

SUMMARY RECORD OF THE THIRTEENTH (13TH) MEETING OF EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006 HELD ON 23RD – 24TH NOVEMBER, 2016.

The Thirteenth meeting of the Expert Appraisal Committee (EAC) for Industry-I Sector in terms of the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-I Sector Projects was held on 23rd – 24th November, 2016 in the Ministry of Environment, Forest and Climate Change. Representative from Central Pulp and Paper Research Institute, Member of EAC had expressed his inability to attend the meeting due to prior engagements. The list of participants is annexed.

After welcoming the Committee members, discussion on each of the agenda items was taken up *ad-seriatim*.

Confirmation of the minutes of the 12th Meeting

The minutes of the 12th meeting, as circulated were confirmed.

23rd November, 2016 /Wednesday

13.3 ENVIRONMENTAL CLEARANCE (EC)

13.3.1 Standalone cement grinding unit (300 TPD) of M/s Maadesh Cements, located at Village Kattur, Taluk Katpadi, District Vellore, Tamil Nadu [J-11011/244/2015-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee (Industry) [EAC(I)] and the project proponent and their EIA-EMP consultant (M/s Perfect Enviro Solution Pvt. Ltd., New Delhi) gave a detailed presentation on the salient features of the project. It is a standalone greenfield cement grinding unit project of M/s Maadesh Cements (MC), which was initially received in the Ministry on 23.12.2015 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the EAC(I) during its meeting held on 29.12.2015 and prescribed TORs to the project for undertaking detailed EIA and EMP study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed TORs to the project *vide* letter No. J-11011/244/2015-IA II (I) dated 29.01.2016. Based on the TORs prescribed to the project, the project proponent submitted an online application to the Ministry for environmental clearance on 04.11.2016. The proposed project activity is listed at S.No. 3(b), under category 'B' of the Schedule of EIA Notification, 2006; however, due to presence of inter-state boundary at a distance of 0.3 Km towards west, the proposal is appraised at the Central level.

The project is located at Survey No. 124, Mathandakuppam Panchayat, Kattur Village, Katpadi Taluk in Vellore District of Tamil Nadu. The proposal is to establish a greenfield standalone cement grinding unit of 300 TPD (0.099 million TPA) production capacity of cement.

| S. No. | Name of the product | Capacity |
|--------|---------------------|----------|
|--------|---------------------|----------|

| | | |
|----|--------|---------|
| 1. | Cement | 300 TPD |
|----|--------|---------|

The total land required for the project is 1.57 ha, which is an agricultural land. No forestland involved. The entire land belongs to the proponent. There is no national park, wildlife sanctuary, biosphere reserve, tiger reserve, elephant reserve etc. located within 10 Km radius. The area also does not report to form corridor for Schedule-I fauna. The Ponnai River is flowing from North-east to South-east at a distance of 1.4 km towards east direction. The topography of the area is plain and reported to lie between 13° 0'54.68"N to 13° 0'51.59"N Latitude and 79°10'38.14"E to 79°10'41.40"E Longitude, in Survey of India topo sheet No 57 O/04 at an elevation of 248m-252 m AMSL. The ground water table reported to range between 13.03m - 16.5 m below the ground level during the post-monsoon season and 11.2m -16.8 m below the ground level during the pre-monsoon season.

The targeted production capacity of the plant is 300 TPD (0.099 million TPA). The raw material will be transported by road, and will be drawn from a maximum distance of 160 Km in the case of clinker.

The water requirement of the project is estimated as 5 KLD, which will be drawn from borewell within the site and stored storm water runoff. The power requirement of the project is estimated as 800 HP, which will be obtained from the TNEB.

Ambient air quality monitoring was carried out at 8 locations during January – March 2016 and the data submitted indicated that the PM₁₀ ranges from 31 µg/m³ to 42 µg/m³, PM_{2.5} ranges from 14 µg/m³ to 19 µg/m³, SO₂ ranges from 9 µg/m³ to 12 µg/m³ and NO_x ranges from 9 µg/m³ to 12 µg/m³. The results of the modeling study indicated that the maximum increase of GLC for the proposed project for PM₁₀ and PM_{2.5} is 0.88 µg/m³, and 0.39 µg/m³ respectively.

It has been reported that a total of 3 kg/day (approximately 0.99 tons/year) of waste (dust) will be generated from the grinding operations and the same will be reused in the process. An area of 0.55 ha (850 trees) will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

The Public hearing of the project was held on 18.08.2016 under the chairmanship of Mr K Manivannan, District Revenue Officer, Vellore District, Tamilnadu. The issues raised during public hearing *inter alia* include impact on air pollution, ground water, employment to locals, transportation, etc.

The capital cost of the project is Rs. 1.35 Crores and the capital cost for environmental protection measures is proposed as Rs. 16.4 Lakhs. The annual recurring cost towards the environmental protection measures is Rs. 10.75 Lakhs.

Based on the presentation made and discussions held the Committee recommended the project for environment clearance subject to stipulation of the following specific conditions and any other mitigative measures, as prescribed by the Ministry for environmental protection:

- i. The project proponent should install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.

- ii. The environmental clearance is subject to approval of the concerned State Government Authority of the Government of Tamil Nadu for diversion of agricultural land for non-agricultural use.
- iii. The Standards issued by the Ministry *vide* G.S.R. No. 612 (E) dated 25th August, 2014 and subsequent amendment dated 9th May, 2016 and 10th May, 2016 regarding cement plants with respect to particulate matter, SO₂ and NO_x shall have to be followed.
- iv. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. Limit of PM shall be controlled to meet prescribed standards by installing adequate air pollution control equipments.
- v. Efforts shall be made to achieve power consumption of 70 units/tonne for Portland Pozzolona Cement (PPC) and 95 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
- vi. The National Ambient Air Quality Standards issued by the Ministry *vide* G.S.R. No. 826(E) dated 16th November, 2009 shall have to be followed.
- vii. Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines/Code of Practice issued by the CPCB in this regard shall be followed.
- viii. The project proponent shall install filter bags with PTFE dipped PPS felt filter bags designed to cater for 150% of the air discharge volume. The filter should be replaced at the end of designed life of the filter.
- ix. A statement on carbon budgeting including the quantum of equivalent CO₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.
- x. The project proponent shall provide fork lift and trolley for lifting the material.
- xi. The project authorities should undertake sample survey to generate data on pre-project community health status within a radius of 1 km from the proposed project.
- xii. Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.
- xiii. The project proponent shall provide for annual health check up of residents of Village of Kattur.

- xiv. Arsenic and Mercury shall be monitored in emissions, ambient air and water.
- xv. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of conveyors/rail mode of transport wherever feasible. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.
- xvi. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted.
- xvii. Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.
- xviii. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986.
- xix. All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices shall be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers / re-processors only.
- xx. Green belt over 33% of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area and along road sides etc. by planting native and broad leaved species in consultation with local DFO, local community and as per the CPCB guidelines. In addition, two rows of plants by planting native and broad leaved species around 8 acres of pond shall also be raised. Native tree species will also be planted along the boundary of the local school in kattoor Village.
- xxi. The project proponent shall maintain 1.2 km of inter-state community road at their cost.
- xxii. The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.
- xxiii. The project proponent shall provide for LED lights in their offices and residential areas.
- xxiv. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.
- xxv. At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with time bound sustainable action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village

Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.

- xxvi. In addition to the above provision of ESC, the proponent shall prepare a detailed CSR Plan for the next 5 years including annual physical and financial targets for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Skill Development and infrastructure etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.
- xxvii. To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
- xxviii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, 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.

13.3.2 Stand alone cement grinding unit (300 TPD) of M/s. Polar Cements Company located at Survey No.429, Kanipedu Village, Katpadi Taluk in Vellore District of Tamil Nadu[J-11011/250/2015-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee (Industry) [EAC(I)] and the project proponent and their EIA and EMP consultant (M/s Perfect Enviro Solution Pvt. Ltd., New Delhi) gave a detailed presentation on the salient features of the project. It is a standalone greenfield cement grinding unit project of M/s Polar Cements Company (PCC), which was initially received in the Ministry on 13.01.2016 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the EAC(I) during its meeting held on 29.01.2016 and prescribed TORs to the project for undertaking detailed EIA and EMP study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed TORs to the project *vide* letter J-11011/250/2015-IA II (I), dated 24.02.2016. Based on the TORs prescribed to the project, the project proponent submitted an online application to the Ministry for environmental clearance on 04.11.2016. The proposed project activity is listed at S.No. 3(b), under category 'B' of the Schedule of EIA Notification, 2006, however, due to presence of inter-state boundary at a distance of 1.2 Km towards west, the proposal is appraised at the Central level.

The project is located at Survey No. 429, Kandipedu Village, Katpadi Taluk in Vellore District of Tamil Nadu. The proposal is to establish a greenfield standalone cement grinding unit of 300 TPD (0.099 million TPA) production capacity of cement.

| S. No. | Name of Product | Manufacturing Capacity (TPD) | | |
|--------|-----------------|------------------------------|----------|-------|
| | | Phase I | Phase II | Total |
| 1 | Cement | 100 | 200 | 300 |

The total land required for the project is 1.057 ha, which is an agricultural land. No forestland involved. The entire land belongs to the proponent. There is no national park, wildlife sanctuary, biosphere reserve, tiger reserve, elephant reserve etc. within 10 km radius. The area also does not report to form corridor for Schedule-I fauna. The Ponnai River is flowing from South-west to South-east at a distance of 6.2 Km towards South-east direction. No water body exist around the project and modification, diversion in the existing natural drainage pattern at any stage has not been proposed. The topography of the area is plain and reported to lies between 13° 0'54.68"N to 13° 0'51.59"N Latitude and 79°10'38.14"E to 79°10'41.40"E Longitude, in Survey of India topo sheet No 57 O/04 at an elevation of 230 m AMSL. The ground water table reported to range between 15m -17.8 m below the ground level during the post-monsoon season and 13m – 16.5 m below the ground level during the pre-monsoon season. The targeted production capacity of the plant is 300 TPD (Phase I : 100 TPD, Phase II : 200 TPD) (0.099 million TPA). The raw material will be transported by road and will be drawn from a maximum distance of 165 Km in the case of clinker.

The water requirement of the project is estimated as 5 KLD, which will be drawn from the borewell within the site and stored storm water runoff. The power requirement of the project is estimated as 800 HP, which will be obtained from the TNEB.

Ambient air quality monitoring was carried out at 8 locations during March-May 2016 and the data submitted indicated the PM₁₀ ranges from 32 µg/m³ to 42 µg/m³, PM_{2.5} ranges from 14 µg/m³ to 19 µg/m³, SO₂ ranges from 9 µg/m³ to 12 µg/m³ and NO_x ranges from 9 µg/m³ to 12 µg/m³. The results of the modeling study indicate that the maximum increase of GLC for the proposed project for PM₁₀ and PM_{2.5} is 2.68 µg/m³, and 0.99 µg/m³ respectively.

