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SMAL/IR0-MoEF&CC/HCR/2022-23

Date: 06 .06.2023.

To

**The Joint Director (S),
MoEF & CC,
Government of India,
Integrated Regional Office, Green House,
Gopala Reddy Road, Vijayawada-520010,
Andhra Pradesh.**

Dear Sir,

Sub: Submission of EC Half yearly Compliance Report for the period of Oct'2022 to March'2023 Reg.

Ref: EC File No. J-11011/164/2009-IA.II(I), Date: 27.05.2022.

With reference to the above subject, we M/s. Sarda Metals & Alloys Ltd., APIIC, Industrial Area, Kantakapalli (V), Kothavalasa (M), Vizianagaram District, Andhra Pradesh, are herewith submitting the EC Half yearly condition wise compliance report for the period of Oct'2022 to March'2023 to your good office.

This is for your kind information and records.

Please acknowledge same.

Yours sincerely,

for M/s. Sarda Metals & Alloys Ltd.,

A handwritten signature in blue ink, appearing to read "V. Surya Bhaskaram", with a blue circular stamp or mark below it.

**V. Surya Bhaskaram
AGM - EHS
Authorised Signatory**

Encl, Half Yearly Compliance report

Status of Environmental Clearances received from MOEF vide MoEF No. F. No. J-11011/164/2009-IA.II (I), Dated 27.05.2022.

- i. Compliance report is enclosed herewith for all the conditions stipulated by MoEF & CC.

A. Specific Conditions																	
S No	Condition	Compliance															
i	Three-tier Green Belt shall be developed in 33% of the total project area by August' 2022 with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. The survival rate of the green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard, shall be submitted to the concerned Regional Office of the MoEF&CC.	<p>SMAL has developed green belt of 33% i.e., 93.23 acres as per MoEF&CC guidelines.17000 trees were planted in the plant. As advised by the committee, SMAL will undertake the planting of additional trees to comply with the norm of 2500 trees per Hectare. The details are given below:</p> <table border="1"> <tr> <td>Area of Greenbelt</td> <td>:</td> <td>93.23 Acres/37.72 Ha.</td> </tr> <tr> <td>Tree Density</td> <td>:</td> <td>2500 trees / Ha. Or 1012 trees/ Acre</td> </tr> <tr> <td>Width of Greenbelt</td> <td>:</td> <td>15m all along the periphery of the plant boundary</td> </tr> <tr> <td>Required No. of Saplings to be planted</td> <td>:</td> <td>94311 trees</td> </tr> <tr> <td>Number of trees already Planted</td> <td>:</td> <td>30000 trees</td> </tr> </table> <p>Plantation will be done phase-wise and the status of the same will be submitted to RO, MoEF & CC.</p>	Area of Greenbelt	:	93.23 Acres/37.72 Ha.	Tree Density	:	2500 trees / Ha. Or 1012 trees/ Acre	Width of Greenbelt	:	15m all along the periphery of the plant boundary	Required No. of Saplings to be planted	:	94311 trees	Number of trees already Planted	:	30000 trees
Area of Greenbelt	:	93.23 Acres/37.72 Ha.															
Tree Density	:	2500 trees / Ha. Or 1012 trees/ Acre															
Width of Greenbelt	:	15m all along the periphery of the plant boundary															
Required No. of Saplings to be planted	:	94311 trees															
Number of trees already Planted	:	30000 trees															
ii	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from the exposed soil surface.	Noted for compliance and being followed.															
iii	Following additional arrangements to control fugitive dust shall be provided.																
	a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas.	Noted. Fog / Mist Sprinklers provided at applicable areas at conveyors points and on bulk raw material storage areas (at the transfer points) like Iron Ore, Coal and for Fly Ash, and similar solid waste storage areas. For your reference attached in Annexure-1															
	b. Proper covered vehicle shall be used while transport of materials.	Noted and Being followed and for your reference attached in Annexure-2 .															
	c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.	Complied. For your reference attached in Annexure-3 .															
iv	All internal roads and connecting roads from the project site to the main highway shall be developed and maintained with suitable Million Axle Standard (MSA) as per the traffic load due to the existing and proposed project.	Noted and Being followed and for your reference attached in Annexure-4 .															
v	Performance tests shall be conducted on all pollution control systems every year and a	Noted and being followed and for your reference attached in Annexure-5 .															

	report shall be submitted to the Regional Office of the MoEF&CC.	
vi	Particulate matter emission from stacks shall be less than 30 mg/Nm ³ .	Complied. Continuous monitoring data is synchronized to APPCB & CPCB servers respectively. The data is uploading to APPCB server URL: http://aprtcms.ap.gov.in . & CPCB http://rtdms.cpcb.gov.in-status
vii	Submerged Arc Furnace shall be equipped with the fourth hole fume extraction system.	Noted and the Fume extraction system is provided as guided and for your reference attached in Annexure-6 .
viii	100% slag generated from the process shall be utilized. Compliance status in this regard shall be submitted to the Regional Office of the MoEF&CC.	Noted and slag being disposed as guided by APPCB. compliance status being submitted to R.O, MoEF & CC.
ix	PP shall do 3-tier green belt along the perimeter boundary of the project, surrounding coal dumping and raw material yard, besides block plantation within the project area.	Noted and industry started developing green belt as guided. Completion will be done in phased manner and for your reference attached in Annexure-7 .
x	PP shall improve the Housekeeping of the project premises with best standards.	SMAL continuously strives to maintain housekeeping by using 5S and TPM practices which are internationally followed.
xi	10 numbers of truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere and the black dust on the nearby Mango orchards of the villagers.	10 numbers of truck-mounted Fog/Mist water cannons will be provided in phase-wise and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere and the black dust on the nearby Mango orchards of the villagers. Phase-1:1Nos, Phase-2:2 Nos, Phase-3:7Nos
xii	Mechanical road sweeping shall be done in the surrounding villages also periodically.	Noted for compliance and being followed. Earlier industry is using three manual machines of three numbers which were ineffective. Industry purchased One high capacity jumbo sweeping machine for road sweeping and for your reference attached in Annexure-8 .
xiii	Project proponent shall follow safeguards to control the exposure of silica dust and some formaldehyde exposures arising out during production of mineral fibers. Compliance status in this regard, shall be submitted to concern Regional Office of the MoEF&CC.	Not applicable at this stage as Industry still has not established mineral fiber plant.

General Conditions

I. Statutory compliance:

S No	Condition	Compliance
	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., Required to be obtained or standards/conditions to be followed under any other Acts / Rules / Subordinate legislation, etc., as may be applicable to the project.	Noted for compliance.
II Air quality monitoring and preservation		
S No	Condition	Compliance
i	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as two Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specifications through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Noted for compliance. SMAL has been provided online stack monitoring system and CAAQM systems for existing plants. The same will be implemented for the proposed project. Periodic Calibration of the same will be carried out as per the condition. OCEMS data is synchronized to APPCB & CPCB servers respectively. The data is uploading to APPCB server URL: http://aprtcms.ap.gov.in & CPCB http://rtdms.cpcb.gov.in-status
ii	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Noted and being followed and for your confirmation attached in Annexure-9 .
iii	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	Noted for compliance. SMAL has provided Bag house at FAD and ESP at the power plant. Dust extraction systems have been provided at transverse points and dust suppression systems at conveyors. Same systems will be implemented for proposed plants For your confirmation attached in Annexure-10 .
iv	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Noted for compliance. Differential pressure system being implemented for the existing plant. Same systems will be implemented for proposed plants.

v	Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting / agglomeration.	Noted and ore fines, coal and coke fines and such other fines collected in the pollution control devices and vacuum cleaning devices are being reused in the process after briquetting.
vi	The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.	Noted and all the vehicles are covered during transportation of coal and other material and for your reference attached in Annexure-2
vii	The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.	Noted and provided primary and secondary fume extraction system at all melting furnaces. Same will be followed during expansion and for your reference attached in Annexure-6.
viii	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	Noted and provided in the applicable areas for your reference attached in Annexure-11.
III	Water quality monitoring and preservation	
S No	Condition	Compliance
i	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) 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.	Complied. Continuous effluent monitoring data is synchronized to APPCB & CPCB servers respectively. The data is uploading to APPCB server URL: http://aprtcms.ap.gov.in & CPCB http://rtdms.cpcb.gov.in-status
ii	The project proponent shall monitor regularly groundwater 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	Noted for compliance SMAL has installed Piezometer for your reference attached in Annexure-12. Groundwater is being tested once in a quarter. Accordingly manual monitoring with NABL accredited laboratory M/s. S.V. Enviro Labs and we care under the specified limits.
iii	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards	Noted for compliance and will be implemented and for your reference attached in Annexure-13.
iv	The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to	Noted and will be provided after installing rolling mills.

	time.	
v	Garland drains and collection pits shall be provided 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.	Noted and provided garland drains at applicable areas and for your reference attached in Annexure-14 .
vi	Tyre washing facilities shall be provided at the entrance/exit of the plant gates.	Complied. For your reference attached in Annexure-3 .
IV	Noise monitoring and prevention	
	Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Complied. Accordingly manual monitoring with NABL accredited laboratory M/s. S.V. Enviro Labs and we care under the specified limits and reports attached in Annexure-9 .
V	Energy Conservation measures	
	Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.	Noted and SMAL already provided LED lights in the existing plane and the same practices will be followed for new plants. SMAL will explore the possibilities of energy conservation measures by adopting solar energy systems at applicable areas, to minimize the energy consumption.
VI	Waste management	
	i. Used refractories shall be recycled.	Noted and being followed
	ii. Kitchen waste shall be composted or converted to biogas for further use.	Noted. Biogas system provided and kitchen waste being composted in the same. Generated bio-gas is being used in the kitchen for cooking image attached in Annexure-15 .
VII	Green Belt	
i	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. SMAL will prepare GHG emissions inventory for the plant and will submit the program for reduction of the same including carbon sequestration including plantation.
ii	The project proponent shall submit a study report on the De-carbonization program, which balances, carbon sequestration activities and carbon capture, use and storage, and offsetting strategies. Further, the report shall also contain time-bound action plan to reduce the carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy, etc. All these activities / assessments should be measurable and monitor able with defined time frames.	Noted and Vendor identified PR raised and time-bound action plan will be submitted for the same TCD-30.09.2023 .

