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

SARDA
SARDA METALS & ALLOYS LTD

Ref. No:SMAL/EHS/REC/13

Date: 8-09-2017

To
The Member Secretary,
AndhraPradesh Pollution Control Board,
Paryavaran Bhawan,
A-3, Industrial Estate,
Sanath Nager, Hyderabad
AndhraPradesh – 500018

Dear Sir,

Sub: Submission of Environmental Statement Form -V

We wish to bring your kind notice with reference to the above captioned subject, we are submitting Environmental statement Form – V report for the Financial 2016-2017 for your kind reference and oblige.

Thanking you with regards.

Your truly,
For Sarda Metals & Alloys Ltd.

Rajendra Vohra

Authorized Signatory.

Copy to:

1. The Regional Officer, Andhra Pradesh Pollution Control Board, Flat No. 11 Shivaji Colony, Pradeep Nagar, Vizianagaram, A.P
2. The Additional Principal Chief Conservator of Forests, Ministry of Environment, Forest and Climate Change, Regional Office (SEZ), I$^{st}$ and II$^{nd}$ Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai – 34

# ENIVIRONMENTAL STATEMENT FORM-V

(See rule 14)

Environmental Statement for the financial year ending with 31st March

## PART-A

| | | |
|---|---|---|
| (i) | Name and address of the owner/occupier of the industry operation or process | Mr Neeraj Sarda<br>M/s. Sarda Metals & Alloys Ltd,<br>APIIC Indusrial Park,<br>Kantakapalli,<br>Kottavalasa,<br>Vizianagaram, Andhra Pradesh - -535240 |
| (ii) | Industry category-<br>Primary-<br>Secondary- | Red category<br>Coal based Captive Power Plant (1 x 80MW) &<br>Ferro Alloys Plant (2 x 33 MVA Furnaces) |
| (iii) | Production capacity Units | 80 MW – Captive Power Plant (CPP)<br>Ferro Alloys Plant (2 x 33 MVA Furnaces) |
| (iv) | Year of establishment | FEB - 2013 (CPP); FeMn on 24-7-14 ;<br>SiMn on 14-06-14 |
| (v) | Date of the last Environmental Statement submitted | 28.09.16 |

## PART-B

Water and Raw Material Consumption

(i) Water Consumption in $m^3/d$

Process : 37.27

Cooling : 253.82

Domestic: 22.13

| Name of Products | Process water consumption per unit of product output | |
|---|---|---|
| | During the previous Financial Year (April 2015 – March 2016) | During the current Financial year (April 2016 – March 2017) |
| 1. Electric Power | Process Water : 22.59 mL/KWhr<br>Cooling Tower Water : 31.10 mL/KWhr | Process Water : 27.82 mL/KWhr<br>Cooling Tower Water : 33.34 mL/KWhr |
| 2. SiMn & FeMn | Cooling Tower Water : 1.64 KL/MT | Cooling Tower Water :1.24 KL/MT |

(ii) Raw Material Consumption

| Name of raw materials | Name of Products | Consumption of raw material per unit of output | |
|---|---|---|---|
| | | During the Previous financial year (April 2015 – March 2016) | During the current financial year (April 2016 – March 2017) |
| Coal | Electric Power | 0.669 kg/KWhr | 0.714 kg/KWhr |
| Fuel Oil | Electric Power | 0.101 ml/KWhr | 0.097 ml/Kwhr |
| Mn Ore | FeMn | 2.678 | - |
| Coke | | 0.114 | - |
| Coal | | 0.486 | - |
| Dolomite | | 0.043 | - |
| Quartz | | 0.004 | - |
| Mill Scale | | 0.001 | - |
| Mn Ore | SiMn | 1.934 | 0.127 |
| Coke | | 0.242 | 0.491 |
| Coal | | 0.442 | 0.127 |
| Dolomite | | 0.193 | 0.127 |
| Quartz | | 0.593 | 0.046 |
| Mill Scale | | 0.090 | 0.046 |
| Fe Mn Slag | | 0.379 | 0.136 |

## PART-C

**Pollution discharged to environment /unit of output**
(Parameter as specified in the Consent issued)

| Pollutants | Quantity of pollutants discharged (mass/ day) | Concentration of pollutants discharged (mass/volume) | Percentage of variation from prescribed standard with reasons. |
|---|---|---|---|
| (a) Water | Zero Discharge | Effluent water being used for inland irrigation / Dust suppression system | Nil |
| (b) Air | Test Reports are enclosed. | | Nil |

## PART-D

### Hazardous Wastes

[as specified under hazardous wastes(Management & Handling rules,1989)].

| Hazardous Waste | Total Quantity (lts) | |
|---|---|---|
| | During the Previous financial year (April 2015 – March 2016) | During the current financial year (April 2016 – March 2017) |
| Waste Oil | 2600 Ltrs (Generated from machineries) & 5670 Ltrs ( Generated during establishment) | 27.586 KL (Contaminated Furnace oil)<br>2100 L (Generated from machineries) |