It has been reported that a total of 3 kg/day (approximately 0.99 tons/year) of waste (dust) will be generated from the grinding operations, and the same will be reused in the process. An area of 0.40 ha (600 trees) will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

The Public hearing of the project was held on 16.08.2016 under the chairmanship of Mr S.A Raman, IAS, District Collector, Vellore District, Tamilnadu. The issues raised during public hearing *inter alia* include impact on ground water, employment to locals, impact of air pollution, etc.

The capital cost of the project is Rs. 1.35 Crores and the capital cost for environmental protection measures is proposed as Rs. 16.4 Lakhs. The annual recurring cost towards the environmental protection measures is Rs. 10.75 Lakhs. It has been reported that there is no court case against the project or related activity.

Based on the presentation made and discussions held the Committee recommended the project for environment clearance subject to stipulation of the following specific conditions and any other mitigative measures, as prescribed by the Ministry for environmental protection:

- i. The project proponent should install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.
- ii. The environmental clearance is subject to approval of the concerned State Government Authority of the Government of Tamil Nadu for diversion of agricultural land for non-agricultural use.
- iii. The Standards issued by the Ministry *vide* G.S.R. No. 612 (E) dated 25th August, 2014 and subsequent amendment dated 9th May, 2016 and 10th May, 2016 regarding cement plants with respect to particulate matter, SO₂ and NO_x shall be followed.
- iv. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. Limit of PM shall be controlled to meet prescribed standards by installing adequate air pollution control equipments.
- v. Efforts shall be made to achieve power consumption of 70 units/tonne for Portland Pozzolona Cement (PPC) and 95 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
- vi. The National Ambient Air Quality Standards issued by the Ministry *vide* G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- vii. Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines/Code of Practice issued by the CPCB in this regard shall be followed.
- viii. The project proponent shall install PTFE dipped PPS felt filter bags, designed to cater for 150% of the air discharge volume. The filter should be replaced at the end of designed life of the filter.
- ix. A statement on carbon budgeting including the quantum of equivalent CO₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.
- x. The project proponent shall provide fork lift and trolley for lifting the material.
- xi. The project authorities should undertake sample survey to generate data on pre-project community health status within a radius of 1 km from proposed mine.
- xii. Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.

- xiii. The project proponent shall provide for annual health check up of residents of Village of Kanipedu.
- xiv. Arsenic and Mercury shall be monitored in emissions, ambient air and water.
- xv. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of conveyors/rail mode of transport wherever feasible. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.
- xvi. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted.
- xvii. Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.
- xviii. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986.
- xix. All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices shall be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers / re-processors only.
- xx. Green belt over 33% of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area and along road sides etc. by planting native and broad leaved species in consultation with local DFO, local community and as per the CPCB guidelines.
- xxi. The project proponent shall maintain 200m of inter-state community road at their cost.
- xxii. The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.
- xxiii. The project proponent shall provide for LED lights in their offices and residential areas.
- xxiv. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.
- xxv. At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with sustainable time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village

Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.

- xxvi. In addition to the above provision of ESC, the proponent shall prepare a detailed CSR Plan for the next 5 years including annual physical and financial targets for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Skill Development and infrastructure etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.
- xxvii. To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
- xxviii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, 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.
- xxix. The PP shall submit Environment Statement in Form V every year on 30th September under the environment audit notification 1992.

13.3.3 Installation of 3.0 MTPA Integrated Steel Plant including 1.5 MTPA cement plant and 200MW CPP by M/s Welspun Steel Ltd., located at Village Varsamedi, Tehsil Anjar, District Kutch, Gujarat [J-11011/136/2015-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee (Industry) [EAC(I)] and the project proponent and their EIA and EMP consultant (M/s M. N. Dastur & Co. (P) Ltd.) gave a detailed presentation on the salient features of the project. The proposal was initially received in the Ministry on 1st October 2015 for obtaining Terms of Reference (TOR) for preparation of EIA and EMP report as per EIA Notification, 2006, as amended. The project was appraised by the EAC-I during its meeting held on 19th November 2015 and prescribed TOR to the project for undertaking detailed EIA and EMP study for the purpose of obtaining Environmental Clearance (EC). Accordingly, the Ministry of Environment, Forest and Climate Change (MoEFCC) had prescribed TOR to the project on 3rd December 2015. Based on the TORs prescribed, the Project Proponent submitted an online application to the Ministry on 4th November 2016 for environmental clearance. The proposed project activity is listed at S.No. 3(a), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

The project of M/s Welspun Steel Limited is located at Village Varsamedi, Tehsil Anjar, District Kutch, Gujarat and is for setting up of a Greenfield Integrated Steel Plant for production of 3 million TPA of crude steel.

The total land required for the project is 231.58 ha, out of which 198.00 ha is vacant land, 27.79 ha is scrub land, 4.63 ha is built-up area and 1.16 ha is others. No forest land is involved. The entire land has been acquired for the project. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. No River passes through the project area. It has been reported that no water body exists around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed. The topography of the area is flat and reported to lie between 23°06'23"N to 23°07'53" N Latitude and 70°04'03"E to 70°05'56" E Longitude, in Survey of India OSM Nos. F42E4 & F42D16, at an elevation of 81 m AMSL. The ground water table in the study area is reported to range between 5m to 10 m below the land surface during the post-monsoon season and 2 to 10 m below the land surface during the pre-monsoon season. The stage of groundwater development is reported to be 91% and 92.62% in core and buffer zone respectively and thereby these are designated as critically exploited areas.

The targeted production capacity of the project is 3.0 million TPA crude steel. The key raw materials for the plant would be procured from domestic sources or imported. The transportation for the same will be done through road.

| S.No. | Production Unit | Configuration | Production capacity |
|-------|--|--|--|
| 1 | Coke Ovens & By-products Recovery Plant (COBP) | 2 X 58 No. Ovens | 1.37 Gross Coke |
| 2 | Sinter Plant | 1 x 496 sq m | 5.28 MTPA Product Sinter |
| 3 | Blast Furnace | 1 x 4300 cum | 3.34 MTPA Hot Metal |
| 4 | Lime/dolo Calcining Plant | 2 x 600 TPD | 0.26 MTPA Calcined Lime 0.08 MTPA Calcined Dolo |
| 5 | Steel Melt Shop | BOF - 2 x 165 T LF - 2 x 165 T VD - 1 x 165 T | 3.10 MTPA Liquid Steel |
| 6 | Continuous Casting | Continuous Caster-Slab caster – 1 x 1 strand Billet caster – 1 x 6 strand | 1.6 MTPA 1.4 MTPA |
| 7 | Rolling Mill | Rebar & Wire Rod Mill | 1.37 MTPA rebar & wire rods |
| 8 | Power Plant | 2 X 100 MW (Gas based) BF-TRT, CDQ & Sinter Cooler | 165 MW 35 MW |
| 9 | Cement Grinding unit | 1 Unit | 1.5 MTPA |
| 10 | Air Separation Plant | - | 2200 TPD |

The water requirement of the project is estimated as 47,232 m³ /day which would be met from Gujarat Water Infrastructure Limited and Proposed Sewage Treatment Plant at Anjar. The power requirement of the project is estimated as 263 MW, out of which 200 MW will be

obtained from the Captive Power Plant and balance 63 MW would be drawn from State Grid Supply system.

Ambient air quality monitoring has been carried out at 8 locations during December 2015 to March 2016 and the data submitted indicated that PM₁₀ ranges from 81.9 µg/m³ to 94.1 µg/m³, PM_{2.5} ranges from 43.4 µg/m³ to 52.9 µg/m³, SO₂ ranges from 6.0 µg/m³ to 16.6 µg/m³ and NO_x ranges from 24.6 µg/m³ to 43.6 µg/m³. The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 9.0 µg/m³ with respect to the PM₁₀, 16.7 µg/m³ with respect to the SO₂ and 20.3 µg/m³ with respect to the NO_x.

No R&R is involved as the land required for the proposed project is already in possession with the company.

It has been reported that approx 5600 tons per day of waste will be generated due to the proposed project, out of which 4750 tons per day will be used within the plant and balance would be stored for further treatment and secondary use. It has been envisaged that an area of 77.2 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

The Public hearing of the project was held on 14th September 2016 under the GPCB officials and Additional District Magistrate, Kutch. The issues raised during public hearing *inter alia* include employment, tree plantation, education, CSR activates etc.

The capital cost of the project is Rs. 14,690 Crores and the capital cost for environmental protection measures is proposed as Rs. 425 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 10 crores. The proponent has mentioned that there is no court case to the project or related activity.

Based on the presentation made and discussions held, the Committee recommended the project for environment clearance subject to stipulation of the following specific conditions and any other mitigative measures, as prescribed by the Ministry for environmental protection:

- i. The project proponent should install 24x7 air monitoring devices to monitor air emission and submit report to Ministry and its Regional Office.
- ii. The ETP for Blast furnace effluent should be designed to meet Cyanide standards as notified by the MoEFCC.
- iii. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted.
- iv. The ETP for coke oven by-product should be designed to meet EPA notified standards especially the cyanide and phenol.

- v. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), and bag filters etc. shall be provided.
- vi. In-plant control measures and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points, coal handling plant and coke sorting plant of coke oven plant. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control dust emissions. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.
- vii. The Standards issued by the Ministry *vide* G.S.R. No. 277(E) dated 31st March, 2012 regarding integrated iron and steel plant shall be followed.
- viii. The emission standards specified in the Environmental (Protection) Amendment Rules, 2015 issued by *vide* S.O. 3305 (E) dated 7th December, 2015 for the Thermal Power Plant shall be strictly adhered to.
- ix. The Standards issued by the Ministry *vide* G.S.R. No. 612 (E) dated 25th August, 2014 and subsequent amendment dated 9th May, 2016 and 10th May, 2016 regarding cement plants with respect to particulate matter, SO₂ and NO_x shall be followed.
- x. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. Limit of PM shall be controlled to meet prescribed standards by installing adequate air pollution control equipments.
- xi. Efforts shall be made to achieve power consumption of 70 units/tonne for Portland Pozzolona Cement (PPC) and 95 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
- xii. The National Ambient Air Quality Standards issued by the Ministry *vide* G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- xiii. Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines/Code of Practice issued by the CPCB in this regard shall be followed.
- xiv. Before obtaining CTO, PP shall install install PTFE dipped PPS felt filter bags, designed to cater for 150% of the air discharge volume. The filter should be replaced at the end of designed life of the filter.
- xv. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of conveyors/rail mode of transport wherever feasible. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.
- xvi. Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.

