Ministry of Environment, Forest and Climate Change
Impact Assessment Division
(Industry-I Sector)

SUMMARY RECORD OF THE FIFTH(5th) MEETING OF RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE HELD DURING 27-29th MARCH, 2019 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER THE PROVISIONS OF ENVIRONMENTAL IMPACT ASSESSMENT (EIA) NOTIFICATION, 2006.

The fifth meeting of the Re-Constituted Expert Appraisal Committee (EAC) for Industry-I Sector as per the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-I Sector Projects was held during **27-29th March, 2019** in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

2.0 After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim. The minutes of 4thmeeting held during **20-22nd February, 2019** were circulated and confirmed by the EAC.

28th March, 2019 (Teesta)

5.12 Recovery Plant Modernization Project (RPMP) of Existing Paper/Board Manufacturing Plant at ITC Limited, PSPD, Unit Bhadrachalam by replacing existing Recovery Boilers with one new Energy Efficient Recovery Boiler (EERB) and enhancing the in house Pulp Production and Captive Power Plant capacity without increasing the total Paper/Board Production Capacity **by M/s. ITC Limited** located at village Sarapaka, Tehsil Burgampahad, District Bhadradri Kothagudem, Telangana [Online proposal No. IA/TG/IND/89386/2018; MoEF&CC File No. J-11011/574/2009-IA.II(I)] – **Environmental Clearance under para 7(ii) of EIA Notification, 2006.**

M/s. ITC Ltd made application vide online proposal no. IA/TG/IND/89386/2018 dated 15th February, 2019 along with the application in prescribed format (Form-I) for expansion and modernization of Existing Paper/Board Manufacturing Plant by replacing existing Recovery Boilers with one new Energy Efficient Recovery Boiler (EERB) and enhancing the inhouse Pulp Production without increasing the total Paper/Board Production Capacity under the provisions of 7 (ii) of EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 5(i) Puplp and Paper Manufacturing Industry under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details Submitted by Project Proponent:

2.0 The mill was accorded with Environmental Clearance for the existing mill facilities vide order dated 18th March 2011. In addition to this, the last Environmental Clearance for the installation of 1,00,000 AD TPA of BCTMP unit in the existing facilitywas accorded on 18th December 2015.

3.0 The chronology of the Environmental Clearances obtained in the existing facility is presented in the Table as below:

SI. No.	EC Dated	Details on Environmental Clearance	Status
1	October 7,1996	Paper & Board: 2,00,000 TPA Co-generation: 33.5 MW Pulp mill: 70,000 TPA	Implemented
2	December 12, 2001	Paper & Board: 2,00,000 TPA (No Change) Co-generation: 33.5 MW (No Change) Pulp mill: 1,00,000 TPA -ECF Bleaching	Implemented
3	March 10, 2004	Paper & Board: 3,00,000 TPA Co-generation: 33.5 MW (No Change) Pulp mill: 1,00,000 TPA (No Change)	Implemented
4	February 14, 2005 (Amendment)	Paper & Board: 3,00,000 TPA (No Change) Co-generation: 55.5 MW Pulp mill: 1,00,000 TPA (No Change)	Implemented
5	November 13, 2006	Paper & Board: 5,20,000 TPA Co-generation: 89.5 MW Pulp mill: 2,35,000 TPA	Implemented
6	March 30, 2007 (Amendment)	Paper & Board: 5,20,000 TPA (No Change) Co-generation: 89.5 MW (No Change) Pulp mill: 2,35,000 TPA (No Change) (Permission obtained to discharge excess treated wastewater to River Godavari after land irrigation)	Implemented
7	March 18, 2011	Paper & Board: 7,40,000 TPA Co-generation: 114.5 MW Pulp mill: 3,50,000 TPA Deinking Plant: 42,000 TPA	Implemented
8	May 15, 2015 (Amendment)	Paper & Board: 7,40,000 TPA (No Change) Co-generation: 114.5 MW (No Change) Pulp mill: 3,50,000 TPA (No Change) New 36 MW TG and 220 TPH CFBC Boiler	Implemented
9	December 18, 2015	Paper & Board: 7,40,000 TPA (No Change) Co-generation: 114.5 MW (No Change) Pulp mill: 3,50,000 TPA (No Change) **New BCTMP Unit: 1,00,000 TPA**	Implemented

4.0 The Public Hearings were conducted on 15th May 2001, 29th Oct 2002, 24th Feb 2006 and 30th April 2010.

5.0 ITC-BCM is regularly submitting the compliance reports to Regional Office, MoEF&CC. The certified compliance report from MoEF&CC Regional Office, South Eastern Region, Chennai vide F. No. EP/12.1/2010-11/55/AP dated 04/02/2019 for latest EC was obtained by the facility.

6.0 The existing capacity of pulp making is 350000 TPA of Chemical wood pulp and 100000 TPA of BCTMP. The existing paper /board capacity is 740000 TPA paper/board. The proposal envisages no change in overall paper/board production as per previous EC.

i. Installation of one new energy efficient recovery boiler by replacing the existing recovery boilers to increase the overall capacity of chemical recovery plant capacity from 2200 TPD to 2700 TPD of black liquor soilds

ii. Enhancing installed capacity of capative power generation from 114.5 MW to 126.0 MW. However, the maximum capative power generation will be limited to consented level of 114.5 MW.

iii. Enhancing the captive Chemical Hard Wood Pulp (CHWP) mill capacity from 350000 BDTPA to 400000 BD TPA

iv. Enhancing the captive bleached Chemi Thermo Mechanical Pulp (BCTMP) unit capacity from 100000 AD TPA to 150000 AD TPA.

7.0 The raw material requirement is as below.

S.No	Raw Material	Unit	Existing	Post RPMP
1	Wood	LTPA	15.20	18.0
2	Imported bleached hardwood pulp	LTPA	1.02	0.45
3	Imported bleached softwood pulp	TPA	28000	28000
4	Imported BCTMP	TPA	50000	-
5	Coal	LTPA	7.90	7.00
6	Fuel Oil	KL	8200	9200

8.0 The emissions and treated wastewater quality are continuously being monitored at the site. All the parameters are complying with the prescribed discharge norms for the facility.

