

COMPLIANCE TO CONDITIONS OF MOEF CLEARENCE FOR EXPANSION OF FERRO CHROME PLANT (27MVA TO 54MVA) BY IMFA

| SL.NO | A. Specific Condition | Compliance Status |
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| i) | Continuous monitoring facilities for all the stacks and sufficient air pollution control equipments viz. Gas cleaning system comprising of duct, cooler, pre collector, filter etc. prior to leaving into the atmosphere through stack shall be provided to submerged arc furnace to control emissions below 100 ng/Nm ³ . Monitoring of total Chromium and carbon monoxide should also be ensured. Standards for Nickel, Chromium & Lead shall be within permissible limit. The Orissa Pollution Control Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit. | Gas Cleaning Plant Equipment erection & commissioning completed. The plant has Forced Draft Coolers, Bag Filter , Pneumatic Dust Handling System etc. |
| ii) | In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. The exhaust gases from the rotary dryer of ore feed shall be de-dusted by means of cyclone and in bag filters before being discharged to the atmosphere. Dry fog dust suppression system shall be provided to the metal recovery plant to control fugitive emissions generated during crushing, screening etc. Dust extraction system with bag filters shall be provided to control the fugitive dust from raw material handling, screening and conveying section along with product handling section, transfer and feeding points to control fugitive dust emissions to meet OPCB norms. Internal roads shall be made black topped and asphalted. Water spraying shall also be done to prevent the dust emanation due to vehicular movement. | Erection & commissioning of dry fog system is completed. Dust extraction system with bag filters at raw material handling is available. Internal roads have been made RCC. Water spraying is carried out. |
| iii) | Data on ambient air quality, stack emissions shall be uploaded on the Company's website and also regularly submitted on-line to the Ministry's Regional office at Bhubaneswar, Orissa Pollution Control Board (OPCB) and Central Pollution Control Board (CPCB) as well as hard copy once in six months. Data on SPM, SO ₂ , NOx shall be displayed prominently outside the premises at the appropriate place for the information of general public. | Data of ambient air quality and stack monitoring is enclosed. |
| iv) | Secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed. | Complied. |
| v) | Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product. | Water sprinkling arrangements have been made. Shall be complied on regular basis. |
| vi) | Total ground water requirement from the bore wells shall not exceed 840m ³ /day. Closed circuit cooling system shall be adopted to reduce water consumption. The waste water from different parts of the plant shall be treated and recycled back to the process for reuse, dust suppression and green belt development. Domestic effluent shall be treated in septic tank followed by soak pits. All the effluent from regeneration plant shall be treated in neutralization pit and clear water recycled / reused in the process or for dust suppression, green belt development and other plant related activities within plant premises. Cooling water and blow down shall be treated and completely recycled. Waste water from jigging plant shall be treated in a settling tank and reused in jigging plant. Domestic waste water shall be treated in septic tanks followed by soak pit system and used for green belt development. | Clarified water, from existing facility is being used for cooling purpose. Waste water is used for dust suppression, green belt development. Zero discharge to outside is being ensured. |