VIII	Public hearing and Human health issues	
i	Emergency preparedness plan based on the Hazard Identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Noted and HIRA and DMP will be submitted during the project phase.
ii	The project proponent shall carry out heat stress analysis for the workmen who work in the high-temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of the Factory Act.	Noted and an industrial hygiene survey was conducted to assess workplace exposure of workmen. Action was taken as per guidelines.
iii	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	Noted and being followed. Annual medical tests being carried out for the workers and reports attached in Annexure-16 .
IX	Environment Management	
i	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt Kantakapalli, Katakapalli, Kotturu, Patta Sunkarapalem, Kotha Sunkarapalem, Gollapeta, Chinnaraopalli, Baligattam, Chiinipalem, Sambayyapalem, Appannapalem and Nimmalapalem villages based on the socio-economic survey and undertake community development activities in consultation with the village Panchayat and the District Administration as committed.	Noted for compliance and SMAL will undertake community development activities in consultation with the village Panchayat and the District Administration in phase-wise.
ii	The company shall have a well-laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe standard operating procedures to have proper checks and balances and to bring into focus any infringements / deviation / violations of the environmental / forest / wildlife norms / Conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stakeholders. A copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of the six-monthly report.	Noted for compliance.
iii	A separate Environmental Cell both at the project and company headquarter level, with qualified personnel shall be set up under the	This condition has complied. AGM-EHS and senior Officer. AGM-EHS directly reports to the Head of

	control of a senior Executive, who will directly to the head of the organization.	the organization.
X	Miscellaneous	
i	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local news papers of the District or State, of which one shall be in the vernacular language within seven days and in addition, this shall also be displayed in the project proponent's website permanently.	Noted. Industry made public the environmental clearance granted in two local newspapers of the District of which one is in the vernacular language and for your reference attached in Annexure-17 .
ii	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Noted. The copies of the environmental clearance are submitted to the Heads of local bodies, Panchayats, and Municipal Bodies in addition to the relevant offices of the Government.
iii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Noted and being followed.
iv	The project proponent shall monitor the criteria pollutants level namely; PM ₁₀ , SO ₂ , 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.	Noted and provided display board at the main gate and attached in Annexure-18 .
v	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	Noted and being followed as per the condition.
vi	The project proponent shall 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.	Noted. Will be followed as per condition and Acknowledgement attached for your reference in Annexure-19 .
vii	The project proponent shall inform the Regional Office as well as the Ministry, the date of	Noted and will be followed as per the condition.

	financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	
viii	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Noted as SMAL will abide by the condition as committed.
ix	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).	Noted and will ensure the same.
x	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted.
xi	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted
xii	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted and SMAL will implement applicable conditions in time-bound manner during the project phase.
xiii	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Noted
xiv	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.

CSR EXPENDITURE DURING FY 2022-23

S. No	CSR Initiative	EXPENDITURE
1	Education	37,77,837
2	Sustainable Livelihood	2,30,000
3	Environmental	21,60,000
4	Infrastructure Development	76,18,285
5	Health	24,16,258
6	Art, Culture and Sports	9,42,727
7	Disaster Management	13,32,142
8	Charity & Donation	9,84,000
Total		19461249

DETAILS OF PRODUCTION AND CONSUMPTION

Ferro Alloy Division-Raw material Consumption & Production Details							
Month & Year	Raw Material Consumption-MT						Product-Tons
	Mn Ore	RB3 & RB2-Coal	Nut Coke	Quartz	Dolomite	Mill Scale	Ferro Alloys
Oct-22	17522.80	4910.91	1046.80	1360.43	0	0	6299.06
Nov-22	18332.48	4412.16	1486.18	1725.04	0	0	6924.12
Dec-22	20382.41	4754.59	1752.80	2367.57	0	0	7790.04
Jan-23	24850.505	5615.066	1989.808	3842.158	0	0	10393.74
Feb-23	23169.201	5876.5	1912.48	2570.59	0	0	9396.92
Mar-23	24911.025	5600.12	2318.02	2526.243	0	0	10063.62
Total	202099.15	48261.03	16726.39	23331.02	0	0	80721.78

Captive Power Plant-Raw Material Consumption and Production Details.

Month & Year	Coal Consumption (MT)	Production Electricity (MWH)
Oct-22	30314.98	36313.00
Nov-22	30925.71	37366.00
Dec-22	34440.03	43746.00
Jan-23	39104.77	54239.00
Feb-23	36100.09	49614.00
Mar-23	39718.94	52007.00
Total	210604.52	273285.00

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 (GCP Dust)	Fe Mn GCP Dust	Si Mn Slag	MnO Slag
Oct-22	302.23	0	7763.57	0
Nov-22	301.96	0	8551.04	0
Dec-22	297.58	0	9118.51	0
Jan-23	400.70	0	11340.43	0
Feb-23	318.10	0	10011.42	0
Mar-23	322.32	0	10839.70	0
Total	1942.89	0	57624.67	0

Captive Power Plant Solid Waste Generation Details (MT)

Month & Year	Fly Ash Generation (MT)	Fly Ash Sold (MT)	Bottom Ash Generation (MT)	Bottom Ash Sold (MT)
Oct-22	4131.00	3844.16	121.00	117.33
Nov-22	6554.00	6027.43	204.00	190.27
Dec-22	6637.00	7290.31	135.00	138.15
Jan-23	4960.00	4989.79	119.00	121.06
Feb-23	6210.00	6219.79	110.36	109.51
Mar-23	8588.00	8585.80	129.00	129.39
Total	37080	36957.28	818.36	805.71

Ferro Alloy Division and Captive Power Plant					
Process/ Industrial Cooling Water Consumption (in M³) Details					
Month & Year	Cooling Tower Makeup	Softener Regeneration	Slag & Process Water	Boiler Feed	Domestic
Oct-22	11576	200	14190	5003	262
Nov-22	13980	240	11236	2541	282
Dec-22	14008	280	7387	1640	272
Jan-23	19356	280	14078	1670	252
Feb-23	20294	400	14825	1650	275
Mar-23	19872	360	18029	2050	216
Total	99086	1760	79745	14554	1559

ANNEXURE-1
WATER SPRINKLER SYSTEM

<p><i>High Pressure Water Sprinkling System</i></p>	<p><i>Water sprinkling system for Haulage Road and Green Belt</i></p>
	
<p><i>Inbuilt water sprinkler system for stacker at coal handling plant</i></p>	<p><i>Water Sprinkling System & Haulage Road Dust Suppression</i></p>
	

ANNEXURE-2
MATERIAL TRANSPORTATION COVERED WITH TOURPALIN



ANNEXURE-3
Tyre Washing Facility at Main Gate



ANNEXURE-4
BITUMEN ROAD INSIDE PLANT

<p>Project Office to Main Gate road</p> 	<p>Project Office to Stores</p> 
<p>Plant inside Connectivity Junction</p> 	<p>Stores to Main gate</p> 

ANNEXURE-5
OCEMS CALIBRATION CERTIFICATES

VASTHI INSTRUMENTS PRIVATE LIMITED
IT'S ALL ABOUT SAFETY



Plot No. 21 & 22, 3rd and 4th Floor Phase IV, Mangalagiri Road, Auto Nagar, Guntur -
522002, info@vasthi.com Tele No. 0863-2238 667, Fax No.0863-2262 667

TEST & CALIBRATION REPORT

DATE OF CALIBRATION: 18.06.2022

NEXT CALIBRATION Due : 17.06.2023

CUSTOMER: M/s Sarda Metals & Alloys Ltd Vizag Common Purchasing Plant , APPIIC,Industrial Park ,Kantaka Palli ,Kothavalasa-535240, Vizanagaram ,India	P.O.No: 4400100156 Order Date: 08.06.2021 Instrument Model No:V_ Air-1000 Instrument Type: Air Quality Monitoring System Range: SO ₂ : 0-10 PPM, NO _x :0-10 PPM, PM10 : 0- 0.6mg/m ³ , PM2.5 : 0-0.6mg/m ³ .
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Instrument Location : Power plant
Instruments Serial No : VI202100234
Voltage Rating : 230V AC, 50Hz
Calibrator used : Model: Air -Q-rate
Standard gases Used :SO₂: 5 PPM , NO_x: 10PPM.

