steel plant and coke oven plants. Hence this condition is not applicable
xxiii.	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.
xxiv.	The company shall provide housing for construction labor 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	Noted for compliance .The industry has established 2-10KLDCapacityof Sewage Treatment Plant for domestic waste water treatment. One at RMHS & the other near to Furnace toilets area. The treated waste water after treatment is used for On land

	of temporary structures to be removed after the completion of the project	irrigation for green belt development in the plant. Good housekeeping is maintained and toilet facility is also provided for male and female .Drinking water facility is also provided at required location and one bed occupational health care centre is established at the project site for health checkup for the employee as well.
B.	<u>GENERAL CONDITIONS</u>	
i.	The project authorities shall strictly adhere to the stipulations made by the Andhra Pradesh Pollution Control Board (APPCB)	The industry is bound the mentioned conditions issued by the Board
ii.	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	In such events the industry will isolate the bag filters and do the maintenance activity and change the bag filters and take the system to normalcy condition and the same has been intimated to the board through E -mail.
iii.	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 environmental protection measures required, if any.	The industry is bound to mentioned condition and shall intimate to the Board for prior approval and act accordingly with board directions. At present the industry has not done any modifications.
iv.	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	This condition is complied by providing the Online Continuous Emission monitoring system for Ferro Alloy Division RABH Stack Parameter -PM (Particulate Matter) and Captive Power Plant for PM (ESP is provided) & Remote calibration system facility to SO ₂ ,NO _X parameter and the data is synchronized to APPCB &CPCB servers respectively. The APPCB URL: http://aprtcms.ap.gov.in/#/login CPCBURL: http://cpcbtrdms.nic.in Accordingly manual monitoring is carried out once in a month with NABL accredited laboratory M/s. S.V. Enviro Labs and we care under the specified limits. In case of excess raw material the interlocking system will act
v.	The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and Import of	This condition is not applicable to us. The waste generated is Used waste oil Schedule-1 of 5.1 clause and waste grease

	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	of clause 5.2 of Hazardous & Other waste (Management & Trans boundary Movement) Rules, 2016 and its amendments.
vi.	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	The waste oil & waste grease generated is collected and stored in closed iron barrels and kept in an isolated place of oil storage shed provided with collection pit. This waste oil is disposed to the authorised recycler authorised by APPCB. We are following Hazardous Wastes (Management and Handling) Rules, 2003 & its amendment rules the Hazardous & Other waste (Management & Trans boundary Movement) Rules, 2016 etc
vii.	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).	This condition is complied .The monitoring is carried out by NABL accredited laboratory M/s. S.V. Enviro Labs and we are under the specified limits.
viii.	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	Noted and being followed by the industry
ix.	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act	The occupational health surveillance checkup of the workers and employee are carried out once in a year and the records are maintained.
x.	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the environmental management and monitoring functions	Noted for compliance. The Organo gram is attached as annexure
xi.	As proposed, Rs. 100.00 Crore and Rs. 5.00 Crore 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	Noted and being followed by the industry

	implement all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose	
xii.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zilla 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	This condition is complied at the time of EC is granted to the industry.
xiii.	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 , NO _x (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	The industry has established one Digital Display Board at the main gate entrance, to display the Emission and Effluent data for easy access to Public domain. All the critical pollutants parameters are well within the stipulated norms and all the process stacks and effluent are connected online to APPCB & CPCB server directly without any intervention. APPCB URL: http://aprtcms.ap.gov.in CPCB URL http://cpcbtrdms.nic.in
xiv.	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 Zonal Office of CPCB and the APPCB. The Regional Office of this Ministry at Bangalore / CPCB / APPCB shall monitor the stipulated conditions	Noted for compliance this condition is complied the condition wise compliance report is uploaded in the company's website www.seml.co.in APPCB https://pcb.ap.gov.in ,and MOEFCC website http://parivesh.nic.in /accordingly as per the recent circular amendments issued by the Board.
xv.	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	The Last Environment Audit Statement is submitted on 30-09-2021.The acknowledgement copy is attached as annexure

	e-mail	
xvi.	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	This condition is complied and published in the two local newspapers that are widely circulated in the region one in vernacular language and the other in English language and details are depicted in the c)Ministry of Environment, Forests and Climate Change (MoEF&CC) at http://envfor.nic.in .
xvii.	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	Noted for compliance. This condition is complied by the industry
7.0	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	The industry is complying all the consent conditions mentioned in the order and if any improvements are needed we will rectify our gaps and do it in a time bound manner by prior intimation to the board with proper action plan.
8.0	The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner shall implement these conditions	The industry is very co operative and bound to the timely amendments issued by the board in view of improving the quality of environment
9.0	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority ,if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act ,1997	Noted for compliance we are bound to the Section 11 of National Environment Appellate Act, 1997. The industry has not received any appeal from any of the community or NGO's till yet
10.0	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974 the Air (Prevention & Control of Pollution) Act, 1981, the Environment(Protection) Act, 1986, Hazardous Wastes(Management and Handling) Rules, 2003 and Public (Insurance)Liability Act, 1991 along with their amendments and rules.	The industry is abide by the mentioned condition and following all the rules and regulations and its timely amendments towards improving the quality of Environment in terms of Air quality, water quality, waste management -Solid Waste and Hazardous Waste and health safety-Occupational health safety of the worker etc

ANNEXURE-2

**(ENVIRONMENTAL CLEARANCE ORDER DATED:
02-07-2018)**

F. No. J-11011/164/2009-IA II (I)
Government of India
Ministry of Environment, Forest and Climate Change
(I.A. Division)

Indira Paryavaran Bhawan
Jor Bagh Road, Ali Ganj,
New Delhi - 110003
E-mail: satish.garkoti@nic.in
Tele ph.: 011: 24695316
Dated: 2nd July, 2018

To

M/s Sarada Metals & Alloys Ltd.,
125 Mittal Court B Wing,
Nariman Point, Mumbai
Maharashtra
Fax No. – +91 22 22826680

Subject: Ferro alloys and Steel plant at Syno.179, 181-183, 185-203 of APIIC Industrial Area, village Kantakapalli, Mandal Kotahvalasa, Dist.Vizianagaram, Andhra Pradesh by M/s Sarda Metals and Alloys Ltd – Amendment to the Environmental Clearance regarding.

Sir,

This has reference to your online application for the amendment in Environmental Clearance vide proposal no. IA/AP/IND/2973/2009 dated 27th November 2017 along with the Form-I for the project mentioned above. Project activity was earlier granted EC by MoEF&CC vide letter no. J-11011/164/2009-IA.II(I) dated 26.11.2009 in respect of schedule No. 3(a) Metallurgical industries (ferrous & non-ferrous), 4(b) Coke oven plants, 1(d) Thermal power plant under Category "A" EIA Notification, 2006. The proposal is appraised at Central level.

Details of the project as per the submissions of project proponent:

2.0 The project of M/s Sarda Metals & Alloys Ltd is located in the Kantakapalli Village, Kothavalsa Tehsil, Vizianagaram District, Andhrapradesh state. The environmental clearance was granted vide File No.J-11011/164/2009-IA.II(I) dated 26.11.2009 and extension of validity was granted up to 25.11.2019 vide even letter number dated 6th December 2016. As per the EC project configuration is as under:

S No	Facilities	Phase I	Phase II	Phase III
	<u>Unit I</u>			
1	Ferro Alloys	1 x 33 MVA (75,000 MTPA)	1 x 33 MVA (75,000 MTPA)	---
2	Sinter Plant	1x24 m ² (1,25,000 MTPA)		
	<u>Unit II</u>			
3	Thermal Power Plant	1 x 80 MW	1 x 80 MW	1 x 80 MW

4	Coke Oven with Stamp charging	2,00,000 MTPA	---	2,00,000 MTPA
5	Sponge Iron Plant	---	2 X 500 TPD (3,00,000 MPTA)	---
6	Blast Furnace (1 x 350m ³)	---	---	2,50,000 MTPA
7	Steel Melting Shop Induction Furnace (5 x 15T) Arc Furnace (1x40 MT)	---	---	2,50,000 MTPA 2,50,000 MTPA
8	Rolling Mills	---	---	4,50,000 MTPA
9	Iron Ore crushing Plant	---	---	6,00,000 MTPA
10	Pellet Plant	---	---	6,00,000 MTPA
11	Railway Siding	---	---	---

3.0 The company has commissioned 2x33 MVA Ferro Alloys and 1X80 MW Thermal Power Plant during Feb'2013.

4.0 It was requested for amendment in the existing EC as follows:

Sl. No	Facilities	As per Existing EC	Proposed amendment	Remarks
1	Ferro Alloys	2X33 MVA (150000 TPA)	3X33 MVA (150000 TPA)	No change in the overall production capacity
2	Steel Melting Shop & Rolling Mill			
	Induction furnace	5 x 15 T (2,50,000 TPA)	4x22 T (3,50,000 TPA)	
	Arc Furnace	1 x 40 MT (2,50,000 MTPA)	---	Proposed to drop the facility
	Rolling Mill	4,50,000 TPA	3,50,000 TPA	Reduction of 100000 TPA
3	Coke Oven with Stamp charging	2,00,000 MTPA	Nil	Proposed to drop
4	Iron Ore Crushing Plant	6,00,000 MTPA	Nil	Proposed to drop

5.0 Details of project for each component and schedule of completion of the unimplemented facilities along with justification is given below:

SINo	Facilities	Phase I	Phase II	Phase III
	<u>Unit I</u>			

1	Ferro Alloys	1 x 33 MVA (75,000 MTPA) Commissioned on Feb 2013	1 x 33 MVA (75,000 MTPA) Commissioned on Feb 2013	---
2	Sinter Plant	1x24 m ² (1,25,000 MTPA) Techno commercial offers are available and it is under negotiation. Expected Commissioning by August 2019		
	<u>Unit II</u>			
3	Thermal Power Plant	1 x 80 MW Commissioned on Feb 2013	1 x 80 MW CHP and DM Plant capacity installed along with phase-1. Detailed Engineering completed. Repeat order for Boiler and TG to be placed with a commissioning by Mar 2022	1 x 80 MW Shall be ordered along with Phase II with a staggered delivery with a commissioning by July 2024
	<u>Unit III</u>			
4	Coke Oven with Stamp charging	2,00,000 MTPA Not being considering	---	2,00,000 MTPA Shall be ordered by Dec'2022 and commissioning by July 2024
5	Sponge Iron Plant	---	2 X 500 TPD (3,00,000 MPTA) Similar Plant is in operation at our Raipur Plant. Detailed project report is in progress. Expected commissioning by May 2024	---
6	Blast Furnace (1x 350m ³)	---	---	2,50,000 MTPA Detailed project report is in progress.