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| vii) | Prior permission for the drwal of 840 m3/day ground water from the State Ground Water Board / Central Ground water Authority / Concerned department shall be obtained. | Clarified water, from existing facility is being used. No bore well water is required. |
| viii) | No waste water shall be discharged outside the premises and zero discharge shall be ensured. | Zero discharge to outside is being ensured. |
| ix) | Metal recovery plant shall be installed to recover through hydraulic jigging process. Slag tailing shall be dumped in own premises after recovery of the metal. Discharge from metal recovery plant shall be monitored for the chromium content and maintained within permissible limit before recycling and reuse. Slag tailing shall be dumped in own premises in secured land fill as per CPCB guidelines after recovery of the metal. Used oils / lubricants shall be sold to authorized recyclers / re-processors | Being complied. |
| x) | Chromate slag shall be used for road making only after passing through Toxic Chemical Leachability Potential (TCLP) test. Otherwise, Ferro chrome shall be recovered from the slag and output waste shall be disposed in secured landfill as per CPCB guidelines. All the other solid waste shall be properly disposed off in environment friendly manner. No hazardous materials shall be spilled out and good house keeping practices shall be adopted. Hazardous waste shall be handled as per the Hazardous waste (Management & Handling) rules 1989 and subsequent amendments. | Being complied. |
| xi) | Product fines, flue dust should not be dumped anywhere but reused in the process. SAF slag shall be dumped only in secured landfill. Sludge from venturi scrubber shall be dried and mixed with chrome ore fines for making briquettes. | Being complied. |
| xii) | Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid / hazardous waste shall be submitted to the Ministry's Regional Office at Bhubaneswar, OPCB and SPCB. | Shall be complied regularly. |
| xiii) | As proposed, green belt shall be developed in at least 8 acrs (33%) out of total 23 acres land within and around the plant premises as per the CPCB guidelines in consultation with DFO. | Plantation work is going on regularly. |
| xiv) | All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Ferro chrome units shall be strictly implemented. | Shall be ensured. |
| xv) | All the commitments made to the public during public hearing / public consultation meeting shall be satisfactorily implemented. | Shall be ensured. |
| xvi) | The company shall provide housing for construction labour within site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project. | Complied during construction phase. |

| SL.NO | B. General Condition | Compliance Status |
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| i) | The project authorities must strictly adhere to the stipulations made by the Orissa Pollution Control Board (OPCB) and the State government. | Being complied. |
| ii) | No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. | Shall be followed. |
| iii) | At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO ₂ and NO _x are anticipated in consultation with the OPCB. Data on ambient air quality and stack emissions should be regularly submitted to this Ministry including its Regional Office at Bhubaneswar, OPCB and CPCB once in six months. | Data of ambient air quality and stack monitoring is enclosed. |
| iv) | In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fume and dust extraction system with bag filters shall be provided at the transfer and discharge points to control fugitive emissions. Further, Specific measures like water sprinkling around the raw material storage areas and asphaltting or concreting of the roads shall be done to control fugitive emissions. | Being complied. |
| v) | Industrial water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. The treated waste water shall be utilised for plantation purpose. | Being complied. |
| vi) | The company shall develop rain water harvesting structures to harvest the rain water for utilisation in the lean season besides recharging the ground water table. | Shall be complied. |
| vii) | The overall noise levels in and around the plant area shall be kept well within the standards (85dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all source of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime) | Being complied. |
| viii) | Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. | Being complied. |
| ix) | The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc. | Shall be complied. |
| x) | As proposed, Rs.10.00 Crores and 20.00 lakhs shall be earmarked towards capital cost and recurring cost / annum for the environment pollution control measures and utilised judiciously to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose. | Shall be complied. |
| xi) | The Regional Office of this Ministry at Bhubaneswar / CPCB / OPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitoring data along with statistical interpretation shall be submitted to them regularly. | Being complied. |

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| xii) | The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the OPCB and may also be seen at the website of the Ministry of the Ministry of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter at least in two local news papers that that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office at Bhubaneswar. | Advertised in News papers. Viz. Indian Express and Samaj (vernacular daily) on 21.06.09. Letter with copy of the advertisement was sent to Ministry's regional office on 22.06.09. |
| xiii) | Project authorities shall inform the Regional office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work. | Financial closure – February 2009 Letter No 10883IV(B)CK-2/2007 dt 09.06.10 from Director of Factories & Boilers, Govt of Orissa. |

monitoring data

AMBIENT AIR QUALITY & STACK EMISSION DATA OF UNIT – II (OCTOBER' 2013 –MARCH' 2014)