1. N₂-99.9% GAS FED:

Parameter	Concentration value on display	Before Calibration	After Calibration	Difference PPM	% Error
SO ₂	000	000	000	000	000
NO _x	000	000	000	000	000

2. SO₂ -5 PPM GAS FED:

Stand Gas concentration	Measured before Calibration	Measured After Calibration	Difference	Error (%)
0 ppm	0 ppm	0 ppm	0 ppm	0 %
5 ppm	7 ppm	5.09 ppm	0.09 ppm	1.8 %

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522002, info@vasthi.com Tele No. 0863-2238 667, Fax No.0863-2262 667

3. NO_x -10 PPM GAS FED:

Stand Gas concentration	Measured before Calibration	Measured After Calibration	Difference
0 ppm	0 ppm	0 ppm	0 ppm
8ppm	7.4 ppm	6 ppm	02 ppm

3 .PM-10/2.5 Monitor : 0.6 mg/m³ :

Parameter	Reference Value mg/m ³	Gain Value mg/m ³	OFF Set Value mg/m ³	Calibrated Value mg/m ³
PM10	0.5	0.42	1.12	0.6
PM2.5	0.5	0.42	0.268	0.54

Functionality: Tested ok

TESTED BY
P. Swaroopa
P.Swaroopa)



CHECKED BY

(D.Govindaraju)

VASTHI INSTRUMENTS PRIVATE LIMITED
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Plot No. 21 & 22, 3rd and 4th Floor Phase IV, Mangalagiri Road, Auto Nagar, Guntur -
522002, info@vasthi.com Tele No. 0863-2238 667, Fax No.0863-2262 667

TEST & CALIBRATION REPORT

DATE OF CALIBRATION: 14.08.2022

NEXT CALIBRATION Due : 13.08.2023

CUSTOMER: M/s Sarda Metals & Alloys Ltd Vizag Common Purchasing Plant , APPIIC,Industrial Park ,Kantaka Palli ,Kothavalasa-535240, Vizanagaram ,India	P.O.No: 4400101416 Order Date: 14.08.2021 Instrument Model No:V_ Air-1000 Instrument Type: Air Quality Monitoring System Range: SO2:0-10 PPM, NOx :0-10 PPM, PM10 : 0- 0.6mg/m3 , PM2.5 : 0-0.6mg/m3.
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Instrument Location : Main Gate
Instruments Serial No : VI202100257
Voltage Rating : 230V AC, 50Hz
Calibrator used : Model: Air -Q-rate
Standard gases Used :SO2: 5 PPM , NOx: 10PPM.

1. N2-99.9% GAS FED:

Parameter	Concentration value on display	Before Calibration	After Calibration	Difference PPM	Error(%)
SO2	000	000	000	000	00
NOX	000	000	000	000	00

2. SO2 -5 PPM GAS FED:

Stand Gas concentration	Measured before Calibration	Measured After Calibration	Difference	Error (%)
0 ppm	0 ppm	0 ppm	0 ppm	0 %
5 ppm	7 ppm	5.07 ppm	0.07 ppm	1.4 %

VASTHI INSTRUMENTS PRIVATE LIMITED
IT'S ALL ABOUT SAFETY



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522002, info@vasthi.com Tele No. 0863-2238 667, Fax No.0863-2262 667

3. NOX -10 PPM GAS FED:

Stand Gas concentration	Measured before Calibration	Measured After Calibration	Difference	Error (%)
0 ppm	0 ppm	0 ppm	0 ppm	0 %
8ppm	7.4 ppm	8.02 ppm	0.02 ppm	0.25 %

3 .PM-10/2.5 Monitor : 0.6 mg/m3 :

Parameter	Reference Value mg/m3	Gain Value mg/m3	OFF Set Value mg/m3	Calibrated Value mg/m3
PM10	0.5	0.42	1.12	0.6
PM2.5	0.5	0.42	0.268	0.54

Functionality: Tested ok

TESTED BY

P Swaroopa
(P.Swaroopa)



CHECKED BY


(D.Govindaraju)

VASTHI INSTRUMENTS PRIVATE LIMITED
IT'S ALL ABOUT SAFETY



Plot No. 21 & 22, 3rd and 4th Floor Phase IV, Mangalagiri Road, Auto Nagar, Guntur - 522002, info@vasthi.com Tele No. 0863-2238 667, Fax No.0863-2262 667

TEST & CALIBRATION REPORT

DATE OF CALIBRATION: 13.08.2022

Next calibration Due : 12.08.2023

CUSTOMER: M/s Sarda Metals & Alloys Ltd Vizag Common Purchasing Plant , APPIIC,Industrial Park ,Kantaka Palli ,Kothavalasa-535240, Vizanagaram ,India	P.O.No: 4400101416 Order Date: 14.08.2021 Instrument Model No:V_ Air-1000 Instrument Type: Air Quality Monitoring System Range: SO2 : 0-10 PPM, NOx :0-10 PPM, PM10 : 0-0.6mg/m3 , PM2.5 : 0-0.6mg/m3.
---	--

Instrument Location : DM Plant
Instruments Serial No : VI202100258
Voltage Rating : 230V AC, 50Hz
Calibrator used : Model: Air-Q-rate
Standard gases Used :SO2: 5 PPM , NOx: 10PPM.

1. N2-99.9% GAS FED:

Parameter	Concentration value on display	Before Calibration	After Calibration	Difference PPM	Error(%)
SO2	000	000	000	000	00
NOX	000	000	000	000	00

2. SO2 -5 PPM GAS FED:

Stand Gas concentration	Measured before Calibration	Measured After Calibration	Difference	Error (%)
0 ppm	0 ppm	0 ppm	0 ppm	0 %
5 ppm	7 ppm	5.04 ppm	0.04 ppm	0.8 %

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3. NOX -10 PPM GAS FED:

Stand Gas concentration	Measured before Calibration	Measured After Calibration	Difference	Error %
0 ppm	0 ppm	0 ppm	0 ppm	0 %
8ppm	7.4 ppm	8.06 ppm	0.06 ppm	0.75 %

3 .PM-10/2.5 Monitor : 0.6 mg/m3 :

Parameter	Reference Value mg/m3	Gain Value mg/m3	OFF Set Value mg/m3	Calibrated Value mg/m3
PM10	0.5	0.42	1.12	0.6
PM2.5	0.5	0.42	0.268	0.54

Functionality: Tested ok

TESTED BY
P.Swaroopa
(P.Swaroopa)



CHECKED BY

(D.Govindaraju)

M/s. Sarda Metals & Alloys Limited::Kantakapalli
EC No: F.No.J-11011/164/2009-IA.II (I) Dated 27.05.2022



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Plot No. 21 & 22, Phase IV, Auto Nagar, Guntur - 522002.
info@vasthi.com Tele No. 0863-2238 667, Fax No.0863-2262 667

CALIBRATION REPORT

Calibration Date: 22.06.2022

Next Calibration Due : 21.06.2023

CUSTOMER: M/s Sarda Metals & Alloys Pvt Ltd Vizag Common Purchasing Plant, APPIIC,Industrial Park ,Kantaka Palli, Kothavalasa-535240, Vizanagaram ,India	Po.No : 6000029146 Dt.: 24.06.2021 Instrument.Location: Fad Stack Make: Land ,UK Model:4200
---	---

Instruments Serial No : C42-13020

Test Items	Technical Requirements	Test Results
Appearance and Structure	Accessories Complete; Glass Clean; No Scratch on Surface	Passed
Zero Drift	$\pm 2\% F.S./24h$	1.2%
Span Drift	$\pm 2\% F.S./24h$	1.1%
Relativity	$R \geq 0.85$	1.3
Half width of the confidence interval	Half width of the confidence interval $\leq 10\%$	6%
Half width of the allowed interval	Half width of the allowed interval $\leq 25\%$	18%
Accuracy	When $> 200mg/m^3$, relative error $\leq \pm 15\%$	10%

Tested By

P. Swaroopa
P.Swaroopa



Checked By

Y.Nandini
Y.Nandini

VASTHI INSTRUMENTS PRIVATE LIMITED
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Plot No. 21 & 22, Phase IV, Auto Nagar, Guntur - 522002.
info@vasthi.com Tele No. 0863-2238 667, Fax No.0863-2262 667

CALIBRATION REPORT

Calibration Date: 22.06.2022

Next Calibration Due : 21.06.2023

CUSTOMER: M/s Sarda Metals & Alloys Pvt Ltd Vizag Common Purchasing Plant, APPIIC,Industrial Park ,Kantaka Palli, Kothavalasa-535240, Vizanagaram , India.	Po.No : 6000029145 Dt.: 24.06.2021 Instrument Type: Dust /Opacity monitor
--	---

Instruments Serial No : 183415-14

Sl.No	Parameter	Before Calibration	After Calibration	Cal Check
1	Zero(0)	Opacity =1.5%	Opacity =0.2%	1.3%
2	Span(100)	Opacity = 98.6%	Opacity =100%	1.4%

Checked By

P. Swaroopa
P.Swaroopa



Tested By

Y.Nandini
Y.Nandini

M/s. Sarda Metals & Alloys Limited::Kantakapalli
EC No: F.No.J-11011/164/2009-IA.II (I) Dated 27.05.2022