				Commissioning by Sept 2024.
	Unit-II			
7	Steel Melting Shop Induction Furnace (5 x 15T) Arc Furnace (1x40 MT)	---	---	2,50,000 MTPA 2,50,000 MTPA Capacity is being reduced from 5,00,000 MTPA to 3,50,000 MTPA. By considering 4x22 T Induction furnace with capacity of 3,50,000 MTPA. Detailed Project report ready. Commissioning by Sept 2022.
8	Rolling Mills	---	---	4,50,000 MTPA Capacity is being reduced from 4,50,000 MTPA to 3,50,000 MTPA. Detailed project report completed and equipment specification finalized. Enquiries floated, target commissioning by Sept 2022.
9	Iron Ore crushing Plant	---	---	6,00,000 MTPA Not being considered.
10	Pellet Plant	---	---	6,00,000 MTPA Detailed project is in progress. Commissioning by Sept 2024.
11	Railway Siding	---	---	---

6.0 The proposal was considered in the 30th EAC meeting held during 9th -10th April 2018. The committee observed that the environmental clearance was granted on 26th November 2009 and valid up to 25th Novemembr 2019. As on date, company has commissioned 2x33 MVA Ferro Alloys and 1X80 MW Thermal Power Plant only. The facilities such as

2X80 MW TPP; Coke oven plant; Blast Furnace; Steel Melting Shop Induction Furnace; Rolling Mills are proposed to complete after validity of the environmental clearance. The facilities like Sponge Iron Plant; Pellet Plant; Railway siding are proposed to drop. The committee opined that the project proponent cannot implement the facilities such as 2X80 MW; Coke oven; Blast Furnace; Steel Melting Shop Induction Furnace; Rolling Mills after expiry of the validity of environmental clearance.

7.0 After detailed deliberations, the committee recommended for amendment in the environmental clearance construed to following facilities subject to specific conditions give hereunder:

Sl. No	Facilities	Configuration amendment	Capacity
1	Ferro Alloys	3X33 MVA	1,50,000 TPA
2	Sinter Plant	1x24 m ²	1,25,000 TPA
3	Captive Thermal Power Plant	1X80 MW	1X80 MW

- i. The EC will be construed to the above facilities and valid up to 25th November 2019 for implementation and start of production operations.
- ii. In case the PP fail to implement and start of production operations before 25th November 2019, shall obtain the environmental clearance as de-novo as per the procedure envisaged in the EIA Notification, 2006.

8.0 The Ministry of Environment, Forest and Climate Change has considered the application based on the recommendations of the Expert Appraisal Committee (Industry-I) and hereby decided to grant amendment in Environmental Clearance vide F.No. J-11011/164/2009-IA.II(I) dated 26.11.2009 for construing Ferro Alloys (3X33 MVA for 1,50,000 TPA); Sinter Plant (1x24 m² for 1,25,000 TPA); CPP (1X80 MW) subject to following specific and general conditions given below:

A. Specific Conditions:

1. The EC will be construed to the above facilities and valid up to 25th November 2019 for implementation and start of production operations.
2. In case the project proponent fail to implement and start of production operations before 25th November 2019, shall obtain the environmental clearance as de-novo as per the procedure envisaged in the EIA Notification, 2006.

B. General Conditions:

- 1) The project proponent shall (Air Quality Monitoring):
 - a. install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012(Integrated iron & Steel); S.O. 3305 (E) dated 7th December 2015(Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these

system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

- b. monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
 - c. Install system carryout to Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions;
 - ✓ d. submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- 2) The project proponent shall (Water Quality Monitoring):
- a) ✓ install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
 - b) ✓ monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories; and
 - ✓ c) submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- 3) The project proponent shall (Air Pollution Control):
- a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards;
 - ✓ b) provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;
 - ✓ c) provide secondary emission control system at SMS Converters;

- d) provide pollution control system in the steel plant as per the CREP Guidelines of CPCB;
 - e) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;
 - f) recycle and reuse iron ore fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration;
 - g) use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin;
 - h) provide wind shelter fence and chemical spraying on the raw material stock piles; and
 - i) design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.
- 4) The project proponent shall (Water Pollution Control):
- ✓ a) provide the ETP for to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;
 - b) adhere to 'zero liquid discharge';
 - ✓ c) provide Sewage Treatment Plant for domestic wastewater;
 - ✓ d) provide garland drains and collection pits for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off;
 - e) provide tyre washing facilities at the entrance of the plant gates;
 - f) introduce CO₂ injection in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning; and
- 5) The project proponent shall (Water conservation):
- ✓ a) practice rainwater harvesting to maximum possible extent;
 - b) provide water meters at the inlet to all unit processes in the steel plants; and
 - c) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.
- 6) The project proponent shall (Energy Conservation):
- a) practice waste heat recovery from Sinter Plants coolers and Sinter Machines;

- b) use torpedo ladle for hot metal transfer as far as possible. If not use ladles covers for open top ladles;
 - c) use hot charging of slabs and billets/blooms as far as possible;
 - d) provide waste heat recovery systems in all units where the flue gas or process gas exceeds 300°C;
 - e) explore feasibility to install WHRS at Waste Gases from Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed;
 - f) provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
 - g) provide LED lights in their offices and residential areas; and
 - h) ensure installation of regenerative type burners on all reheating furnaces.
- 7) The project proponent shall install Dry Gas Cleaning Plant with bag filter for SMS converter.
 - 8) Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.
 - 9) Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.
 - 10) Used refractories shall be recycled as far as possible.
 - 11) SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.
 - 12) 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office
 - 13) The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.
 - 14) Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
 - 15) The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

- 16) The project proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.
- 17) All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented.
- 18) A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.
- 19) Provision shall be made for the housing of 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.
- 20) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- 21) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- 22) The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanising, chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
- 23) Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area
- 24) The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.
- 25) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- 26) The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.
- 27) Kitchen waste shall be composted or converted to biogas for further use.
- 28) The project proponent shall (Post-EC monitoring):
 - a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
 - b. put on the clearance letter on the web site of the company for access to the public.
 - c. inform the public through advertisement 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 that the project has been

accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at <http://envfor.nic.in>.

- d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
- e. monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;
- f. 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&CC, the respective Zonal Office of CPCB and the SPCB;
- ✓g. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;
- h. 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.

9.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

10.0 The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

11.0 The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and that during their presentation to the EAC. The commitment made by the project proponent to the issue raised during Public Hearing shall be implemented by the proponent.

12.0 The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and rules.

13.0 All other terms prescribed in the environmental clearance letter vide F.No. J-11011/164/2009-IA.II(I) dated 26.11.2009 shall remain same.

This issues with the approval of the Competent Authority.


(Sharath Kumar Pallerla)
Scientist 'F'/Director

Copy to:-

1. **The Secretary, Department of Environment, Government of Andhra Pradesh, Secretariat Hyderabad.**
2. **The Additional Principal Chief Conservator of Forests(C), Ministry of Environment, Forest and Climate Change, Regional Office (SEZ), Ist and IInd Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai – 600034.**
3. **The Chairman, Andhra Pradesh State Pollution Control Board, Paryavaran Bhawan, A-3 Industrial Estate, Sanath Nagar, Hyderabad - 500 018**
4. **The Member Secretary, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.**
5. **The District Collector, Vizianagaram District, State of Andhra Pradesh.**
6. **Guard File / Record file / Monitoring file.**
7. **MOEF&CC Website.**


(Sharath Kumar Pallerla)
Scientist 'F'/Director

ANNEXURE-3

**(ENVIRONMENTAL CLEARANCE ORDER DATED:
26-11-2009)**

F.No. J-11011/164/2009- IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

Paryavaran Bhawan
CGO Complex, Lodhi Road
New Delhi – 110 003

E-mail : pb.rastogi@nic.in
Telefax : 011: 2436 7668

Dated 26th November, 2009

To,
 The Senior Vice President
M/s Sarda Energy & Minerals Ltd.
Industrial Growth Centre, Phase-I
Siltara, Raipur-493 111, Chhattisgarh

E-mail : vbjain@semil.co.in ; Fax No. : 07721-403924, 264214;

Subject : Ferro Alloys and Steel Plant at Sy. No. 179, 181-183, 185-203 of APIIC Industrial area, Village Kantakapalli, Mandal Kothavalasa, District Vizianagaram, Andhra Pradesh by M/s Sarda Metals & Alloys Ltd. – Environment clearance reg.

Ref. : Your letter no. nil dated 9th July, 2009.

Sir,

This has reference to your letter no. nil dated 9th July, 2009 alongwith application in Form I, draft Terms of Reference, Pre-feasibility Report and EIA/EMP and subsequent clarification furnished by you vide letter dated 7th, 26th and 28th October, 2009 for environmental clearance on the above mentioned project.

2.0 The Ministry of Environment and Forests has examined the application. It is noted that proposal is for the Ferro Alloys and Steel Plant at Sy. No. 179, 181-183, 185-203 of APIIC Industrial area, Village Kantakapalli, Mandal Kothavalasa, District Vizianagaram, Andhra Pradesh by M/s Sarda Metals & Alloys Ltd. (Formerly, M/s Sarda Energy & Minerals Ltd.) Total land acquired is 280.96 acres. Out of total project area of 280.96 acres, 136.78 acres is Govt. land and 144.18 acres is private land. No national Park/wild life sanctuary is located within 10 km radius of the project site. Adanapalem RF is at 2 km from the project site. Total cost of the project is Rs. 1,997.00 Crores. Following will be the details of the facilities to be installed:

S. N.	Facilities	Phase-I	Phase-II	Phase-III
Unit-I				
1	Ferro Alloys	1x33 MVA (75,000 MTPA)	1x33 MVA (75,000 MTPA)	--
2	Sinter Plant	1x24 m ² (1,25,000 MTPA)	--	--
Unit-II				
3	Thermal Power Plant	1x60 MW	1x60 MW	2x60 MW
Unit-III				
4	Coke Oven with Stamp charging	2,00,000 MTPA	--	2,00,000 MTPA

5	Sponge Iron Plant	--	2x500 TPD (3,00,000 MTPA)	--
6	Blast furnace (1x350 m ³)	--	--	2,50,000 MTPA
7	Steel Melting Shop Induction furnace(5x15 T) Arc Furnace (1x40 MT)	--	--	2,50,000 TPA 2,50,000 TPA
8	Rolling Mill	--	--	4,50,000 MTPA
9	Iron ore crushing plant	--	--	6,00,000 MTPA
10	Pellet Plant	--	--	6,00,000 MTPA
11	Railway siding	--	--	--

3.0 Ferro alloy plant, sinter plant, coke oven plant (non-recovery type), thermal power plant, sponge iron kilns, blast furnace, induction/arc furnace, rolling mill and allied infrastructure will be installed. No ferro chrome will be produced.

