

Ref: SMAL/EC/MoEF-HCR-1/IRO/2022-23

Date: 06.07.2022

To,  
The Joint Director (S),  
Ministry of Environment, Forests and Climate Change,  
Government of India,  
Integrated Regional Office, Green House,  
Gopala Reddy Road, Vijayawada-520010  
Andhra Pradesh.

Dear Sir,

**Sub: Submission of Half-Yearly Compliance report for the period of October'2021-March'2022**  
**Ref: EC No:F.No.J-11011/164/2009-IIA(I) dated on 26.11.2009(GC-1**

With respect to the above subject M/s Sarda Metals & Alloys Limited would like to submit Half-Yearly compliance report for the period of October'2021 to March'2022.

We request you to kindly acknowledge the same.

Thanking You

Yours Sincerely,  
For M/s. Sarda Metals & Alloys Ltd,

  
**Surya Bhaskar**  
Assistant General Manager- EHS  
Authorised Signatory

Encl: Half-Yearly compliance report

# **ENVIRONMENTAL CLEARANCE HALF-YEARLY COMPLIANCE REPORT**

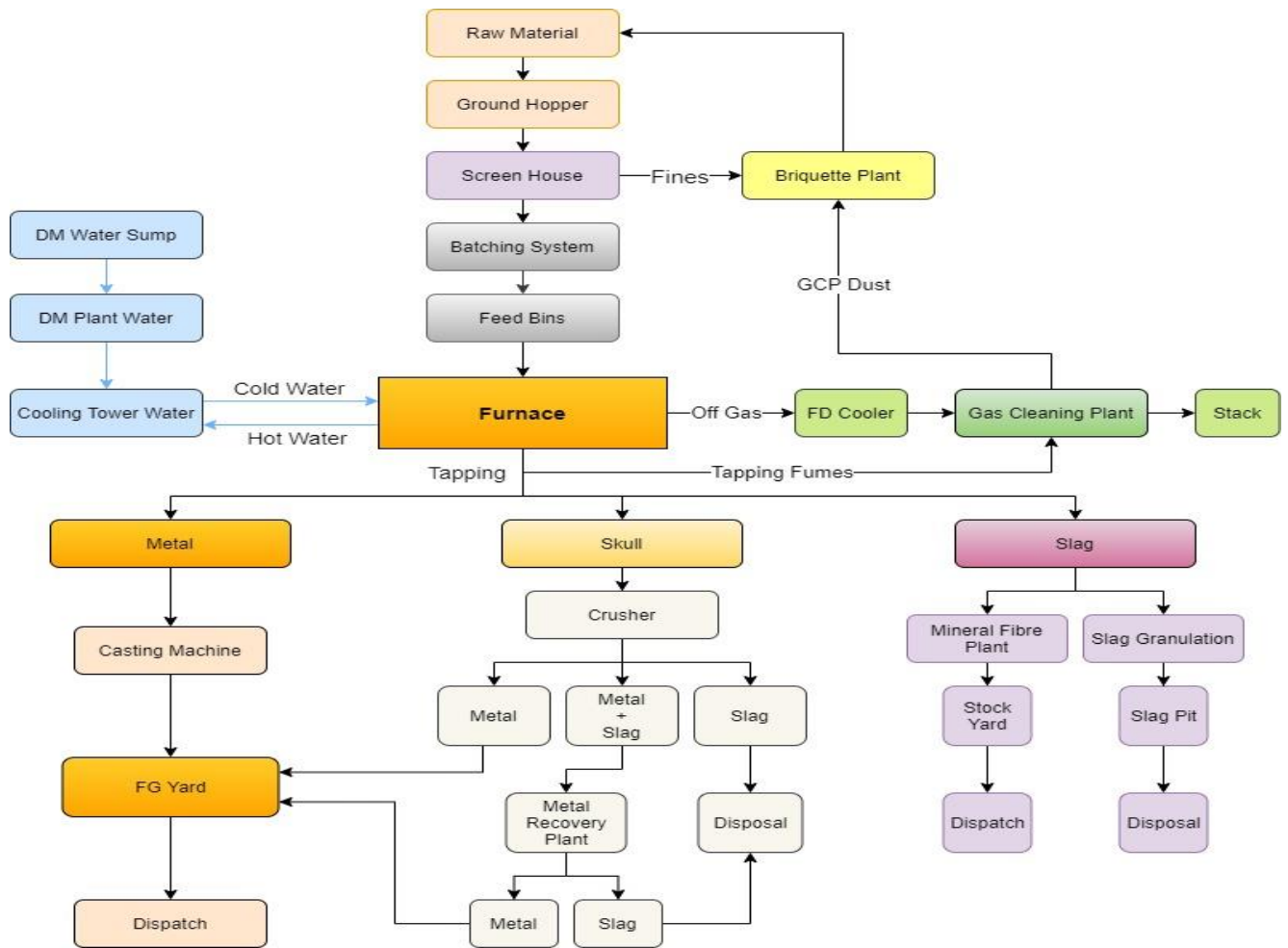
**For the period of  
October'2021 to March'2022**