Overview of the Proposal:

The main aim of the project is to generate more green power (Black Liquor from pulp mill) for same black liquor and thereby reducing power generation from fossil fuels and thus making the mill more environmental friendly. Towards this goal, a new Energy Efficient Recovery Boiler (EERB) has been considered in place of existing three second generation recovery boilers. The proposed EERB higher pressure boiler (110 ata and 515 ^{o}C) is fifth generation boiler that is designed to utilise most of the heat generated during the burning of Black Liquor to convert into useful heat in steam. There will be increase in the steam generation from current 3.1 tonnes of steam/tonne of BLS (Black Liquor Solids) to post project 3.5 tonnes of steam/tonne of BLS. This steam when passed though Turbine generates high specific power generation per tonne of BLS. EERB is based on highly efficient technology with improvement in thermal efficiency of Boiler and Turbine along with better chemical recovery. EERB will be equipped with sufficient capacity of high efficiency ESPs to control and maintain the air emissions from the boiler within the stipulated norms. In view of higher specific power generation, load on coal fired boilers will be reduced leading to reduction in air emissions.

The salient features of the project are as follows:

- The proposed EERB Higher Pressure Boiler (110 ata and 515^{o} C) will be first in India.

- Higher efficiency of EERB (3.5 tonnes of steam per tonne of Black Liquor Solids (BLS)) compared to all the recovery boilers in operation in India (3.0 tonnes of steam per tonne of BLS)
- Higher specific power generation per tonne of BLS from the proposed EERB
- Substantial reduction in procurement of imported pulps thus resulting in reduced FOREX
- Substantial reduction in steam generation from coal fired boilers and increasing steam generation from EERB (Black Liquor from pulp mill), thus resulting in reduction of coal consumption, air emissions and ash generation.
- No additional land will be acquired
- No additional water allocation needed
- No additional wastewater will be discharged beyond the consented levels
- Reduction in emissions

The existing and post MEP capacities are presented as below:

SL. No.	Description	Units	Existing EC/Consented Capacity	Post RPMP	Variation	Remarks
1	**Paper/Board Manufacturing Section**					
1.1	Paper/Board	tpa	7,40,000	7,40,000	-	No change
		tpd	2,176	2,176	-	
1.2	De-Inking Plant	BD tpd	120	120	-	No Change
1.3	Secondary Fibre Treatment (SFT)	BD tpd	540	540	-	No Change
2	**Pulp Mill Section**					
2.1	Captive Chemical Hard Wood Pulp Mill (CHWP)	BD tpa	3,50,000	4,00,000	50,000	Increase in captive pulp production
		BD tpd	1,029	1,176	147	
2.2	Captive Bleached Chemi Thermo Mechanical Pulp (BCTMP)	AD tpa	1,00,000	1,50,000	50,000	Increase in captive pulp production
		AD tpd	300	450	150	
2.3	ClO_2 Plant	tpd	10	17	7	New ClO_2 plant of 7 tpd
2.4	Ozone Plant	tpd	6	6	-	No Change
2.5	Oxygen Generation Plant	Nm^3/hr	4000	4500	500	Augmentation
2.6	White Liquor Oxidation Plant	m^3/hr	24	24	-	No Change
3	**Recovery Plant**					
3.1	Evaporator	tph	450	550	100	Upgradation
3.2	Chemical Recovery Boiler	tpd of BL Solids	2200	2,700	500	Existing recovery boilers will be retired after stabilization of new EERB

SL. No.	Description	Units	Existing EC/Consented Capacity	Post RPMP	Variation	Remarks
3.3	Lime Kiln	tpd	500	530	30	Augmentation
3.4	Re-causticizing Plant	tpd of Active Alkali (AA)	450	600	150	Augmentation
4	**Steam Generation from Power Boilers**					
4.1	CFB 6	tph	90	90	-	**Existing:** Standby **Proposed**: Standby
4.2	CFB 7	tph	90	90	-	**Existing:** In Operation **Proposed:** Standby
4.3	MFB 8	tph	90	90	-	**Existing:** In Operation **Proposed:** In Operation
4.4	CFB 9	tph	130	130	-	**Existing:** In operation **Proposed:** In operation
4.5	CFB 10	tph	220	220	-	**Existing:** In operation **Proposed:** In operation
4	**Total Steam Generation**	**tph**	**530**	**440**	**(90)***	Reduction due to new EERB. No new coal fired boiler is proposed
5	**Captive Power Generation**					
5.1	TG-3	MW	17.5	17.5	-	**Existing:** In Operation **Proposed:** Standby
5.2	TG-4	MW	20	20	-	**Existing:** Standby **Proposed:** Standby
5.3	TG-5	MW	21	21	-	**Existing:** In Operation **Proposed:** Standby
5.4	TG-6	MW	15	15	-	**Existing:** In Operation **Proposed:** Standby
5.5	TG-7	MW	25	25	-	**Existing:** In Operation **Proposed:** In Operation
5.6	TG-8	MW	36	36	-	**Existing:** In Operation **Proposed:** In Operation

SL. No.	Description	Units	Existing EC/Consented Capacity	Post RPMP	Variation	Remarks
5.7	TG-9	MW	-	65	-	**Existing:** Not Applicable **Proposed:** New in Operation to generate power using steam from new EERB
5.8	Total in operation	MW	114.5	126.0	11.5	Installation of new TG of capacity 65 MW is mandatory to align with higher steam pressure and energy efficient operation in EERB system. Although installed capacities will increase, the actual power generation will be limited to existing consented level of 114.5 MW
6	**Water and Wastewater**					
6.1	Water Treatment Plant	m^3/day	1,00,000	1,00,000	-	No Change
6.2	Wastewater Treatment Plant	m^3/day	80,000	80,000	-	-

** Values inside parenthesis indicates reduction/savings*

Prediction of Impacts and Management Plan

Overall Summary of the Project with salient features are presented as below:

SL. No.	Description	Units	Existing Scenario	Post RPMP Scenario	Variation	Remarks
1	Land Requirement	acres	393	393	0	No additional land is required for the project
2	Wood Consumption	Lakh tpa	15.20	18.00	2.80	Adequate wood is available through captive sources and social-farm forestry program.
3	Elemental Chlorine for Bleaching	tpa	0	0	0	The mill is adopting Elemental Chlorine Free (ECF) Bleaching Technology with state-of-the-art Ozone bleaching system.