4.0 Electrostatic precipitator (ESP), gas cleaning plant, multi-cyclone, bag filter, de-duster, dust & fume extraction system, dust suppression system will be provided to control air emissions. Total water requirement from Tatipudi reservoir will be 396 m³/hr. Dry quenching will be adopted in coke oven. Closed circuit cooling system will be adopted to reduce water consumption. All the effluent will be treated and used for ash handling, dust suppression and green belt development. No effluent will be discharged and 'zero' discharge will be adopted. Dust from sinter/pellet plant and BF will be recycled to sinter plant. Dust from de-dusting units will be given to brick manufacturing units. BF slag will be sold to cement plant. SMS slag will be used as road ballast or road fill material. Scrap from rolling mill will be used as raw material in SMS. Char/dolochar will be used in power plant. Manganese slag will be used in Silico-Manganese production. Fly ash from power plant will be used for cement plant/brick plant. Sludge from STP will be used as manure for green belt development. Green belt will be developed in 92.72 acres, out of total 280.96 acres.

5.0 Public hearing / consultation is exempted as per Section (iii), Stage (3), Para (i)(b) of EIA Notification, 2006.

6.0 The Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14th September, 2006 subject to strict compliance of the following specific and general conditions:

A. SPECIFIC CONDITIONS :

- i) 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/Nm³. 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.
- ii) 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/Nm³.

- iii) 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 emissions into the atmosphere.
- iv) Dry coke quenching method shall be adopted in the proposed coke oven plant as per the commitment submitted.
- v) 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.
- vi) 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.
- vii) 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.
- viii) 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.
- ix) Total water requirement from Tatipudi reservoir shall not exceed $396 \text{ m}^3/\text{hr}$. 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.
- x) Prior permission for the drawl of $396 \text{ m}^3/\text{hr}$ 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
- xi) The water consumption shall not exceed $16 \text{ m}^3/\text{Ton}$ of Steel as per prescribed standard.

- xii) 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.
- xiii) 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.
- xiv) 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 provided to cement manufacturers for further utilization. Sludge from STP shall be used as manure for green belt development.
- xv) 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.
- xvi) 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.
- xvii) A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
- xviii) 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.
- xix) 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.
- xx) 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
- xxi) All the environment management measures given in the EIA/EMP shall be implemented and complied with.
- xxii) 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.
- xxiii) 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.

- xxiv) 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.

B. GENERAL CONDITIONS:

- i. The project authorities shall strictly adhere to the stipulations made by the Andhra Pradesh Pollution Control Board (APPCB).
- ii. 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.
- iii. 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 environmental protection measures required, if any.
- iv. 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.
- v. 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.
- vi. 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.
- vii. 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).
- viii. 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.
- ix. Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. ✓

- x. A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the environmental management and monitoring functions.
- xi. 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.
- xii. 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.
- xiii. 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, SO₂, NO_x (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.
- xiv. 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 Zonal Office of CPCB and the APPCB. The Regional Office of this Ministry at Bangalore / CPCB / APPCB shall monitor the stipulated conditions.
- xv. 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 alongwith the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.
- xvi. 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.
- xvii. 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.

7.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

8.0 The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

9.0 Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.

10.0 The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules, 2003 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules

Mantra
24/11/07
(Dr. P.B. RASTOGI)
Director

Copy to :-

1. The Secretary, State Department of Environment and Forests, Govt. of Andhra Pradesh, Mantralaya, Hyderabad, A.P.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110032.
3. The Chairman, Andhra Pradesh State Pollution Control Board, 2nd Floor, HUDA Complex, Maitrivaram, S.R. Nagar, Hyderabad - 500 038, A. P.
4. The Chief Conservator of Forests (Central), Ministry of Environment & Forest, Regional Office (SZ), Kendriya Sadan, IVth Floor, E & F Wing, 17th Main Road, Koramangla, Bangalore - 560 034, Karnataka.
5. Adviser, IA-II (I), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi. - 110003.
6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi-110003.
7. Guard file.
8. Record file
9. Monitoring file.

Mantra
24/11/07
(Dr. P.B. RASTOGI)
Director

Annexure-4
(Consent Order For Establishment)



CONSENT ORDER FOR ESTABLISHMENT

Order No.200/APP/CFE/RO-VZM/HO/2018

Dt:10.08.2021

Sub: APPCB – CFE - M/s. Sarda Metals & Alloys Ltd., APIIC, Industrial Area, Kantakapalli (V), Kothavalasa (M), Vizianagaram District - CFE for Briquette plant under Sec.25 of Water (P & C of P) Act, 1974 and Under Sec.21 of Air (P & C of P) Act, 1981 – Issued – Reg.

- Ref:**
- 1) Environmental Clearance dt.26.11.2009 issued by MoEF&CC, Gol.
 - 2) CFE Orders dt.11.08.2010 & 24.01.2011.
 - 3) CFE amendment Order dt.11.05.2011.
 - 4) EC Amendment dt.02.07.2018 issued by MoEF&CC, Gol.
 - 5) CFO & HWA Order dt.17.03.2015.
 - 6) CFO Auto Renewal Order dt.11.05.2016.
 - 7) CFE amendment Order dt.26.09.2018.
 - 8) CFO & HWA Order dt.09.06.2021.
 - 9) CFE application for Briquette plant received through APOCMMS on 09.07.2021.
 - 10) R.O's inspection report dt.28.07.2021.
 - 11) CFE Committee meeting held on 05.08.2021.

1. In the reference 9th cited, an application was submitted to the Board seeking Consent for Establishment (CFE) for Briquette plant, in addition to existing products with capacities as mentioned below:

S. No.	Name of the Product	EC dt.26.11.2009 and amendment dt.02.07.2018	CFO order dt.17.03.2015	CFE amendment dt. 26.09. 2018	CFO amendment dt.20.12. 2019	CFO order dt.09.06. 2021	Expansion Proposed
	Ferro Alloys	3 x 33 MVA 1,50,000 TPA	--	3 x 33 MVA (1,50,000 MTPA)	2 x 33 MVA 1,00,000 MTPA	278 MT/day – 2 x 33 MVA	--
	Sinter plant	1 x 24 m ² 1,25,000 TPA	--	1 x 24 m ² (1,25,000 TPA)	--	--	--
1	Ferro manganese	--	75,000 TPA		--	--	--
2	Silico manganese	--	75,000 TPA		--	--	--
3	Thermal power plant (captive)	1 x 80 MW	1 x 80 MW	1 x 80 MW	--	1 x 80 MW	--
4	Briquette plant	--	--	--	--	--	1,05,000 MTPA

2. As per the application, the above activity is to be located within the existing premises located at **APIIC, Industrial Area, Kantakapalli (V), Kothavalasa (M), Vizianagaram District** in an area of 280.96 acres.
3. The above site was inspected by the Asst. Environmental Engineer, Regional Office, Vizianagaram, A.P Pollution Control Board on 28.07.2021 and noted that the above activity is to be located within the existing premises and surroundings are as following:

North : Hillock
South : Dry lands with mango and cashew gardens
East : Partly green belt and partly Hillock
West : Kothavalasa – Vizianagaram road

4. The Board, after careful scrutiny of the application and verification report of Regional Officer, hereby issues **CONSENT FOR ESTABLISHMENT FOR Briquette plant** to the activity under Section 25 of Water (Prevention & Control of Pollution) Act 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 and the rules made there under. **This order is issued to manufacture the products as mentioned at para (1) only.**
5. This Consent Order now issued is subject to the conditions mentioned in Annexure.
6. This order is issued from pollution control point of view only. Zoning and other regulations are not considered.
7. **This order is valid for a period of 7 years from the date of issue.**

Encl: Annexure.

**BATCHU
SIVA PRASAD**
CHIEF ENVIRONMENTAL ENGINEER

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To

**M/s. Sarda Metals & Alloys Ltd.,
APIIC, Industrial Area,
Kantakapalli (V), Kothavalasa (M),
Vizianagaram District**

- Copy to:** 1. The JCEE, Z.O: Visakhapatnam for information and necessary action.
2. The E.E., R.O: Vizianagaram for information and necessary action.

ANNEXURE

1. The proponent shall obtain Consents for Operation (CFO) from APPCB, as required Under Sec.25/26 of the 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.
2. Compensation is to be paid for any environmental damage caused by it, as fixed by the Collector and District Magistrate as civil liability.
3. The rules and regulations notified by Ministry of Law and Justice, GOI, regarding the Public Liability Insurance Act, 1991 shall be followed.

Water:

4. The source of water is Thatipudi reservoir and the maximum permitted water consumption after expansion is as following:

S. No	Purpose	Existing Qty as per CFO Order dt.17.03.2015	Qty as per CFE Amendment Order dt.26.09.2018	Qty as per CFO Order dt.09.06.2021	Expansion Proposed
1	Boiler make up water	307.2 KLD	70.0 KLD	--	--
2	Cooling tower make up water	532.8 KLD	530.0 KLD	530.0 KLD	--
3	RO Feed / DM feed (Boiler Feed)	81.6 KLD	40.0 KLD	110 KLD	--
4	Softener regeneration	33.6 KLD	34.0 KLD	34 KLD	--
5	Domestic	19.0 KLD	52.34 KLD	52.34 KLD	0.5 KLD
6	Slag Generation	0.0	225.0 KLD	225.0 KLD	--
7	Process	--	--	--	27.7 KLD
	Total	974.2 KLD	951.40 KLD	951.34 KLD	28.2 KLD

Separate meters with necessary pipe-line shall be provided for assessing the quantity of water used for each of the purposes mentioned below.

5. The maximum waste water generation shall not exceed the following after expansion:

S. No.	Source	Existing Qty as per CFO Order dt.17.03.2015	Qty as per CFE Amendment Order dt.26.09.2018	Existing Qty as per CFO Order dt.09.06.2021	Expansion Proposed
1	RO Reject and DM Plant Back Wash(Ferro Alloy & CPP)	13.89 KLD	30.0 KLD	30.0 KLD	--
2	Boiler blow down	37.05 KLD	5.0 KLD	5.0 KLD	--
3	Cooling Blow Down	64.3 KLD	45.0 KLD	45.0 KLD	--
4	Domestic	15.0 KLD	38.80	38.80	0.5 KLD
	Total	130.24 KLD	118.80 KLD	118.80 KLD	0.5 KLD

Treatment & Disposal :

Effluent Source	Treatment Facility	Mode of Disposal
DM Plant rejects, Boiler blow down, Cooling Bleed off & Softener regeneration	20 KLD below ground cement tank (2 chamber of 10 KL each) for Collection tank and neutralization tank.	On land for plantation and dust suppression.
Domestic wastewater	The industry provided 2 x 10 KLD eco sequential batch reactor (SBR) STP with Collection tank and neutralization tank.	On land for plantation.

