Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

# FORM V

**(See Rule 14)**

**Environmental Audit Report for the financial Year ending the 31st March 2021**

| ***Unique Application Number*** | ***Submitted Date*** |
|---|---|
| MPCB-ENVIRONMENT_STATEMENT-0000034549 | 31-08-2021 |

## PART A

### *Company Information*

| ***Company Name*** | ***Application UAN number*** |
|---|---|
| Steel Authority of India limited, Chandrapur Ferro Alloy plant,Chandrapur | MPCB-CONSENT-000008859 |

***Address***

MUL ROAD

| ***Plot no*** | ***Taluka*** | ***Village*** |
|---|---|---|
| 498/2,499,500,503/2 | CHANDRAPUR | CHANDRAPUR |
| ***Capital Investment (In lakhs)*** | ***Scale*** | ***City*** |
| 31761 | L.S.I. | CHANDRAPUR |
| ***Pincode*** | ***Person Name*** | ***Designation*** |
| 442401 | N.L.SHARMA | CGM(WORKS) |
| ***Telephone Number*** | ***Fax Number*** | ***Email*** |
| 09420479413 | 07171-278038,278002 | rajesh.janbandhu@yahoo.com |
| ***Region*** | ***Industry Category*** | ***Industry Type*** |
| SRO-Chandrapur | Orange | O63 Steel and steel products using various furnaces like blast furnace /open hearth furnace/induction furnace/arc furnace/submerged arc furnace / basic oxygen furnace /hot rolling reheated furnace |
| ***Last Environmental statement submitted online*** | ***Consent Number*** | ***Consent Issue Date*** |
| yes | BO/CAC-Cell/UAN No 000008859-18/CO/12 th CAC-1905000074 | 2-05-2019 |
| ***Consent Valid Upto*** | ***Establishment Year*** | ***Date of last environment statement submitted*** |
| 31/3/2021 | 1974 | Mar 13 2021 12:00:00:000AM |

***Industry Category Primary (STC Code) & Secondary (STC Code)***

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### *Product Information*

| ***Product Name*** | ***Consent Quantity*** | ***Actual Quantity*** | ***UOM*** |
|---|---|---|---|
| Lime | 1980 | 30 | MT/A |
| Nitrogen gas | 600 | 265 | CMD |
| High carbon Ferro Manganeses | 96660 | 0 | MT/A |

| | | | |
|---|---|---|---|
| Silico Manganese | 80540 | 79378 | MT/A |
| Medium Carbon Ferro Manganeses | 2400 | 1228 | MT/A |
| Mn Ore Sinter from SP-1 | 17040 | 5985 | MT/A |
| Mn Ore Sinter from SP-II | 16020 | 2544 | MT/A |
| Electric power Generation | 36792 | 0 | Mwh |

***By-product Information***

| ***By Product Name*** | ***Consent Quantity*** | ***Actual Quantity*** | ***UOM*** |
|---|---|---|---|
| Furnace Gas | 456000 | 200640 | CMD |
| High MnO Slag | 98880 | 0 | MT/A |
| Low MnO Slag | 72480 | 74053 | MT/A |

## Part-B (Water & Raw Material Consumption)

***1) Water Consumption in m3/day***

| ***Water Consumption for*** | ***Consent Quantity in m3/day*** | ***Actual Quantity in m3/day*** |
|---|---|---|
| ***Process*** | 840 | 394 |
| ***Cooling*** | 7100 | 1968 |
| ***Domestic*** | 235 | 197 |
| ***All others*** | 130 | 0 |
| ***Total*** | 8305 | 2559 |

***2) Effluent Generation in CMD / MLD***

| ***Particulars*** | ***Consent Quantity*** | ***Actual Quantity*** | ***UOM*** |
|---|---|---|---|
| Trade effluent | 860 | 860 | CMD |
| Domestic effluent | 168 | 95 | CMD |

***2) Product Wise Process Water Consumption (cubic meter of process water per unit of product)***

| ***Name of Products (Production)*** | ***During the Previous financial Year*** | ***During the current Financial year*** | ***UOM*** |
|---|---|---|---|
| High Carbon Ferro Manganese | 0 | 0 | KL/A |
| Silico Manganese | 0 | 0 | KL/A |
| Medium Carbon Ferro Manganese | 0 | 0 | KL/A |