SL. No.	Description	Units	Existing Scenario	Post RPMP Scenario	Variation	Remarks
4	Coal Consumption	tpa	7,90,000	7,00,000	(90,000)	Reduction due to higher steam generation from BL solids thereby reducing the net air emissions due to the proposed RPMP
5	PM emissions rate from boilers	tpa	595	563	(32)	Reduction due to decrease in coal consumption
6	SO_2 emissions rate from boilers	tpa	5,497	4,887	(397)	Reduction due to decrease in coal consumption
7	NOx emissions rate from boilers	tpa	1,882	1.851	(31)	Reduction due to decrease in coal consumption
8	Fresh Water Demand	m^3/day	70,000	77,000	7,000	Within the consented level of 79,000 m^3/day
9	Wastewater Discharge Quantities	m^3/day	60,000	66,500	6,500	Within the consented level of 68,800 m^3/day
10	Fly ash and Bottom ash from Coal fired boilers	BD tpd	960	875	(85)	Reduction due to lower steam generation from coal fired power boilers
11	Lime sludge from lime kiln	BD tpd	92		8	Will be disposed to cement plants as per existing practice
12	ETP Primary sludge (Dry basis)	BD tpd	45	60	15	Will be sent to low grade paper board facilities as per existing practices

Note: Values inside parenthesis indicates reduction/savings

Air Quality Management:

It is proposed to Install, one (1) New Energy Efficient Recovery Boiler (EERB) by replacing the existing recovery boilers. Due to the increase in power generation from biomass (Black Liquor generated from pulp mill), the steam generation capacities of existing coal fired boilers (in operation) will be reduced from 530 tph to 440 tph. Therefore, there will be decrease in coal consumption during the post project scenario by 90,000 TPA (12 % reduction). The overall reduction in PM, SO_2 and NO_x emissions from the facility post RPMP will be in the order of about 30 tpa, 400 tpa and 30 tpa respectively.

In order to control air emissions from proposed EERB, a new efficient Electrostatic Precipitator (ESP) is proposed to be installed along with a stack of adequate height as per CPCB norms. The emissions from the proposed EERB will be maintained within the stipulated norms of TSPCB.

As per the existing practice, High volume Low Concentration (HVLC) NCGs will be collected in the NCG gas collection system and fired in lime kiln/recovery boilers. Adequate Low Volume High Concentration (LVLC) system and stripper in the ambient air are in place for recycling foul condensate to control Mercaptans & H2S (Odour Control System)

Noise Emissions:

The proposed new TG (Turbo Generator) will be housed inside the building. Existing noise management practices will be continued to limit the noise levels at the facility to comply the stipulated norms of CPCB.

Water Quality, Wastewater Generation, Treatment &Discharge: The specific water consumption will be maintained to 35 m^3/T of paper/board production during the post RPMP scenario due to the adoption of water conservation measures. The total fresh water consumption for the proposed project will be about 77,000 m^3/day which will be within the consented level of 79,000 m^3/day. The wastewater generation post RPMP will be about 68,500 m^3/day as against the total ETP capacity of about 80,000 m^3/day. Treated wastewater quality will be maintained within the consented levels as prescribed by TSPCB. Out of the total wastewater generated, 2,000 m^3/day of treated wastewater from ETP will be recycled. The remaining 66,500 m^3/day will be utilized for land irrigation and balance into the River Godavari duly meeting the discharge standards stipulated by TSPCB. However, The existing facility is consented to discharge 68,800 m^3/day of treated wastewater for land irrigation/River Godavari.

Solid and Hazardous Waste Management as below:

S.No.	Waste Category	Unit	Consented Quantity	Proposed Quantity	Variation	Remarks/ Disposal Methods Adopted
Solid Waste Generation						
1	Fly ash and Bottom ash from Coal fired boilers	BD tpd	960	875	(85) reduction	Reduction due to lower steam generation from power boilers
2	Lime sludge from lime kiln	BD tpd	92	100	8	Will be disposed to cement plants as per existing practice
3	Chipper dust from Chipper	BD tpd	78	95	17	Will be used as fuel in boilers
4	Waste fibre from SFT	BD tpd	10	5	(5)	Reduction due to limiting SFT usage
Hazardous Waste Generation						
5	Primary Clarifier sludge (Dry basis)	BD tpd	45	60	15	Will be sent to low grade paper board facilities as per existing practices
6	Waste Sludge from DIP	BD tpd	35	0	(-35)	Reduction as DIP will not be used after RPMP

S.No.	Waste Category	Unit	Consented Quantity	Proposed Quantity	Variation	Remarks/ Disposal Methods Adopted
7	Used oil	kla	75	75	0	No Change
8	Used Lead acid Batteries	Nos./ annum	300	300	0	No Change
9	Non-ferrous Scrap	tpa	13	13	0	No Change
10	Used containers and container liners	Nos./ annum	15,000 (125 tpa)	15,000 (125 tpa)	0	No Change

Proposed EMP Budget as below:

Total investment for the installation of project is **Rs 950 Crore**, out of the total project cost about **Rs.100 crores** is allocated for the Environmental Management Plan.

Sl. No	Description	Rs. Crore
1	New EERB - Recovery Boiler ESP	30
2	Stack for the proposed recovery boiler	20
3	Ash Leaching	42
4	CEMS for new EERB, Modifications of ETP etc	8
	Total	**100**

Proposed mitigation plan for dealing of additional pollution load

Air Quality:

Due to the increased steam generation from new recovery boiler there will be a considerable decrease in the steam generation in coal fired boilers thus resulting in decrease in coal consumption. Hence there will be decrease in air emissions from boilers post RPMP.

It is proposed to install new ESP (three chambers with four fields) and stack for the proposed EERB to meet the prescribed standards of TSPCB.

Water & Wastewater:

No additional water allocation is needed. The specific water consumption will be maintained to 35 m^3/T of paper/board production due to the adoption of water conservation measures. The total fresh water consumption for the proposed RPMP will be within the consented level of 79,000 m^3/day. Existing ETP of capacity 80,000 m^3/day will be adequate to treat the total wastewater generation of about 68,500 m^3/day post RPMP. The treated wastewater discharge quantities post RPMP (66,500 m^3/day) will be within the consented level of 68,800 m^3/day. Hence no additional pollution load is envisaged beyond the consented levels. The existing discharge practices will be continued post RPMP.

Solid and Hazardous Waste:

Due to reduction in coal consumption post RPMP, there will be reduction in ash generation by about 85 BD tpd. Additional 8 BD tpd of lime sludge generation will be disposed to cement plants as per existing practice. Additional 17 BD tpd of chipper dust will be used as fuel in boilers as per existing practice. Additional 15 BD tpd of primary clarifier sludge will be sent to low grade paper board facilities as per the existing practices.

Name of the Consultant: Cholamandalam MS Risk Services Limited, Chennai
SI. No in the QCI List: 26

9.0 The proposal was considered in the EAC meeting and for the same, the committee co-opted, Shri Sharath Kumar Pallerla, Scientist F.