6. Closed circuit cooling system shall be adopted for cooling system. No waste water shall be discharged outside the factory premises under any circumstances and zero effluent discharge shall be adopted.
7. The industry shall install flow meters with totalizer for the purpose of measuring the quantity of treated effluents recycled for various uses.
8. The industry shall install flow meters for quantify the treated effluents utilization for each purpose.

Air:

9. The Air pollution Control equipment shall be maintained properly to comply with the following for controlling air pollution after expansion:

As per CFE (Amend) Order dt. 26.09.2018:

S. No.	Details of Stack	Stack – 1	Stack – 2	Stack – 4	Stack – 5
a)	Attached to	Sinter Plant	Ferro Alloys Furnaces	Power Plant Boiler	DG Set
b)	Capacity	1 x 24 Sq.m.	3 x 33 MVA	309 TPH	600 KVA
c)	Fuel	Coal / Furnace Oil	Electricity	Imported Coal 1133 TPD	Diesel
d)	Stack height	40 m	65 m (Common Stack)	120 m	20.0 m.
e)	Control Equipment	ESP	Separate RABH	ESP	Acoustic Enclosure with Silencer

The industry installed 2X250 KVA DG sets only. The industry is yet to install sinter plant and 1X33 MVA furnace.

10. The Industry shall provide Continuous online stack monitoring facility to all the major stacks attached to furnaces and the data shall be upload to APPCB & CPCB websites.
11. The proponent shall provide 25% of additional bags as spare in the Bag house to meet the emergency requirements.

12. The industry shall always place the hood over the furnaces to collect the emissions, except during charging of raw materials into the furnace.
13. The proponent shall provide interlocking system between air pollution control equipments electricity supply, so that the electricity supply to the furnaces would be stopped automatically incase the air pollution control equipment fails / emission levels exceed the prescribed standards.
14. All the conveyors shall be covered with G.I sheets to prevent fugitive emissions.
15. All the raw material & solid waste shall be accommodated under roof cover with required safety ventilation as approved by the competent authorities. There shall not be any open piling.
16. Secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Board and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
17. The industry shall install dust extraction system and dry fogging system at coke handling areas, stock piles, transfer areas and other vulnerable dusty areas to control dust emissions.
18. The industry shall provide dust suppression system at all the discharge and feed points.
19. All the internal roads shall be concerted / asphalted to control fugitive emissions.
20. The industry shall install separate energy meters to air pollution control equipment and maintain records pertaining to operation and maintenance of the control equipment.
21. The proponent shall ensure compliance of the National Ambient Air quality standards notified by MoE&F, GoI vide notification No. GSR 826(E), dated. 16.11.2009 during regular operational phase of the project.
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.
23. The generators shall be installed in a closed area with a silencers 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.

Solid Waste:

24. The proponent shall comply with the following after expansion:

S. No.	Description	As per CFO Order dt.09.06.2021	Mode of Disposal / Treatment
1.	Ash From Power Plant (80MW) bottom and fly ash	30,274 TPA	Shall be sold to fly ash brick manufacturing units and to nearby cement plant

2.	Ferro Manganese Slag (2x33 MVA) (80 to 85% of Product)	55,000 TPA (or)	To be reused for production of silico manganese
3.	Silico Manganese Slag(85 to 90 % of Product)	1,20,000 TPM	Shall be disposed in Land fill/ for making roads with in the premises after TCLP test.
4.	Dust from De dusting Units like transverse points of coal conveyors and silos	200 TPA	The industry shall reuse the dust from dedusting units as fuel for captive consumption and the fly ash generated shall be sent to nearby brick makers.
5.	Waste Oil	224 Ltrs/month	Shall be routed through APEMC, so as to send to authorized recyclers/re-processors(as recyclable waste).
6.	Bag house Dust(Gas cleaning plant dust)	7500 TPA	The industry shall use the bag house dust for making briquettes for captive consumption.

25. The following rules and regulations notified by the MoEF & CC, GoI shall be implemented.

- a) Regulation of Persistent Organic Pollutants Rules
- b) Hazardous waste and other wastes (Management and Transboundary Movement) Rules
- c) Plastic Waste Management Rules
- d) Manufacture
- e) Fly Ash Notification
- f) Batteries (Management & Handling) Rules
- g) E-Waste (Management) Rules
- h) Construction and Demolition waste Management Rules
- i) Solid Waste Management Rules
- j) The Public Liability Insurance Act

Other Conditions:

26. The industry shall comply with following 10 conditions stipulated in the earlier CFO order dt.09.06.2021, by 31.08.2021, as committed by the industry. The CFO order will be issued only after complying with all the conditions stipulated in the CFO order-

- i. The industry has a total area of 280.96 acres and supposed to develop green belt in an area of 92.71 acres (33% of the total area), whereas the industry has developed green belt in an area of 47.31 acre and the balance 45.4 acres need to be developed. The industry shall develop balance green belt of 45.4 acres by 31.08.2021.
- ii. The industry has not calibrated the Online stack monitoring system since 31.03.2020. The industry shall calibrate the Online stack monitoring system by 31.08.2021.
- iii. The industry provided 3 Nos. of continuous AAQ stations out of which 2 stations(at DM plant & main gate) are working. The station at coal handling plant

(CHP) is not working. The online readings at main gate are PM2.5-37.19, PM10-30.8, SO2-1.5 & NO2-3, but online readings at DM plant are not displaying in the website. The industry shall rectify 3rd CAAQM station at coal handling plant (CHP) and transmit the data of 3 CAAQM stations to APPCB website by 31.08.2021.

- iv. The industry has provided continuous online effluent monitoring system for the parameters of pH, TSS, COD & BOD. At present pH-7.52 & Temperature- 31.5 parameters are only displayed. The industry shall rectify the monitoring system for display of other parameters like pH, TSS, COD & BOD and the monitoring system shall be in working condition by 31.08.2021.
- v. The industry provided online stack analyzer and connected to APPCB/CPCB Website. During inspection it was observed that, the value of SPM for CPP is 30.43 mg/Nm³, but SPM for 2x33 MVA is not showing in the website. The industry shall transmit the data of 2 X 33 MVA furnaces to APPCB website without interruption by 31.08.2021.
- vi. Not complied with the condition no. of 9 of CFO order dated 17/03/2015 that "the industry shall lay the internal roads of 2 Km and concreted/asphalted to control fugitive emissions by the end of May'2015 and report the compliance to Regional Office-Vizianagaram" and the industry laid BT road from Main gate to the process area only. The rest of the area roads are not provided till date to avoid the dust nuisance during vehicle movement and avoiding the material runoff during rainy season. The industry shall lay the rest of internal roads by 31.08.2021 to control fugitive emissions.
- vii. Not complied with the condition no. of 14 of CFO order dated 17/03/2015 that "All the raw material shall be stored in storage yards and adequate dust containment / suppression measures shall be maintained all around storage yard to control fugitive emission. The industry shall not cause any air pollution / dust nuisance in the surroundings" and Closed shed was constructed for the storage of Coal. The coal shed was 50% damaged at the time of Hud-Hud. During inspection it was observed that coal shed was not rectified till date. Some quantity of coal is stored openly. Remaining raw materials are stored openly. The industry shall rectify the coal shed by 31.08.2021 and shall not store coal openly.
- viii. The industry has to improve housekeeping at bag house area of ferro alloy division, metal recovery and manual recovery process area. The industry shall improve housekeeping near bag house area of ferro alloy division, metal recovery and manual recovery process area by 31.08.2021.
- ix. The industry has provided interlocking system for air pollution control equipment and raw material feeding system, but the same was not working, at the time of inception. The industry shall operate the interlocking system by 31.08.2021, without fail.

- x. The domestic wastewater is treated in STPs (2X10 KL at FAD furnace & RMHS) through sequential batch reactor (SBR) and used for onland plantation; out of which one STP was not in operation. The industry shall operate both the STPs by 31.08.2021.
27. **The industry shall comply with the conditions stipulated in the EC orders dt.26.11.2009 & dt.02.07.2018 issued by MoEF&CC, GoI.**
28. **The industry shall prepare a safety report and carry out an independent safety audit report of the respective industrial activities including chemical storages / isolated storages by an expert not associated with such industrial activity as required under Rule 10 of MSIHC Rules, 1989 and get it approved by the Factories Dept., and submit the compliance along with copy of the safety report, safety audit report and safety certificate at concerned Regional Office, APPCB.**
29. **The industry shall submit a copy of the NOC issued by the Andhra Pradesh State Disaster Response and Fire Service Dept., (APSDRFSD) at concerned Regional Office, APPCB.**
30. **The industry shall submit risk assessment report covering worst scenario clearly describing impact within the industry premises and outside the industry premises and emergency response system.**
31. The proponent shall ensure that there shall not be any change in the process technology, source of raw material and scope of working without prior approval from the Board.
32. The proponent shall comply with all the directions issued by the Board from time to time.
33. Existing green belt (47.32 acres) shall not be disturbed due to the proposed activity. **The industry shall develop balance green belt of 45.4 acres by 31.08.2021.**
- Thick green belt shall be maintained all along the boundary & vacant spaces with tall growing trees with good canopy and it shall not be less than 33% of the total area.
34. **The industry shall submit compliance to the conditions stipulated in the EC and CFE orders to the concerned Regional Officer of APPCB every six months and shall upload the same at APPCB website viz., [https://pcb.ap.gov.in/UI/Submission Compliance of EC CFE CFO Direction.aspx](https://pcb.ap.gov.in/UI/Submission%20Compliance%20of%20EC%20CFE%20CFO%20Direction.aspx).**
35. Concealing the factual data or submission of false information / fabricated data and failure to comply with any of the conditions mentioned in this order attracts action under the provisions of relevant pollution control Acts.
36. 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 revoke the order, to review any or all the conditions imposed herein and to make such modifications as deemed fit and stipulate any additional conditions.

37. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules, 1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of Water (Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air (Prevention and Control of Pollution) Act, 1981.