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CALIBRATION REPORT

Calibration Date: 22.06.2022

Next calibration Due : 21.06.2023

CUSTOMER: M/s Sarda Metals & Alloys Ltd Vizag Common Purchasing Plant , APPIC,Industrial Park ,Kantaka Palli ,Kothavalasa-535240, Vizanagaram ,India	Po.No : 6000029145 Dt.: 24.06.2021 Instrument Type: Stack Opacity Meter P/P Range :SO2: 0 -2000PPM, NOx:0- 1000PPM,CO:0-2000PPM
---	--

Instrument model : PSGM-1-D-AGS(M)
Instrument Make : Prima
Instrument location : Power Plant
Instruments Serial No : 1706020
Voltage Rating : 230V AC, 50Hz

Calibration Gas Range : CO : 796PPM, SO2:990 PPM, NOx:967PPM,
Functional Tests : O.K

1. Nitrogen - 99.99 % Gas Fed

Gases used	Concentration value on display	Before Calibration	After Calibration	Difference mg/m ³	% Error
SO2	0000	0000	0000	0000	000
NOx	0000	0000	0000	0000	000
CO	0000	0000	0000	0000	000

2. CO - 796PPM Gas Fed

Gases used	Concentration value	Before Calibration	After Calibration	Difference mg/m ³	% Error
CO	796	795	796	0001	0.1%
SO2	----	0000	0000	0000	000
NOx	----	0000	0000	0000	000

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3. SO2-990 PPM Gas Fed

Gases used	Concentration value	Before Calibration	After Calibration	Difference PPM	% Error
SO2	990 PPM	995 PPM	993 PPM	2	0.2%
NOx	----	0000	0000	0000	000
CO	----	0000	0000	0000	000

4. NOx- 967 PPM Gas Fed

Gases used	Concentration value	Before Calibration	After Calibration	Difference PPM	% Error
NOx	967 PPM	966 PPM	967 PPM	1	0.1%
SO2	----	0000	0000	0000	000
CO	----	0000	0000	0000	000

Checked By

P. Swaroopa
P.Swaroopa



Tested By

Y. Nandini
Y.Nandini

ANNEXURE-6
FUMES EXTRACTION SYSTEM



ANNEXURE-7
3 TIRE GREENBELT DEVELOPMENT-PLANT INSIDE



ANNEXURE-8
SWEEPING MACHINES



ANNEXURE-9
THIRD PARTY MONITORING REPORTS



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

Ref: SVELC/SMAL/23-02/01

Date: 24-02-2023

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 : 17-02-2023 @ 09:30hr

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	$\mu\text{g}/\text{m}^3$	69.7	100	IS:5182 (P-23) Gravimetric
2.	Particulate Matter(Size<2.5 μ) or PM _{2.5}	$\mu\text{g}/\text{m}^3$	28.5	60	IS:5182 (P-24) Gravimetric
3.	Sulphur Dioxide – SO ₂	$\mu\text{g}/\text{m}^3$	15.4	80	IS:5182 (P-2) - West and Gaeke Method
4.	Oxides of Nitrogen – NO _x	$\mu\text{g}/\text{m}^3$	13.2	80	IS:5182(P-6) - Jacob & Hochheiser Method

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

Ref: SVELC/SMAL/23-02/02

Date: 24-02-2023

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 : 17-02-2023 @ 09:45hr

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	$\mu\text{g}/\text{m}^3$	61.0	100	IS:5182 (P-23) Gravimetric
2.	Particulate Matter(Size<2.5 μ) or PM _{2.5}	$\mu\text{g}/\text{m}^3$	27.4	60	IS:5182 (P-24) Gravimetric
3.	Sulphur Dioxide – SO ₂	$\mu\text{g}/\text{m}^3$	14.3	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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M/s. Sarda Metals & Alloys Limited::Kantakapalli
EC No: F.No.J-11011/164/2009-IA.II (I) Dated 27.05.2022



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Ref: SVELC/SMAL/23-02/03

Date: 24-02-2023



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 : 17-02-2023 @ 10:00hr

DURATION OF SAMPLING : 24 Hours

ATMOSPHERE CONDITION : Clear Sky

TEST REPORT

S.No	PARAMETER	UNIT	RESULT	NAAQ STANDARDS	METHOD
1.	Particulate Matter(Size<10 μ) or PM ₁₀	$\mu\text{g}/\text{m}^3$	59.2	100	IS:5182 (P-23) Gravimetric
2.	Particulate Matter(Size<2.5 μ) or PM _{2.5}	$\mu\text{g}/\text{m}^3$	25.6	60	IS:5182 (P-24) Gravimetric
3.	Sulphur Dioxide – SO ₂	$\mu\text{g}/\text{m}^3$	12.9	80	IS:5182 (P-2) - West and Gaeke Method
4.	Oxides of Nitrogen – NO _x	$\mu\text{g}/\text{m}^3$	11.3	80	IS:5182(P-6) - Jacob & Hochheiser Method

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Ref: SVELC/SMAL/23-02/04

Date: 24-02-2023



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 : 17-02-2023 @ 10:15hr

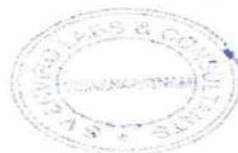
DURATION OF SAMPLING : 08 hours

ATMOSPHERE CONDITION : Clear Sky

TEST REPORT

S.No	PARAMETER	UNIT	RESULT	METHOD
1.	Total Suspended Particulate Matter – TSPM	mg/m^3	1.54	IS:5182 (P-4)
2.	Respirable Suspended Particulate Matter – RSPM	mg/m^3	0.96	IS:5182 (P-23)

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Ref: SVELC/SMAL/23-02/05

Date: 24-02-2023

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 TAPPING EMISSION AREA

DATE & TIME OF START : 18-02-2023 @ 09:45hr

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 ³	1.78	IS:5182 (P-4)
2.	Respirable Suspended Particulate Matter – RSPM	mg/m ³	1.06	IS:5182 (P-23)


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Ref: SVELC/SMAL/23-02/06

Date: 24-02-2023

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 FMY AREA

DATE & TIME OF START : 18-02-2023 @ 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 ³	0.79	IS:5182 (P-4)
2.	Respirable Suspended Particulate Matter – RSPM	mg/m ³	0.53	IS:5182 (P-23)


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Ref: SVELC/SMAL/23-02/07

Date: 24-02-2023



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 : 18-02-2023 @ 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 ³	0.85	IS:5182 (P-4)
2.	Respirable Suspended Particulate Matter – RSPM	mg/m ³	0.47	IS:5182 (P-23)


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Ref: SVELC/SMAL/23-02/08

Date: 24-02-2023



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 : 18-02-2023 @ 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 ³	1.03	IS:5182 (P-4)
2.	Respirable Suspended Particulate Matter – RSPM	mg/m ³	0.81	IS:5182 (P-23)


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EC No: F.No.J-11011/164/2009-IA.II (I) Dated 27.05.2022



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Ref: SVELC/SMAL/23-02/09

Date: 24-02-2023

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 : 17-02-2023 @ 11:30 hr

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	32
7.	Stack Temperature	°C	175
8.	Nozzle Diameter	mm	09
9.	Exit Velocity	m/sec	6.05
10.	Gas Quantity	m ³ /hr	273556
11.	Duration of Sampling	minutes	45

EMISSION RATE

S.No	PARAMETER	UNITS	RESULT	PCB STANDARD
1.	Particulate Matter – PM	mg/Nm ³	25.8	50
2.	Sulphur Dioxide – SO ₂	mg/Nm ³	37.6	-
3.	Oxides of Nitrogen – NOx	mg/Nm ³	46.2	-
4.	Mercury – Hg	mg/Nm ³	< 0.0056	-

CHECKED BY

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Ref: SVELC/SMAL/23-02/10

Date: 24-02-2023

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 : 17-02-2023 @ 14:30 hr

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	148
8.	Nozzle Diameter	mm	09
9.	Exit Velocity	m/sec	6.13
10.	Gas Quantity	m ³ /hr	775248
11.	Duration of Sampling	minutes	60

EMISSION RATE

S.No	PARAMETER	UNIT	RESULT	PCB STANDARD
1.	Particulate Matter – PM	mg/Nm ³	23.6	50
2.	Sulphur Dioxide – SO ₂	mg/Nm ³	220	600
3.	Oxides of Nitrogen – NOx	mg/Nm ³	134	300
4.	Mercury – Hg	mg/Nm ³	< 0.0056	-

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M/s. Sarda Metals & Alloys Limited::Kantakapalli
EC No: F.No.J-11011/164/2009-IA.II (I) Dated 27.05.2022



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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 Date: 24-02-2023



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 : 18-02-2023 @ 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	33
6.	Stack Temperature	°C	160
7.	Nozzle Diameter	mm	06
8.	Exit Velocity	m/sec	15.2
9.	Gas Quantity	Nm ³ /hr	168
10.	Duration of Sampling	minutes	45

EMISSION RATE

S.No	PARAMETER	UNITS	RESULT	CPCB STANDARD
1.	Particulate Matter - PM	g/kw-hr	0.16	0.3
2.	Oxides of Nitrogen - NOx	g/kw-hr	2.08	9.2
3.	Carbon Monoxide - CO	g/kw-hr	0.97	3.5
4.	Hydrocarbons - HC	g/kw-hr	0.32	1.3

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Kothavalasa-535240,
Vizianagaram.