Observations of the Committee: -

10.0 The existing ETP capcity is sufficient to treat the wastewater generated in additional pulping process.

Recommendations of the Committee: -

11.0 After detailed deliberations, the committee recommended the proposal for expansion and modernization of existing unit by replacing existing Recovery Boilers with one new Energy Efficient Recovery Boiler (EERB) and enhancing the inhouse Pulp Production without increasing the total Paper/Board Production Capacity under the provisions of 7 (ii) of EIA Notification, 2006 with following specific conditions.

i. Enhancement of pulping production capacity shall be 100000 TPA to 120000 of BCTMP and 350000 TPA to 400000 TPA of chemical hardwood pulp.

ii. Discharge of wastewater to Godavari River shall be reduced by 15% of existing quantity.

iii. The existing boiler shall be decommissioned after stabilizing the proposed high efficiency boiler.

5.13 Increase of clinker production from 3.043 MTPA to 3.5 MTPA by **M/s. My Home Industries Limited** locatedatVillage and Mandal Mellacheruveu, District Nalgonda (presently Suryapet District) in Telangana State [Online proposal No. IA/TG/IND/95625/2019; MoEF&CC File No. J-11011/205/2013-IA.II(I)] – **Environmental Clearance under para 7(ii) of EIA Notification, 2006.**

M/s. My Home Industries Limited, made online application vide proposal no. IA/TG/IND/95625/2019 dated 14th February, 2019 seeking extension of validity of environmental clearance for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Plant under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

2.0 My Home Industries Private Limited (MHIPL) is operating integrated Cement Plant with three manufacturing Lines i.e., Unit-I, Unit-II and Unit-III located at Mellacheruvu

Village & Mandal, Suryapet District, Telangana State. MHIPL has initially commissioned the cement plant with clinker production capacity of 0.495 MTPA and gradually increase the capacity of the cement plant to the present level of 3.043 MTPA by obtaining clearances from time to time as per the below table.

S. No	Particulars	EC letter no Details	Date
1	Cement Plant – 600 TPD	J-11012/5/96-IA II (I)	07.10.1996
2	Cement Plant expansion - 0.495 MTPA to 1.09 MTPA Addition of Unit-II	J-11011/19/2001-IA II (I)	13.09.2001
3	Expansion -Clinker 1.58 MTPA to 2.48 MTPA and Cement 1.90 MTPA to 3.30 MTPA Addition of Unit-III	J-11011/76/2006-IA II (I)	25.05.2006
4	Expansion -Clinker 2.48 MTPA to 2.78 MTPA and Cement 3.30 MTPA to 3.90 MTPA Expansion in Unit-III	J-11011/1014/2007-IA II (I)	11.06.2008
5	Expansion -Clinker 2.78 MTPA to 3.043 MTPA Expansion in Unit-II	J-11011/172/2012-IA II (I)	15.12.2014

3.0 MHIPL has also obtained Environmental Clearance from MoEFCC for setting up of Unit – IV of 1.75 MTPA Clinker production capacity vide J-11011/215/2013-IA II (I) 14.09.2015 & transfer letter dated 31.05.2018, which is valid upto 14.09.2022. Unit – IV is yet to be implemented.

4.0 MHIPL has obtained Certified Compliance of the EC conditions by Regional Office, MoEFCC, Chennai vide F. No. EP/12.1/205/AP dated 11.02.2019.

The additional emission from the proposed enhancement will be due to:

i. increase in flows resulting increase in particulate emission load
ii. increase in Coal/Pet coke consumption in the kiln resulting in increase of particulate, SO_2 and NOx emissions *(Sulphur will be absorbed in clinker)*

5.0 The incremental ground level concentration due to increase of Clinker production capacity from 3.043 to 3.50 MTPA computed using AERMOD model (EPA recommended model) is given below:

		µg/m^3 (max)
Particulate Matter – PM_{10}	Baseline	58.1
	Incremental	0.40
	Overall Scenario	**58.5** **NAAQ Standard - 100**
Sulphur dioxide	Baseline	11.8

	Incremental	0.60
	Overall Scenario	**12.4 NAAQ Standard – 80**
Oxides of Nitrogen	Baseline	15.6
	Incremental	4.5
	Overall Scenario	20.1 **NAAQ Standard - 80**

6.0 The change in pollution load of various environmental components due to increase of clinker capacity of the cement plant are detailed below:

		EC Granted	**EC Requested**	**Remarks**
Cost of the Project, Rs. crores		Rs.50 crores	Rs.5 crores	Process optimization
Capacities (in MTPA)	Clinker production	3.043	3.50	Enhancement of clinker production by 15 % by process optimisation
	Cement production	3.9	3.9	No change
RAW MATERIAL REQUIREMENT (in MTPA)	Limestone	4.28	4.92	Additional consumption EC obtained
	Laterite	0.17	0.20	Additional consumption
	Shale	0.01	0.01	No change
	Slag	0.01	0.01	No change
	Fly Ash	0.04	0.04	No change
	Gypsum	0.16	0.16	No change
	Fly ash for PPC	0.40	0.40	No change
FUEL (in MTPA)	Coal for Clinker (Max)	0.43	0.51	Increase in coal consumption by 18%
POLLUTION LOAD (Kg/Hr)				
AIR EMISSIONS				
Particulate Matter		87.44	96.23	Increase by 10 %↑
Sulphur Dioxide		89.89	103.32	Increase by 15 %↑
Oxides of Nitrogen		719.1	826.70	Increase by 15 %↑
INCREMENTAL GROUND LEVEL CONCENTRATIONS (ug/m^3)				
Particulate Matter – PM_{10}			Baseline	58.1
			Incremental	0.40
			Overall Scenario	**58.5 NAAQ Standard - 100**
Sulphur dioxide			Baseline	11.8
			Incremental	0.60
			Overall Scenario	**12.4 NAAQ Standard – 80**
Oxides of Nitrogen			Baseline	15.6

	EC Granted	EC Requested	Remarks
		Incremental	4.5
		Overall Scenario	20.1 **NAAQ Standard - 80**
WATER ENVIRONMENT			
Water Requirement, m^3/day	1260	1260	No Change
LAND ENVIRONMENT			
Landuse breakup, Ha	160	160	No Change. No additional land requirement

7.0 The increase in capacity of various units under the up gradation and modernization will result in increase of volumetric flow rates. As a result of increase in flow rates, the emission loads on the pollution control equipment are likely to increase. Keeping in view of this, **MHIPL** has conducted a detailed technical assessment of the pollution control equipment of the main units to find out the adequacy. Details of the same are given below.