- xvii. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xviii. All the blast furnace (BF) slag shall be granulated and provided to cement manufacturers for further utilization. Flue dust from sinter plant and SMS and sludge from BF shall be re-used in sinter plant. Coke breeze from coke oven plant shall be used in sinter and pellet plant. SMS Slag shall be given for metal recovery and properly utilized. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner.
- xix. Coal and coke fines shall be recycled and reused in the process. The breeze coke and dust from the air pollution control system shall be reused in sinter plant. The waste oil shall be properly disposed of as per the Hazardous Waste (Management, Handling, Handling and Transboundary Movement) Rules, 2008.
- xx. Green belt shall be developed in at least 33% of the project area by planting native and broad leaved species in consultation with local DFO and local communities as per the CPCB guidelines. The plantation should be finished in 2 years time from the grant of environmental clearance.
- xxi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants and Coke Oven Plants shall be implemented.
- xxii. The project proponent shall earmark an amount of Rs.368 Crores towards the Enterprise Social Commitment based on Public Hearing issues and local needs. Item-wise details along with sustainable time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.
- xxiii. The proponent shall prepare a detailed CSR Plan for every year for the next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company. The plan so prepared shall be based on SMART (Specific, Measurable, Achievable, Relevant and Time bound) concept. The expenditure should be aimed at sustainable development and direct free distribution and temporary relief should not be included.

- xxiv. All the commitments made to the public during the Public Hearing / Public Consultation meeting including installation of an RO plant required by the villagers shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.
- xxv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- xxvi. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986.
- xxvii. The sewage should be treated in the STP and the standards for the STP should be followed.
- xxviii. PP shall install biogas plant to handle kitchen waste. The gas captured shall be piped to canteen/kitchen for use and solid manure shall be used in plantation area.

13.4 FURTHER CONSIDERATION

13.4.1 Rotary Kiln for clinker (500 TPD) and Cement grinding (500 TPD) (closed circuit) units of M/s K. R. Associates, located Village-Ambher, Jorabat, Mouza- Sonapur, District- Kamrup, Assam [F. No. J-11011/139/2015-IA II (I)]

The proposal was earlier considered during the 9th meeting of Expert Appraisal Committee (EAC) (Industry) held on 27th – 29th July, 2016, when the Committee desired additional information on various issues.

The proponent submitted the requisite information to the Ministry. The Committee deliberated on the additional information as presented by the project proponent. The Committee verified the details submitted by the project proponent and satisfied with the submissions made by the project proponent.

Based on the presentation made and discussions held, the Committee recommended the project for environment clearance subject to stipulation of the following specific conditions and any other mitigative measures, as prescribed by the Ministry for environmental protection:

- i. The project proponent should install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.
- ii. The Standards issued by the Ministry *vide* G.S.R. No. 612 (E) dated 25th August, 2014 and subsequent amendment dated 9th May, 2016 and 10th May, 2016 regarding cement plants with respect to particulate matter, SO₂ and NO_x shall be followed.
- iii. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled to meet prescribed standards by installing adequate air pollution control viz Electrostatic

precipitators to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill. Low NO_x burners shall be provided to control NO_x emissions. Regular calibration of the instruments must be ensured.

- iv. Efforts shall be made to achieve power consumption of 70 units/tonne for Portland Pozzolona Cement (PPC) and 95 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
- v. The National Ambient Air Quality Standards issued by the Ministry *vide* G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- vi. AAQ Modelling shall be carried out based on the specific mitigative measures taken in the existing project and proposed for the expansion project to keep the emissions well below prescribed standards.
- vii. Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines/Code of Practice issued by the CPCB in this regard shall be followed.
- viii. The project proponent shall install filter bags system with PTFE dipped PPS felt filter bags, designed to cater for 150% of the air discharge volume. The filter should be replaced at the end of designed life of the filter.
- ix. A statement on carbon budgeting including the quantum of equivalent CO₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.
- x. Arsenic and Mercury shall be monitored in emissions, ambient air and water.
- xi. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of conveyors/rail mode of transport wherever feasible. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.
- xii. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted.
- xiii. The project authorities should undertake sample survey to generate data on pre-project community health status within a radius of 1 km from proposed mine.

- xiv. Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.
- xv. Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.
- xvi. All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices shall be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers / re-processors only.
- xvii. Green belt over 33% of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area and along road sides etc. by planting native and broad leaved species in consultation with local DFO, local community and as per the CPCB guidelines.
- xviii. The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.
- xix. The project proponent shall provide for LED lights in their offices and residential areas.
- xx. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.
- xxi. At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.
- xxii. In addition to the above provision of ESC, the proponent shall prepare a detailed CSR Plan for the next 5 years including annual physical and financial targets for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Skill Development and infrastructure etc) activities in consultation with the local communities and administration. The plan so prepared shall be based on SMART (Specific, Measurable, Achievable, Relevant and Time bound) concept. The expenditure should be aimed at sustainable development and direct free distribution and temporary relief should not be included. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.

- xxiii. A Risk Assessment Study and Disaster Preparedness and Management Plan along with the mitigation measures shall be prepared with a focus of Disaster Prevention and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xxiv. To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
- xxv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, 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.

13.5 ANY OTHER ITEM

13.5.1 Expansion of Ferro Alloy Plant by installing SAF (9 MVAx1= 40 TPD) for manufacture of Ferro Silicon/Ferro-Manganese by M/s Bihar Foundry and Casting Limited, located at Plot No. 1405, Ramgarh Industrial Area, Village Marar, District Ramgarh in Jharkhand - Under Clause 7(ii) of EIA Notification, 2006[J-11011/384/2010-IA.II(I)].

M/s Bihar Foundry & Casting Ltd, has proposed for change in the product mix by adding Ferro Chrome using the same existing process with the same raw ingredient as chrome ore, magnesite, quartz etc. All the existing products namely Silico Manganese / Ferro Silicon / Ferro Manganese and proposed product Ferro Chrome will be produced as per the requirement from time to time any one of the four products will be produced within the overall EC permissible capacities.

| S. No. | Name of the Project | Existing Products | Amendment Product |
|--------|-------------------------|---|-------------------|
| 1 | Ferro Alloy (2x5 MVA) | 26 TPD (Silico / Manganese) | Ferro Chrome |
| 2 | Ferro Alloy (7.5 MVA) | 30 TPD (Silico / Manganese) | Ferro Chrome |
| 3 | Ferro Alloy (9 MVA x 1) | 40 TPD (Ferro Silico / Ferro Manganese) | Ferro Chrome |

It was noted that the environmental clearance for the project was accorded by the Ministry *vide* letter No. J-11011/384/2010-IA.II(I) dated 31st October 2011. The project proponent has however, not submitted the compliance report from the Regional Office of the Ministry. The Committee deferred the consideration of the proposal and requested the proponent to submit the compliance report issued by the Regional Office of the Ministry after conducting site visit. The proposal will be considered after submission of compliance report.

13.5.2 Portland Slag Cement (PSC) and Ground Granulated Blast Furnace Slag (GGBS) Grinding Unit (1.2 MTPA) of M/s JSW Cement Ltd., located at Pottaneri, Village M. Kalipatti, Mettur Taluk, Salem, Tamil Nadu [J-11011/240/2016-IA.II(I)].

The proposal was earlier considered by the Expert Appraisal Committee(Industry-I) during its 9th meeting held on 27th – 29th July, 2016. It was noted by the Committee that the extant proposal is a Category B project. However, as the unit is proposed to be located in the premises of JSW steels Ltd, which is an A category project, the Tamil Nadu State Environmental Impact Assessment Authority advised the proponent to approach the Ministry on the applicability of category. The Committee noted that the piece of land on which M/s JSW Cement Ltd. intend to establish the cement unit belongs to M/s JSW Steels Ltd.; however, the land has been allotted on 20 year lease to M/s JSW Cement Ltd. by the M/s JSW Steels Ltd. Since cement grinding units falls under category ‘B’ as per EIA Notification, 2006, as amended, the proposal has to be appraised at the State level. Therefore, the proposal should be transferred to State Environmental Impact Assessment Authority for further necessary action.

The matter was examined in the Ministry and it was decided that since the unit is proposed to be located in the premises of JSW Steels Ltd., which is ‘A’ category project, the cement project should be dealt at the central level. After deliberations, the Committee recommended to issue TORs to the project and prescribed following specific TORs, in addition to the standard TOR, for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-2:**

- i. Public Hearing to be conducted by the Tamil Nadu Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. Compliance report issued by the Regional Office of the Ministry for the existing steel plant should be submitted along with the EIA report and the compliance status should be presented before the Committee.
- v. The project proponent shall raise green belt comprising local tree species in addition to the one already existing in respect of JSW Steel Ltd.

13.6 CASE FOR TERMS OF REFERENCE (TOR)

13.6.1 Sponge Iron Plant (1,20,000 TPA), Induction furnace with CCM & LRF(1,35,000 TPA, Rolling Mill (90,000 TPA), Power Plant through WHRB of 8 MW (after Dropping 10 MW) capacity, Power Plant (8 MW) of M/s Vikas Metaliks & Energy Ltd., located at Village Bartori, Tehsil Tilda, District Raipur, Chhattisgarh[J-11011/80/2008-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee(Industry-I) to determine Terms of Reference (TORs) for undertaking detailed EIA and EMP study for the purpose of obtaining Environment Clearance in accordance with the provisions of EIA Notification, 2006, as amended. For this purpose, the project proponent submitted information in prescribed format (Form-I) along with the pre-feasibility report. The proposed project activity is listed at S.No.

3(a), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

The project of M/s VikasMetaliks& Energy Limited,located at Bartori Village, Tilda Tehsil, Raipur District, Chhattisgarh was earlier accordedEnvironmental Clearance(EC)by the Ministry vide letter No. J-11011/80/2008 – IA II (I) dated 9th June 2009. The EC was accorded for the following components.

| S.No. | Details | EC Obtained on 9 th June 2009 |
|-------|---|--|
| 1. | Pelletizing Unit | 6,00,000 TPA (1x2000 TPD) |
| 2. | Pig Iron through Blast Furnace | 1,65,000 TPA (1x250 m ³) |
| 3. | DRI Kiln for Production of Sponge Iron | 1,05,000 TPA (2x175 TPD) 1,50,000 TPA (1 x 500 TPD) |
| 4. | Induction furnace with CCM & LRF | 1,80,000 TPA (4x15 MT/heat) |
| 5. | Rolling Mill | 90,000 TPA (1x300 TPD) |
| 6. | Ferro Alloy plant for production of Si-Mn | 15,000 TPA (1x9 MVA) |
| 7. | Power Plant through WHRB | 18 MW (1 x 12 MW & 2x 3 MW) |
| 8. | Power Plant through FBC Boiler | 15 MW (1x15 MW) |

The Project Proponent could not implement any of the Units for which Environmental Clearance was accorded, due to sluggish market conditions and non-availability of Funds.Further, the proponent mentioned that the EC validity of 7 years has already been expired on 8thJune 2016 and they could not submit the request letter to MoEFCC for extension of validity of EC before the expiry of validity period. Therefore, a fresh proposal has been submitted to the Ministry for grant of EC as per the provisions of EIA notification, 2006.