SAMPLE PARTICULARS : STACK EMISSIONS

SOURCE OF COLLECTION : 250 KVA DG Set -2

DATE & TIME OF COLLECTION : 18-02-2023 @ 14:00hr

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	33
6.	Stack Temperature	°C	173
7.	Nozzle Diameter	mm	06
8.	Exit Velocity	m/sec	16.1
9.	Gas Quantity	Nm ³ /hr	172
10.	Duration of Sampling	minutes	45

EMISSION RATE

S.No	PARAMETER	UNITS	RESULT	CPCB STANDARD
1.	Particulate Matter - PM	g/kw-hr	0.21	0.3
2.	Oxides of Nitrogen - NOx	g/kw-hr	2.43	9.2
3.	Carbon Monoxide - CO	g/kw-hr	0.89	3.5
4.	Hydrocarbons - HC	g/kw-hr	0.27	1.3

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Ref: SVELC/SMAL/23-02/13

Date: 24-02-2023



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VIZAG COMMON PURCHASING PLANT,
APIIC, Industrial Park, Kantakapalli,
Kothavalasa-535240,
Vizianagaram.

SAMPLE PARTICULARS : WORK ZONE NOISE (CPP)

DATE OF COLLECTION : 17-02-2023

TEST REPORT

S.No	SOURCE OF COLLECTION	Noise levels measured in dB(A)	Method
1.	Near Boiler Area	73.4	IS:4954 – 1968 Noise Level Meter
2.	Near TG Building	76.1	
3.	Near CHP Ground Hopper	69.8	
4.	Near CHP Crushes House	71.6	
5.	Near FD Fan	64.9	
6.	Near Coal Mill Area	72.5	
7.	Compressor Area	75.2	
8.	Near ID Fan Area	74.7	
CPCB STANDARDS		90.0	



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Ref: SVELC/SMAL/23-02/14

Date: 24-02-2023



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Vizianagaram.

SAMPLE PARTICULARS : WORK ZONE NOISE (FAD)

DATE OF COLLECTION : 17-02-2023

TEST REPORT

S.No	SOURCE OF COLLECTION	Noise levels measured in dB(A)	Method
1.	Near Furnace 1	67.8	IS:4954 – 1968 Noise Level Meter
2.	Near Furnace 2	68.6	
3.	Metal Breaking Yard	72.9	
4.	28 Metre Area	74.3	
5.	RMHS Area	68.5	
CPCB STANDARDS		90.0	



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Vizianagaram.

SAMPLE PARTICULARS : NOISE LEVEL

DATE OF COLLECTION : 17-02-2023

TEST REPORT

S.No	SOURCE OF COLLECTION	Noise levels measured in dB(A)		Method
		DAY	NIGHT	
1.	Near Security Gate	69.4	60.8	IS:4954 – 1968 Noise Level Meter
2.	Near RO Plant	62.1	56.5	
3.	Near Admin Building	58.3	51.9	
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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Kothavalasa-535240,
Vizianagaram.

SAMPLE PARTICULARS : EFFLUENT WATER

SOURCE OF COLLECTION : FAD – COOLING TOWER

DATE OF COLLECTION : 17-02-2023

TEST REPORT

S.No	Parameter	Unit	Result	Discharge Standards
1.	pH	--	8.37	6.5 – 8.5
2.	Total Dissolved Solids	mg/l	1168	2100
3.	Total Suspended Solids	mg/l	4.0	100
4.	COD	mg/l	10.0	250
5.	BOD 3d 27°C	mg/l	3.0	30
6.	Oil & Grease	mg/l	<1.0	10


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Date: 24-02-2023



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Vizianagaram.

SAMPLE PARTICULARS : EFFLUENT WATER

SOURCE OF COLLECTION : CPP – COOLING TOWER

DATE OF COLLECTION : 17-02-2023

TEST REPORT

S.No	Parameter	Unit	Result	Discharge Standards
1.	pH	--	7.66	6.5 – 8.5
2.	Total Dissolved Solids	mg/l	1742	2100
3.	Total Suspended Solids	mg/l	7.0	100
4.	COD	mg/l	40.9	250
5.	BOD 3d 27°C	mg/l	12.0	30
6.	Oil & Grease	mg/l	<1.0	10


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Date: 24-02-2023



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Vizianagaram.

SAMPLE PARTICULARS : EFFLUENT WATER

SOURCE OF COLLECTION : GUARD POND

DATE OF COLLECTION : 17-02-2023

TEST REPORT

S.No	Parameter	Unit	Result	Discharge Standards
1.	pH	--	8.08	6.5 – 8.5
2.	Total Dissolved Solids	mg/l	1234	2100
3.	Total Suspended Solids	mg/l	6.0	100
4.	COD	mg/l	30.1	250
5.	BOD 3d 27°C	mg/l	8.0	30
6.	Oil & Grease	mg/l	<1.0	10


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Ref: SVELC/SMAL/23-02/19

Date: 24-02-2023

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Kothavalasa-535240,
Vizianagaram.

SAMPLE PARTICULARS : EFFLUENT WATER

SOURCE OF COLLECTION : NEUTRALISATION PIT

DATE OF COLLECTION : 17-02-2023

TEST REPORT

S.No	Parameter	Unit	Result	Discharge Standards
1.	pH	--	7.74	6.5 – 8.5
2.	Total Dissolved Solids	mg/l	682	2100
3.	Total Suspended Solids	mg/l	3.0	100
4.	COD	mg/l	10.0	250
5.	BOD 3d 27°C	mg/l	3.0	30
6.	Oil & Grease	mg/l	<1.0	10

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Date: 24-02-2023

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Vizianagaram.

SAMPLE PARTICULARS : EFFLUENT WATER

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

DATE OF COLLECTION : 17-02-2023

TEST REPORT

S.No	Parameter	Unit	1	2	3	4	Discharge Standards
1.	pH	--	7.04	7.48	6.75	7.23	6.5 – 8.5
2.	Total Dissolved Solids	mg/l	192	160	468	148	2100
3.	Total Suspended Solids	mg/l	26.0	23.0	37.0	6.0	100
4.	COD	mg/l	30.1	10.9	180	<10	250
5.	BOD 3days 27°C	mg/l	16	4.0	83.0	<3	30
6.	Oil & Grease	mg/l	<1.0	<1.0	1.6	<1.0	10
7.	Fecal Coliforms	MPN/100ml	382	22	694	16	-

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Ref: SVELC/SMAL/23-02/21

Date: 24-02-2023



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Vizianagaram.

SAMPLE PARTICULARS : WATER

SOURCE OF COLLECTION : ARIHANT BOREWELL

DATE OF COLLECTION : 18-02-2023

TEST REPORT

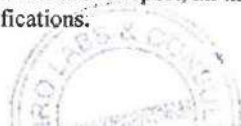
S.No	Parameter	Unit	Result	IS 10500:2012 Drinking Water Specifications
1.	Colour	Hazen	<1.0	5.0
2.	Odour	-	Agreeable	Agreeable
3.	Taste	-	Agreeable	Agreeable
4.	Turbidity	NTU	0.26	1.0
5.	pH	-	6.63	6.5 - 8.5
6.	Total Dissolved Solids	mg/l	294	500
7.	Total Alkalinity as CaCO ₃	mg/l	114	200
8.	Total Hardness as CaCO ₃	mg/l	181	200
9.	Calcium as Ca	mg/l	38.4	75
10.	Magnesium as Mg	mg/l	20.8	30
11.	Chlorides as Cl	mg/l	73.2	250
12.	Fluorides as F	mg/l	<0.01	1.0
13.	Nitrates as NO ₃ ⁻	mg/l	11.6	45
14.	Sulphates as SO ₄	mg/l	25.3	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:				
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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VIZAG COMMON PURCHASING PLANT,
APIIC, Industrial Park, Kantakapalli,
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Vizianagaram.

SAMPLE PARTICULARS : WATER

SOURCE OF COLLECTION : DM PLANT DRINKING WATER

DATE OF COLLECTION : 18-02-2023

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	0.14	1.0
5.	pH	-	6.58	6.5 - 8.5
6.	Total Dissolved Solids	mg/l	120	500
7.	Total Alkalinity as CaCO ₃	mg/l	106	200
8.	Total Hardness as CaCO ₃	mg/l	86.3	200
9.	Calcium as Ca	mg/l	22.4	75
10.	Magnesium as Mg	mg/l	7.38	30
11.	Chlorides as Cl	mg/l	12.7	250
12.	Fluorides as F	mg/l	<0.01	1.0
13.	Nitrates as NO ₃ ⁻	mg/l	1.10	45
14.	Sulphates as SO ₄	mg/l	4.56	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

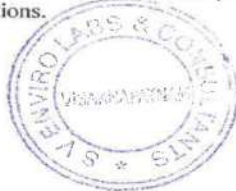
MICROBIOLOGY:

31.	<i>E. coli</i> forms	CFU/100mL	Not Detected	Shall not be detected in 100 ml
32.	Total Coliforms	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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ANNEXURE-10
FAD-DUST EXTRACTION SYSTEM



Dry Bottom Ash Handling System-1*80 MW Captive Power Plant

Covered Conveyor Belt at Captive Power plant



Stack attached to RABH-Reverse Air Bag House (2No's) in Ferro Alloy Division.