***3) Raw Material Consumption (Consumption of raw material per unit of product)***

| ***Name of Raw Materials*** | ***During the Previous financial Year*** | ***During the current Financial year*** | ***UOM*** |
|---|---|---|---|
| Manganese ore | 108229 | 171991 | MT/A |
| Iron ore | 780 | 2987 | MT/A |
| Quartz | 1722 | 5726 | MT/A |
| Dolomite | 4667 | 5200 | MT/A |
| Limestone | 0 | 256 | MT/A |
| Charcoal | 4693 | 5999 | MT/A |
| Coke | 30437 | 50628 | MT/A |
| Mn Ore Sinter | 7352 | 8308 | MT/A |

| | | | |
|---|---|---|---|
| MnO slag | 49020 | 64589 | MT/A |
| Carbon electrode Paste | 1453 | 1777 | MT/A |
| Roasted Mn ore | 2694 | 1843 | MT/A |
| Calcined lime | 629 | 472 | MT/A |
| Graphite electrode | 29 | 22.414 | MT/A |
| Calcined dolomite | 322 | 339 | MT/A |

### *4) Fuel Consumption*

| *Fuel Name* | *Consent quantity* | *Actual Quantity* | *UOM* |
|---|---|---|---|
| Electricity - For Submerged Arc Furnaces | 594417 | 337989 | Mwh |
| Clean SAF Gas for SP-1 | 216000 | 97076 | |
| Clean SAF Gas for SP-2 | 72000 | 30240 | |
| Clean SAF Gas for Power Plant 4.2MW | 5760000 | 0 | |
| Furnace oil for Power Plant 4.2MW | 200 | 0 | KL/A |
| Clean SAF Gas for Lime kiln 7 tpd | 144000 | 144000 | |
| Clean SAF Gas for Lime kiln 4tpd | 144000 | 144000 | |

## Part-C

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

### *[A] Water*

| *Pollutants Detail* | *Quantity of Pollutants discharged (kL/day)* | *Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour* | *Percentage of variation from prescribed standards with reasons* | | |
|---|---|---|---|---|---|
| | *Quantity* | *Concentration* | *%variation* | *Standard* | *Reason* |
| pH | 0 | 7.68 | 0 | 5.5-9 | NIL |
| Oil & grease | 3.44 Kg/Day | < 4 | 0 | 10 mg/litre l | NIL |
| BOD | 63.64 Kg/Day | 74 | 0 | 100 mg/litre | NIL |
| TDS | 1510 Kg/Day | 1756 | 0 | 2100 mg/litre | NIL |
| Suspended solids | 35.26 Kg/Day | 41 | 0 | 100 mg/litre | NIL |
| COD | 186.62 Kg/Day | 217 | 0 | 250 mg/litre | NIL |
| Chloride | 33.11 Kg/Day | 38.51 | 0 | 600 mg/litre | NIL |
| Sulphate | 23.61 Kg/Day | 27.46 | 0 | 1000 mg/litre | NIL |
| Iron | 0.14 Kg/Day | 0.17 | 0 | 5.0 mg/litre | NIL |

### *[B] Air (Stack)*

| *Pollutants Detail* | *Quantity of Pollutants discharged (kL/day)* | *Concentration of Pollutants discharged(Mg/NM3)* | *Percentage of variation from prescribed standards with reasons* | | |
|---|---|---|---|---|---|
| | *Quantity* | *Concentration* | *%variation* | *Standard* | *Reason* |
| Particulate matter | 21 kg/day | 76.4 | 0 | 150 | NIL |
| Acid mist | 0.31 kg/day | 1.14 | 0 | 35 | NIL |

## Part-D

### *HAZARDOUS WASTES*

### 1) From Process

| Hazardous Waste Type | Total During Previous Financial year | Total During Current Financial year | UOM |
|---|---|---|---|
| 5.1 Used or spent oil | 6.7 | 6.2 | KL/A |
| Other Hazardous Waste | 0.23 | 0.017 | MT/A |