The PP has now proposed reduced capacities of Sponge Iron, SMS, Power, dropping of Pellet plant, BF, Ferro Alloys. An area of 34.26 acres of land is envisaged and is already acquired by the Project Authorities. Revisedplant configuration and production capacity is as following:

| S.No. | Details | Plant Configuration | Production Capacity |
|-------|--|---------------------|---------------------|
| 1. | DRI Kiln for Production of Sponge Iron | 4 x 100 TPD | 1,20,000 TPA |
| 2. | Induction furnace with CCM & LRF | 3 x 15 MT/heat | 1,35,000 TPA |
| 3. | Rolling Mill | 1 x 300 TPD | 90,000 TPA |
| 4. | Power Generation | WHRB | 8 MW |
| | | FBC Boiler (40 TPH) | 8 MW |

Estimated project cost for proposed project will be Rs. 125 Crores.Total water requirement for project will be 450 cum/day, which will be sourced from ground water. Prior permission from CGWA will be obtained.There will be no effluent generation in the DRI, SMS & Rolling Mill units as closed circuit cooling system will be adopted.

After detailed deliberations, the Committee recommended the issue of TOR and prescribed following specific TORs, in addition to the standard TOR, for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-2**:

- i. Public Hearing to be conducted by the Chhattisgarh Environment Conservation Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

13.6.2 Expansion of Ferro Alloys Plant(2x9 MVA to 4x9 MVA submerged electrical arc furnace) by M/s Berry Alloy Limited, located at Plot No-368, APIIC Growth Centre (Industrial Estate), Bobbili (V & M), District Vizianagaram, Andhra Pradesh[J-11011/1129/2007-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee(Industry-I) to determine Terms of Reference (TORs) for undertaking detailed EIA and EMP study for the purpose of obtaining Environment Clearance in accordance with the provisions of EIA Notification, 2006, as amended. For this purpose, the project proponent submitted information in prescribed format (Form-I) along with the pre-feasibility report. The proposed project activity is listed at S.No. 3(a), under category ‘A’ of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s Berry Alloys Limited was earlier accorded environmental clearance(EC) by the Ministry for 2 X 9 MVA Submerged Electrical Arc Furnaces *vide* letter No. J-11011-1129/2007-IA-II dated 19.06.2008. The proponent has now proposed to expand the Submerged Electrical Arc Furnace capacity from 2 x 9 MVA to 4 x 9 MVA. The existing plant is located at Plot No 368, APIIC Growth Centre, (Industrial Estate), Village & Mandal Bobbili, District Vizianagaram, Andhra Pradesh. The detail of the existing and the proposed plant is presented in the following table:

| Existing Furnace Capacity 2 x 9 MVA | |
|--|----------------|
| Ferro Manganese | 43200 TPA (OR) |
| Silico Manganese | 36000 TPA (OR) |
| Ferro Silica | 25200 TPA (OR) |
| Ferro Chrome | 36000 TPA |
| Proposed Furnace Capacity 2 x 9 MVA | |
| Ferro Manganese | 43200 TPA (OR) |
| Silico Manganese | 36000 TPA |

The existing water requirement for the plant is 30 KLD and the proposed requirement is 30 KLD. The source of water supply will be Andhra Pradesh Industrial Infrastructure Corporation. The total cost of the project is 20 crores.

After detailed deliberations, the Committee recommended the issue of TOR and prescribed following specific TORs, in addition to the standard TOR, for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-2**:

- i. Public Hearing to be conducted by the Andhra Pradesh Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. Compliance report issued by the Regional Office of the Ministry for the existing steel plant should be submitted along with the EIA report and the compliance status should be presented before the Committee.
- v. Green belt report should be specifically covered w.r.t earlier EC granted

13.6.3 Expansion of Ferro Alloys Plant(16,100 TPA to 1,27,750 TPA) by M/s Anjaney Ferro Alloys Limited , located at Village Bhutberia, District Jamtara Jharkhand[J-11011/221/2013-IA.II(I)].

The consideration of proposal was deferred as it is a case of violation.

13.6.4 Expansion of Integrated Cement Plant[Clinker (1.48 to 4.38 MTPA), Cement (2.28 to 6.14 MTPA), CPP (25 to 60 MW) and WHRB (4.7 to 15 MW)]by M/s. Nirma Ltd. located at Villages Nimbol & Sinla, Tehsil Jaitaran, District Pali, Rajasthan[J-11011/01/2010-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee(Industry-I) to determine Terms of Reference (TORs) for undertaking detailed EIA and EMP study for the purpose of obtaining Environment Clearance in accordance with the provisions of EIA Notification, 2006, as amended. For this purpose, the project proponent submitted information in prescribed format (Form-I) along with the pre-feasibility report. The proposed project activity is listed at S.No. 3(b), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s. Nirma Limited has an existing Integrated Cement Project - Clinker (1.48 MTPA), Cement (2.28 MTPA) and Captive Power Plant (25 MW) at Villages - Nimbol & Sinla, Tehsil - Jaitaran, District - Pali (Rajasthan). The Environmental Clearance for the same has been obtained from MoEFCC, New Delhi *vide* letter No. J-11011/1/2010-IA-II (I) dated 29th March, 2011 by M/s Siddhi Vinayak Cement Ltd. M/s. Nirma Limited is now proposing expansion of existing Integrated Cement Plant [Clinker (1.48 to 4.38 MTPA), Cement (2.28 to 6.14 MTPA), CPP (25 to 60 MW) and WHRB (4.7 to 15 MW)].

The total land required for the project is 95.764 ha, which is in the possession of the proponent. An area of 31.6 ha i.e. (33% of the total Plant area) is kept for greenbelt / plantation, out of which 17 ha area has already been developed under greenbelt / plantation. Total Cost of the project is Rs. 900 Crores. The total manpower requirement after the proposed expansion project will be around 1006 persons. Project Description is given in the table below:

| S. No. | Units | Existing Capacity | Additional Capacity | Total Capacity after expansion |
|--------|--------------------------|-------------------|---------------------|--------------------------------|
| 1. | Clinker (MTPA) | 1.48 | 2.9 | 4.38 |
| 2. | Cement (MTPA) | 2.28 | 3.86 | 6.14 |
| 3. | Captive Power Plant (MW) | 25 | 35 | 60 |
| 4. | WHRB (MW) | 4.7 | 10.3 | 15 |
| 5. | D.G. Set (MW) | 4.8 | Nil | 4.8 |

The total power requirement for the project is estimated as 61.5 MW, which will be sourced from Captive Power Plant, RSEB, WHRB and D.G Set (for back - up). Raw materials required for the proposed expansion project are Limestone, which will be sourced from Captive Mines; Gypsum will be procured from Bhavnagar, Gujarat; Fly ash will be procured from CPP, Suratgarh & Barmer (JSW); Clay & Silica sand will be procured from nearby market; Red Ochre/ Iron Ore will be procured from Choti Sadri.

Total water requirement after the proposed expansion will be 2500 KLD, which will be sourced from the ground water. Blow down water from cooling towers and boiler will be treated in neutralization pit and treated water will be utilized in dust suppression and domestic wastewater generated from plant and colony will be treated in proposed STP and treated water will be utilized in greenbelt development / plantation.

After detailed deliberations, the Committee recommended the issue of TORs and prescribed following specific TORs, in addition to the standard TORs, for undertaking detailed EIA and EMP study in addition to the generic TORs enclosed at **Annexure I read with additional TORs at Annexure-2:**

- i. Public Hearing to be conducted by the Rajasthan Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. Compliance report issued by the Regional Office of the Ministry for the existing steel plant should be submitted along with the EIA report and the compliance status should be presented before the Committee.
- v. The proponent should produce environmental clearance issued *vide* letter No. J-11011/1/2010-IA-II (I) dated 29th March, 2011 in the name of M/s Siddhi Vinayak Cement Ltd. in their at the time of consideration of proposal for environmental clearance.

13.6.2 Kraft paper production(150 TPD) using locally available hard wood along with captive power plant(5 MW) by M/s Rajmax Paper Industries LLP, located at Village Sundargadh, Taluka Halvad, District Morbi, Gujarat[J-11011/108/2016-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee (Industry) [EAC(I)] and the project proponent and their EIA-EMP consultant (M/s Eco Chem Sales & Services) gave a detailed presentation on the salient features of the project. The proposal was initially received in the Ministry on 20.02.2016 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the EAC(I) during its meeting held on 31.03.2016 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed TORs to the project on 24.05.2016. Based on the TORs prescribed to the project, the project proponent submitted an online application for environmental clearance to the Ministry on 28.10.2016.

The project of M/s Rajmax Paper Industries LLP is located at Survey No. 451,422,452, 449, 450 & 453, in Village Sundargadh, Taluka Halvad, District Morbi, Gujarat. The proposal is for setting up of a greenfield project for production of 150 TPD of kraft paper plant & installation of 5 MW of captive co-gen power plant. The total land required for the project is 3.43 ha. No agricultural land or grazing land or forestland is involved. The entire land has been acquired for the project. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. No River passes through the project area.

The topography of the area is flat and reported to lie between 22°57'30.39"N Latitude and 71°06'46.30"E Longitude, in Survey of India topo sheet No. F42L1, at an elevation of 152 ft AMSL. The ground water table reported to range between 10m-20 m below the land surface during the post-monsoon season and 10m-20m below the land surface during the pre-monsoon season.

The targeted production capacity of the Kraft Paper is 150 TPD. The raw material for the plant would be procured from local suppliers.

The water requirement of the project is estimated as 3825 m³/day, which will be obtained from the Brahmini River. The power requirement of the project is estimated as 1500 KWh and additional 5 MW will be obtained from the Captive Power Plant.

Ambient air quality monitoring has been carried out at 9 locations during March 2016 to May 2016 and the data submitted indicated that PM₁₀ ranges from 58.9 µg/m³-96.4 µg/m³, PM_{2.5} ranges from 27.2 µg/m³- 49.2 µg/m³, SO₂ ranges from 15.0 µg/m³ -28.5 µg/m³ and NO_x ranges from 17.5 –32.5 µg/m³. The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 0.875 µg/m³ with respect to the PM, 1.010 µg/m³ with respect to the SO₂ and 0.382 µg/m³ with respect to the NO_x.

The Public Hearing of the project was held on 25.10.2016 for production of 150 MT/day of Kraft Paper and 5 MW Co generation captive power plant. The issues raised during public hearing *inter alia* include employment, use of cotton sticks, benefits to the farmers etc.

The capital cost of the project is Rs. 49.2 Crores and the capital cost for environmental protection measures is proposed as Rs. 5.75 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 0.575 Crores. The proponent has mentioned that there is no court case to the project or related activity.

Based on the presentation made and discussions held, the Committee desired following information for further consideration of the project.

- i. Water requirement has to be reassessed and based on the same revised water balance clearly indicating evaporation losses should be submitted.
- ii. Revised layout plan indicating parking area, green belt, facilities, roads, entry exit gates, etc.
- iii. Public hearing points raised and commitment of the project proponent on the same along with time bound action plan including financial allocation to implement the same should be included in the EIA and EMP report.
- iv. Permission from the irrigation department for supply of water.
- v. Permission from the electricity board for supply of electricity
- vi. Application for conversion of land for non agricultural land.
- vii. Revise the table of risk assessment.
- viii. Revisit the biomass based co-gen power plant particularly in view of availability of biomass.
- ix. The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.
- x. It has been reported that water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed. Revisit this statement and provide factual information.
- xi. It has been reported that there are 150 people in the core zone ;however no R&R is proposed. It may be clarified how the people in the core zone would be compensated?
- xii. Revise the EIA and EMP report by incorporating the above information MOU with the hard-wood suppliers.