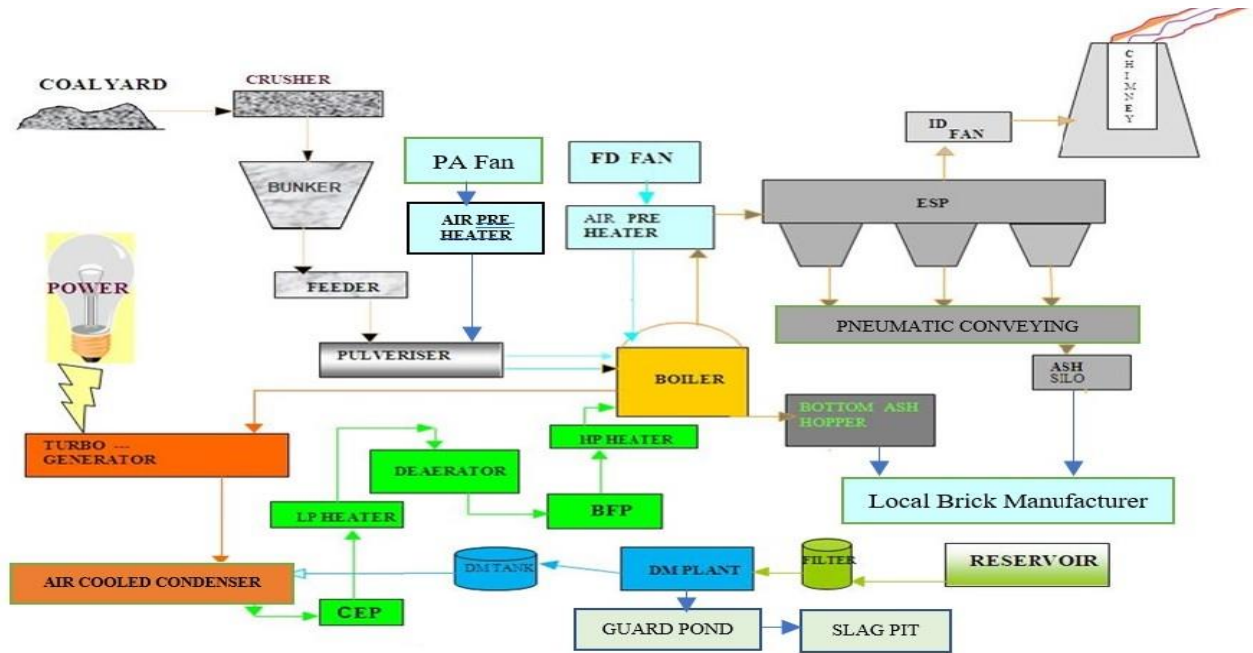
**M/s. SARDA METALS & ALLOYS Ltd.**

Kantakapalli vill, Kothavalasa M, Vizianagaram Dist,  
Andrapradesh.

### Ferro Alloy Plant



*Captive Power Plant*



**M/s. Sarda Metals & Alloys Ltd: Kantakapalli**  
**Compliance report for**  
**EC No: F.No.j-11011/164/2009-IA II (I) Dated 26-11-2009**



S No	SPECIFIC CONDITIONS	Compliance
1	<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/Nm<sup>3</sup>. 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 we have adopted one 5KL capacity mobile water tanker for haulage road dust suppression and accordingly water sprinkling system in the key 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 &amp; 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>
2	<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 and ABC boilers to control air emissions within 100 mg/Nm<sup>3</sup>.</p>	<p>The industry has not established DRI Kiln .Hence this is condition is not applicable</p>
3	<p>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<sup>3</sup>. Bag filter and DE-duster to coke oven plant; dust extraction system with bag filters to blast furnace stock house, Ferro alloys plant</p>	<p>The industry has not established Sinter plant&amp; DRI plant, Blast furnace &amp; Coke oven plants.</p> <p>To control the emissions 2No'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 &amp; Captive</p>

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	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.	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).
4	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.
5	All the standards prescribed for the coke oven plants vide notification no. GSR 46 (E) dated 3rd February, 2006 shall be followed as per the latest guidelines. Proper and full utilization of coke oven gases in power plant using waste heat recovery steam generators shall be ensured and no flue gases shall be discharged into the air	The industry has not established Dry coke plant. Hence this condition is not applicable.
6	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed. The emission standards issued by the Ministry in May, 2008 for the sponge plants shall be followed	The industry has not established sponge iron plant. To control the fugitive emission, raw materials are stored in the closed sheds and covered with tarpaulin coverings. 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. 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.
7	Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product	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
8	In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Dust suppression system with spray nozzles shall be provided to raw material handling area and material	Noted and being followed.

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	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	
9	Total water requirement from Thatipudi reservoir shall not exceed 396 m <sup>3</sup> /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	Water required from Thatipudi reservoir is being maintained within the stipulated limit of less than 396 m <sup>3</sup> /hr. No Ground water is being used for process cooling purpose. Provided Air cooled condenser at captive power plant neutralizing pit for Boiler blow 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.
10	Prior permission for the drawl of 396 m <sup>3</sup> /hr water from Thatipudi reservoir from the concerned department shall be obtained and a copy of the permission letter shall be submitted to the Ministry and its Regional Office at Bangalore	At present, permission for supply of 62.5m <sup>3</sup> /hr (1500 KL/day) is obtained from the Greater Visakhapatnam Municipal Corporation for existing Captive Power Plant and Ferro Alloys Plant.
11	The water consumption shall not exceed 16 m <sup>3</sup> /Ton of Steel as per prescribed standard	The industry has not established steel plant. Hence this condition is not applicable.
12	Ground water monitoring around the solid waste disposal site / secured landfill (SLF) shall be carried out regularly and report submitted to the Ministry's Regional Office at Bangalore, CPCB and APPCB	Noted and being followed.
13	No coal fines shall be imported as proposed. DRI Fines, coke breeze, Sinter dust, GCP dust, blast furnace dust, SMS dust, scale, iron ore fines shall be used in Sinter plant. Scrap from rolling mill shall be used as raw material in SMS. Char/Dolochar shall be used in power plant / brick manufacturing	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

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	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	disposed to the authorised recycler authorised by APPCB. The refractory is consumed in furnace areas.
14	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.
15	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	Noted and being followed.
16	A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal	Noted and being followed.
17	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.
18	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.
19	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.
20	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
21	All the recommendations made in the	The industry has not established steel plant and