Unit	**APCE**	**Design Capacity (m^3/hr)**	**GAS VOLUME (m^3/hr.)**		**ModificationProposed for expansion**	**REMARKS**
			Present	**After proposed Expansion**		
Unit –I&II	L/s crusher baghouse	77000	45252	45252	Capacity available and modification not required	All Pollution Control Equipment in Cement plant are already upgraded and complying with new emission standards of PM, SO2 & NOx.
Unit-I	RABH	510000	379461	459907	Capacity available and modification not required	
	ESP	270000	184397	223489	Capacity available and modification not required	
	Coal mill - Baghouse	37500	36423	36423	Capacity available and modification not required	
Unit-II	RABH	586800	487987	536323	Capacity available and modification not required	
	ESP	350000	300707	330492	Capacity available and modification not required	
	Coal mill - Baghouse	67000	57380	57380	Capacity available and modification not required	

Unit-III	L/s crusher baghouse	77000	47512	47512	Capacity available and modification not required	
	RABH	620000	535892	606236	Capacity available and modification not required	
	ESP	500000	341044	397885	Capacity available and modification not required	
	Coal mill - Baghouse	100000	93635	93635	Capacity available and modification not required	

8.0 The proposal will result in increase of Flue Gas Flows. It can be seen from the above table that there will be increase in flow due to increase in capacity. Adequate capacities of air pollution control equipment are available to handle increased flows rate. MHIPL will ensure that the particulate concentration at outlet of pollution control equipment is less than30 mg/Nm^3.

9.0 MHIPL has installedair pollution control equipment and carrying regular monitoring to check the emission level at outlet of stack.

10.0 MHIPL proposes to obtain EC for enhancement of clinker production capacity from 3.043 to 3.50 MTPA without any increase in Pollution load as shown in the below table

Unit	Present MoEF approved Clinker capacity (in MTPA)	Proposed Clinker Production Enhancement (in MTPA)	Total Clinker Production after proposed Enhancement (in MTPA)
Unit-1	0.66	0.14	0.80
Unit-2	1.183	0.117	1.30
Unit-3	1.20	0.20	1.40
Total	3.043	0.457 (15 %)	3.50

Observations and Recommendations of the Committee: -

After detailed deliberations, the committee rejected the proposal in view of non-compliances in the report of Regional Office of the Ministry, Chennai.

5.14 Expansion of Clinker unit from 3.3 MTPA to 3.927 MTPA, addition of 9.5 MW CPP-WHRS and dropping of 40 MW FBC-Captive Power from 70 MW accorded in previous EC **by M/s. Bharathi Cement Corporation Limited** located at at-Nallalingayapalli in YSR Kadapa district of Andhra Pradesh [Online proposal No. IA/AP/IND/94552/2019;

MoEF&CC File No. J-11011/379/2008-IA.II(I)] – **Environmental Clearance under para 7(ii) of EIA Notification, 2006.**

M/s Bharathi Cement Corporation Pvt. Ltd, vide online proposal no. IA/AP/IND/94552/2019 dated 15th February, 2019 along with the application in prescribed format (Form-I) for enhancement of Production Capacity under the provisions of 7 (ii) of EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details Submitted by Project Proponent:

2.0 The company was accorded EC vide letter No J-11011/379/2008/IA-II(I) Dated 10th December 2008 to manufacture 3.3 MTPA clinker, 5.0 MTPA cement and 70MW(FBC) captive power plant. The company at present is manufacturing 3.3 MTPA Clinker, 5.0 MTPA cement & installed and commissioned 30 MW CFBC based power plant. Existing CFO order No-APPCB/KNL/TPT/105/HO/CFO/2015-2559, Dt: 22.08.2015 is valid up to 30.092020

3.0 As per the letter from Regional Office (south eastern zone), MOEFCC, Nungambakkam, Chennai to M/s Bharathi Cement vide letter no EP/12.1/525/AP/1578 dt 4.10.18, the company has complied to all the conditions stipulated in EC.

4.0 The proposal is for enhancement of Clinkering capacity from 1.485 MTPA to 1.782 MTPA for line -1 and enhancement of Clinkering capacity from 1.815 MTPA to 2.145MTPA for line -2 totaling clinkering capacity to 3.927 MTPA, addition of 9.5 MW Waste Heat Recovery Power Plant.

The impact predicted due to expansion of the project under 7(ii) is as below:

Condition	Total PM from process & CPP in gm/sec.	Total SO2 from process & CPP in gm/sec	Total NOx from process & CPP in gm/sec
As per EC	35.07	245.7	189.69
Proposed Expansion & use of AFR	21.15	15.89	178.27
Net change in pollution load	(-)13.92	(-)229.81	(-)11.42

This reduction in pollution load is due to use of AF in kilns and dropping of 40 MW power plant which reduced substantial burning of coal in CPP. More over 9.5 MW power will be generated from WHRS without burning of fossil fuel & preventing pollution.

Comparison of Precipitation of pollutants of Existing & Proposed Expansion

Paramenter	As per Existing EC	In Proposed scenario	Net Change
PM_{10} (in $\mu g/m^3$)	9.72	4.47	- 5.25

$PM_{2.5}$ (in µg/m^3	5.42	2.65	-2.77
SO_2(in µg/m^3)	39.020	2.540	- 36.48
NO_x (in µg/m^3)	13.470	23.303	+9.833

5.0 No additional pollution load is envisaged due to increase of intermediate product clinker, no increase in final product cement has been proposed. However, strengthening of pollution control equipment's have been proposed with additional budgetary provision as follows.

6.0 BCCPL has already installed Reverse air Bag houses for Kilns, ESPs for coolers & CPP and Bag houses for coal mill with a number of Jet pulse bag filters in material transfer points taken together and it has now proposed to increase the number of bags in each bag filter and use improved quality bag cloth to absorb increased pollution load due to expansion so that emission to atmosphere will be as per CPCB norms.. Similarly, it has been proposed to increase the number of plates in each ESP connected to coolers so as to absorb the additional pollution load.

7.0 A WHRS system of 9.5 MW capacities will be introduced to control heat emission and utilize the power for operation of the plant. Pneumatic conveying of cement to silo has been provided with bag filters and its capacity will be increased. Conveyor systems, screens and finished product area will have independent dust extraction units of adequate capacity.

8.0 BCCPL has implemented interlocking system for all the pollution control equipment.

Location	Pollution Control Equipment	Interlocking System
Kiln	Bag House for Kiln and exhaust Gases	All devices and fan interlocked with raw mill and kiln
Kiln Feeding System	Bag Filter	Bag filter fan and purging air system are interlocked with kiln drive
Clinker Cooler	Electro Static Precipitator	Cooler Exhaust fan interlocked with drive
Coal Mill	Bag filter	Bag house fan interlocked with coal mill
Cement Mill	Bag filter	Bag house fans are interlocked

9.0 Major noise generating system are coal mill, Kiln, Raw mill, Cement mill , Packers of cement plant & turbine generator for power plant.The noise generated is confined to BCCPL complex and is further reduced due to attenuation of green belt.