### 2) From Pollution Control Facilities

| Hazardous Waste Type | Total During Previous Financial year | Total During Current Financial year | UOM |
|---|---|---|---|
| 35.1 Exhaust Air or Gas cleaning residue | 4730 | 6235 | MT/A |

## Part-E

### SOLID WASTES

### 1) From Process

| Non Hazardous Waste Type | Total During Previous Financial year | Total During Current Financial year | UOM |
|---|---|---|---|
| High Carbon Ferro manganese slag | 0 | 0 | MT/A |
| Silico Manganese Slag | 54200 | 74053 | MT/A |
| Medium carbon Ferro manganese slag | 5058 | 3533 | MT/A |

### 2) From Pollution Control Facilities

| Non Hazardous Waste Type | Total During Previous Financial year | Total During Current Financial year | UOM |
|---|---|---|---|
| GCP Residue | 4730 | 6235 | MT/A |

### 3) Quantity Recycled or Re-utilized within the unit

| Waste Type | Total During Previous Financial year | Total During Current Financial year | UOM |
|---|---|---|---|
| 35.1 Exhaust Air or Gas cleaning residue | 4730 | 6235 | MT/A |

## Part-F

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

### 1) Hazardous Waste

| Type of Hazardous Waste Generated | Qty of Hazardous Waste | UOM | Concentration of Hazardous Waste |
|---|---|---|---|
| 5.1 Used or spent oil | 6.2 | KL/A | It is sold to authorized re processor. |
| 35.1 Exhaust Air or Gas cleaning residue | 6235 | MT/A | 100 % agglomerated in existing Sinter plants for utilization in furnace for ferro alloy production |
| Other Hazardous Waste | 0.017 | MT/A | CHWTSDF Butibori -Mixed non ferrous scrap - |

### 2) Solid Waste

| Type of Solid Waste Generated | Qty of Solid Waste | UOM | Concentration of Solid Waste |
|---|---|---|---|
| MnO slag + MCFeMn slag | 64589 | MT/A | Used in SiMn production . |

## Part-G

### Impact of the pollution Control measures taken on conservation of natural resources and consequently on the cost of production.

| Description | Reduction in Water Consumption (M3/day) | Reduction in Fuel & Solvent Consumption (KL/day) | Reduction in Raw Material (Kg) | Reduction in Power Consumption (KWH) | Capital Investment(in Lacs) | Reduction in Maintenance(in Lacs) |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Effluent recycle and reuse | 860 | NA | NA | NA | Existing facilities | NA |
| Use of Sinter produced from Mn ore fines and GCP residue | NA | NA | 8529000 | NA | Existing practice | NA |
| Use of MnO slag + MCFeMn slag | NA | NA | 64589000 | NA | Existing practice | NA |

## Part-H

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

***[A] Investment made during the period of Environmental Statement***

| ***Detail of measures for Environmental Protection*** | ***Environmental Protection Measures*** | ***Capital Investment (Lacks)*** |
|---|---|---|
| Installation of Brick/block making machine | Reuse and recycle of Mn ore fines/slag fines/sludge fines etc etc | 28.45 lakhs +GST |

***[B] Investment Proposed for next Year***

| ***Detail of measures for Environmental Protection*** | ***Environmental Protection Measures*** | ***Capital Investment (Lacks)*** |
|---|---|---|
| Data Connectivity of online PM monitors with MPCB server at SAF III | To get real time data transferred to MPCB server | 2.72 lakhs |
| Data Connectivity of online Effluent monitors with MPCB server for ETP-I,II | To get real time data transferred to MPCB server | 29 lakhs |
| Up gradation of APC of Sinter plants | To achieve revised PM norms | Consultant being engaged |

## Part-I

***Any other particulars for improving the quality of the environment.***

***Particulars***

Briquetting of Mn ore fines/slag fines is being explored for revamping reuse /recycle of solid waste as a measure for resource conservation . This will be in addition to existing sintering facility

***Name & Designation***

N. L. Sharma CGM (Works )

***UAN No:***

MPCB-ENVIRONMENT_STATEMENT-0000034549

***Submitted On:***

31-08-2021