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	Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Sector including Coke Oven Plants shall be implemented	coke oven plants. Hence this condition is not applicable
22	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 to the proposed SMAL Project.
24	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 of temporary structures to be removed after the completion of the project	Noted for compliance .The industry has established 2-10 KLD Capacity of 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 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>B</b>	<b><u>GENERAL CONDITIONS</u></b>	
1	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
2	At no time, the emissions shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved	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.
3	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional 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.
4	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19th May, 1993 and standards prescribed from	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

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	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	for PM (ESP is provided) & Remote calibration system facility to SO <sub>2</sub> ,NO <sub>X</sub> parameter and the data is synchronized to APPCB &CPCB servers respectively. The APPCB URL: <a href="http://aprtcms.ap.gov.in/#/login">http://aprtcms.ap.gov.in/#/login</a> CPCB URL: <a href="http://cpcbtdms.nic.in">http://cpcbtdms.nic.in</a> 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. Third party Reports attached in <b>Annexure-1</b> .
5	The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 and January, 2000. Authorization from the APPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes	This condition is not applicable to us. The waste generated is Used waste oil Schedule-1 of 5.1 clause and waste grease of clause 5.2 of Hazardous & Other waste (Management & Trans boundary Movement) Rules, 2016 and its amendments.
6	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules, 2003. Authorization from the A. P. Pollution Control Board must be obtained for collection / treatment / storage / disposal of hazardous wastes	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
7	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	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.
8	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table	Noted and being followed.
9	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. Reference attached in <b>Annexure-2</b> .
10	A separate Environmental Management Cell equipped with full-fledged laboratory	Noted for compliance. The Organo gram is attached as <b>annexure-3</b>

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	facilities shall be set up to carry out the environmental management and monitoring functions	
<b>11</b>	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 implement all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose	Noted and being followed.
<b>12</b>	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 compiled at the time of EC is granted to the industry.
<b>13</b>	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 <sub>2</sub> , NO <sub>x</sub> (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 <a href="http://aprtcms.ap.gov.in">URL:http://aprtcms.ap.gov.in</a> CPCB URL <a href="http://cpcbtdms.nic.in">http://cpcbtdms.nic.in</a>
<b>14</b>	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	Noted for compliance this condition is complied the condition wise compliance report is uploaded in the company's website <a href="http://www.seml.co.in">www.seml.co.in</a> APPCB <a href="https://pcb.ap.gov.in">https://pcb.ap.gov.in</a> ,and MOEFCC website <a href="http://parivesh.nic.in">http://parivesh.nic.in</a> /accordingly as per the recent circular amendments issued by the Board.

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	shall monitor the stipulated conditions	
<b>15</b>	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail	The Last Environment Statement is submitted on September-2021.
<b>16</b>	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 <a href="http://envfor.nic.in">http://envfor.nic.in</a> . 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 <a href="http://envfor.nic.in">http://envfor.nic.in</a> .
<b>17</b>	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
<b>7.0</b>	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.
<b>8.0</b>	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
<b>9.0</b>	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.
<b>10.0</b>	The above conditions shall be enforced,	The industry is abide by the mentioned condition

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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.

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

**DETAILS OF PRODUCTION AND CONSUMPTION**

<b>Ferro Alloy Division-Raw material Consumption &amp; Production Details</b>							
<b>Month &amp; Year</b>	<b>Raw Material Consumption-MT</b>						<b>Product-Tons</b>
	<b>Mn Ore</b>	<b>RB3 &amp; RB2-Coal</b>	<b>Nut Coke</b>	<b>Quartz</b>	<b>Dolomite</b>	<b>Mill Scale</b>	<b>Ferro Alloys</b>
Oct-21	15256.37	3914.2	927.62	1090.52	5.1	0	5732.933
Nov-21	15859.8	3622.5	1247.93	1007.48	727.33	0	6056.07
Dec-21	17602.81	5269	726	1952	0	0	7351.01
Jan-22	18093.87	5144	940	2178	0	0	7474.16
Feb-22	15904.69	4674.51	716.78	1983	0	4.04	6651.56
Mar-22	18276.52	4810.23	918.47	2291	0	0	7704.61
<b>Total</b>	<b>100994.06</b>	<b>27434.38</b>	<b>5476.62</b>	<b>10502</b>	<b>732.44</b>	<b>4.04</b>	<b>40970.34</b>

**Captive Power Plant-Raw Material Consumption and Production Details.**

<b>Month &amp; Year</b>	<b>Raw material Consumption Coal Consumption (MT)</b>	<b>Production Electricity (MWH)</b>
Oct-21	28467.90	36675.00
Nov-21	19457.19	27947.00
Dec-21	25606.65	36895.00
Jan-22	26005.69	37370.00
Feb-22	24916.21	34863.00
Mar-22	33432.13	45545.00
<b>Total</b>	<b>157885.76</b>	<b>219295.00</b>

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**Non-Hazardous Waste Generation Details**

Month & Year	Solid Waste from Pollution Control Equipments/Facility Gas Cleaning Plant-RABH (Bi Product Tons)	Solid Waste from Process (Waste Tons)	Si Mn Slag	MnO Slag
	Si Mn (GCP Dust)	Fe Mn GCP Dust		
Oct-21	167.66	57.376	4908.18	1382.63
Nov-21	127.51	120.317	3096.267	3100.974
Dec-21	247.76	0	8112.1	0
Jan-22	248.6	0	8110.37	0
Feb-22	220	0	6740.17	0
Mar-22	233.89	0	7981.84	0
<b>TOTAL</b>	<b>1245.41</b>	<b>177.69</b>	<b>38948.93</b>	<b>4483.61</b>