10.0 BCCPL is manufacturing cement by dry process technology. In the entire process water is used only for cooling cement mill, coal mill & raw mill. Cooling includes circulating water. Waste water generated from the power plant is about 64 KLD, which includes DM rinse, Boiler blow down and back wash from softening plant. This water will be reused in cement plant and dust suppression after primary treatment.

11.0 BCCPL has developed 4 number of Rain Water Harvesting structures with capacities of 4,800m^3, 70,000m^3, 1,00,000m^3& 24,500m^3 totaling 1,99,300 m^3 per annum and assuming 20% evaporation loss the total water available for consumption is 1,59,440 m^3 per annum i.e 498 m^3/day, which will reduce fresh water drawl from river.

12.0 The company has already spent Rs 110.89 crore on Environment Management towards installing equipments as capital cost, and has spent Rs 1.5 crore on an average/yr as recurring cost for the same. Now M/s BCCPL proposes to improve further the efficiencies of ESPs and Reverse bag houses. For that numbers of plates in ESPs are to be increased and material of bags will be changed to PTFE bags for which a budgetary provision of Rs. 5.0 crore has been made towards EMP cost of Expansion project.

Observations of the Committee: -

The committee observed that the proposed WHRS power generation is 9.5MW which is inadequate. Dioxins and furons are monitored by accredited laboratory and the latest report is available dated 04.01.2019.

According to details submitted, the project site is having eight water bodies of total capacity of 699300 m3 for rainwater harvesting. Four more water bodies for rainwater harvesting are proposed for expansion project. The raw materials, laterite, slag and coal are transported by rail.

Recommendations of the Committee: -

After detailed deliberations, the committee recommended the proposal for enhancement of production of clinker from 3.3 MTPA to 3.927 MTPA with the following conditions.

i. The power generation from Waste Heat Recovery System shall be enhanced to 20 MW.
ii. The plant shall maintain the emissions standards as prescribed by regulatory authorities in view of coprocessing.

5.15 Expansion of Re-RollingMill from 22,500 TPA to 81,000 TPA for Production of MS Billets & TMT Bar by Installation of 3 Induction Furnace (1 X 15 Tonne + 2 X 6 Tonne) **by M/s. City Alloys Pvt Ltd** at Village Kadavita, P.O.-Kalyaneswari, Mouza-Mahespur, JL- 24, P.S.-Salanpur, District- Paschim Bardhaman, West Bengal [Online proposal No. IA/WB/IND/97521/2019; MoEF&CC File No. IA-J-11011/71/2019-IA-II(I)] – **Terms of Reference.**

M/s. City Alloys PrivateLimitedmade application vide online proposal no. IA/WB/IND/97521/2019dated 27th February, 2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "B" EIA Notification,2006. However, due to the applicability of general condition i.e., interstate boundary, the project is being appraised at the Central level as Category 'A'.

Details submitted by the project proponent

2. M/s. City Alloys Pvt. Ltd. proposed to expand its current Rolling Mill for producing Billets and TMT Bars at Village-Kadavita, P.O –Kalyaneswari, P.S-Salanpur, State-West

Bengal. The existing plant capacity is 22500 TPA Rolling Mill & 1 x 6 tons + 1 x 1.5 tons Induction Furnace. After the proposed expansion, the Rolling Mill capacity will be 81,000 TPA (6750 TPM) by installtion of1 x 15 tons + 2 x 6 tons Induction Furnace.The project proponent submitted an application in the prescribed format along with Form-1 and other reports to the Ministry online on 27th February 2019 vide Online Application No. IA/WB/IND/97521/2019.

3. The existing project was exempted from the purview of prior Environmental Clearance &Consent to Operate was accorded by West Bengal State pollution Conrol Board.

4. The proposed unit will be located at Village: Kadavita, P.O.-Kalyaneswari, Mouza-Mahespur, JL- 24, P.S.-Salanpur, District- Paschim Bardhaman, West Bengal. The water bodies located within the study area of project site are Damodar River – 10.2 km SSW; Barakar River – 1.4 km West; Ajay River- 12 km NE and Maithon Reservoir on N – NW - W side of the project site.

5. The land area acquired for the proposed plant is 3.022 Ha. No forest land is involved. The entire land has been acquired for the project. Of the total area 1.032 ha land will be used for green belt development.

6. 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.

7. Total project cost is approx. 24.6 Crore rupees. Proposed employment generation fromproposed project will be 300 as direct employees while 100 will get indirect employment.

8. The targeted production capacity of the 81,000 TPA. The ore for the plant would be procured from local market nearby. The ore transportation will be done through road. The proposed capacity for different products for new site area as below:

Name of unit	**No. of units**	**Capacity of each Unit**	**Production Capacity**
Induction Furnace	2	6 Ton	81,000 TPA
Induction Furnace	1	15 Ton	

9. The electricity load of 2500 kVA will be procured from Damodar Valley Corporation.

10. Proposed raw material and fuel requirement for project are Sponge Iron, Pig Iron, MS Scrap, Ferro Silico Manganese. The requirement would be fulfilled by purchase from local market.

11. Water Consumption for the proposed project will be 36,000 Liter/day out of which 30,000 Liter is required for manufacturing process and balance 6,000 liter are required for drinking and other purpose.

12. The proponent has mentioned that there is no court case or violation under EIA Notificationto the project or related activity.

13. Name of the consultant: Grass Roots Research and Creation India (P) Ltd. [S.No. 80, List of Accredited Consultant Organizations (Alphabetically) Rev. 74, March 07, 2019].

Observations of the Committee: -

14. The Committee noted that lay out plan submitted by the project proponent is not legible and clear.

Recommendations of the Committee: -

15. After detailed delibrations, the Committee sought the following additional information for further consideration of the proposal.

i. Project proponent shall submit revised layout plan.
ii. Valid copy of the Consent to Renewal of West Bengal Pollution Control Board (WBPCB) shall be submitted.
iii. Consent to Establish (CTE) obtained from WBPCB and reason for not taking environmental clearance for the existing unit shall be submitted.