**BATCHU SIVA
PRASAD**

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CHIEF ENVIROMENTAL ENGINEER

**To
M/s. Sarda Metals & Alloys Ltd.,
APIIC, Industrial Area,
Kantakapalli (V), Kothavalasa (M),
Vizianagaram District.**

Annexure-5
(Consent and Authorization Order)



ANDHRA PRADESH POLLUTION CONTROL BOARD
 D.No.33-26-14D/2, Near Sunrise Hospital, Pushpa Hotel Centre,
 Chalamalavari Street, Kasturibaipet, Vijayawada – 520 010
 Phone. No.0866-2463200, Website : <https://pcb.ap.gov.in>

**RED CATEGORY
 CONSENT & AUTHORISATION ORDER**

Consent Order No : APPCB/VSP/VZN/200/CFO/HO/2021-

19/10/2021

CONSENT is hereby granted for Operation under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21/22 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorisation under Rule 6 of the Hazardous & Other Wastes (Management and Transboundary, Movement) Rules, 2016 and the rules and orders made there under (hereinafter referred to as 'the Acts', 'the Rules') to:

**M/s. Sarda Metals & Alloys Ltd.,
 (Existing and Expansion)
 APIIC, Industrial Area,
 Kantakapalli (V), Kothavalasa (M),
 Vizianagaram District
 E-mail: nsarda@smal.co.in**

(Hereinafter referred to as 'the Applicant') authorizing to operate the industrial plant to discharge the effluents from the outlets and the quantity of emissions per hour from the chimneys as detailed below:

i) Out lets for discharge of effluents:

Outlet No.	Outlet Description	Max Daily Discharge KLD	Point of Disposal
1.	RO Reject and DM Plant Back Wash(Ferro Alloy & Captive Power Plant)	30.0	The industry shall treat the effluents in ETP. After treatment in the ETP, the treated effluents shall be used on land for irrigation within the industry's premises, duly meeting the Board's discharge standards (BOD-) and dust suppression.
2.	Boiler blow down	5.0	
3.	Cooling Blow Down	45.0	
4.	Domestic wastewater (Ferro Alloy & Captive Power Plant – 38.80 KLD + Briquette plant – 0.5 KLD)	39.3	The industry shall treat the wastewater in the STP. After treatment in STP, the treated waste water shall be used onland for irrigation, within the industry premises duly meeting the Board's discharge standards (BOD-30 mg/l).
	Total	119.3 KLD	

ii) Emissions from chimneys:

Chimney No.	Description of Chimney
1.	Attached to 2x33 MVA Electrical Arc Furnaces
2.	Attached to 1x 309 TPH Coal fired boiler
3.	Attached to 1x 24 sq.m Coal / F.O fired sinter plant
4.	Attached to 2x250 KVA D.G. Sets

iii) HAZARDOUS WASTE AUTHORISATION (FORM – II) [See Rule 6 (2)]:

M/s. Sarda Metals & Alloys Ltd., APIIC, Industrial Area, Kantakapalli (V), Kothavalasa (M), Vizianagaram District, is hereby granted an authorization to operate a facility for collection, reception, storage, treatment, transport and disposal of Hazardous Wastes namely:

S.No	Name of the Hazardous waste	Stream	Quantity of Hazardous waste	Disposal Option.
1.	Waste oil	5.1 of Schedule - I	224 Lt/Month	Shall be routed through APEMC, so as to send to authorized recyclers / reprocessors (as recyclable waste)
Non Hazardous				
2.	Bag house Dust(Gas cleaning plant dust)	--	7500 TPA	The industry shall use the bag house dust for making Briquettes for captive consumption.
3.	Dust from De dusting Units like transverse points of coal conveyors and silos	--	200 TPA	The industry shall reuse the dust from de dusting units as fuel for captive consumption and the fly ash generated shall be sent to nearby brick manufacturing units .
4.	Ash From Power Plant (80MW) bottom and fly ash	--	30274 TPA	Shall be sold to nearby cement plants (grinding) / fly ash brick manufacturing units
5.	Ferro Manganese Slag (2x33 MVA) (80 to 85% of Product)	--	55000 TPA	Shall be reused for production of silico manganese.
6.	Silico Manganese Slag(85 to 90 % of Product)	--	1,20,000 TPM	Shall be disposed in Land fill/ for making roads with in the premises, after TCLP test.

This consent order is valid for the manufacture of the following products with quantities mentioned below only:

S.No.	Product	Quantity
1.	*Ferro Alloys	1,00,000 MTPA (or) 278 MT/ per day (2x33 MVA)
2.	Thermal power plant(captive)	1x80 MW
3.	Briquette plant	1,05,000 MTPA

* Industry shall manufacture only Ferro Silicon, Ferro Manganese & Silico Manganese only.

This order is subject to the provisions of 'the Acts' and the Rules' and orders made thereunder and further subject to the terms and conditions incorporated in the schedule A, B & C enclosed to this order.

This combined order of consent & Hazardous Waste Authorisation shall be valid for a period ending with the 31st day of May, 2023.

BATCHU SIVA PRASAD, CEE(BSP), O/o CHIEF ENVIRONMENTAL ENGINEER-APPCB

To

M/s. Sarda Metals & Alloys Ltd.,
APIIC, Industrial Area,
Kantakapalli (V), Kothavalasa (M),
Vizianagaram District

Copy to:

1. The JCEE, Zonal Office, Visakapatnam for information and necessary action.
2. The Environmental Engineer, Regional Office, Vizianagaram for information and necessary action for ensuring compliance.

SCHEDULE - A

1. Any up-set condition in any industrial plant / activity of the industry, which result in, increased effluent / emission discharge and/ or violation of standards stipulated in this order shall be informed to this Board, under intimation to the Collector and District Magistrate and take immediate action to bring down the discharge / emission below the limits.
2. The industry should carryout analysis of waste water discharges or emissions through chimneys for the parameters mentioned in this order on quarterly basis and submit to the Board.
3. All the rules & regulations notified by Ministry of Law and Justice, Government of India regarding Public Liability Insurance Act, 1991 should be followed as applicable.
4. The industry should put up two sign boards (6x4 ft. each) at publicly visible places at the main gate indicating the products, effluent discharge standards, air emission standards, hazardous waste quantities and validity of CFO and exhibit the CFO order at a prominent place in the factory premises.
5. Notwithstanding anything contained in this consent order, the Board hereby reserves the right and powers to review / revoke any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Acts by the Board.
6. The industry shall ensure that there shall not be any change in the process technology, source & composition of raw materials and scope of working without prior approval

- from the Board.
7. The applicant shall submit Environment statement in Form V before 30th September every year as per Rule No.14 of E(P) Rules, 1986 & amendments thereof.
 8. The applicant should make applications through Online for renewal of Consent (under Water and Air Acts) and Authorization under HWM Rules at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts and detailed compliance of CFO conditions for obtaining Consent & HW Authorization of the Board.
 9. The industry should immediately submit the revised application for consent to this Board in the event of any change in the raw material used, processes employed, quantity of trade effluents & quantity of emissions. Any change in the management shall be informed to the Board. The person authorized should not let out the premises / lend / sell / transfer their industrial premises without obtaining prior permission of the State Pollution Control Board.
 10. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to Appellate authority constituted under Section 28 of the Water(Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air(Prevention and Control of Pollution) Act, 1981.
 11. The industry shall be liable to pay Environmental Compensation / Other Environmental Taxes, if any environmental damage caused to the surroundings, as fixed by the Collector & District Magistrate or any other competent authority as per the Rules in vogue.
 12. The industry may explore the possibility of tapping the solar energy for their energy requirements.
 13. The industry should educate the workers and nearby public of possible accidents and remedial measures.

SCHEDULE – B

1. The industry shall comply with the following conditions:
 - i. The industry shall rectify the damaged coal shed within 1 year and shall not store the coal and raw materials openly.
 - ii. The industry shall not halt the material transport vehicles in front of the main gate adjacent to the Vizianagaram-Kothavalasa main road and develop green belt in the halting area, by 31.12.2021.
 - iii. The industry shall maintain good housekeeping and shall procure sweeping machine to clean the internal roads, by 31.12.2021
 - iv. The industry shall complete the laying of bitumen topping on the roads, by 31.12.2021.
 - v. The industry shall submit the safety report approved by the Factories Dept, to Board, regularly.
 - vi. The industry shall route the all storm water drains outlets to rain water harvesting pit.
 - vii. The industry shall maintain 33 % green belt in the industry premises.

WATER POLLUTION:

2. The effluent discharged shall not contain constituents in excess of the tolerance limits mentioned below:

Outlet	Parameter No.	Limiting Standards
1 to 3	pH	6.5 – 8.5
	Total Suspended Solids (TSS at 103 ⁰ – 105 ⁰ C)	100 mg/l
	Total Dissolved Solids	2100 mg/l
	Oil & Grease	10 mg/l
	Chemical Oxygen Demand	250 mg/l
	Biochemical Oxygen Demand (BOD at 27 ⁰ C 3 days)	30 mg/l
4	pH	6.5 – 9.0
	TSS	<100 mg/l
	BOD	30 mg/l
	Fecal coliform (FC) (Most Probable Number per 100 milliliter, MPN/100 ml)	< 1000

3. The source of water is **Thatipudi Reservoir** and the maximum permitted water consumption shall not exceed the quantities mentioned below:

S.No.	Purpose	Quantity in KLD
1.	Cooling tower makeup	530
2.	RO feed / DM feed (Boiler feed)	110
3.	Softener regeneration	34
4.	Slag generation	225.0
5.	Domestic (Ferro Alloy & Captive Power Plant – 52.34 KLD + Briquette plant – 0.5 KLD)	52.84
6.	Process	27.7
	Total	979.54

4. The industry shall maintain separate meters with necessary pipe-line for assessing the quantity of water used for cooling / water spraying and domestic purposes and maintain records for the same.
5. The industry shall install flow meters with totalizer for the purpose of measuring the quantity of treated effluents recycled for various uses.
6. Closed circuit cooling system shall be adopted for cooling system. No wastewater shall be discharged outside the factory premises under any circumstances and zero effluent discharge shall be adopted.

AIR POLLUTION:

7. The emissions shall not contain constituents in excess of the prescribed limits mentioned below:

Chimney No.	Parameter	Emission Standards
1	Particulate Matter	50 mg/Nm ³
2	Particulate Matter	50 mg/Nm ³
	Sulphur Dioxide (SO ₂)	600 mg/Nm ³
	Oxides of Nitrogen (NO _x)	300 mg/Nm ³

	Mercury (Hg)	0.03 mg/Nm ³
--	--------------	-------------------------

8. The industry shall comply with emission limits for DG sets upto 800 KW as per the Notification G.S.R.520 (E), dated 01.07.2003 under the Environment (Protection) Amendment Rules, 2003 and G.S.R.448(E), dated 12.07.2004 under the Environment (Protection) Second Amendment Rules, 2004. In case of DG sets more than 800 KW shall comply with emission limits as per the Notification G.S.R.489 (E), dated 09.07.2002 at serial no.96, under the Environment (Protection) Act, 1986.