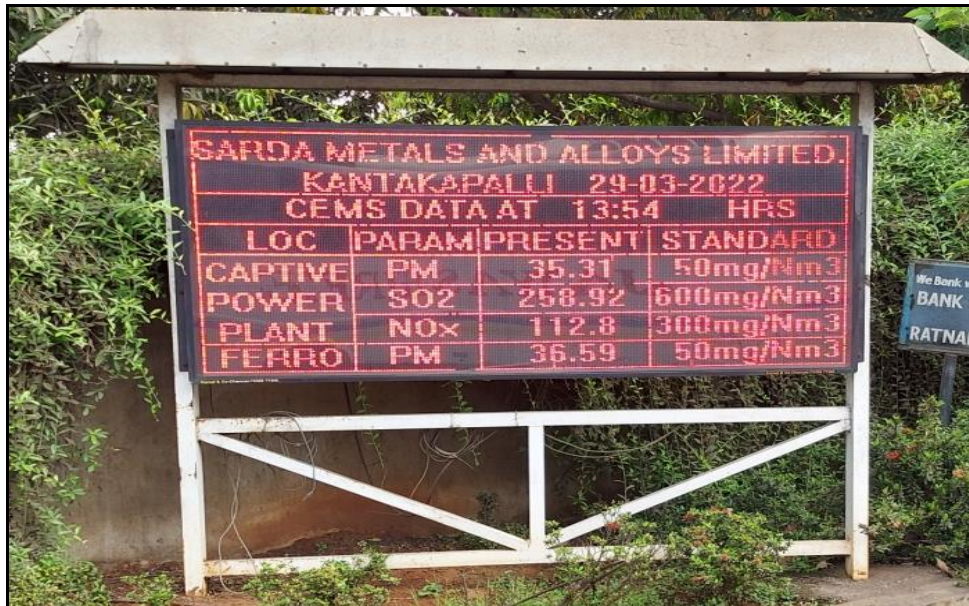
**Captive Power Plant Solid Waste Generation Details (MT)**

Month & Year	Fly Ash Generation	Fly Ash Sold	Bottom Ash Generation	Bottom Ash Sold
Oct-21	3764.00	3776.51	153	147.83
Nov-21	2904.00	2891.72	160	168.16
Dec-21	3513.00	3503.33	248	246.55
Jan-22	3509.00	3533.35	196	179.49
Feb-22	5045.00	5041.99	213	207.1
Mar-22	4966.00	4966.1	203	202.28
<b>Total</b>	<b>23701.00</b>	<b>23713.00</b>	<b>1173.00</b>	<b>1151.41</b>

**Process / Industrial Cooling water Consumption (in M3) Details**

Month & Year	Ferro Alloy Division	Ferro Alloy & Captive power plant	Captive Power Plant			Domestic
	Cooling Tower Makeup	Softener regeneration	Cooling Tower makeup	Boiler feed	Raw water required for DM water generation	
Oct-21	9075	160	1197	2099	3412	275
Nov-21	7985	160	1076	1255	2003	267
Dec-21	11053	200	1308	411	646	332
Jan-22	10753	240	1254	402	775	324
Feb-22	9146	210	1189	406	765	292
Mar-22	11067	270	1490	557	742	329
<b>TOTAL</b>	<b>59079</b>	<b>1240</b>	<b>7514</b>	<b>5130</b>	<b>8343</b>	<b>1819</b>

**DIGITAL DISPLAY BOARD AT MAIN GATE**





## WATER SPRINKLERS



*Water Sprinkling System & Haulage Road Dust Suppression*



*Road Sweeping Machine*



*Water sprinkling system for Haulage Road and Green Belt*



*Inbuilt water sprinkler system for stacker at coal handling plant*



*High Pressure Water Sprinkling System*



*Dry bottom ash handling system-1\*80 mw captive power plant*

**WATER FLOW METERS**

*Power plant Cooling tower Makeup water flow meter*



*FAD Cooling Tower Make up water flow meter*



*N-Pit Water Flow Meter*



*Domestic Water Flow Meter*



*Power Plant Blow down water flow meter*



*Piezometer for Ground water level (Online Station)*



**CLOSED BELT CONVEYORS & TAURPAULIN COVERED TRANSPORTATION**



**Covered Conveyor Belt at Captive Power plant**



**Covered Conveyor Belt at Raw Material**



**Covered Conveyor Belt at Ferro Alloys**



**Raw materials are received with tarpaulin**



**Finished products are transported in closed containers**

**ANNEXURE-1 THIRD PARTY MONITORING Report**

**THIRD PARTY AAQ, WATER QUALITY & NOISE 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.svenvirolabs.com, Ph:0891-2755528, Cell: +91 9440338628  
info@svenvirolabs.com, svenviro\_labs@yahoo.co.in

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

Recognized by Govt.of India-MoEF & CC, New Delhi, Accredited by : NABL & NABET



Ref: SVELC/SMAL/21-12/01

Date: 17-12-2021

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 : 08-12-2021@ 10:30hr

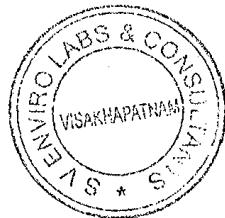
DURATION OF SAMPLING : 24 Hours

ATMOSPHERE CONDITION : Clear Sky

**TEST REPORT**

S.No	PARAMETER	UNIT	RESULT	NAAQ STANDARDS	METHOD
1.	Particulate Matter(Size<10 $\mu$ ) or PM <sub>10</sub>	$\mu\text{g}/\text{m}^3$	64.6	100	IS:5182 (P-23) Gravimetric
2.	Particulate Matter(Size<2.5 $\mu$ ) or PM <sub>2.5</sub>	$\mu\text{g}/\text{m}^3$	37.8	60	IS:5182 (P-24) Gravimetric
3.	Sulphur Dioxide - SO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	14.2	80	IS:5182 (P-2)- West and Gaeke Method
4.	Oxides of Nitrogen - NO <sub>x</sub>	$\mu\text{g}/\text{m}^3$	12.0	80	IS:5182(P-6) - Jacob & Hochheiser Method