## PART-E

### Solid Wastes

| Solid Waste | Total Quantity | |
|---|---|---|
| | During the Previous financial year (April 2015 – March 2016) | During the Previous financial year (April 2016 – March 2017) |
| (a) From Process | FeMn Slag: 14977.09T<br>SiMn Slag: 16466.01T | FeMn Slag: Nil<br>SiMn Slag: 68335.23T |
| (b) From Pollution control Facility | Ash Generation: 22573.07T<br>Baghouse Dust (FeMn): 1297.67T<br>Baghouse Dust (SiMn) : 796.34T | Ash Generation: 15713.3 T<br>Baghouse Dust (FeMn): Nil<br>Baghouse Dust (SiMn) : 2204.11 T |
| (c) Quantity recycled or reused within the unit | Ash provided to brick manufacture: 8622.58T; Ash used inhouse land for reclamation: 13950.49T<br>FeMn slag used as raw material in SiMn production: 6034.97T ;<br>FeMn slag provided to other ferro alloy unit: 5277.69 T;<br>SiMn Slag provided to brick manufacture: 15533.540 T | Ash provided to brick manufacture: 13066.89 T ; Ash used inhouse land for reclamation: 2646.41 T<br>FeMn slag used as raw material in SiMn production: 8338.09T ;<br>FeMn slag stock : 2652.73T<br>FeMn slag provided to other ferro alloy unit: 401.280 T;<br>SiMn Slag provided to brick manufacture: 49551.35 T<br>SiMn Slag stock: 37983.76T |

## PART-F

Please specify the characterizations (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

*Hazardous waste:*

- Only Waste oil is generated from machineries and it is sent to authorize recycler.

*Solid Waste:*

- SiMn slag is provided to brick manufactures.
- Fly ash is provided to brick manufactures.

## PART-G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

- Effluent water used as dust suppression system and for green belt development so as to reduce the raw water consumption.

## PART-H

Additional measures/investment proposal for environmental protection including abatement of pollution/prevention of pollution.

- Laying of CC roads to reduce the fugitive emissions due to vehicle movement.

## PART-I

Any other particulars for improving the quality of the environment.

- Periodic Monitoring of Stack emissions, Air and water parameters
- The company obtained IMS Certification (ISO 9001, ISO 14001 & OSHAS 18001) effectively from 30.10.15

Rajendra Vohra

(Signature of a person carrying out an industry – operation or process)

Date:

Name : Mr. Rajendra Vohra

Designation : President

Address : M/s. Sarda Metals & Alloys Ltd,
APIIC Indusrial Park,
Kantakapalli, Kottavalasa,
Vizianagaram, Andhra Pradesh - 535240

**TEAM**
*Labs and Consultants*

ORIGINAL

Form-No. TCL/L/GF/RF-138

2681

*Registered Office :*
B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.
Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com
*ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization*
Laboratory Recognised by Ministry Environment, Forests and Climate Change, GoI, New Delhi

# TEST REPORT

**Test Report No.TLC/V/ENV/SMAL/ 01/0617** **DT 26.06.2017**

**Description of Test:** **Ambient Noise Level Monitoring**

**Name of the client:** **M/s Sarda Metals & Alloys Limited Kothavalasa, Vizianagram**

**Location of Monitoring:** **As per details Given**

**Date of monitoring:** **14.06.2017**

| No | Location | Noise level dB(A) | |
|---|---|---|---|
| | | Day | Night |
| 1 | Near Main gate | 68.6 | 61.2 |
| 2 | Near DM Plant . | 57.6 | 52.1 |
| 3 | Near Project office | 68.4 | 63.2 |
| 4 | Near Boiler Area | 71.1 | 68.4 |
| 5 | Near Store area | 61.4 | 54.8 |
| 6 | Canteen area | 68.8 | 62.1 |
| 7 | Near CHP Area | 62.0 | 59.0 |
| 8 | Furnace-1 area | 72.4 | 67.1 |
| 9 | Furnace-2 area | 71.8 | 67.6 |
| | CPCB Standard for Ambient Noise Levels | 75 | 70 |

For Team Labs and Consultants

TEAM Labs and Consultants

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# TEST REPORT

**Test Report No.TLC/V/ENV/SMAL/ 02/0617** **DT26.06.2017**

**Description of Test:** **Stack Emissions Analysis**

**Name of the client:** **M/s Sarda Metals & Alloys Limited**
**Kothavalasa, Vizianagram**

**Location of sampling:** **As per details given**

| Parameter | Stack attached to FAD | Stack attached to CPP |
|---|---|---|
| Date of sampling | 13.06.2017 | 13.06.2017 |
| Stack height (m) | 65 | 120 |
| Stack diameter (m) | 4.0 | 6.7 |
| Stack area $(m)^2$ | 12.57 | 35.27 |
| Flue gas temp $^0c$ | 165 | 196 |
| Exit gas velocity (m/s) | 9.6 | 4.19 |
| Flue gas flow rate $Nm^3/hr$ | 295563 | 338038 |
| Emission Rates | | |
| Dust concentration $mg/Nm^3$ | 36 | 32 |
| $SO_2$ $mg/Nm^3$ | - | 225 |
| NOx $mg/Nm^3$ | - | 262 |
| Hg $mg/Nm^3$ | - | <0.01 |