Product is loading in the closed containers



ANNEXURE-11
TUNNEL VENTILATION SYSTEM AT PP GROUND HOPPER



ANNEXURE-12
OPEN BORE WELL-PIEZOMETER



ANNEXURE-13
STP (Waste water treatment facilities)

RMHS AREA STP



Automatic Compressor System



Digital flow meter for outlet water



**ANNEXURE-14
GARLAD DRAINS**



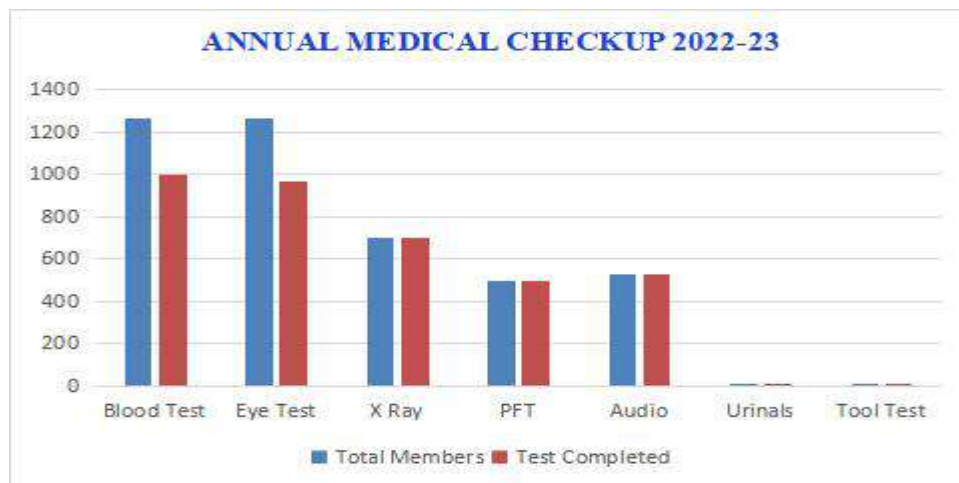
ANNEXURE-15
BIO GAS PLANT AT MAIN CANTEEN



**ANNEXURE-16
 ANNUAL MEDICAL CHECK UP**



ANNUAL MEDICAL CHECKUP 2022-23							
	Blood Test	Eye Test	X Ray	PFT	Audio	Urinals	Tool Test
Total Members	1264	1264	699	496	528	8	8
Test Completed	999	968	699	496	528	8	8



ANNEXURE-17
EC - NEWS PAPER PUBLICATIONS

గమనిక

M/s. సర్దా మెటల్స్ & అల్యాయిస్ లిమిటెడ్ వారు పర్యావరణ, అటవీ మరియు వాతావరణ మంత్రిత్వ శాఖ ద్వారా పర్యావరణ అనుమతులు (ఆర్డర్ నెం. J-11011/164/2009-IA. II(I)- Dt.: 27.05.2022), పొందినారు. ప్రతిపాదిత విస్తరణ క్లియరెన్స్ లెటర్ కాపీలు ఆండ్రప్రదేశ్ కాలుష్య నియంత్రణ మండలి వద్ద అందుబాటులో ఉన్నాయి. మరియు MoEFCC వెబ్సైట్లో కూడా చూడవచ్చు (<http://parvesh.nic.in>)

M/s సర్దా మెటల్స్ & అల్యాయిస్ లిమిటెడ్
APIIC ఇండస్ట్రియల్ పార్క్, కంటకపల్లి గ్రామం, కొత్తవలస మండలం, విజయనగరం జిల్లా, ఆండ్రప్రదేశ్-535240.

PUBLIC NOTICE

M/s. Sarda Metals & Alloys Limited is pleased to inform the general public that it has been accorded Environmental Clearance (F. No. J-11011/164/2009-IA. II(I)- Dt.: 27.05.2022), by the Ministry of Environment, Forest and Climate Change (MoEFCC) for the Proposed Expansion of Ferro Alloy Plant, Captive Power Plant and Installation of Steel Melting Shop, Mineral Fibre Plant at APIIC Industrial Park, Kantakapalli Village, Kothavalasa Mandal, Vizianagaram District, Andhra Pradesh. Copies of the clearance letter are available with Andhra Pradesh Pollution Control Board and can also be seen at website of the MoEFCC at <http://parvesh.nic.in>.

M/s. Sarda Metals & Alloys Limited
APIIC Industrial Park, Kantakapalli Village Kothavalasa
Mandal, Vizianagaram District, Andhra Pradesh-535240.

M/s. Sarda Metals & Alloys Limited::Kantakapalli
EC No: F.No.J-11011/164/2009-IA.II (I) Dated 27.05.2022



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

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



Ref: SMAL/APPCB/EC/5-22

Date:30.05.2022

To,
The Environmental Engineer,
Andhra Pradesh Pollution Control board,
Vizianagaram.

Dear Sir

Sub: Proposed Expansion of Expansion of Ferro Alloy Plant, Captive Power Plant and installation of Steel Melting Shop, Mineral Fibre Plant by M/s. Sarda Metals & Alloys Ltd. in APIIC Industrial Park, Kantakapalli (V), Kothavalasa (M), Vizianagaram (Dist.), A.P

Ref: – Environmental Clearance Lr. No: J-11011/164/2009-IA. II (I) dated 27.05.2022

We are pleased to inform you that Ministry of Environment, Forest and Climate Change (MoEFCC) has granted Environmental Clearance for our proposed expansion vide reference above.

A copy of Environmental clearance is attached for your reference.

Thanking You

Yours Sincerely
For M/s. Sarda Metals and Alloys Limited

Surya Bhaskaram,
Assistant General Manager- EHS

Encl: Copy of EC



Factory : APIIC, Industrial Park, Kantakapalli, Kothavalasa Vizianagaram - 535 240, (AP) India. (C) : +91 8922 248203
Registered Office : 125 Mittal Court B wing, Nariman Point, Mumbai - 400021 (MH) Tel: +91 22 22884640 B.T.F. : +022 22826689

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

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



Ref: SMAL/APPCB/EC/5-22

Date:30.05.2022

To,
The District Collector & Magistrate,
Vizianagaram.

Dear Sir

Sub: Proposed Expansion of Expansion of Ferro Alloy Plant, Captive Power Plant and installation of Steel Melting Shop, Mineral Fibre Plant by M/s. Sarda Metals & Alloys Ltd. in APIIC Industrial Park, Kantakapalli (V), Kothavalasa (M), Vizianagaram (Dist.), A.P

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Yours Sincerely
For M/s. Sarda Metals and Alloys Limited

Surya Bhaskaram,
Assistant General Manager- EHS

Encl: Copy of EC



M/s. Sarda Metals & Alloys Limited::Kantakapalli
EC No: F.No.J-11011/164/2009-IA.II (I) Dated 27.05.2022



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.semi.co.in



Ref: SMAL/APP/EC/5-22

Date:30.05.2022

To,
**The Panchayat Secretary,
Gram Panchayat,
Kantakapalli,
Kothavalasa mandalam,
Vizianagaram.**

Dear Sir,

Sub: Proposed Expansion of Expansion of Ferro Alloy Plant, Captive Power Plant and installation of Steel Melting Shop, Mineral Fibre Plant by M/s. Sarda Metals & Alloys Ltd. in APIIC Industrial Park, Kantakapalli (V), Kothavalasa (M), Vizianagaram (Dist.), A.P

Ref: - Environmental Clearance Lr. No: J-11011/164/2009-IA, II (I) dated 27.05.2022

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Thanking You

Yours Sincerely
For **M/s. Sarda Metals and Alloys Limited**


**Surya Bhaskaram,
Assistant General Manager- EHS**

Encl: Copy of EC

Received copy
26.5.2022
PANCHAYAT SECRETARY
GRAM PANCHAYAT
KANTAKAPALLI
Kothavalasa Mandel, VZM

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.semi.co.in



Ref: SMAL/APP/EC/5-22

Date:30.05.2022

To,
**General Manager,
District Industries Centre,
Vizianagaram.**

Dear Sir

Sub: Proposed Expansion of Expansion of Ferro Alloy Plant, Captive Power Plant and installation of Steel Melting Shop, Mineral Fibre Plant by M/s. Sarda Metals & Alloys Ltd. in APIIC Industrial Park, Kantakapalli (V), Kothavalasa (M), Vizianagaram (Dist.), A.P

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Thanking You

Yours Sincerely
For **M/s. Sarda Metals and Alloys Limited**


**Surya Bhaskaram,
Assistant General Manager- EHS**

Encl: Copy of EC



M/s. Sarda Metals & Alloys Limited::Kantakapalli
EC No: F.No.J-11011/164/2009-IA.II (I) Dated 27.05.2022



D. No. 50-96-4/1, Floor II & III
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Tel : +91 891 2858200
Fax : +91 891 2700864
www.seml.co.in



Ref: SMAL/APPCB/EC/5-22

Date:30.05.2022

To,
The District Revenue Officer,
Vizianagaram.