13.6.3 Expansion of Integrated Steel Plant (1 MTPA to 1.3 MTPA) of M/s JSW Steel Ltd., located at Mecheri, Taluk Mettur, District Salem, Tamil Nadu[No.J-11011/281/2016-IA.II(I)]

Consideration of the proposal was deferred at the request of the Project Proponent.

13.6.4 Greenfield Beneficiation plant-II(10MTPA), slime disposal pipeline-1 & 2, Tailing dam-1 & 2 for Donimalai and Kumaraswamy Iron Ore Mines by M/s. NMDC Limited, located at Donimalai Iron Ore Complex, Village Narsingapura, Taluk Sandur, District Bellary, Karnataka[No.J-11015/125/2014-IA.II(M)].

The Proposed 10 Million Tonnes Per Annum (MTPA) Capacity Screening & Beneficiation Plant-II, Slime Disposal Pipelines and Tailing Dams for Donimalai & Kumaraswamy Iron Ore Mines of M/s NMDC Limited is located nearby Village Narsingapur, Tehsil Sandur, District Bellary, Karnataka. The proposal was initially received in the Ministry

on 06.09.2014 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Non-Coal Mining Projects) during its meeting held on 26.09.2014 and prescribed TORs to the project for undertaking detailed EIA and EMP study for the purpose of obtaining Environmental Clearance. Accordingly, the Ministry of Environment, Forest and Climate Change(MoEFCC) had prescribed TORs to the project *vide* letter No: J-11015/125/2014-IA.II(M) dated 30.10.2014 for the project area of 39.320 ha.

Subsequently, M/s NMDC requested MoEFCC for amendment of ToRs *vide* letter No. NMDC/ENV/SBP-II/EC/2015/2544 dated 18.8.2015 due to increase of area from 39.320 ha to 75.920 ha. The amendment proposal was considered by the Reconstituted Expert Appraisal Committee (Non Coal Mining Projects) during its 37th meeting held on 27.08.2015 and recommended the amendment for the increase in project area to 75.920 ha. MoEFCC *vide* letter dated 28.09.2015 issued amendment for preparation of EIA and EMP report as per the amended TORs.

Based on the TORs prescribed to the project, the project proponent submitted an online application for Environmental Clearance on 16.08.2016. The proposal was considered by EAC (Non Coal Mining)during its 11th meeting held on 24.10.2016 and decided to transfer the proposal to Industry Sector, as it is a standalone beneficiation plant outside the lease area and the project proposal falls in schedule 2(b), as per provisions of EIA notification, 2006.

The proposal was therefore, considered by the Expert Appraisal Committee (Industry) [EAC(I)] and the project proponent and their EIA and EMP consultant(M/s Mecon Limited) gave a detailed presentation on the salient features of the project. It is a Greenfield screening and beneficiation plant II(10MTPA),for processing of iron ore received from existing Donimalai and Kumaraswamy iron ore mines of M/s NMDC located nearby. The capacity of the plant would be 7 MTPA in 1st phase which will be augmented to 10 MTPA in 2nd phase.

The total land required for the project is 75.92 ha, which is towards southern side of the existing Screening Plant-I on the top of hill lock between fine ore belt conveyor number BC 411 and lump ore conveyor number BC 501 of Donimalai mine. The entire land of 75.92 Ha is forest land and falls within Donimalai Reserve Forest. M/s NMDC has submitted online application (FP/KA/OTHERS/14576/2015) for obtaining Forest Clearance on 11.08.2015, which was accepted by Nodal Officer, Forest Department, Bangalore on 06.06.2016. No river passes through the project area. It has been reported that the project site is located on slope of hill, seasonal drainage channels passes through the site. Therefore, it is proposed to construct diversion channels along rims of tailing ponds to divert water away from tailings maintaining the overall drainage pattern. The seasonal drainage channels will be integrated in to plants' storm water drainage system.

The topography of the area is undulating being on slope of a hill / escarpment and reported to lies between 15°03'55" N to 15°03'35" N Latitude and 76°30'10" E to 76°36'29" E Longitude in Survey of India topo-sheet No.D43E12, at an elevation of 684m-726m AMSL.

No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The authenticated list of flora and fauna provided through the Forest Department reporting presence Schedule-I fauna in the study area.

The ore for the plant would be received from existing iron ore mines of M/s NMDC at Kumaraswamy & Donimalai. The ore transportation from these mines will be done through covered cross country conveyors only. The beneficiated ore will be sent to the existing railway siding at Ranjitpura by covered conveyors, mechanically loaded and despatched by railway wagons to customers.

The proposed plant will process 10 MTPA of ROM to yield 4.55 MTPA of calibrated lump ore and 5.213 MTPA of fine ore. About 0.237 MTPA of iron ore tailings will be generated as waste. The beneficiation process will comprise of screening, crushing and classification with water followed by dewatering & de-sliming.

The water requirement of the project is estimated as 60984 m³/day, out of which 8787 m³/day of fresh water requirement will be obtained from the Taranagar Dam from the existing allotment of Donimalai Mines. The remaining requirement of 52197 m³/day will be met from recycling effluents. The power requirement of the project is estimated as 1.5 MW, which will be obtained from the grid.

Ambient air quality monitoring has been carried out at 10 locations during winter season 2014-15 (05-12-14 to 27-02-2015) and the data submitted indicated that PM₁₀ ranges from 97 µg/m³ to 43 µg/m³, SO₂ ranges from 5.8 µg/m³ to <3.6 µg/m³ and NO_x ranges from 24.5 µg/m³ to <10 µg/m³. At the proposed plant, raw and finished ore will be despatched only by covered conveyors, hence generation of fugitive dust is minimal. The conveyor system will be covered but also have de-dusting systems at the material transfer points. The crushed ore from Donimalai and Kumaraswamy iron ore mines will be stored in covered silos at proposed plant-II. Water will be added to the ore at the Primary Screens - the first stage of the beneficiation process. The entire beneficiation process will be carried out inside an enclosed building provided with de-dusting systems. The tailings in tailing dam will be always kept moist. Once a tailing pond fills up, it will be biologically reclaimed. Hence there will be hardly any dust generation from the project.

It has been reported that there are no people in the core zone of the project. No R&R is involved. Approximately 2,38,000 tonnes (99167 m³) of waste will be generated due to the project, which will be dumped in engineered tailings ponds located within the project area. There will be two tailings ponds, of which only one will be in use at a time. The total life of the tailings ponds has been estimated to be 37 years, whereas the life of the mines which will be the source of raw materials for the proposed project has been estimated to be about 30 years at current rated capacities. It has been envisaged that an area of 11.457 ha of unutilised forest land in the plant area will be developed as green belt to attenuate the noise levels and trap the dust generated due to the project development activities. An area of 62.30 ha of filled up tailings ponds will be biologically reclaimed as soon as each tailing pond is filled up.

The Public Hearing of the project was held on 10.03.2016 for 10 MTPA capacity Screening cum Beneficiation Plant-II, under the chairmanship of Additional Deputy Commissioner, Bellary District. The issues raised during public hearing *inter alia* include pollution & consequences of pollution, depletion of water resources, employment, extension of NMDC's medical facilities to local villagers, etc.

The capital cost of the project is Rs. 399.75 Crores and the capital cost for environmental protection measures is proposed as Rs. 51.96 crores. The annual recurring cost towards the

environmental protection measures is proposed as Rs.83.0 Lakhs. It has been mentioned that there is no court case to the project or related activity.

Based on the presentation made and discussions held, the Committee noted that the proponent has not complied with the ToRs 21, 26 and 30. In addition, information on the following would also be required for further consideration of the project:

- (i) Management and disposal of tailings and closure plan of the tailing pond, if any, after the project is over.
- (ii) Biological as well as health impact of fines and other dust generated in the plant should be studied with reference to National and International Standards (WHO and ILO standards including CPCB norms). The proposed mitigation measures with EMP should also be provided.
- (iii) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan including financial allocation to implement the same should be submitted.

In view of the location of the project in forestland, the Committee desired that a sub-committee comprising of the following shall visit the site at the earliest and submit their recommendation for further consideration of the project:

- (i) Dr. G. Bhaskar Raju, Member, EAC
- (ii) Shri Ashok Upadhyay, Member, EAC
- (iii) Shri Amardeep Raju, Joint Director, Representative of MoEFCC

13.7 FURTHER CONSIDERATION

13.7.1 Establishment of Industrial unit consisting of sponge iron (1000 TPD), MS Ingots/Billets (1000 TPD), structural TMT bar (1000 TPD) along with power generation (50 MW) by M/s Kapila Metals Pvt. Ltd. located at MIDC Area, Phase III, Jalna, District Jalna, Maharashtra [F. No. J-11011/144/2014-IA.II(I)].

The proposal was earlier considered in the eighth (8th) meeting of the Expert Appraisal Committee(Industry-I) held on 27th –28th June, 2016 and again in the 11th meeting held on 26th – 27th September, 2016 when the Committee after detailed deliberation advised the proponent and the consultant to revisit the EIA and EMP report for its correctness in terms of data analysis, predictions and the final conclusion. The proponent finally submitted the revised EIA and EMP report and made presentation before the committee:

The proposed project of M/s Kapila Metals Pvt. Ltd. (KMPL) was initially received in the Ministry dated 11th-12th December 2014 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its meeting held on 11th 12th December, 2014 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment and Forests had prescribed TORs to the project on 1st April 2015. Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 27th May 2016.

The proposal is for setting up of a new plant for production of Sponge iron 1000TPD, Captive Power 50 MW, Billets 1000TPD/TMT Bar 1000 TPD. The total land required for the project is 11.60 ha,

out of which 3.8 ha is for green belt development. No forestland is involved. The entire land has been acquired for the project. The Kundalika River passes near the project area. The topography of the area is flat terrain and reported to lie between 19°52'53.46"N Latitude to 75°48'50.51"E Longitude in Survey of India topo sheet No. 47M-9 & 47 M13, at an elevation of 552 m AMSL.

No national park/wildlife sanctuary/ biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form a corridor for Schedule-I fauna. The process of the project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process.

The ore for the plant would be procured from various suppliers. The coal will be procured from Indian traders. The ore transportation will be done through road. The water requirement of the project is estimated as 737 m³/day, which will be obtained from the MIDC Jalna. The power requirement of the project is estimated as 58MW, out of which 50 MW will be obtained from the own power plant & remaining will be met from MIDC Jalna.

Ambient air quality monitoring has been carried out at 8 locations during December 2014 to February 2015 and the data submitted indicated that PM₁₀ ranges from 69.18 µg/m³ to 65.31µg/m³, PM_{2.5} ranges from 25.46 µg/m³ to 22.52µg/m³, SO₂ ranges from 14.88 µg/m³ to 11.89 µg/m³ and NO_x ranges from 18.82 µg/m³ to 16.24 µg/m³. The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 77.48 µg/m³ with respect to the PM₁₀, 33.58 µg/m³ with respect to the SO₂ 22.92 µg/m³ with respect to the NO_x.