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Ref: SVELC/SMAL/21-12/02

Date: 17-12-2021

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 : 08-12-2021@ 10:45hr

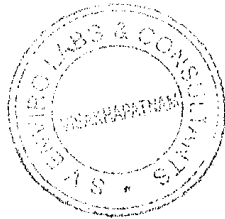
DURATION OF SAMPLING : 24 Hours

ATMOSPHERE CONDITION : Clear Sky

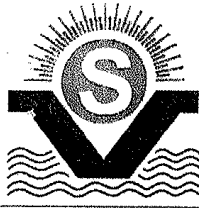
**TEST REPORT**

S.No	PARAMETER	UNIT	RESULT	NAAQ STANDARDS	METHOD
1.	Particulate Matter(Size<10 $\mu$ ) or PM <sub>10</sub>	$\mu\text{g}/\text{m}^3$	55.6	100	IS:5182 (P-23) Gravimetric
2.	Particulate Matter(Size<2.5 $\mu$ ) or PM <sub>2.5</sub>	$\mu\text{g}/\text{m}^3$	26.2	60	IS:5182 (P-24) Gravimetric
3.	Sulphur Dioxide – SO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	12.5	80	IS:5182 (P-2)- West and Gaeke Method
4.	Oxides of Nitrogen - NO <sub>x</sub>	$\mu\text{g}/\text{m}^3$	10.9	80	IS:5182(P-6) - Jacob & Hochheiser Method

  
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Ref: SVELC/SMAL/21-12/03

Date: 17-12-2021

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 : 08-12-2021@ 11:00hr

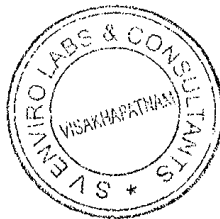
DURATION OF SAMPLING : 24 Hours


ATMOSPHERE CONDITION : Clear Sky

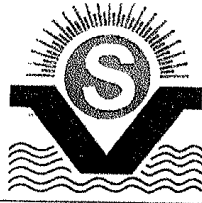
### TEST REPORT

S.No	PARAMETER	UNIT	RESULT	NAAQ STANDARDS	METHOD
1.	Particulate Matter(Size<10 $\mu$ ) or PM <sub>10</sub>	$\mu\text{g}/\text{m}^3$	53.4	100	IS:5182 (P-23) Gravimetric
2.	Particulate Matter(Size<2.5 $\mu$ ) or PM <sub>2.5</sub>	$\mu\text{g}/\text{m}^3$	22.9	60	IS:5182 (P-24) Gravimetric
3.	Sulphur Dioxide – SO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	12.0	80	IS:5182 (P-2)- West and Gaeke Method
4.	Oxides of Nitrogen - NO <sub>x</sub>	$\mu\text{g}/\text{m}^3$	11.6	80	IS:5182(P-6) - Jacob & Hochheiser Method

  
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Ref: SVELC/SMAL/21-12/04

Date: 17-12-2021

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

SAMPLE PARTICULARS : FUGITIVE EMISSIONS

SOURCE OF COLLECTION : NEAR CHP AREA

DATE & TIME OF START : 09-12-2021 @ 10:00hr

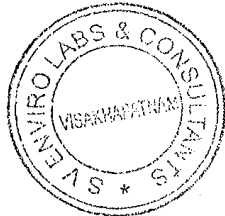
DURATION OF SAMPLING : 08 hours

ATMOSPHERE CONDITION : Clear Sky

### TEST REPORT

S.NO	PARAMETER	UNIT	RESULT	METHOD
1.	Total Suspended Particulate Matter – TSPM	mg/m <sup>3</sup>	1.16	IS:5182 (P-4)
2.	Respirable Suspended Particulate Matter –RSPM	mg/m <sup>3</sup>	0.89	IS:5182 (P-23)

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Ref: SVELC/SMAL/21-12/05

Date: 17-12-2021

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

SAMPLE PARTICULARS : FUGITIVE EMISSIONS

SOURCE OF COLLECTION : NEAR TAPPING EMISSION AREA

DATE & TIME OF START : 09-12-2021 @ 10:15hr

DURATION OF SAMPLING : 08 hours

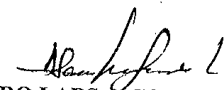
ATMOSPHERE CONDITION : Clear Sky

**TEST REPORT**

S.NO	PARAMETER	UNIT	RESULT	METHOD
1.	Total Suspended Particulate Matter – TSPM	mg/m <sup>3</sup>	1.33	IS:5182 (P-4)
2.	Respirable Suspended Particulate Matter –RSPM	mg/m <sup>3</sup>	1.02	IS:5182 (P-23)

  
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Ref: SVELC/SMAL/21-12/06

Date: 17-12-2021

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

SAMPLE PARTICULARS : FUGITIVE EMISSIONS

SOURCE OF COLLECTION : NEAR FMY AREA

DATE & TIME OF START : 09-12-2021@ 10:30hr

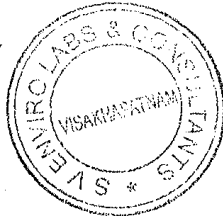
DURATION OF SAMPLING : 08 hours


ATMOSPHERE CONDITION : Clear Sky

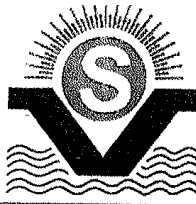
**TEST REPORT**

S.NO	PARAMETER	UNIT	RESULT	METHOD
1.	Total Suspended Particulate Matter – TSPM	mg/m <sup>3</sup>	0.86	IS:5182 (P-4)
2.	Respirable Suspended Particulate Matter –RSPM	mg/m <sup>3</sup>	0.68	IS:5182 (P-23)