9. The industry shall comply with ambient air quality standards of PM10(Particulate Matter size less than 10mm) - 100 mg/ m³; PM2.5(Particulate Matter size less than 2.5 mm) - 60 mg/ m³; SO₂ - 80 mg/ m³; NO_x - 80 mg/m³, outside the factory premises at the periphery of the industry.

Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009 shall be complied. Following standards prescribed for noise shall be complied.

Noise Levels: Day time - (6 AM to 10 PM) - 75 dB (A)

Night time - (10 PM to 6 AM) - 70 dB (A).

10. The industry shall always maintain 25% of additional bags as spare in the bag house to meet the emergency requirements.
11. The industry shall always place hood over the furnaces to extract the emissions from the furnace, except during charging of raw materials into the furnace.
12. The industry shall maintain interlocking system between APC equipment and fuel (electricity) feeding system, so that the electricity supply to furnaces would stop automatically in case the APC fails or not effective to control fugitive emissions.
13. All the raw materials shall be stored in closed sheds and adequate dust containment / suppression measures shall be maintained to control fugitive emissions. The industry shall not cause any air pollution / dust nuisance in the surroundings.
14. The industry under no circumstances shall bypass the emissions from stacks.
15. The industry shall operate the Air Pollution Control Equipments regularly and maintain the log registers.
16. All the conveyors shall be covered with G.I. Sheets to prevent fugitive emissions.
17. Secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Board and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
18. The industry shall install dust extraction system at dusty material handling areas, stock piles transfer and other vulnerable dusty arrears to control dust emissions.
19. The industry shall provide dust suppression system at all the discharge and feed points.
20. The industry shall maintain online stack monitoring system to all stacks. Calibration of CAAQM system shall be carried out periodically and informed to Board Office.
21. The industry shall start consumption of accumulated the bag filter dust immediately and dispose the bag filter dust completely.

GENERAL:

22. The industry shall not manufacture new products other than the mentioned in CFO order and not increase the capacity beyond the permitted capacity mentioned in this order.

23. The industry shall ensure ash and sulphur content in fuel (non-coking coal) used in power plant shall be less than 4.06% and 0.85% respectively.

24. The industry shall dispose Ferro Alloy slag for land filling inside the plant premises

- or used as building material only after passing through Toxic Chemical Leachability Potential (TCLP) test.
25. The industry shall ensure proper solid waste management plan to dispose the solid waste generated.
 26. The industry shall maintain good house-keeping within the plant premises.
 27. The industry shall provide data logger enabled damper to the natural draft chimneys connected to the furnaces to record the bypassing timings and duration or permanently close the damper.
 28. The industry shall provide slag granulators at each furnace.
 29. All the internal roads shall be concerted / asphalted to control fugitive emissions.
 30. The industry shall maintain the following records and the same shall be made available to the Board Officials during the inspection.
 - a. Daily production details, RG-I records and Central Excise Returns.
 - b. Quantity of Effluents generated, treated and recycled.
 - c. Log Books for pollution control systems.
 - d. Daily solid waste generated and disposed.
 31. The industry shall develop and maintain green belt atleast in an area of 33 % of total area. Sampling shall be planted along the boundary and in vacant places during the monsoon season.
 32. The industry shall submit the compliance report to all the stipulated conditions for Consent for Operation for every six months i.e. on 1st of January and 1st of July of every year.
 33. The industry shall maintain the Rain water harvesting pit of capacity 370 MLD.
 34. The industry shall not park the vehicles/ trucks in front of the main gate and shall not cause dust nuisance in the surroundings by parking the trucks/ vehicles.
 35. The industry shall comply with the conditions stipulated in the EC orders dt.26.11.2009 & dt.02.07.2018 issued by MoEF&CC, GoI.
 36. The industry shall obtain necessary amendments from MoEF&CC / Board if any changes in the products / capacities.
 37. The industry shall comply with the directions issued by the Board from time to time.

Special conditions:

38. The industry shall submit a copy of the NOC issued by the Andhra Pradesh State Disaster Response and Fire Service Dept., (APSDRFSD) at concerned Regional Office, APPCB.
39. The industry shall prepare a safety report and carry out an independent safety audit report of the respective industrial activities including chemical storages / isolated storages by an expert not associated with such industrial activity as required under Rule 10 of MSIHC Rules, 1989 and get it approved by the Factories Dept., and submit the compliance along with copy of the safety report, safety audit report and safety certificate at concerned Regional Office, APPCB.
40. The industry shall extend training to the working personnel for the prevention of accidents and necessary antidotes to ensure safety, as per the MSIHC Rules, 1989.
41. The industry shall carryout calibration of safety equipment and leak detection systems at regular intervals and shall certify the same with the Factories Department. That certified copy shall be submitted to the APPCB, Regional Office.
42. The industry shall install fluorescent Wind Vane at the highest point in the industry premises.
43. The industry shall submit Risk analysis and risk assessment covering worst scenario clearly describing impact within the industry premises and outside the industry premises and emergency response system.

44. The industry shall submit the copy of the safety audit report and On-Site / Off Site Emergency Plans as applicable after being certified by the Factories Department to the APPCB, Regional Office from time to time, if the storage quantity of hazardous chemicals is equal to or, in excess of the threshold quantities specified in schedule 2 & 3 of MSIHC Rules, 1989.

SCHEDULE - C

[see rule 6(2)]

**[CONDITIONS OF AUTHORISATION FOR OCCUPIER OR OPERATOR
HANDLING HAZARDOUS WASTES]**

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorisation shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.
3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.
4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.
5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;
6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty".
7. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.
8. An application for the renewal of an authorisation shall be made as laid down under these Rules.
9. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.

Specific Conditions:

10. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.
11. The industry shall store Used / Waste Oil and Used Lead Acid Batteries in a secured way in their premises till its disposal to the manufacturers / dealers on buyback basis.
12. The industry shall comply with the provisions of HWM Rules, 2016.
13. The industry shall maintain 7 copy manifest system for transportation of waste generated and a copy shall be submitted to concerned Regional Office of APPCB. The driver who transports Hazardous Waste should be well acquainted about the procedure to be followed in case of an emergency during transit. The transporter should carry a Transport Emergency (TREM) Card.
14. The industry shall maintain proper records for Hazardous and Other Wastes stated in Authorisation in Form-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form-4 as per Rule 20 (2) of the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.

The industry shall submit Half yearly compliance reports to all the stipulated conditions in Environmental Clearance (EC), Consent for Establishment (CFE) and Consent for Operation (CFO) through website i.e., <https://pcb.ap.gov.in> by 1st of January and 1st July of every year. The first half yearly compliance reports shall be furnished by the industry and second half yearly compliance reports shall be the audited through NABL accredited third party.

BATCHU SIVA PRASAD, CEE(BSP), O/o CHIEF ENVIRONMENTAL ENGINEER-APPCB

To
M/s. Sarda Metals & Alloys Ltd.,
APIIC, Industrial Area,
Kantakapalli (V), Kothavalasa (M),
Vizianagaram District

Signed by Batchu Siva
Prasad
Date: 19-10-2021 19:36:04
Reason: Approved

Annexure-6
(Monitoring Reports)



SV ENVIRO LABS & CONSULTANTS

(Environmental Engineers & Consultants in Pollution Control)

Corporate Office : Enviro House, B-1, Block-B, IDA, Autonagar, Visakhapatnam-530012
& Laboratory www.svenviolabs.com, Ph:0891-2755528, Cell: +91 9440338628
info@svenviolabs.com, svenviro_labs@yahoo.co.in

Branch Office : 2-53, Mahipala Street, Yanam - 533464.

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Ref: SVELC/SMAL/21-08/06

Date: 05-09-2021

NAME AND ADDRESS : M/s. SARDA METALS AND ALLOYS LTD.,
VIZAG COMMON PURCHASING PLANT,
APIIC, Industrial Park, Kantakapalli,
Kothavalasa-535240,
Vizianagaram.

SAMPLE PARTICULARS : STACK EMISSIONS

SOURCE OF COLLECTION : POWER PLANT CHIMNEY

DATE & TIME OF COLLECTION : 28-08-2021@ 14:30hr

TEST REPORT

S.No.	DESCRIPTION	UNIT	RESULT
1.	Stack Height	m	120
2.	Diameter of the Stack	m	6.69
3.	C/s Area of Stack	m ²	35.13
4.	Pitot Coefficient	-	0.87
5.	Specific Gravity of Fluid	-	1.0
6.	Temperature @ DGM	°C	32
7.	Stack Temperature	°C	131
8.	Nozzle Diameter	mm	09
9.	Exit Velocity	m/sec	5.04
10.	Gas Quantity	m ³ /hr	637398
11.	Duration of Sampling	Minutes	60

EMISSION RATE

S.No.	PARAMETER	UNIT	RESULT	PCB STANDARD
1.	Particulate Matter – PM	mg/Nm ³	35.8	50
2.	Sulphur Dioxide – SO ₂	mg/Nm ³	277	600
3.	Oxides of Nitrogen – NO _x	mg/Nm ³	170	300
4.	Mercury – Hg	mg/Nm ³	< 0.0056	-


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Ref: SVELC/SMAL/21-08/07

Date: 05-09-2021

NAME AND ADDRESS : M/s. SARDA METALS AND ALLOYS LTD.,
VIZAG COMMON PURCHASING PLANT,
APIIC, Industrial Park, Kantakapalli,
Kothavalasa-535240,
Vizianagaram.