Dear Sir

Sub: Proposed Expansion of Expansion of Ferro Alloy Plant, Captive Power Plant and installation of Steel Melting Shop, Mineral Fibre Plant by M/s. Sarda Metals & Alloys Ltd. in APIIC Industrial Park, Kantakapalli (V), Kothavalasa (M), Vizianagaram (Dist.), A.P

Ref: – Environmental Clearance Lr. No: J-11011/164/2009-IA. II (I) dated 27.05.2022

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Thanking You

Yours Sincerely
For **M/s. Sarda Metals and Alloys Limited**


Surya Bhaskaram,
Assistant General Manager- EHS

Encl: Copy of EC



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

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



Ref: SMAL/APPCB/EC/5-22

Date:30.05.2022

To,
The Revenue Divisional Officer,
Vizianagaram.

Dear Sir

Sub: Proposed Expansion of Expansion of Ferro Alloy Plant, Captive Power Plant and installation of Steel Melting Shop, Mineral Fibre Plant by M/s. Sarda Metals & Alloys Ltd. in APIIC Industrial Park, Kantakapalli (V), Kothavalasa (M), Vizianagaram (Dist.), A.P

Ref: – Environmental Clearance Lr. No: J-11011/164/2009-IA. II (I) dated 27.05.2022

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A copy of Environmental clearance is attached for your reference.

Thanking You

Yours Sincerely
For **M/s. Sarda Metals and Alloys Limited**


Surya Bhaskaram,
Assistant General Manager- EHS

Encl: Copy of EC



M/s. Sarda Metals & Alloys Limited::Kantakapalli
EC No: F.No.J-11011/164/2009-IA.II (I) Dated 27.05.2022



D. No. 50-96-4/1, Floor II & III
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Tel : +91 891 2858200
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www.seml.co.in



Ref: SMAL/APPCB/EC/5-22

Date:30.05.2022

To,

**The Tahsildar,
Tahsildar office,
Kothavalasa,
Vizianagaram.**

Dear Sir

Sub: Proposed Expansion of Expansion of Ferro Alloy Plant, Captive Power Plant and installation of Steel Melting Shop, Mineral Fibre Plant by M/s. Sarda Metals & Alloys Ltd. in APIIC Industrial Park, Kantakapalli (V), Kothavalasa (M), Vizianagaram (Dist.), A.P

Ref: - Environmental Clearance Lr. No: J-11011/164/2009-IA. II (I) dated 27.05.2022

We are pleased to inform you that Ministry of Environment, Forest and Climate Change (MoEFCC) has granted Environmental Clearance for our proposed expansion vide reference above.

A copy of Environmental clearance is attached for your reference.

Thanking You

Yours Sincerely
For **M/s. Sarda Metals and Alloys Limited**


**Surya Bhaskaram,
Assistant General Manager- EHS**

Encl: Copy of EC



ANNEXURE-18
Digital Display Board At Main Gate



ANNEXURE-19
FORM-V

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



Ref No: SMAL/Envi/Form-V/2021-22

Date: 13 /09/2022.

To

The Environmental Engineer,
Regional Office,
Andhra Pradesh Pollution Control Board,
Thotapalem, Vizianagaram, Andhra Pradesh.

Sub: Submission of Environment Statement Form-V.

Dear Sir,

With reference to the above subject we M/s. Sarda Metals and Alloys Limited located at Kantakapalli, Kothavalasa Mandal, and Vizianagaram District are herewith submitting the Environment Statement in Form-V as per the rule 14 of Environment Protection Rules for the financial year 2021-2022.

This is for your kind information and kindly acknowledge the receipt of the same.

Thank you.

Yours Faithfully
For Sarda Metals & Alloys Limited

V. Surya Bhaskaram
Assistant General Manager-EHS
Authorized Signatory

Copy to:

1. IRO-Vijayawada
2. APSPCB-Vijayawada

Annexure: Environment Statement Form-V.



ENVIRONMENTAL CLEARANCE

ENVIRONMENTAL
CLEARANCE



**Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)**

To,

The Deputy Managing Director
M/s Sarda Metals & Alloys Limited
Sy. No. 179 to 203 APIIC Industrial Park Kantakapalli Village Kothavalasa
Mandal Vizianagaram Distri, Sy. No. 179 to 203 APIIC Industrial Park
Kantakapalli Village Kothavalasa Mandal Vizianagaram
Distri, Vizianagaram, Andhra Pradesh-535240

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity
under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC)
in respect of project submitted to the Ministry vide proposal number
IA/AP/IND/260192/2017 dated 17 Mar 2022. The particulars of the environmental
clearance granted to the project are as below.

- | | |
|---|---|
| 1. EC Identification No. | EC22A008AP140455 |
| 2. File No. | J-11011/164/2009-IA.II(I) |
| 3. Project Type | Expansion |
| 4. Category | A |
| 5. Project/Activity including
Schedule No. | 3(a) Metallurgical industries (ferrous &
non-ferrous) |
| 6. Name of Project | Expansion of Ferro Alloy Plant, Captive
Power Plant and Installation of Steel
Melting Shop, Mineral Fibre Plant By
Sarda Metals Alloys Ltd |
| 7. Name of Company/Organization | M/s Sarda Metals & Alloys Limited |
| 8. Location of Project | Andhra Pradesh |
| 9. TOR Date | 27 Nov 2017 |

The project details along with terms and conditions are appended herewith from page
no 2 onwards.

Date: 27/05/2022

(e-signed)
Dr. R. B. Lal
Scientist E
IA - (Industrial Projects - 1 sector)



*Note: A valid environmental clearance shall be one that has EC identification
number & E-Sign generated from PARIVESH. Please quote identification
number in all future correspondence.*

This is a computer generated cover page.

M/s. Sarda Metals & Alloys Limited::Kantakapalli
EC No: F.No.J-11011/164/2009-IA.II (I) Dated 27.05.2022



By Speed Post/Online

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

Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj,
New Delhi – 110003

Dated: 27th May, 2022

To,

M/s. Sarda Metals & Alloys Limited,
Sy. No. 179 to 203 APIIC Industrial Park
Kantakapalli Village Kothavalasa Mandal
Vizianagaram Distri,Sy. No. 179 to 203
Dist. Kothavalasa,Vizianagaram, Andhra Pradesh-535240,
Email: ehs@smal.co.in

Subject: Expansion of Ferro Alloy Plant, Captive Power Plant and Installation of Steel Melting Shop, Mineral Fibre Plant by M/s. Sarda Metals & Alloys Limited located at APIIC Industrial Park, Kantakapalli Village, Kothavalasa Mandal, Vizianagaram District, Andhra Pradesh [Online Proposal No. IA/AP/IND/260192/2017, File No. J-11011/164/2009- IA.II(I)] –Environment Clearance – regarding.

Sir,

This refers to your proposal no. **IA/AP/IND/260192/2017** dated 17th March 2022 received through PARIVESH Portal for grant of **Environmental Clearance (EC)** for the project mentioned above.

- As per the provisions of the Environment Impact Assessment (EIA) Notification, 2006, the above-mentioned project/activity is covered under category 'A' of item 3(a) **Metallurgical industries (ferrous & non-ferrous) and 1(d) Thermal Power Plants**, and appraised at **Central level**.
- The details of Implementation status of the existing EC are as under:

S. No.	Facilities	EC dated 26/11/2009	EC Amended on 04/05/2010	EC Amended on 02/07/2018	Implementation Status as on 17/03/2021	Production as per CTO
1.	Ferro Alloys *	2x33 MVA (1,50,000 TPA)	No change	3x33 MVA (1,50,000 TPA)	2x33 MVA 1,00,000 Implemented	2x33 MVA (1,00,000 TPA)
2.	Sinter Plant	1x24m² (1,25,000 TPA)	No change	No change	Not Implemented	
3.	Thermal Power Plant	4x60 (240 MW)	Configuration change as 3x80 (240 MW)	No change	1x80 MW Implemented	1x80 MW
4.	Coke Oven with Stamp	4,00,000 TPA	No change	Drop the facility	Not Implemented	--

M/s. Sarda Metals & Alloys Limited::Kantakapalli
EC No: F.No.J-11011/164/2009-IA.II (I) Dated 27.05.2022



	Charging					
5.	Sponge Iron Plant	2x500 TPD (3,00,000 TPA)	No change	No change	Not Implemented	--
6.	Blast Furnace	1x350 m³ (2,50,000 TPA)	No change	No change	Not Implemented	--
7.	SMS					
7a	Induction Furnace	5x15 T (2,50,000 TPA)	No change	4x22T (3,50,000 TPA)	Not Implemented	--
7b	ARC Furnace	1x40 T (2,50,000 TPA)	No change	Drop the facility	--	--
8.	Rolling Mills	4,50,000 TPA	No change	3,50,000 TPA	Not Implemented	--
9.	Iron Ore Crushing Plant	6,00,000 TPA	No change	Drop the facility	--	--
10.	Pellet Plant	6,00,000 TPA	No change	No change	Not Implemented	--
11.	Railway Siding	--	No change	No change	Not Implemented	--
12.	Briquetting Plant**	--	--	--	1,05,000 TPA Implemented	1,05,000 TPA
<p><i>Note:</i> * As per CFO dated 19/10/2021 PP shall manufacture only Ferro Silicon, Ferro Manganese & Silico Manganese only. **Briquetting Plant does not require the Environmental Clearance and is now categorized as Green Category as per CPCB guidelines. Hence, CFE dated 10/08/2021 for the Briquetting Plant of capacity 1,05,000 TPA was obtained by PP.</p>						