It has been reported that a total of 170 TPD of waste will be generated due to the project, which will be sold and used for building construction material and road making. It has been envisaged that an area of 3.8 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities. The proposed project is situated at Additional MIDC Jalna, so no Public Hearing required, as the ToRs were prescribed prior to April, 2016 i.e. new O.M. on public consultation in the industrial estates.

The capital cost of the project is Rs. 540 Crores and the capital cost for environmental protection measure is proposed as Rs. 1386 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 34.50 Lakhs. The proponent has mentioned that there is no court case to the project or related activity.

Based on the presentation made and discussions held, the Committee recommended the project for environment clearance subject to stipulation of the following specific conditions and any other mitigative measures, as prescribed by the Ministry for environmental protection:

- i. The project proponent shall install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.
- ii. Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided. Submerged arc furnace PM level should be restricted to 50 mg/Nm³.
- iii. The project proponent should provide for Scrubber to reduce SO_x emission before it is going to ESP.

- iv. The National Ambient Air Quality Emission Standards issued by the Ministry *vide* G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- v. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry *vide* G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- vi. AAQ Modelling shall be carried out based on the specific mitigative measures taken in the existing project and proposed for the expansion project to keep the emissions well below prescribed standards.
- vii. A statement on carbon budgeting including the quantum of equivalent CO₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.
- viii. For the employees working in high temperature zones falling in the plant operation areas, the total shift duration would be 4 hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipments, garments and gears such as head gear, clothing, gloves, eye protection etc. There should also be an arrangement for sufficient drinking water at site to prevent dehydration etc
- ix. 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.
- x. The project proponent install filter bags system with PTFE dipped PPS felt filter bags, designed to cater for 150% of the air discharge volume. The filter should be replaced at the end of designed life of the filter.
- xi. The emission standards specified in the Environmental (Protection) Amendment Rules, 2015 issued by *vide* S.O. 3305 (E) dated 7th December, 2015 for the Thermal Power Plant shall be strictly adhered to.
- xii. 'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.
- xiii. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent. Revised sourcing of raw material.

- xiv. 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, SPCB and CPCB.
- xv. A time bound action plan shall be submitted for reduction in solid waste, its proper utilization and disposal.
- xvi. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and its subsequent amendments. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Chennai.
- xvii. A Risk and Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xviii. Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.
- xix. Green belt shall be developed in at least 33% of the project area by planting native and broad leaved species in consultation with local DFO and local communities as per the CPCB guidelines.
- xx. The project authorities should undertake sample survey to generate data on pre-project community health status within a radius of 1 km from proposed project.
- xxi. Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.
- xxii. At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.
- xxiii. In addition to the above provision of ESC, the proponent shall prepare a detailed CSR Plan for the next 5 years including annual physical and financial targets for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Skill Development and infrastructure etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and

revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.

- xxiv. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xxv. The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.
- xxvi. The project proponent shall provide for LED lights in their offices and residential areas.
- xxvii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

13.8 ANY OTHER ITEM

13.8.1 Enhancement of production capacity of pig iron(expansion) for existing blast furnace from 2,92,000TPA to 3,50,000TPA by process optimisation and efficiency improvement by M/s Vedanta Ltd. (Sesa Goa Iron Ore) located at Village Navelim, Taluka Bicholim, District North Goa-Amendment in ToRs[No.J-11011/946/2007-IA.II(I)].

The Ministry issued ToRs to the proposal for enhancement in production capacity of pig iron (expansion) for existing Blast Furnaces from 292000 TPA to 350000 TPA by process optimization and efficiency improvement, located at Village Amona, Taluka Bicholim, District North Goa, Goa to M/s Vedanta Ltd., vide F. No. J-11011/211/2016-IA.II(I) dated 11th August 2016.

The project proponent has now proposed for following product diversification along with enhancement in production capacity as per the detail provided below:

| S. No. | Products | Existing Production (TPA) | Proposed Production(TPA) |
|--------|----------------------|---------------------------|--------------------------|
| 1 | High Purity Pig Iron | ----- | 1,25,000 |
| 2 | Iron & Alloy Powder | ----- | 50,000 |
| 3 | Pig Iron | 2,92,000 | 1,75,000 |

| | | | |
|---|--------------------------|----------|----------|
| 4 | Total Pig Iron/Hot Metal | 2,92,000 | 3,50,000 |
|---|--------------------------|----------|----------|

It has been proposed that 1,75,000 TPA hot metal tapped from Blast Furnaces will be refined in Basic Oxygen Furnaces (BOFs) and Ladle Refining Furnaces (LRFs). It is proposed that 50,000 TPA refined hot metal will be atomized and further processed to form Iron and Alloy Powder and 125000 TPA refined hot metal will be casted into High Purity Pig Iron and Alloy Steel. Hot metal refining and iron & alloy powder installation will be done within existing land of Pig Iron Plant in 10 Acres (100mX400m plot).

Total cost of project is Rs. 265 Crores. Employment generation from proposed project will be 118 direct employment and 300 indirect employment. Total power requirement is around 16 MW and same will be sourced from existing 2X30MW Waste Heat Recovery based Power Plants of the company. Total make up water requirement will be 1200 m³/day, which will be sourced from Bandara and/or iron ore mine pits of Sesa. Proposed project is designed for maintaining zero process discharge.

After detailed deliberation the Committee recommended the proposal for amendment of ToRs issued by the Ministry vide letter F. No. J-11011/211/2016-IA.II(I) dated 11th August 2016.

13.8.2 Expansion of the existing Pig Iron (24 000 TPA), sponge Iron (45000 TPA) and ore briquetting Plant (100000 TPA) by M/s Suraj Product Ltd., located in ,Village Borpali, Post Kesramal, Tehsil Rajgangpur, District Sundargarh, Orissa- Amendment in ToRs[J-11011/226/2007-IA.II(I)].

The Ministry issued ToRs to the proposal for expansion of the existing (24 000 TPA Pig Iron, 45000 TPA sponge Iron and 100000 TPA ore briquetting Plant) unit located in the village Borpali, Post Kesramal, Tehsil Rajgangpur, Dist. Sundargarh (Orissa) by M/s Suraj Product Ltd., vide letter No. J-11011/226/2007-IA-II(I) dated 24.06.2015.

The project proponent now requested to reduce the capacity for different products proposed for expansion under the ToRs. It has been mentioned that no additional or new product or new process is proposed to be added. Due to severe market recession in steel sector, steel industries are facing difficulties in seeking finance from banks and financial institutions for large investment in steel and power sector; therefore capacity granted in previous ToRs, is being changed/reduced for proposed expansion capacity. Following table presents the existing and the proposed capacities:

| S. No | Facilities | Capacity for which TOR is granted | Revision in TOR request for the following capacity |
|-------|---|-----------------------------------|--|
| 1 | Sponge Iron (DRI Kilns 50 TPD X 3 Nos.) Existing facility already in Production: 45000 TPA Proposed expansion: NIL | 45000 TPA | 45000 TPA |

| | | | |
|---|--|---|---|
| 2 | Pig Iron (Mini Blast Furnace) (increasing the volume to 40 m ³ thus additional capacity increased by 36000 TPA, thus total capacity become 60000 TPA)] Existing facility already in production: 24000 TPA Proposed expansion: 36000 TPA | 60000 TPA | 60000 TPA |
| 3 | Iron Ore/ Mineral Ore Briquettes [Mineral Briquetting Plant (Proposed capacity addition (Cold Briquetting Plant) Existing facility already in production: 100000 TPA Proposed expansion: <u>NIL (the existing facility will be able to produce additional 5600 TPA of briquettes)</u> | 200000 TPA | 105600 TPA (20 TPH) |
| 4 | Backup power generation (DG set installed for Emergency backup) Existing facility already in production: 1820 KVA Proposed expansion : Nil | 500 KVA X 3 Nos + 320 KVA x1 Nos. = 1820kVA | 500 KVA X 3 Nos + 320 KVA x1 Nos. = 1820kVA |
| 5 | Iron Ore and Other Mineral Ore (Like Manganese; Chrome; Nickel Ore; etc) Beneficiation Plant input basis (throughput) Existing facility already in production: Nil Proposed expansion through new facility: 105600 TPA | 264000 TPA | 105600 TPA (20 TPH) |
| 6 | Coal Washery Existing facility already in production: Nil Proposed expansion through new facility: 96000 TPA | 185000 TPA | 96000 TPA (20 TPH) |
| 7 | Reduced Metal Powder from metallic mineral ores such as Iron Powder and chrome ore, manganese ore etc. (through Tunnel Kiln process) Existing facility already in production: Nil Proposed expansion through new facility: (60 TPD each kiln X 2 nos kiln) : 40000 TPA | 60000 TPA | 40000 TPA |
| 8 | Ferro Alloys / Pig Iron from Submerged Arc Furnace Existing facility already in production: Nil Proposed expansion through new facility: 20000 TPA Ferro Manganese/Ferro Silico/Silico Manganese Or 40000 TPA Pig Iron | Ferro Manganese/ Ferro Nickel/ Silico Manganese = 25000 TPA Or Pig Iron - 50000 TPA | Ferro Alloy- 20000 TPA or Pig Iron – 40000TPA |

| | | | |
|----|---|---|--|
| 9 | Semi Finished Steel (Through Induction Furnace; LRF/GOR; Converter; and Continuous Caster) Existing facility already in production: Nil Proposed expansion through new facility: 110000 TPA | 110000 TPA | 110000 TPA |
| 10 | Rerolled Steel [Rolling Mill (Structure / Rolled product)] Existing facility already in production: Nil Proposed expansion through new facility: 100000 TPA | 100000 TPA | 100000 TPA |
| 11 | Captive Power generation (CFBC Power Plant based on washery reject) Existing facility already in production: Nil Proposed expansion through new facility: 6 MW | 8 MW | 6 MW |
| 12 | Bricks (Brick making from waste) Existing facility already in production: Nil Proposed expansion through new facility: 66000 TPA | 66000 TPA | 66000 TPA |
| 13 | Producer Gas plants two numbers for firing these Kilns Existing facility already in production: Nil Proposed expansion through new facility: 600 kg/hour | Each 1000 kg/hr or 6000 TPA coal gasification capacity or 3500 ³ Nm ³ /hr i.e. 21 Million m ³ per year producer gas. | Each 600 kg/hr or 3600 TPA coal gasification capacity or 2100 ³ Nm ³ /hr i.e. 14 Million m ³ per year producer gas. |

After detailed deliberation, the Committee recommended the proposal for amendment of ToRs issued by the Ministry vide letter F. No. J-11011/226/2007-IA-II(I) dated 24.06. 2015.