| Month/week | Near main receiving substation | | | | Back side of raw material storage yard | | | | Stack emission (PM) | |
|---------------------------|--------------------------------|-----|------|-------|--|-----|------|-------|-------------------------|-------------------------|
| | PM10 | SO2 | NO2 | PM2.5 | PM10 | SO2 | NO2 | PM2.5 | 1 st Furnace | 2 nd Furnace |
| Oct' 1 st week | 122 | 7.6 | 14.8 | | 101 | 6.9 | 13.9 | | | |
| 2 nd week | 109 | 7 | 14.1 | | 98 | 6.6 | 12.8 | | 72 | 58 |
| 3 rd week | 102 | 7.2 | 13.6 | | 86 | 6.8 | 12.9 | | 82 | 62 |
| 4 th week | 94 | 7.8 | 13.2 | 46 | 84 | 6.9 | 13.4 | 66 | | |
| 5 th week | 97 | 7.2 | 14.5 | | 107 | 8 | 13.3 | | | |
| Nov 1 st week | 168 | 8.9 | 16 | | 95 | 5.2 | 14.6 | | 71 | 59 |
| 2 nd week | 102 | 7.9 | 15.2 | | 100 | 6.4 | 16 | | | |
| 3 rd week | 164 | 7 | 15.4 | 59 | 103 | 6.6 | 16.2 | | | 68 |
| 4 th week | 128 | 6.9 | 13.6 | | 112 | 7.2 | 14.4 | 70 | | |
| 5 th week | 86 | 6 | 15.7 | | 109 | 7.1 | 14.4 | | | |
| Dec 1 st week | 124 | 6.1 | 13.8 | | 108 | 5.7 | 12.3 | | 65 | 62 |
| 2 nd week | 119 | 6.5 | 15.6 | 58 | 100 | 5.6 | 14.7 | | | |
| 3 rd week | 131 | 7.4 | 15.2 | | 168 | 8.1 | 14.9 | 77 | 73 | 51 |
| 4 th week | 145 | 7.8 | 16 | | 157 | 9.3 | 13.1 | | | |
| Jan 1 st week | 106 | 5.9 | 12.8 | | 101 | 6.2 | 13.6 | | | |
| 2 nd week | 126 | 6.5 | 15.4 | | 109 | 5.8 | 14.2 | | | |
| 3 rd week | 168 | 6.4 | 16.6 | 52 | 145 | 5.9 | 15.6 | | 68 | 56 |
| 4 th week | 102 | 6.4 | 13.6 | | 99 | 6 | 12.9 | 58 | 88 | 69 |
| 5 th week | 110 | 5.9 | 14.2 | | 97 | 6.4 | 14.8 | | | |
| Feb 1 st week | 98 | 5.8 | 12.9 | | 90 | 5.2 | 13.6 | | | |
| 2 nd week | 96 | 6.6 | 13.8 | 54 | 89 | 6.5 | 12.9 | | 72 | 64 |
| 3 rd week | 99 | 5.9 | 14 | | 84 | 7.2 | 13.8 | 68 | | |
| 4 th week | 100 | 6 | 12.4 | | 89 | 5 | 11.8 | | 80 | 68 |
| Mar 1 st week | 99 | 5.6 | 13.2 | | 106 | 5.9 | 13.5 | | | |
| 2 nd week | 102 | 6.1 | 13.9 | | 100 | 6.5 | 14.6 | | 78 | 65 |
| 3 rd week | 103 | 6.6 | 12.5 | 63 | 98 | 7.2 | 14 | | 82 | 69 |
| 4 th week | 94 | 5.9 | 13.3 | | 106 | 6.2 | 14.8 | 74 | | |

Env eppndtr, CSR, Plantation

| Period | Expenditure incurred on environmental management | Plantation, green belt development | CSR activities undertaken |
|------------------------|---|---|--|
| October'13 to March'14 | Operation – Rs.16999188/- Maintenance – Rs.461893/- Total – Rs.17461081/- | Oct - Nil - Nil - Nil - Nil Nil | Nov Dec Jan'14 Feb Mar - Six nos. bore-well dug in ward no. 7,8,11 & 12. of Choudwar Municipality. Two nos. toilet constructed in Netaji Primary school and Virat Cuttack Primary school of ward no. 10 & 11 of Choudwar Municipality. 30 girls & ladies were sponsored for tailoring training at Apparel training and design center (ATDC, Choudwar under Ministry of Textile, Govt. of India). One health camp was organised at Agrahat GP. Two nos. steel almirah was donated to Harihar Juva Parishad for storing of library books. |