5.16 Proposed production of MS Billets/Alloys Billets – 9,00,000 TPA TMT Bars/MS Structural Steel/Gutter/Angles/Channels/Pipes – 9,00,000 TPA Ferro alloys unit with 1 x 9 MVA Submerged Electric Arc Furnace – Ferro Manganese – 22,000 TPA or Silico Manganese – 18,500 TPA by **M/s. Shree Om Rolling Mills Pvt. Limited** located at Gat no. 53, 56 and 57 , village Daregaon, Adjacent to MIDC Phase II, Taluka-Jalna, District – Jalna, Maharashtra [Online proposal No. IA/MH/IND/97544/2019; MoEF&CC File No. IA-J-11011/72/2019-IA-II(I)] – **Terms of Reference.**

M/s. Shree Om Rolling Mills Pvt. Ltd. submitted an application vide Online Proposal No. IA/MH/IND/97544/2019 dated 28th February 2019 in the prescribed format along with Form-1 and other reports to the Ministry.

2.0 The proposed unit will be located at Gat no. 53, 56 and 57 Village Daregaon, Adjacent to MIDC Phase II, Taluka-Jalna, District – Jalna, Maharashtra. The land area acquired for the proposed plant is 20.09 ha. Total land is fallow Land. No /forest land involved. The entire land has been acquired for the project. Of the total area 6.63 ha (33%) land will be used for green belt development.

Sr. No.	Particulars	Phase I Area (m^2)	Phase II Area (m^2)	Total Area (m^2)
1	Plant Area	13337.71	13619.11	26956.82
2	Green Belt Area	38667.73	27632.27	66300.00
3	Parking Area	14541.85	9690.36	24232.21
4	Open Area	26403.17	8705.22	35108.39
5	Road Area	16478.83	14374.13	30852.96

6	Others	10366.61	7083.01	17449.62
	Total	**119795.9**	**81104.1**	**200900**

3.0 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.

4.0 Total project cost is approx. 350 Crore rupees. Proposed employment generation from proposed project will be 900 direct employment and 500 indirect employment.

5.0 The targeted production capacity of the MS Billets/Alloys Billets – 9,00,000 TPA, TMT Bars/MS Structural Steel/Gutter/Angles/Channels/Pipes – 9,00,000 TPA, Ferro alloys unit with 1 x 9 MVA Submerged Electric Arc Furnace – Ferro Manganese – 22,000 TPA or Silico Manganese – 18,500 TPA. The ore for the plant will be procured from open market. transportation will be done through road The proposed capacity for different products for new site area as below:

Production Capacity	
IMS Billets/Alloys Billets	9,00,000 TPA
TMT Bars/MS Structural Steel/Gutter/Angles/Channels/Pipes	9,00,000 TPA
Ferro Alloys	Ferro Manganese – 22,000 TPA or Silica Manganese – 18,500 TPA

6.0 The electricity load of 65 MW will be procured from Maharashtra State Electricity Board.

7.0 Proposed raw material requirement for project are Sponge Iron (40%) Scrap (57%) and Other Minerals (3%) for Billets, Billets for TMT bar and Manganese Ore, Dolomite and Quartz for Ferro Alloys. The requirement would be fulfilled by open market.

8.0 Water Consumption for the proposed project will be 350 KLD and waste water generation will be zero. Domestic waste water will be treated STP and Treated wastewater will be used for Greenbelt Development.

Item	**Water Requirement (KLD)**
Cooling Purpose	290
Domestic Purpose	40
Dust Suppression	20
Total	**350**

9.0 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

Environmental Consultant Name: **Sri Sai Manasa Nature Tech. Pvt. Ltd., Hyderabad**

Certificate no.: NABET/EIA/1720/RA0111 valid till 05.08.2020

Observations of the Committee:

The proposed project site involves two plots separated by a vacant land which is not a part of the project. The committee opined that the project can be considered as two separate projects in accordance with the layout.

Recommendations of the Committee:

After detailed deliberations, the committee returned the proposal in the present form in view of two separate plots for same project.

5.17 Proposed 0.6 MTPA Iron Ore Pellet Plant & 5 Nos. (4W+1 S) Producer Gas Plant of Capacity 5000 Nm³/hr **by M/s. Kashvi International Private Limited** located atChampadihi, Keonjhar District, Odisha [Online proposal No. IA/OR/IND/97660/2019; MoEF&CC File No. IA-J-11011/73/2019-IA-II(I)] **– Terms of Reference.**

M/s. Kashvi International Private Limited made application vide online proposal no. IA/OR/IND/97660/2019dated 28th February, 2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above.The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

2. M/s. Kashvi International Private Limited proposes to install a new unit for 0.6 MTPA Iron Ore Pellet Plant & 5 Nos. (4Working +1Standby) Producer Gas Plant of capacity 5000 Nm³/hr each at- Champadihi, Keonjhar district of Odisha.

3. It is proposed to set up the plant for iron ore pellet using combination of producer gas and furnace oil as fuel based on Advanced Process technology and application in the prescribed format along with Form-1 and other reports submitted to the Ministry online on 28.02.2019 vide Online Application No. IA/OR/IND/97660/2019.

3. Previously the TOR was obtained vide proposal no. IA/OR/IND/24872/2014 and F. No. J11011 /314/2014-IA.II (I) on dated 03/12/2014. The proposal could not be taken further and not installed due to a personnel dispute between the directors and family problems. The same has been solved and the present proponents intend to install the project. As the validity of earlier TOR expired, this proposal applied afresh for grant of TOR for the EIA studies and Environment Clearance.

4. The proposed unit will be located at Village -Champadihi, Taluka (Block) Jhumpura, District Keonjhar of Odisha. The land area acquired for the proposed plant is7.94 Ha. No/forest land involved. The entire land has been acquired for the project. Out of the total area, 2.63 Ha

land will be used for green belt development. The latitude and longitude of the project site 21^0 53' 23.76"N and 85^0 28' 47.84"E respectively. Nearest habitation is in village Champadihi. The water bodies located within the study area are Jalpa River -5.4 km SW and Baitarani River- 0.5 km W. The forest exists within the study area are Chamakpur R.F – 0.5 km NE; Baliband R.F – 7.5 km E and Patabila R.F – 7.0 km E.

5. 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.

6. Total project cost is 223.0 Crore rupees. Proposed employment generation from proposed project will be 93 nos. with direct employment and indirect employment. The targeted production capacity of the Iron ore Pellet Plant is 6, 00,000 TPA & Producer gas Plant of 5000 Nm^3/hr each. The ore for the plant would be procured from Odisha (KJS Ahluwalia, RP Sao, MESCO Steel, Kalinga Mining) and the transportation will be done through Road/Rail.