13.9 CASE FOR TERMS OF REFERENCE (TOR)

13.10.1 Expansion of Ductile Iron Pipe Plant (2,00,000 TPA To 5,50,000 TPA) by M/s Rashmi Metaliks Limited, located at Village Gokulpur, Post Office Shyamraipur, District Paschmi Mednipur, West Bengal [J-11011/237/2016-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee (Industry-I) to determine Terms of Reference (TORs) for undertaking detailed EIA and EMP study for the purpose of obtaining Environment Clearance in accordance with the provisions of EIA Notification, 2006, as amended. For this purpose, the project proponent submitted information in prescribed format (Form-I) along with the pre-feasibility report. The proposed project activity is listed at S.No. 3(a), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s Rashmi Metaliks Limited proposes to expand the production capacity of existing Ductile Iron Pipe Plant from 2, 00,000 TPA to 5, 50,000 TPA. It is proposed to set up the plant for Ductile Iron Pipe based on Centrifugal Casting technology. The total land area required for

the proposed expansion project is 4.0468 Ha, out of which 1.34 Ha land will be used for green belt development. Total project cost is approximately 165 Crore rupees. Proposed employment generation from proposed project will be 600 direct employments and 200 indirect employments.

The proposed capacity for different products for new site area as below:

| Sr. No | Plant | Existing (TPA) | Proposed (TPA) | | Total (TPA) |
|--------|-------------------|----------------|--|--|-------------|
| | | | Phase-I | Phase-II | |
| 1 | Ductile Iron Pipe | 2,00,000 | 1,50,000 Size of Pipe (SDP I) DN (80- 300 mm) x 5.5 m | 2,00,000 Size of Pipe (SDP II) DN (200- 600 mm) x 5.5 m | 5,50,000 |

The electricity load of 9.73 MW for the proposed expansion project will be procured from West Bengal State Electricity Distribution Company Limited has also proposed to install a 725 KVA DG Set. Water Consumption for the proposed project will be 830 KLD and waste water generation will be 500 KLD. The plant will be designed at 'Zero 'effluent discharged concept and it will ensured by top management. Domestic waste water will be treated at septic tank followed by soak pit and industrial waste water generated will be treated at E.TP. Plant and reused in process, green belt development, water spraying/ sprinklers for dust suppression.

After detailed deliberations, the Committee recommended the issue of TOR and prescribed following specific TORs, in addition to the standard TOR, for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-2:**

- i. Public Hearing to be conducted by the West Bengal Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. Compliance report issued by the Regional Office of the Ministry for the existing steel plant should be submitted along with the EIA report and the compliance status should be presented before the Committee.
- v. Comfort letter from the concerned departments should be obtained for supply of water and power. Land related documents should be submitted as per OM of the Ministry.
- vi. One complete season(3 months) monitoring should be conducted for preparation of EIA and EMP report and the data so collected should be compared with the old data collected for earlier project and presented in the EIA report

13.10.2 Mini Blast Furnace (1 X 65 m³) and Sinter Plant (1 X 12 m²) of M/s Purulia Metal Casting Private Limited, located at Village Bongabari, P.O. Vivekanandanagar, District Purulia, West Bengal [J-11011/236/2016-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee(Industry-I) to determine Terms of Reference (TORs) for undertaking detailed EIA and EMP study for the purpose of obtaining Environment Clearance in accordance with the provisions of EIA Notification, 2006, as amended. For this purpose, the project proponent submitted information in prescribed format (Form-I) along with the pre-feasibility report. The proposed project activity is listed at S.No. 3(a), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s.Purulia Metal Casting (P) Ltd. (Pig Iron Division) propose to install a new manufacturing unit Sinter Plant (12 m²) for production of Iron Ore Sinter and Mini Blast Furnace (65 m³) for production of Molten Metal i.e. 59,310 TPA Pig Iron. The land area required for the proposed project is 5.0 Acres, out of which 1.65 Acres will be developed as green belt. Total project cost is Rs. 25.50 Crores. Proposed employment generation from proposed project will be 60 direct employments and 80 indirect employments. The proposed capacity for different products for new site area as below:

| Name of Unit | No. of Units | Capacity of each Unit | No. of Working Days/Year | Production Capacity |
|---|---------------------|------------------------------|---------------------------------|-----------------------------|
| Mini Blast Furnace (65 m ³) | 1 | 162.5 | 365 | Molten Metal 59,310 TPA. |
| Sinter Plant (12 m ²) | 1 | 300.0 | 170 | Iron Ore Sinter 51,000 TPA. |

The electricity load of 2050 kVA will be procured from Damodar Valley Corporation (DVC). Company has proposed to install DG Sets for Mini Blast Furnace 2 X 250 kVA & Sinter Plant 2 X 250 kVA.

Proposed raw materials required for the Sinter Plant are Iron ore fines (40,800 TPA), Mill scale (6,630 TPA), Limestone (5,100 TPA), Coke Breeze (3,060 TPA), Flue dust (1,530 TPA) & Return fines (21,420 TPA) and for Mini Blast Furnace are Iron ore (47,450 TPA), Iron ore Sinter (50,415 TPA), Coke (41,518 TPA), Limestone (6,524 TPA), Dolomite (6,524 TPA) & Quartz (2,965 TPA).

Water will be required for cooling of different equipment/components and will adopt a re-circulation system which enables re-use of water in-cycle and replenish the losses by feeding make-up water (345 KLD) in the circuit. Make-up water will be sourced from Supply Water, Borewell & Rain Water Harvesting. The plant is designed on the basis of zero liquid effluent discharge. Treated water will be used in dust suppression and green belt development.

After detailed deliberations, the Committee recommended the project for issue of TOR and prescribed following specific TORs, in addition to the standard TOR, for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-2:**

- i. Public Hearing to be conducted by the West Bengal Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. Compliance report issued by the Regional Office of the Ministry for the existing steel plant should be submitted along with the EIA report and the compliance status should be presented before the Committee.
- v. Comfort letter from the concerned departments should be obtained for supply of water and power. Land related documents should be submitted as per OM of the Ministry.
- vi. The project proponent shall ensure that natural drainage in the project area is not adversely impacted due to any faulty designed constructions."**

13.10.3 Expansion of cement plant [Clinker (1.0 MTPA to 2.50 MTPA) and Cement (1.5 MTPA to 3.80 MTPA) of M/s Rain Cements Limited, located at Village Ramapuram, Mellachervu Mandal, District Suryapet, Telangana [J-11011/152/2008-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee (Industry-I) to determine Terms of Reference (TORs) for undertaking detailed EIA and EMP study for the purpose of obtaining Environment Clearance in accordance with the provisions of EIA Notification, 2006, as amended. For this purpose, the project proponent submitted information in prescribed format (Form-I) along with the pre-feasibility report. The proposed project activity is listed at S.No. 3(b), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s Rain Cement Limited was established in the year 1986 and the company is engaged in the production and marketing of Priya Brand Cement. Cement plant is located at Ramapuram Village, Kodad Taluk, Nalgonda District (Unit-I), which has an installed capacity of 1.5 MTPA cement. Environmental Clearance (EC) for the existing cement plant has been issued *vide* letter F.No.J.11011/152/2008-IA II (I) dated October 27th 2010. The proponent is currently operating cement plant of 1.0 million TPA clinker and 1.5 million TPA of cement and the proponent has now proposed to expand by setting up the second production line by addition of 1.5 million TPA of clinker and 2.3 million TPA of cement within the existing cement plant complex. Total production capacity after expansion would be 2.5 million TPA of clinker and 3.8 million TPA of cement.

The total land required for expansion is 11.53ha within the existing plant premise of 126.3ha. The additional Water requirement for the proposed expansion of the clinker and cement is about 600 KLD, which will be sourced from rain water harvested in the mines pits and from the existing bore wells. The maximum estimated power demand for the plant is 35 MW. It is proposed to meet this requirement from State Electricity Board grid and 2x6 MW Furnace oil fired DG set. There is a potential of 10 MW power generation from the exhaust gases of the existing and proposed plant by installing environment friendly Waste heat Recovery System in future.

Estimated cost of the project is Rs. 379 Crores. About 500 workforce are required during the construction phase of the project. Additional workforce of about 80 employees would be required during operational phase.

After detailed deliberations, the Committee recommended the issue of TORs to the project and prescribed following specific TORs, in addition to the standard TOR, for undertaking detailed EIA and EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-2:**

- i. Public Hearing to be conducted by the Telangana Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. Compliance report issued by the Regional Office of the Ministry for the existing steel plant should be submitted along with the EIA report and the compliance status should be presented before the Committee.
- v. Comfort letter from the concerned departments should be obtained for supply of water and power. Land related documents should be submitted as per OM of the Ministry

13.10.4 Expansion of existing Steel Plant by installing (2x15 T + 2x20 T) Induction Furnaces, 120000 TPA capacity Rolling Mill along with 16 MW capacity Captive Power Plant (4 MW WHRB + 12 MW AFBC utilising waste heat & dolochar, generated from the existing 2x100 TPD sponge iron plant) within the premises of the existing Steel Plant of M/s MA AMBA Sponge Iron Ltd. located at Village Jemua, P.O. – Mejhia, District Bankura, West Bengal[J-11011/235/2016-IA.II(I)].

Consideration of the proposal was deferred on the request of the Project Proponent.

13.10.5 Modernization and Expansion of 20 TPD paper mill to 40 TPD including bleaching of matching capacity by M/s Sri Siddhi Vinayak Paper Mills Pvt. Ltd. located at Village Sukhani, Tehsil Rajganj, District Jalpaiguri, West Bengal[J-11011/238/2016-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee(Industry-I) to determine Terms of Reference (TORs) for undertaking detailed EIA and EMP study for the purpose of obtaining Environment Clearance in accordance with the provisions of EIA Notification, 2006, as amended. For this purpose, the project proponent submitted information in prescribed format (Form-I) along with the pre-feasibility report. The project activity is listed in Serial no. 5(i) – Pulp & Paper Industry as per EIA Notification 2006. The project falls in Category ‘B’ as the paper is proposed to be manufactured from waste paper with bleaching process. However, as the project is located at 3.61 Km, from India-Bangladesh international boundary, it was appraised as Category ‘A’ project due to applicability of general conditions.

M/s Sri Siddhi Vinayak Paper Mills Pvt. Ltd., has proposed for expansion and modernization in production capacity of writing paper from 20 TPD to 40 TPD. The expansion will be carried out in the existing plant premises. No additional land is required for expansion proposal. Following table presents the existing and the proposed capacities of the plant:

| Particulars | Existing Capacity | Proposed Expansion Capacity | Total Capacity after Expansion |
|-------------|-----------------------------------|--|--------------------------------|
| Paper | 20 TPD without Bleaching process. | 20 TPD include Bleaching(for total capacity) | 40 TPD with bleaching. |

The “Consent To Operate” for the existing plant has been issued by West Bengal Pollution Control *vide* Memo No. C131/WPB/SRO/JAL/S-374-2012 dated 05.10.2016 and valid upto 31.08.2021. The EC was not required for the existing project as the process involved manufacturing from waste paper pulp and there was no bleaching, no deinking or coloring section involved.

The total water requirement for paper &Pulp production is 3000KLD and the fresh makeup water requirement is 635 KLD. The total power requirement for the project is 1600 kw,of which existing power requirement is 1200 kw and the additional power requirement will be 400 kw.