*Test Method:IS11255

For Team Labs and Consultants

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# TEST REPORT

**Test Report No.TLC/V/ENV/SMAL/ 03/0617** **DT26.06.2017**

**Description of Test:** **Stack Emissions Analysis**

**Name of the client:** **M/s Sarda Metals & Alloys Limited**
**Kothavalasa, Vizianagram**

**Location of sampling:** **As per details given**

| Parameter | Stack attached to DG-I 250KVA | Stack attached to DG-II 250KVA | CPCB Standard g/kWh |
|---|---|---|---|
| Date of sampling/time | 14.06.2017 | 14.06.2017 | |
| Stack height(m) | 10.0 | 10.0 | |
| Stack diameter (m) | 0.125 | 0.125 | |
| Stack area $(m)^2$ | 0.0123 | 0.0123 | |
| Flue gas temp$^0$c | 171 | 178 | |
| Exit gas velocity (m/s) | 16.1 | 17.9 | |
| Flue gas flow rate$NM^3$/hr | 478 | 524 | |
| Emission Rates | | | |
| Dust concentration g/kWh | 0.122 | 0.147 | 0.3 |
| CO g/kWh | 0.574 | 0.419 | 3.5 |
| NOx g/kWh | 0.579 | 0.693 | 9.2 |
| HC g/kWh | 0.04 | 0.03 | 1.3 |

*Test Method:IS11255

For Team Labs and Consultants

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268

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# TEST REPORT

**Test Report No .TLC/V/ENV/SMAL/ 04/0617** **DT26.06.2017**

**Description of test:** **Ambient Air Quality Monitoring**

**Name of the Industry:** **M/s Sarda Metals & Alloys Limited**

**Date of Sampling:** **13.06.2017 to 14.06.2017**

**Location of industry:** **APIIC, Sarda Industrial Park , Kantakapalli, Kothavalasa, Vizianagram**

| S. No. | Location | $PM_{10}$ | $PM_{2.5}$ | $SO_2$ | $NO_X$ |
|---|---|---|---|---|---|
| 1 | Near Security Gate | 88 | 44 | 14.2 | 20.6 |
| 2 | Beside Conveyor belt | 92 | 48 | 15.8 | 21.6 |
| 3 | Near DM Plant | 78 | 35 | 9.9 | 18.2 |
| | Protocol | IS5182 PART-23 - 2006 | Gravimetric, CPCB Manual page15-30 | IS5182 PART-2 - 2001 | IS5182 PART-6 - 2004 |
| | APPCB STANDARD | 100 | 60 | 80 | 80 |

**For Team Labs and Consultants**

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# TEST REPORT

*Test* Report No .TLC/V/ENV/SMAL/ 06/0417 DT26.06.2017

**Description of test:** STP Waste Water Analysis

**Name of the Industry:** M/s Sarda Metals & Alloys Limited

**Date of Sampling:** 14.06.2017

**Location of industry:** APIIC, Sarda Industrial Park , Kantakapalli, Kothavalasa, Vizianagram

| S.No. | Parameter | STP Outlet | APPCB discharge standard | protocol |
|---|---|---|---|---|
| 1 | $p^H$ | 7.4 | 6.5-8.5 | IS:3025 Part 11-1983 |
| 2 | TDS as mg/l | 1050 | 2100 | IS:3025 Part 16-1984 |
| 3 | TSS as mg/l | 45 | 100 | IS:3025 Part 17-1984 |
| 4 | BOD as mg/l | 24 | 30 | IS:3025 Part 44-1993 |
| 5 | COD as mg/l | 135 | 250 | IS:3025 Part 58-2006 |
| 6 | Oil& Grease as mg/l | 1.7 | 10.0 | IS:3025 Purt 39 1991 |

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# TEST REPORT

**Test Report No .TLC/V/ENV/SMAL/ 07/0617** **DT26.06.2017**

**Description of test:** **Water Analysis**

**Name of the Industry:** **M/s Sarda Metals & Alloys Limited**

**Date of Sampling:** **14.06.2017**

**Source of collection:** **As per details given**

**Location of industry:** **APIIC, Sarda Industrial Park , Kantakapalli, Kothavalasa, Vizianagram**

| S.No. | Parameter | FAD Cooling Tower | CPP Cooling Tower | Neutralization Pit | APPCB discharge standard | protocol |
|---|---|---|---|---|---|---|
| 1 | $p^H$ | 7.7 | 7.95 | 8.05 | 6.5-8.5 | IS:3025 Part 11-1983 |
| 2 | TDS as mg/l | 1920 | 1905 | 560 | 2100 | IS:3025 Part 16-1984 |
| 3 | TSS as mg/l | 18 | 22 | 15 | 100 | IS:3025 Part 17-1984 |
| 4 | BOD as mg/l | 8 | 7 | 9 | 30 | IS:3025 Part 44-1993 |
| 5 | COD as mg/l | 80 | 74 | 85 | 250 | IS:3025 Part 58-2006 |
| 6 | Oil& Grease as mg/l | Nil | Nil | Nil | 10.0 | IS:3025 Part 39-1991 |

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