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Ref: SVELC/SMAL/21-12/07

Date: 17-12-2021

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

SAMPLE PARTICULARS : FUGITIVE EMISSIONS

SOURCE OF COLLECTION : NEAR MRP AREA

DATE & TIME OF START : 09-12-2021@ 10:45hr

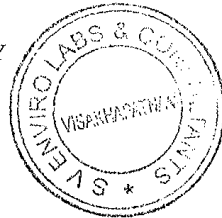
DURATION OF SAMPLING : 08 hours

ATMOSPHERE CONDITION : Clear Sky

### TEST REPORT

S.NO	PARAMETER	UNIT	RESULT	METHOD
1.	Total Suspended Particulate Matter – TSPM	mg/m <sup>3</sup>	0.70	IS:5182 (P-4)
2.	Respirable Suspended Particulate Matter –RSPM	mg/m <sup>3</sup>	0.51	IS:5182 (P-23)

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info@svenviolabs.com, svenviro\_labs@yahoo.co.in

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

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Ref: SVELC/SMAL/21-12/08

Date: 17-12-2021

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

SAMPLE PARTICULARS : FUGITIVE EMISSIONS

SOURCE OF COLLECTION : NEAR RMHS AREA

DATE & TIME OF START : 09-12-2021@ 11:00hr

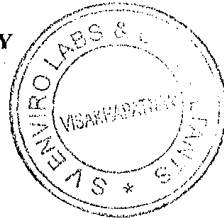
DURATION OF SAMPLING : 08 hours

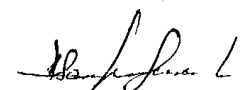
ATMOSPHERE CONDITION : Clear Sky

### TEST REPORT

S.NO	PARAMETER	UNIT	RESULT	METHOD
1.	Total Suspended Particulate Matter-TSPM	mg/m <sup>3</sup>	0.98	IS:5182 (P-4)
2.	Respirable Suspended Particulate Matter -RSPM	mg/m <sup>3</sup>	0.72	IS:5182 (P-23)

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

Recognized by Govt.of India-MoEF & CC, New Delhi, Accredited by : NABL & NABET



Ref: SVELC/SMAL/21-12/09

Date: 17-12-2021

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 : 08-12-2021@ 11:30hr

**TEST REPORT**

S.No.	DESCRIPTION	UNIT	RESULT
1.	Diameter of the Stack	m	0.0762
2.	C/s Area of Stack	m <sup>2</sup>	0.0045
3.	Pitot Coefficient	-	0.87
4.	Specific Gravity of Fluid	-	1.0
5.	Temperature @ DGM	°C	31
6.	Stack Temperature	°C	160
7.	Nozzle Diameter	mm	06
8.	Exit Velocity	m/sec	14.7
9.	Gas Quantity	Nm <sup>3</sup> /hr	162
10.	Duration of Sampling	minutes	45

**EMISSION RATE**

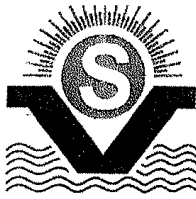
S.No	PARAMETER	UNITS	RESULT	CPCB STANDARD
1.	Particulate Matter – PM	g/kw-hr	0.15	0.3
2.	Oxides of Nitrogen – NOx	g/kw-hr	1.90	9.2
3.	Carbon Monoxide – CO	g/kw-hr	0.81	3.5
4.	Hydrocarbons - HC	g/kw-hr	0.19	1.3

*Swamy*  
 CHECKED BY



*Manoj Kumar*  
 SV ENVIRO LABS & CONSULTANTS

**M/s. Sarda Metals & Alloys Ltd: Kantakapalli**  
**Compliance report for**  
**EC No: F.No.j-11011/164/2009-IA II (I) Dated 26-11-2009**



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**& 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/21-12/10

Date: 17-12-2021

**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 :** 08-12-2021@ 12:15hr

**TEST REPORT**

S.No.	DESCRIPTION	UNIT	RESULT
1.	Diameter of the Stack	m	0.0762
2.	C/s Area of Stack	m <sup>2</sup>	0.0045
3.	Pitot Coefficient	-	0.87
4.	Specific Gravity of Fluid	-	1.0
5.	Temperature @ DGM	°C	31
6.	Stack Temperature	°C	174
7.	Nozzle Diameter	mm	06
8.	Exit Velocity	m/sec	16.0
9.	Gas Quantity	Nm <sup>3</sup> /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	2.28	9.2
3.	Carbon Monoxide – CO	g/kw-hr	0.84	3.5
4.	Hydrocarbons - HC	g/kw-hr	0.26	1.3

*[Signature]*  
**CHECKED BY**



*[Signature]*  
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Ref: SVELC/SMAL/21-12/11

Date: 17-12-2021

**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 :** 08-12-2021@ 13:15hr

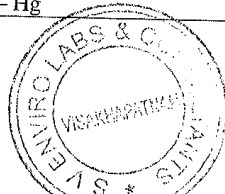
**TEST REPORT**

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 <sup>2</sup>	12.56
4.	Pitot Coefficient	-	0.87
5.	Specific Gravity of Fluid	-	1.0
6.	Temperature @ DGM	°C	32
7.	Stack Temperature	°C	150
8.	Nozzle Diameter	mm	09
9.	Exit Velocity	m/sec	6.04
10.	Gas Quantity	m <sup>3</sup> /hr	273104
11.	Duration of Sampling	minutes	45