After detailed deliberations, the Committee recommended the issue of TOR to the project and prescribed following specific TORs, in addition to the standard TOR, for undertaking detailed EIA and EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-2:**

- i. Public Hearing to be conducted by the West Bengal Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

Executive Summary

Executive summary of the report in about 8-10 pages incorporating the following:

- i. Project name and location (Village, Dist, State, Industrial Estate (if applicable))
- ii. Products and capacities. If expansion proposal, then existing products with capacities and reference to earlier EC.
- iii. Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative)
- iv. Process description in brief, specifically indicating the gaseousemission, liquid effluent and solid and hazardous wastes. Materials balance shall be presented.
- v. Measures for mitigating the impact on the environment and mode of discharge or disposal.
- vi. Capitalcost of the project, estimated time of completion
- vii. Site selected for the project – Nature of land – Agricultural (single/double crop), barren, Govt/private land, status of is acquisition, nearby (in 2-3 km.) water body, population, with in 10km other industries, forest , eco-sensitive zones, accessibility, (note – in case of industrial estate this information may not be necessary)
- viii. Baseline environmental data – air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
- ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
- x. Likely impact of the project on air, water, land, flora-fauna and nearby population
- xi. Emergency preparedness plan in case of natural or in plant emergencies
- xii. Issues raised during public hearing (if applicable) and response given
- xiii. CSR plan with proposed expenditure.
- xiv. Occupational Health Measures
- xv. Post project monitoring plan

GENERIC TERMS OF REFERENCE (TOR) IN RESPECT OF INDUSTRY SECTOR

1. Executive Summary
2. Introduction
 - i. Details of the EIA Consultant including NABET accreditation
 - ii. Information about the project proponent
 - iii. Importance and benefits of the project
3. Project Description
 - i. Cost of project and time of completion.
 - ii. Products with capacities for the proposed project.
 - iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
 - iv. List of raw materials required and their source along with mode of transportation.
 - v. Other chemicals and materials required with quantities and storage capacities
 - vi. Details of Emission, effluents, hazardous waste generation and their management.
 - vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
 - viii. The project proponent shall furnish the requisite documents from the competent authority in support of drawl of ground water and surface water and supply of electricity.
 - ix. Process description along with major equipments and machineries, process flow sheet (Quantative) from raw material to products to be provided
 - x. Hazard identification and details of proposed safety systems.
 - xi. Expansion/modernization proposals:
 - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB shall be attached with the EIA-EMP report.
 - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.
4. Site Details
 - i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

- ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)
- iii. Co-ordinates (lat-long) of all four corners of the site.
- iv. Google map-Earth downloaded of the project site.
- v. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
- vi. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
- vii. Landuse break-up of total land of the project site (identified and acquired), government/private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
- viii. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
- ix. Geological features and Geo-hydrological status of the study area shall be included.
- x. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
- xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
- xii. R&R details in respect of land in line with state Government policy

5. **Forest and wildlife related issues (if applicable):**

- i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).
- ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha*).
- iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
- iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon.
- v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.
- vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife

6. **Environmental Status**

- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
- v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
- vi. Ground water monitoring at minimum at 8 locations shall be included.
- vii. Noise levels monitoring at 8 locations within the study area.
- viii. Soil Characteristic as per CPCB guidelines.
- ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
- x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
- xi. Socio-economic status of the study area.

7. Impact Assessment and Environment Management Plan

- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
- ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.
- iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
- iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

- v. Details of stack emission and action plan for control of emissions to meet standards.
- vi. Measures for fugitive emission control
- vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
- viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
- ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
- x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
- xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
- xii. Action plan for post-project environmental monitoring shall be submitted.
- xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8. Occupational health

- i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
- ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
- iii. Annual report of health status of workers with special reference to Occupational Health and Safety.
- iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.

9. Corporate Environment Policy

- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

- ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
 - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
 - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
 11. Enterprise Social Commitment (ESC)
 - i. Adequate funds (Atleast 2.5 % of the project cost) shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.
 12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
 13. 'A tabular chart with index for point wise compliance of above TORs.
 14. The TORs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages shall be provided.
- iv. The letter/application for environmental clearance shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.
- viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI) /National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their

status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.

- ix. TORs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

ADDITIONAL TORS FOR INTEGRATED STEEL PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. For Large ISPs, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
4. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
5. PM(PM₁₀ and P_{2.5}) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM₁₀ to be carried over.
6. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
7. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
8. Plan for slag utilization
9. Plan for utilization of energy in off gases (coke oven, blast furnace)
10. System of coke quenching adopted with justification.
11. Post process control system for control of SO_x
12. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
13. Trace metals in waste material especially slag.
14. Trace metals in water

ADDITIONAL TORS FOR PELLET PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. PM(PM_{10} and $P_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM_{10} to be carried over.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

ADDITIONAL TORs FOR CEMENT INDUSTRY

1. Limestone and coal linkage documents along with the status of environmental clearance of limestone and coal mines
2. Quantum of production of coal and limestone from coal & limestone mines and the projects they cater to;
3. Present land use shall be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. If the raw materials used have trace elements, an environment management plan shall also be included.
5. Plan for the implementation of the recommendations made for the cement plants in the CREP guidelines must be prepared.
6. Energy consumption per ton of clinker and cement grinding
7. Provision of waste heat recovery boiler
8. Arrangement for co-processing of hazardous waste in cement plant.
9. Trace metals in waste material especially slag.

ADDITIONAL TORs FOR PULP AND PAPER INDUSTRY

- i. A note on pulp washing system capable of handling wood pulp shall be included.
- ii. Manufacturing process details for the existing and proposed plant shall be included. Chapter on Pulping & Bleaching shall include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery shall include: no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln
- iii. Studies shall be conducted and a chapter shall be included to show that Soda pulping process can be employed for *Eucalyptus/Casuarina* to produce low kappa (bleachable) grade of pulp.
- iv. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be closed within 2 years of issue of environment clearance.
- v. A commitment that no extra chlorine basebleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills. Plan for reduction of water consumption.

LEATHER/SKIN/HIDE PROCESSING INDUSTRY

1. Justification for engaging a particular type of process (raw hide/skin into semi finishing or finished leather, semi finished leather to finished leather, dry finishing operations, chrome/vegetable tanning, *etc.*).
2. Details regarding complete leather/ skin/ hide processing including the usage of sulfides, nitrogen compounds, chromium or other tanning agents, post-tanning chemicals, biocides, *etc.*, along with the material balance shall be provided.
3. In case of chrome tanning, details of the chrome recovery plant, management of shavings/solid waste including safe disposal.
4. Details on reuse of soak liquor / saline stream from membrane system, if applicable, to the extent possible in pickling activity after required treatment. Also, mention the salt recovery measures.

COKE OVEN PLANT

1. Justification for selecting recovery/non-recovery (beehive) type batteries with the proposed unit size.
2. Details of proposed layout clearly demarcating various facilities such as coal storages, coke making, by-product recovery area, *etc* within the plant.
3. Details of coke oven plant (recovery/non-recovery type) including coal handling, coke oven battery operations, coke handling and preparation.
4. Scheme for coal charging, charging emission centre, Coke quenching technology, pushing emission control.
5. Scheme for coke oven effluent treatment plant details including scheme for meeting cyanide standard.

ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

1. Type of the project – new/expansion/modernization
2. Type of fibres used (Asbestos and others) and preference of selection from techno-environmental angle should be furnished
3. As asbestos is used in several products and as the level of precautions differ from milling to usage in cement products, friction products gasketing, textiles and also differ with the process used, it is necessary to give process description and reasons for the choice for selection of process
4. Technology adopted, flow chart, process description and layout marking areas of potential environmental impacts
5. National standards and codes of practice in the use of asbestos particular to the industry should be furnished
6. In case of newly introduced technology, it should include the consequences of any failure of equipment/ technology and the product on environmental status.
7. In case of expansion project asbestos fibre to be measured at slack emission and work zone area, besides base line air quality.
8. In case of green field project asbestos fibre to be measured at ambient air.

INDUCTION/ARC FURNACES/CUPOLA FURNACES 5TPH OR MORE

1. Details of proposed layout clearly demarcating various units within the plant.
2. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
3. Details on design and manufacturing process for all the units.
4. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
5. Details on requirement of raw materials, its source and storage at the plant.
6. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
7. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
8. Details on toxic content (TCLP), composition and end use of chrome slag. Details on the recovery of the Ferro chrome from the slag and its proper disposal.

METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)

1. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs & outputs (material and energy balance).
2. Emission from sulphuric acid plant and sulphur muck management.
3. Details on installation of Continuous Emission Monitoring System with recording with proper calibration system
4. Details on toxic metals including fluoride emissions
5. Details on stack height.
6. Details on ash disposal and management
7. Complete process flow diagram describing process of lead/zinc/copper/ aluminium, *etc.*
8. Details on smelting, thermal refining, melting, slag fuming, and Waelz kiln operation
9. Details on Holding and de-gassing of molten metal from primary and secondary aluminum, materials pre-treatment, and from melting and smelting of secondary aluminium
10. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
11. Trace metals in waste material especially slag.
12. Plan for trace metal recovery
13. Trace metals in water

Air Pollution

| Plant /Unit | Pollutants | Qty generated | Method used to Control/ and specifications/attach Separate Sheet to furnish Details | Number of units planned & Capacity | Budget | Estimated Post Control Qty of Pollutant | |
|-------------|------------|---------------|---|------------------------------------|--------|---|---------|
| | | | | | | Per Unit | Per Day |
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LIST OF PARTICIPANTS OF EAC (I) IN 13th MEETING OF EAC (INDUSTRY-I)
HELD ON 23rd – 24th November, 2016

| S.No | Name and Address | Position | Attendance | | Signature |
|---------|--|---------------------|------------|---|-----------|
| | | | | | |
| 1 | Dr.Chhavi Nath Pandey, IFS(Retired) | Chairman | P | P | |
| Members | | | | | |
| 2. | Director, Central Pulp and Paper Research Institute | Member | A | A | |
| 3. | Director, Central Leather Research Institute | Member | A | A | |
| 4. | Representative of Indian Meteorological Department | Member | A | A | |
| 5. | Representative of Central Ground Water Board | Member | A | A | |
| 6. | Dr. G. Bhaskar Raju | Member | P | P | |
| 7. | Prof. Naresh Chandra Pant | Member | A | A | |
| 8. | Dr. Jagdish Kishwan, IFS(Retired) | Member | P | P | |
| 9. | Dr.G.V.Subrahmanyam | Member | P | P | |
| 10. | Prof. Arun Pandey | Member | P | P | |
| 11. | Shri Santosh Raghunath Gondhalekar | Member | P | P | |
| 12. | Shri Ashok Upadhyay | Member | P | P | |
| 13. | Shri Vijay Prakash Saha | Member | P | P | |
| 14. | Dr.Satish C.Garkoti, Scientist 'F', MoEFCC | Member Secretary | P | P | |
| 15. | Shri Amardeep Raju, Scientist 'D', MoEFCC | MoEFCC | P | P | |