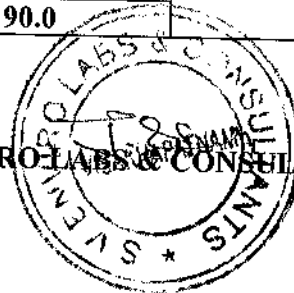
SAMPLE PARTICULARS : WORK ZONE NOISE (CPP)

DATE OF COLLECTION : 28-08-2021

TEST REPORT

S.No.	SOURCE OF COLLECTION	Noise levels measured in dB(A)	Method
1.	Near Boiler Area	72.4	IS:4954 – 1968 Noise Level Meter
2.	Near TG Building	75.1	
3.	Near CHP Ground Hopper	69.6	
4.	Near CHP Crushes House	71.2	
5.	Near FD Fan	63.5	
6.	Near Coal Mill Area	73.3	
7.	Compressor Area	74.8	
8.	Near ID Fan Area	74.6	
CPCB STANDARDS		90.0	

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Ref: SVELC/SMAL/21-08/08

Date: 05-09-2021

NAME AND ADDRESS : M/s. SARDA METALS AND ALLOYS LTD.,
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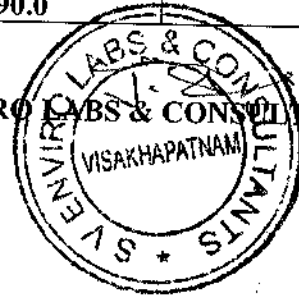
SAMPLE PARTICULARS : WORK ZONE NOISE (FAD)

DATE OF COLLECTION : 28-08-2021

TEST REPORT

S.No.	SOURCE OF COLLECTION	Noise levels measured in dB(A)	Method
1.	Near Furnace 1	68.9	IS:4954 – 1968 Noise Level Meter
2.	Near Furnace 2	69.4	
3.	Metal Breaking Yard	73.7	
4.	28 Metre Area	75.3	
5.	RMHS Area	68.2	
CPCB STANDARDS		90.0	

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Ref: SVELC/SMAL/21-08/09

Date: 05-09-2021

NAME AND ADDRESS : M/s. SARDA METALS AND ALLOYS LTD.,
VIZAG COMMON PURCHASING PLANT,
APIIC, Industrial Park, Kantakapalli,
Kothavalasa-535240,
Vizianagaram.

SAMPLE PARTICULARS : NOISE LEVEL

DATE OF COLLECTION : 28-08-2021

TEST REPORT

S.No.	SOURCE OF COLLECTION	Noise levels measured in dB(A)		Method
		DAY	NIGHT	
1.	Near Security Gate	68.3	59.2	IS:4954 – 1968 Noise Level Meter
2.	Near RO Plant	61.6	55.4	
3.	Near Admin Building	56.1	50.8	
CPCB STANDARDS		75.0	70.0	

Note: Day time shall mean from 6.00 am to 10.00 pm
Night time shall mean from 10.00 p.m. to 6.00 a.m.





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info@svenvirolabs.com, svenviro_labs@yahoo.co.in

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Ref: SVELC/SMAL/21-08/10

Date: 05-09-2021

NAME AND ADDRESS : M/s. SARDA METALS AND ALLOYS LTD.,
VIZAG COMMON PURCHASING PLANT,
APIIC, Industrial Park, Kantakapalli,
Kothavalasa-535240,
Vizianagaram.

SAMPLE PARTICULARS : EFFLUENT WATER

SOURCE OF COLLECTION : 1. FAD-COOLING TOWER
2. CPP - COOLING TOWER
3. GUARD POND
4. NEUTRALISATION PIT

DATE OF COLLECTION : 28-08-2021

TEST REPORT

S. No.	Parameter	Unit	1	2	3	4	Discharge Standards
1.	pH	--	8.82	7.52	6.69	7.36	6.5 - 8.5
2.	Total Dissolved Solids	mg/l	1924	1830	1938	1424	2100
3.	Total Suspended Solids	mg/l	20	10	18	26	100
4.	COD	mg/l	31.8	33.6	32.4	23.2	250
5.	BOD 3d 27°C	mg/l	10	11	10	8	30
6.	Oil & Grease	mg/l	<1.0	<1.0	<1.0	<1.0	10


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Ref: SVELC/SMAL/21-08/11

Date: 05-09-2021

NAME AND ADDRESS : M/s. SARDA METALS AND ALLOYS LTD.,
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APIIC, Industrial Park, Kantakapalli,
Kothavalasa-535240,
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SAMPLE PARTICULARS : EFFLUENT WATER

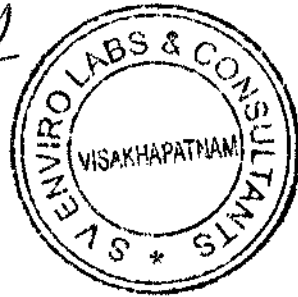
SOURCE OF COLLECTION : 1. CPP- STP INLET
2. CPP – STP OUTLET
3. RMHS-STP INLET
4. RMHS-STP OUTLET

DATE OF COLLECTION : 28-08-2021

TEST REPORT

S. No.	Parameter	Unit	1	2	3	4	Discharge Standards
1.	pH	--	7.30	7.82	7.19	7.68	6.5 – 8.5
2.	Total Dissolved Solids	mg/l	174	158	446	154	2100
3.	Total Suspended Solids	mg/l	23	12	36	6.0	100
4.	COD	mg/l	32.8	14.6	218	<10	250
5.	BOD 3d 27°C	mg/l	10	4.4	82	<3	30
6.	Oil & Grease	mg/l	<1.0	<1.0	2.0	<1.0	10
7.	Faecal Coliforms	MPN/100ml	510	56	860	45	-


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Ref: SVELC/SMAL/21-08/12

Date: 05-09-2021

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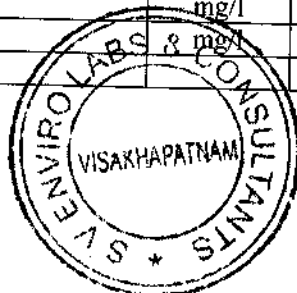
SAMPLE PARTICULARS : WATER

SOURCE OF COLLECTION : DM PLANT BOREWELL

DATE OF COLLECTION : 28-08-2021

TEST REPORT

S.No	Parameter	Unit	Result	IS 10500:2012 Drinking Water Specifications
1.	Colour	Hazen	2.87	5.0
2.	Odour	-	Agreeable	Agreeable
3.	Taste	-	Agreeable	Agreeable
4.	Turbidity	NTU	0.30	1.0
5.	pH	-	7.38	6.5 - 8.5
6.	Total Dissolved Solids	mg/l	196	500
7.	Total Alkalinity as CaCO ₃	mg/l	31	200
8.	Total Hardness as CaCO ₃	mg/l	137	200
9.	Calcium as Ca	mg/l	40.8	75
10.	Magnesium as Mg	mg/l	8.52	30
11.	Chlorides as Cl ⁻	mg/l	54	250
12.	Fluorides as F	mg/l	<0.01	1.0
13.	Nitrates as NO ₃ ⁻	mg/l	1.66	45
14.	Sulphates as SO ₄ ²⁻	mg/l	14.2	200
15.	Iron as Fe	mg/l	<0.01	0.3
16.	Free Residual Chlorine	mg/l	<0.1	0.2
17.	Phenolic Compounds as C ₆ H ₅ OH	mg/l	Nil	0.001
18.	Copper as Cu	mg/l	<0.01	0.05
19.	Manganese as Mn	mg/l	<0.01	0.1
20.	Zinc as Zn	mg/l	<0.01	5.0
21.	Aluminum as Al	mg/l	<0.01	0.03
22.	Boron as B	mg/l	<0.01	0.5
23.	Sulphide as H ₂ S	mg/l	<0.1	0.05
24.	Anionic Detergents (as MBAS)	mg/l	<0.01	0.2
25.	Barium as Ba	mg/l	<0.1	0.7
26.	Chloramines (as Cl ₂)	mg/l	<1.0	4.0
27.	Ammonia as total ammonia-N	mg/l	<0.01	0.5
28.	Mineral Oil	mg/l	<0.01	0.5
29.	Selenium as Se	mg/l	<0.005	0.01
30.	Silver as Ag	mg/l	<0.01	0.1
MICROBIOLOGY:				





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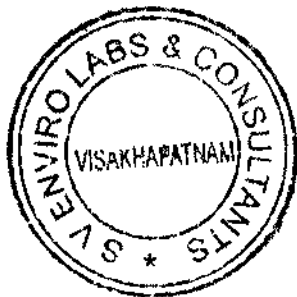


31.	<i>E. coliforms</i>	CFU/ 100mL	Not Detected	Shall not be detected in 100 ml
32.	<i>Total Coliforms</i>	CFU/ 100mL	Not Detected	Shall not be detected in 100 ml

Note: All the above parameters are tested as per APHA methods, 23rd Edition, 2017

Remarks: As per the above report, all the parameters are within IS 10500:2012 Drinking Water Specifications.


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Ref: SVELC/SMAL/21-08/13

Date: 05-09-2021

NAME AND ADDRESS : M/s. SARDA METALS AND ALLOYS LTD.,
VIZAG COMMON PURCHASING PLANT,
APIIC, Industrial Park, Kantakapalli,
Kothavalasa-535240,
Vizianagaram.

SAMPLE PARTICULARS : WATER

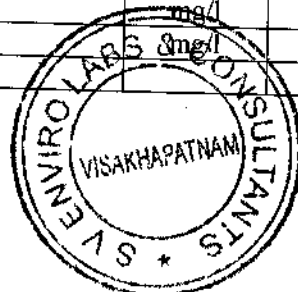
SOURCE OF COLLECTION : ARIHANT BOREWELL

DATE OF COLLECTION : 28-08-2021

TEST REPORT

S.No	Parameter	Unit	Result	IS 10500:2012 Drinking Water Specifications
1.	Colour	Hazen	<1.0	5.0
2.	Odour	-	Agreeable	Agreeable
3.	Taste	-	Agreeable	Agreeable
4.	Turbidity	NTU	0.34	1.0
5.	pH	-	8.18	6.5 - 8.5
6.	Total Dissolved Solids	mg/l	185	500
7.	Total Alkalinity as CaCO ₃	mg/l	36	200
8.	Total Hardness as CaCO ₃	mg/l	161	200
9.	Calcium as Ca	mg/l	33.9	75
10.	Magnesium as Mg	mg/l	18.6	30
11.	Chlorides as Cl ⁻	mg/l	43.4	250
12.	Fluorides as F	mg/l	<0.01	1.0
13.	Nitrates as NO ₃ ⁻	mg/l	7.12	45
14.	Sulphates as SO ₄ ²⁻	mg/l	12.4	200
15.	Iron as Fe	mg/l	<0.01	0.3
16.	Free Residual Chlorine	mg/l	<0.1	0.2
17.	Phenolic Compounds as C ₆ H ₅ OH	mg/l	Nil	0.001
18.	Copper as Cu	mg/l	<0.01	0.05
19.	Manganese as Mn	mg/l	<0.01	0.1
20.	Zinc as Zn	mg/l	<0.01	5.0
21.	Aluminum as Al	mg/l	<0.01	0.03
22.	Boron as B	mg/l	<0.01	0.5
23.	Sulphide as H ₂ S	mg/l	<0.1	0.05
24.	Anionic Detergents (as MBAS)	mg/l	<0.01	0.2
25.	Barium as Ba	mg/l	<0.01	0.7
26.	Chloramines (as Cl ₂)	mg/l	<1.0	4.0
27.	Ammonia as total ammonia-N	mg/l	<0.01	0.5
28.	Mineral Oil	mg/l	<0.01	0.5
29.	Selenium as Se	mg/l	<0.005	0.01
30.	Silver as Ag	mg/l	<0.01	0.1

MICROBIOLOGY:





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info@svenviolabs.com, svenviro_labs@yahoo.co.in

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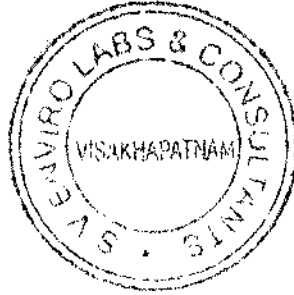


31.	<i>E. coliforms</i>	CFU/ 100mL	Not Detected	Shall not be detected in 100 ml
32.	<i>Total Coliforms</i>	CFU/ 100mL	Not Detected	Shall not be detected in 100 ml

Note: All the above parameters are tested as per APHA methods, 23rd Edition, 2017

Remarks: As per the above report, all the parameters are within IS 10500:2012 Drinking Water Specifications.