- The above-mentioned proposal was considered in 4th **meeting of Re-constituted Expert Appraisal Committee (Industry 1 Sector) held on 27th -28th April 2022**. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed at <https://parivesh.nic.in>.
- The details of the proposal are as per the EIA/EMP report submitted by the proponent. The salient features of the proposal as presented during the above-mentioned meetings of EAC (Industry 1 Sector) are as under: -

S No	Particulars	Details															
a.	Terms of Reference for undertaking EIA study	22/04/2020															
b.	Period of baseline data collection	December, 2020 to February, 2021															
c.	Date of Public Consultation	10/12/2021															
d.	Action plan to address the PH issues	Attached as Annexure 1															
e.	Location of the project	Kantakapalli Village, Kothavalasa Mandal, Vizianagaram District, Andhra Pradesh.															
f.	Latitude and Longitude of the project site	<table border="1"> <thead> <tr> <th>S No</th> <th>Latitude</th> <th>Longitude</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>17°56'47.70"N</td> <td>83°13'4.60"E</td> </tr> <tr> <td>B</td> <td>17°56'12.89"N</td> <td>83°13'31.44"E</td> </tr> <tr> <td>C</td> <td>17°56'39.92"N</td> <td>83°12'46.32"E</td> </tr> <tr> <td>D</td> <td>17°56'31.16"N</td> <td>83°13'47.88"E</td> </tr> </tbody> </table>	S No	Latitude	Longitude	A	17°56'47.70"N	83°13'4.60"E	B	17°56'12.89"N	83°13'31.44"E	C	17°56'39.92"N	83°12'46.32"E	D	17°56'31.16"N	83°13'47.88"E
S No	Latitude	Longitude															
A	17°56'47.70"N	83°13'4.60"E															
B	17°56'12.89"N	83°13'31.44"E															
C	17°56'39.92"N	83°12'46.32"E															
D	17°56'31.16"N	83°13'47.88"E															

M/s. Sarda Metals & Alloys Limited::Kantakapalli
EC No: F.No.J-11011/164/2009-IA.II (I) Dated 27.05.2022



S No	Particulars	Details		
g.	Total land	113.7 ha (280.96 acres) [Private land: 113.7 ha]		
		S No	DETAILS	Existing
		01	Process Area	32.69
		02	Common utility area	21.43
		03	Green Belt	
			a. Developed Greenbelt	93.23
			b. Proposed Miyawaki Plantation	-
		04	Vacant Land	133.61
			Total Area	280.96
				280.96
h.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Expansion project is proposed within existing project area of 113.7 ha. Total land of 113.7 ha is owned by project proponent. No additional land is required for the expansion project.		
i.	Existence of habitation & involvement of R&R, if any	Plant Site: NIL Study Area:		
		Habitation	Distance	Direction
		Kantakapalli Village	0.46 km	North
		Katakapalli Village	1.0km	NNE
		Kothavalasa	0.70 km	NNW
j.	Elevation of the project site	102 m above mean sea level		
k.	Involvement of Forest land if any.	Nil		
l.	Water body exists within the project site as well as study area	Project site: Nil. Study area:		
		Water Body	Distance	Direction
		Pond	0.27 km	West
		Pedda Gedda	5.55 km	SE
		Meghadri Gedda	3.45 km	SW
		Vagu (Nala)	7.1 km	NE
m.	Existence of ESZ / ESA / national park / wildlife Sanctuary / biosphere Reserve / tiger reserve / elephant reserve etc. if any within the study area	Nil. However, following Forests are located within study area: • Advanapalem RF – 1.3 km – SE Muchcherla RF - 7.2 km – ESE		
n.	Project cost	INR 1242 Crores		
o.	EMP cost	17.194 Cr.		
p.	Employment opportunity	2523		
q.	Water and Power requirement	Water – 980 m3/day, Power – 54.30 MW		

Unit configuration and capacity:

S. No	Nam of the product	Units implemented as per EC dated 26/11/2009 and amended on 04/06/2016 & 02/07/2018 (A)		Proposed expansion (B)		Total (A+B)	
		Config-uration	Capacity (TPA)	Config-uration	Capacity (TPA)	Config-uration	Capacity (TPA)
1.	Ferro Alloys	2x33 MVA	1,00,000	Existing	2,50,000	5x36 MVA	2,50,000

				2x33 MVA upgraded to 2x36 MVA and add new 3x36 MVA			
2.	Captive Power Plant	1x80 MW	80 MW	1x80 MW	80 MW	2x80 MW	160 MW
3.	Steel Melting Shop	--	--	IF: 4x22 T	3,00,000	IF: 4x22 T	3,00,000
4.	Mineral Fiber Plant- 5 lines	--	--	--	Add New unit 1,50,000	--	1,50,000
5.	Briquetting Plant	--	1,05,000	--	--	--	1,05,000

6. The Consent & Authorization Order(CAO) is accorded Andhra Pradesh Pollution Control Board (APPCB) vide consent Order No. APPCB/VSP/VZN/200/CFO/HO/2021- dated 19/10/2021. Validity of CAO is up to 31/05/2023.
7. The EAC, in its 4th meeting of Expert Appraisal Committee (Industry-1 Sector) held on 27-28th April, 2022, based on information and clarifications provided by the project proponent and after detailed deliberations **recommended** the proposal for grant of Environment Clearance subject to stipulation of specific and general conditions as detailed in the paragraph given below.
8. The MoEF&CC has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 and further amendments thereto and after accepting the recommendations of the Expert Appraisal Committee (Industry-1) hereby decided to grant **Environment Clearance for instant proposal of M/s Sarda Metals & Alloys Limited under the provisions of EIA Notification, 2006** subject to the following specific conditions and general conditions:

A. Specific Conditions:

- i. Three tier Green Belt shall be developed in 33% of total project area by August, 2022 with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard, shall be submitted to concern Regional Office of the MoEF&CC.
- ii. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
- iii. Following additional arrangements to control fugitive dust shall be provided:
 - a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas.
 - b. Proper covered vehicle shall be used while transport of materials.
 - c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.

- iv. All internal road and connecting road from project site to main highway shall be developed and maintained with suitable Million Axle Standard (MSA) as per the traffic load due to existing and proposed project.
- v. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.
- vi. Particulate matter emission from stacks shall be less than 30 mg/Nm³.
- vii. Submerged Arc Furnace shall be equipped with the fourth hole fume extraction system.
- viii. 100 % slag generated from the process shall be utilized. Compliance status in this regard shall be submitted to the Regional Office of the MoEF&CC.
- ix. PP shall do 3-tier green belt along the perimeter boundary of the project, surrounding coal dumping and raw material yard, besides block plantation with in the project area.
- x. PP shall improve the Housekeeping of the project premises with best standards.
- xi. 10 numbers of truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere and the black dust on the nearby Mango orchards of the villagers.
- xii. Mechanical road sweeping shall be done in the surrounding villages also periodically.
- xiii. Project proponent shall follow safeguards to control the exposure of silica dust and some formaldehyde exposures arising out during production of mineral fibers. Compliance status in this regard, shall be submitted to concern Regional Office of the MoEF&CC.

A. General conditions

I. Statutory compliance:

- i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as two Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

- iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- v. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
- vii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
- Viii Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) 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.
- ii. The project proponent shall 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.
- iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- iv. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.
- v. Garland drains and collection pits shall be provided 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.
- vi. Tyre washing facilities shall be provided at the entrance/exit of the plant gates.

IV. Noise monitoring and prevention

- i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

- i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

VI. Waste management

- i. Used refractories shall be recycled.
- ii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

- i. 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.
- ii. Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

VIII. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. 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.
- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Environment Management

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt Kantakapalli, Katakapalli, Kotturu, Patta Sunkarapalem, Kotha Sunkarapalem, Gollapeta, Chinnaraopalli, Baligattam, Chiinipalem, Sambayyapalem, Appannapalem and Nimmalapalem villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.
- ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall 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.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall 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.
- vii. The project proponent 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, commencing the land development work and start of production operation by the project.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. 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).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

8. This issues with the approval of the Competent Authority.



(Dr. R. B. Lal)
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Encl. as above at Annexure
Copy to: -

1. The Principal Secretary, Department of Environment, Forest, Science & Technology, Government of Andhra Pradesh, Hyderabad, Andhra Pradesh
2. The Additional Principal Chief Conservator of Forests (C), Aranya Bhavan, K.M. Munshi Road, Nagarampalem, Guntur-522 004, Andhra Pradesh.
3. The Member Secretary, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 32.
4. The Member Secretary, AP Pollution Control Board, Chalamalavaii Street, Kasturibaipet, Vijayawada - 520 010.
5. Member Secretary, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
6. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi
7. District Collector, Nagaur, Rajasthan
8. Guard File/Monitoring File/ Parivesh Portal /Record File.



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