**EMISSION RATE**

S.No	PARAMETER	UNITS	RESULT	PCB STANDARD
1.	Particulate Matter – PM	mg/Nm <sup>3</sup>	31.6	50
2.	Sulphur Dioxide – SO <sub>2</sub>	mg/Nm <sup>3</sup>	72.8	-
3.	Oxides of Nitrogen – NOx	mg/Nm <sup>3</sup>	85.2	-
4.	Mercury – Hg	mg/Nm <sup>3</sup>	< 0.0056	-

  
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 info@svenviolabs.com, svenviro\_labs@yahoo.co.in

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

Recognized by Govt.of India-MoEF & CC, New Delhi, Accredited by : NABL & NABET



Ref: SVELC/SMAL/21-12/12

Date: 17-12-2021

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 : 08-12-2021@ 14:30hr

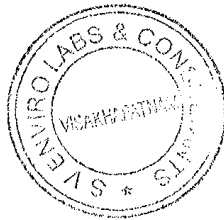
### TEST REPORT

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 <sup>2</sup>	35.13
4.	Pitot Coefficient	-	0.87
5.	Specific Gravity of Fluid	-	1.0
6.	Temperature @ DGM	°C	31
7.	Stack Temperature	°C	135
8.	Nozzle Diameter	mm	09
9.	Exit Velocity	m/sec	5.64
10.	Gas Quantity	m <sup>3</sup> /hr	713279
11.	Duration of Sampling	minutes	60

### EMISSION RATE

S.No.	PARAMETER	UNIT	RESULT	PCB STANDARD
1.	Particulate Matter – PM	mg/Nm <sup>3</sup>	33.8	50
2.	Sulphur Dioxide – SO <sub>2</sub>	mg/Nm <sup>3</sup>	272	600
3.	Oxides of Nitrogen – NOx	mg/Nm <sup>3</sup>	167	300
4.	Mercury – Hg	mg/Nm <sup>3</sup>	< 0.0056	-