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Ref: SVELC/SMAL/21-08/04

Date: 05-09-2021

NAME AND ADDRESS : M/s. SARDA METALS AND ALLOYS LTD.,
VIZAG COMMON PURCHASING PLANT,
APIIC, Industrial Park, Kantakapalli,
Kothavalasa-535240,
Vizianagaram.

SAMPLE PARTICULARS : STACK EMISSIONS

SOURCE OF COLLECTION : 250 KVA DG Set -1

DATE & TIME OF COLLECTION : 28-08-2021@ 11:45hr

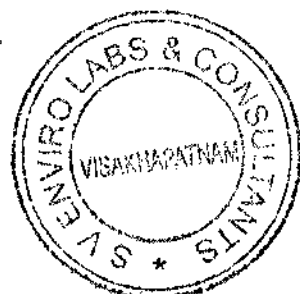
TEST REPORT

S.No.	DESCRIPTION	UNIT	RESULT
1.	Diameter of the Stack	m	0.0762
2.	C/s Area of Stack	m ²	0.0045
3.	Pitot Coefficient	-	0.87
4.	Specific Gravity of Fluid	-	1.0
5.	Temperature @ DGM	°C	31
6.	Stack Temperature	°C	163
7.	Nozzle Diameter	mm	06
8.	Exit Velocity	m/sec	15.0
9.	Gas Quantity	Nm ³ /hr	164
10.	Duration of Sampling	Minutes	45

EMISSION RATE

S.No	PARAMETER	UNITS	RESULT	CPCB STANDARD
1.	Particulate Matter – PM	g/kw-hr	0.15	0.3
2.	Oxides of Nitrogen – NOx	g/kw-hr	1.82	9.2
3.	Carbon Monoxide – CO	g/kw-hr	0.76	3.5
4.	Hydrocarbons - HC	g/kw-hr	0.20	1.3

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Ref: SVELC/SMAL/21-08/05

Date: 05-09-2021

NAME AND ADDRESS : M/s. SARDA METALS AND ALLOYS LTD.,
VIZAG COMMON PURCHASING PLANT,
APIIC, Industrial Park, Kantakapalli,
Kothavalasa-535240,
Vizianagaram.

SAMPLE PARTICULARS : STACK EMISSIONS

SOURCE OF COLLECTION : 250 KVA DG Set -2

DATE & TIME OF COLLECTION : 28-08-2021@ 12:30hr

TEST REPORT

S.No.	DESCRIPTION	UNIT	RESULT
1.	Diameter of the Stack	m	0.0762
2.	C/s Area of Stack	m ²	0.0045
3.	Pitot Coefficient	-	0.87
4.	Specific Gravity of Fluid	-	1.0
5.	Temperature @ DGM	°C	32
6.	Stack Temperature	°C	179
7.	Nozzle Diameter	mm	06
8.	Exit Velocity	m/sec	16.2
9.	Gas Quantity	Nm ³ /hr	171
10.	Duration of Sampling	Minutes	45

EMISSION RATE

S.No	PARAMETER	UNITS	RESULT	CPCB STANDARD
1.	Particulate Matter – PM	g/kw-hr	0.19	0.3
2.	Oxides of Nitrogen – NOx	g/kw-hr	2.30	9.2
3.	Carbon Monoxide – CO	g/kw-hr	0.84	3.5
4.	Hydrocarbons - HC	g/kw-hr	0.23	1.3

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Ref: SVELC/SMAL/21-08/01

Date: 05-09-2021

NAME AND ADDRESS : M/s. SARDA METALS AND ALLOYS LTD.,
VIZAG COMMON PURCHASING PLANT,
APIIC, Industrial Park, Kantakapalli,
Kothavalasa-535240,
Vizianagaram.

SAMPLE PARTICULARS : AMBIENT AIR QUALITY

SOURCE OF COLLECTION : NEAR SECURITY GATE

DATE & TIME OF START : 28-08-2021@ 10:15hr

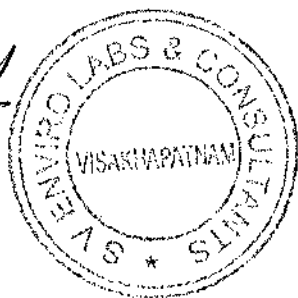
DURATION OF SAMPLING : 24 Hours

ATMOSPHERE CONDITION : Clear Sky

TEST REPORT

S.No	PARAMETER	UNIT	RESULT	NAAQ STANDARDS	METHOD
1.	Particulate Matter(Size<10 μ) or PM ₁₀	$\mu\text{g}/\text{m}^3$	72.0	100	IS:5182 (P-23) Gravimetric
2.	Particulate Matter(Size<2.5 μ) or PM _{2.5}	$\mu\text{g}/\text{m}^3$	42.8	60	IS:5182 (P-24) Gravimetric
3.	Sulphur Dioxide – SO ₂	$\mu\text{g}/\text{m}^3$	16.2	80	IS:5182 (P-2)- West and Gaeke Method
4.	Oxides of Nitrogen - NO _x	$\mu\text{g}/\text{m}^3$	14.1	80	IS:5182(P-6) - Jacob & Hochheiser Method


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Ref: SVELC/SMAL/21-08/02

Date: 05-09-2021

NAME AND ADDRESS : M/s. SARDA METALS AND ALLOYS LTD.,
VIZAG COMMON PURCHASING PLANT,
APIIC, Industrial Park, Kantakapalli,
Kothavalasa-535240,
Vizianagaram.

SAMPLE PARTICULARS : AMBIENT AIR QUALITY

SOURCE OF COLLECTION : NEAR ADMIN BUILDING

DATE & TIME OF START : 28-08-2021@ 10:30hr

DURATION OF SAMPLING : 24 Hours

ATMOSPHERE CONDITION : Clear Sky

TEST REPORT

S.No	PARAMETER	UNIT	RESULT	NAAQ STANDARDS	METHOD
1.	Particulate Matter(Size<10 μ) or PM ₁₀	$\mu\text{g}/\text{m}^3$	62.4	100	IS:5182 (P-23) Gravimetric
2.	Particulate Matter(Size<2.5 μ) or PM _{2.5}	$\mu\text{g}/\text{m}^3$	30.6	60	IS:5182 (P-24) Gravimetric
3.	Sulphur Dioxide - SO ₂	$\mu\text{g}/\text{m}^3$	14.8	80	IS:5182 (P-2)- West and Gaeke Method
4.	Oxides of Nitrogen - NO _x	$\mu\text{g}/\text{m}^3$	12.5	80	IS:5182(P-6) - Jacob & Hochheiser Method


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Ref: SVELC/SMAL/21-08/03

Date: 05-09-2021

NAME AND ADDRESS : M/s. SARDA METALS AND ALLOYS LTD.,
VIZAG COMMON PURCHASING PLANT,
APIIC, Industrial Park, Kantakapalli,
Kothavalasa-535240,
Vizianagaram.

SAMPLE PARTICULARS : AMBIENT AIR QUALITY

SOURCE OF COLLECTION : NEAR RO PLANT

DATE & TIME OF START : 28-08-2021@ 10:45hr

DURATION OF SAMPLING : 24 Hours

ATMOSPHERE CONDITION : Clear Sky

TEST REPORT

S.No	PARAMETER	UNIT	RESULT	NAAQ STANDARDS	METHOD
1.	Particulate Matter(Size<10 μ) or PM ₁₀	$\mu\text{g}/\text{m}^3$	60.9	100	IS:5182 (P-23) Gravimetric
2.	Particulate Matter(Size<2.5 μ) or PM _{2.5}	$\mu\text{g}/\text{m}^3$	26.4	60	IS:5182 (P-24) Gravimetric
3.	Sulphur Dioxide – SO ₂	$\mu\text{g}/\text{m}^3$	14.1	80	IS:5182 (P-2)- West and Gaeke Method
4.	Oxides of Nitrogen - NO _x	$\mu\text{g}/\text{m}^3$	13.6	80	IS:5182(P-6) - Jacob & Hochheiser Method


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Ref: SVELC/SMAL/21-08/04

Date: 05-09-2021

NAME AND ADDRESS : M/s. SARDA METALS AND ALLOYS LTD.,
VIZAG COMMON PURCHASING PLANT,
APIIC, Industrial Park, Kantakapalli,
Kothavalasa-535240,
Vizianagaram.

SAMPLE PARTICULARS : STACK EMISSIONS

SOURCE OF COLLECTION : Stack Attached to FAD

DATE & TIME OF COLLECTION : 28-08-2021 @ 11:00hr

TEST REPORT

S.No.	DESCRIPTION	UNIT	RESULT
1.	Stack Height	m	65
2.	Diameter of the Stack	m	4.0
3.	C/s Area of Stack	m ²	12.56
4.	Pitot Coefficient	-	0.87
5.	Specific Gravity of Fluid	-	1.0
6.	Temperature @ DGM	°C	31
7.	Stack Temperature	°C	146
8.	Nozzle Diameter	mm	09
9.	Exit Velocity	m/sec	5.96
10.	Gas Quantity	m ³ /hr	269487
11.	Duration of Sampling	minutes	45

EMISSION RATE

S.No	PARAMETER	UNITS	RESULT	PCB STANDARD
1.	Particulate Matter – PM	mg/Nm ³	35.8	50
2.	Sulphur Dioxide – SO ₂	mg/Nm ³	82.6	-
3.	Oxides of Nitrogen – NOx	mg/Nm ³	94.2	-
4.	Mercury – Hg	mg/Nm ³	< 0.0056	-

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