CHECKED BY



SV ENVIRO LABS & CONSULTANTS

**ANNEXURE-2 ANNUAL MEDICAL CHECKUP-2021-22**

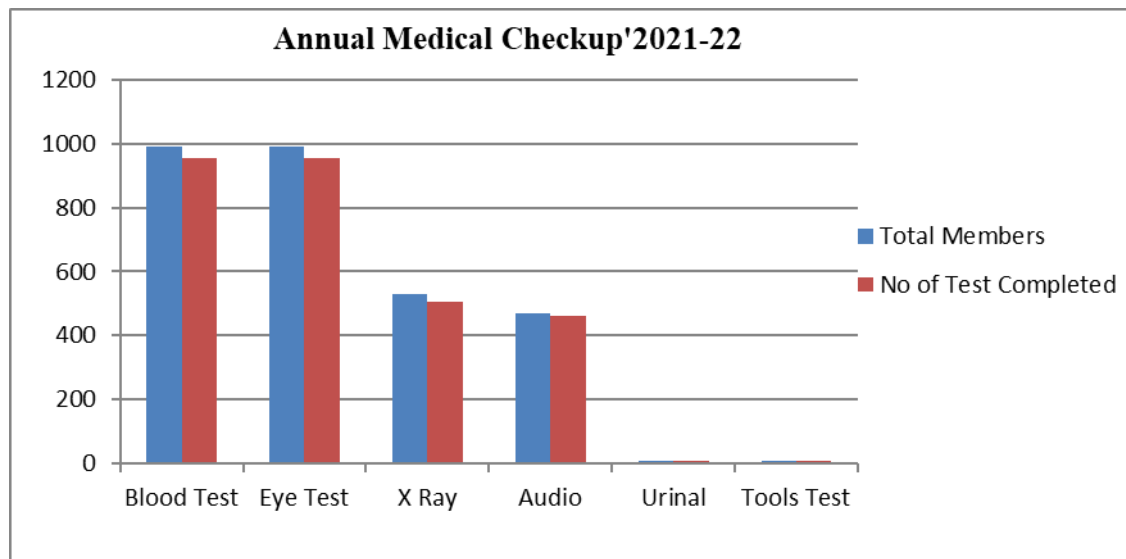


*Audio Metric*



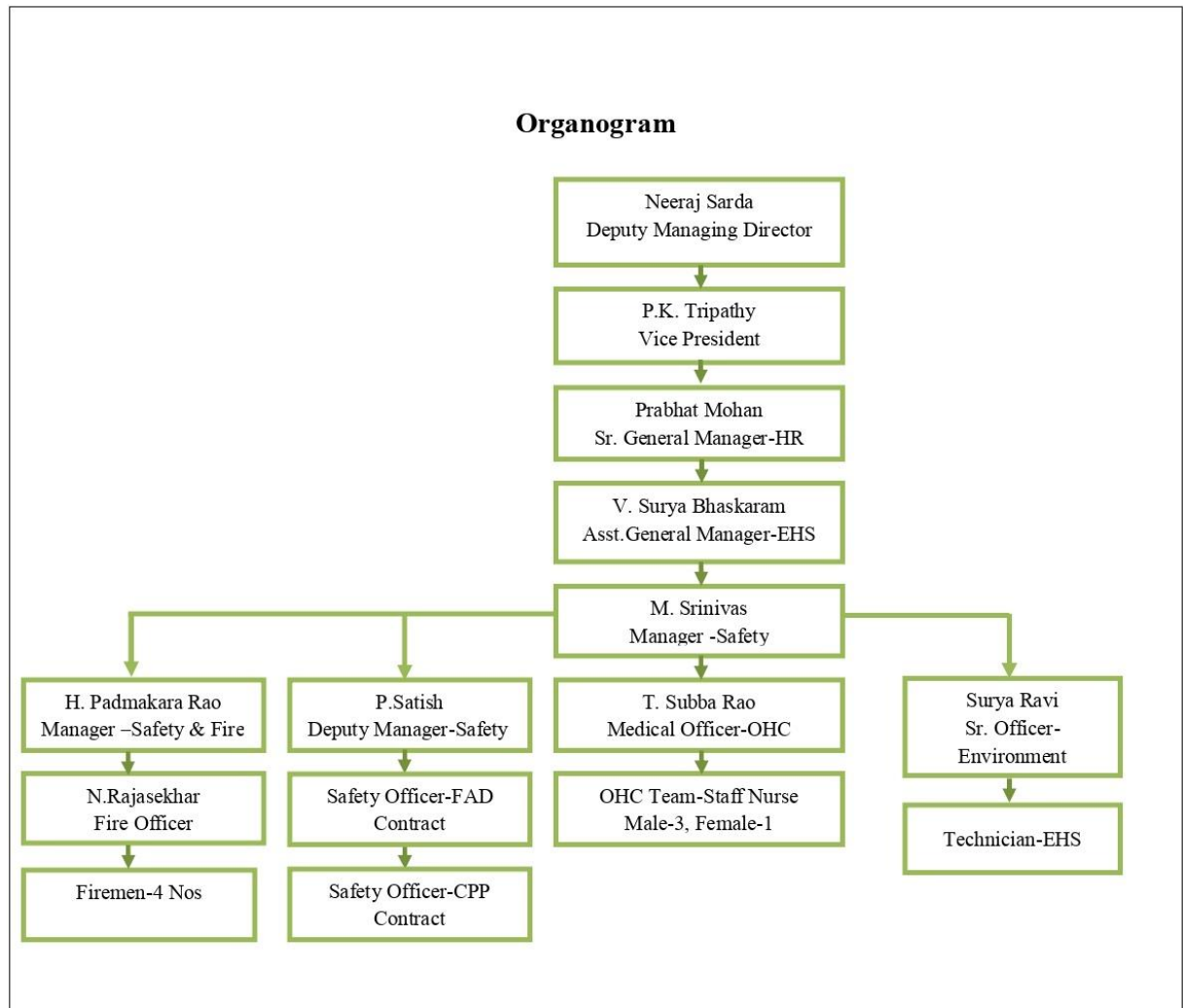
*Eye Test*

Annual Medical Checkup 2021-22						
	Blood Test	Eye Test	X Ray	Audio	Urinal	Tools Test
Total Members	990	990	530	470	9	9
No of Test Completed	953	953	507	462	9	9





**ANNEXURE-3 ORGANO GRAM**



Hazardous Waste Manifest

FORM 10  
 [SEE RULE 19 (1)]  
 MANIFEST FOR HAZARDOUS AND OTHER WASTE

1.	Sender's name and mailing address (including Phone No. and E-mail)	M/s. Sarda Metals and Alloys Ltd. APJIC Industrial Park, Kantakapalli (V) Kothavalara (M), Vizianagaram (D) 535240 chs@smal.co.in, 7382627553
2.	Sender's authorisation No.	APPCB/VSP/VZN/200/CFD/HO/2021
3.	Manifest Document No.	02
4.	Transporter's name and address : (including Phone No. and e-mail)	Sri Siva Sai Petroleum products Plot No. 223, Block No: B-01 Near auto Nagar, Kanuru (V) Panamaluru (M), IDA, Krishna (D) SSSP66@gmail.com, 9246629688, 9246928666
5.	Type of vehicle	(Truck/Tanker/Special Vehicle)
6.	Transporter's registration No.	
7.	Vehicle registration No.	AP16TL1276
8.	Receiver's name and mailing address (including Phone No. and e-mail)	Sri Siva Sai Petroleum products Plot No: 223, Block No. B-01, New Autonagar Kanuru (V), Panamaluru (M), IDA, Krishna (D)
9.	Receiver's authorisation No.	K-1551/APPCB/RO/VJACFD/WBA/2017-103
10.	Waste description	Used waste oil
11.	Total quantity No. of Containers	100 lit 5 Barrels m3 or MT 1.070 Mt.
12.	Physical form	(Solid/Semi-Solid) Solid/Sludge/Oily/Tarry/Slurry/Liquid
13.	Special handling instructions and additional information	
14.	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
Name and stamp : Sardaji Debby. M		Signature :  Day: 30, Month: 10, Year: 2021
15. Transporter acknowledgement of receipt of Wastes		
Name and stamp : G. Chinnada		Signature :  Proprietor Day: 30, Month: 10, Year: 2021
16. Receiver's certification for receipt of hazardous and other waste		
Name and stamp : G. Chinnada		Signature : For Sri Siva Sai Petroleum Products  Day: 30, Month: 10, Year: 2021
Copy 1 (White)	To be forwarded by the sender to the State Pollution Control Board after signing all the seven copies.	
Copy 2 (Yellow)	To be retained by the sender after taking signature on it from the transporter and the rest of the five signed copies to be carried by the transporter.	
Copy 3 (Pink)	To be retained by the receiver (actual user or treatment storage and disposal facility operator) after receiving the waste and the remaining four copies are to be duly signed by the receiver.	
Copy 4 (Orange)	To be handed over to the transporter by the receiver after accepting waste.	
Copy 5 (Green)	To be sent by the receiver to the State Pollution Control Board.	
Copy 6 (Blue)	To be sent by the receiver to the sender.	
Copy 7 (Grey)	To be sent by the receiver to the State Pollution Control Board of the sender in case the sender is in another State. X	