7. Total power requirement for the project is 9.0 MW, which will be met from 132/33 KV Substation of OPTCL at Palaspanga. Proposed raw material and fuel requirement for project are Iron Ore Fines (64.0% Fe), Bentonite, Limestone, Coke and Steam Coal. The requirement would be fulfilled by Odisha (KJS Ahluwalia, RP Sao, MESCO Steel, Kalinga Mining), Rajasthan/ Gujarat, Rourkela Steel Plant, Rourkela, Sundergarh, Odisha & MCL, Odisha, ECL, Jharkhand. Furnace oil from Local Supplier by Road.

8. Total water requirement for the proposed project is of 15 m^3/hr. Waste water from domestic water will be treated in STP and reused in dust suppression, greenbelt etc. RWTP in form of Back Wash will be treated in settling pond and reused in dust suppression. Domestic wastewater will be treated in septic tank and discharged to soak pit. Zero discharge norms will be maintained in the proposed plant. Greenbelt will be developed in 2.63 ha of the total plant area. Earmuffs/earplugs will be provided to workers working in high noise prone areas. There is no court case or litigation pending in the court in relation to environmental issues of the project.

9. The proponent has mentioned that there is no court case or violation under EIA Notificationto the project or related activity.

10. Name of the consultant: Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar is the consultant accredited by NABET, QCI with accreditation no. NABET/EIA/1720/RA0090, dtd-30.04.2018. And sl. no. in the QCI list is 160 as on March 07, 2019.

Observations and recommendations of the Committee: -

11. After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs 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. Closed loop system shall be adopted in the producer gas plant.

ii. Stack emission shall be restricted to less than 50 mg/Nm^3.

iii. Water shall be drawn from river Baitarani only. No ground water abstraction is permitted.

iv. Traffic study shall be carried out inter-alia including existing road details with traffic load, proposed quantum of material to be transported by rail/road with anticipated rakes/vehicles details, line source modelling and infrastructure strengthening details etc., These details shall be included in the EIA report.

v. Public Hearing to be conducted by the concerned State Pollution Control Board.

vi. 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.

vii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

5.18 Mini-Integrated Steel Plant of 1,32,000 Metric Tons Per Annum (TPA) Capacity TMT/MS Roads Production **by M/s. Sri Subramanya Sponge Iron Pvt. Ltd** located at Sy. Nos. 135, 136, 137, 138, 139 & 140, Haraginadoni Village, Bellary Taluk & District, Karnataka State [Online proposal No. IA/KA/IND/98248/2019; MoEF&CC File No. IA-J-11011/74/2019-IA-II(I)] **– Terms of Reference.**

M/s Sri Subramanya Sponge Iron Pvt. Ltd., submitted an online application vide proposal no. IA/KA/IND/98248/2019 dated 05 March 2019 in the prescribed format along with Form-1 and other reports to the Ministry for prescribing the Terms of Refernce for proposed steel plant. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

2.0 M/s Sri Subramanya Sponge Iron Pvt. Ltd., proposes to install a new manufacturing unit for production of TMT/ MS Rods. It is proposed to set up the plant for production of 1,32,000 Tons per Annum of TMT/ MS Rods based on Sponge Iron-Induction Furnace technology.

3.0 The Proposed unit will be located at Sy. Nos. 135, 136, 137, 138, 139 & 140; Village: Haraginadoni, Taluka: Bellary, District: Bellary, State: Karnataka

4.0 The land area acquired for the proposed plant is 22.98 Ha. (56.80 Acres) out of which 17 Ha. (42 Acres) is an agricultural land, 0 Ha. is grazing land and 5.98 Ha. (14.8 Acres) is others (industrially converted land). No forest land involved. Part of the Land i.e. 5.98 Ha. has been acquired and the balance 17 Ha. has not been acquired, for the project. Of the total area, 7.68 Ha. (33.42%) land will be used for green belt development.

5.0 The National Park/WL etc are located at a distance of > 15 KM from the site. 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.

6.0 Total project cost is approx. Rs. 175 Crore rupees. Proposed employment generation from proposed project will be 300 direct employment and 350 indirect employment.

7.0 The targeted production capacity of the mini-integrated steel plant is 0.132 million TPA of TMT/MS Rods. The ore for the plant would be procured from (linkages: E-Auction). The ore transportation will be done through Trucks (Road). The proposed capacity for different products for new site area as below:

Name of Unit	No. of Units	Capacity of Each Unit	Production Capacity
Phase-I of the Project			
Sponge Iron Plant	02	75 Tons/ Day	45,000 Tons/ Annum
Phase-II of the Project			
Sponge Iron Plant	02	100 Tons/ Day	60,000 Tons/ Annum
Induction Furnace & Billet/ Ingot Caster	02	20 Tons/ Heat	1,38,200 Tons/ Annum of Billets/ Ingots
Phase-III of the Project			
Rolling Mill	01	25 Tons/ Hour	1,32,000 Tons/ Annum of TMT/MS Rods
Captive Power Plant	01	08 MW Capacity	

8.0 The electricity load of 25 MW will be procured from Gulbarga Electricity Supply Company Limited. Company has also proposed to install 2 x 500 KVA DG Set.

9.0 Proposed raw material and fuel requirement for project are Iron Ore Lumps/ Pellets, Non-coking Coal, Limestone/ Dolomite, Ferro-Alloys, Pig Iron etc. The requirement would be fulfilled by E-Auction as well as procurement from indigenous/ imported sources. Fuel consumption will be mainly for Sponge Iron Plant and Power Plant.

10.0 Water consumption for the proposed project will be 400 M^3/ Day (Make-up/ Fresh Water) and waste water generation will be 10 M^3/ Day. Domestic waste water will be treated in Septic Tank-Soak Pit system and industrial waste water (mainly cooling water) generated will be treated in cooling towers and will be reused.

11.0 The proponent has mentioned that there is no court case or violation under EIA notification to the project or related activity.

Recommendations of the Committee:

The consultant cound not attend the meeting for presentation. Therefore, the committee deferred the proposal.

5.19 Low Carbon Ferro Alloys Plant with capacity 18,000TPA over an area of 4.5Acre **by M/s. Mohashakti Ferroalloys Pvt Ltd** at Bargada Village, Bayree of Jajpur District, Odisha [Online proposal No. IA/OR/IND/97783/2019; MoEF&CC File No. IA-J-11011/75/2019-IA-II(I)] **– Terms of Reference.**

M/s. Mohashakti Ferroalloys Pvt Limitedhas made online application vide proposal no. IA/OR/IND/97783/2019dated 6th March, 2019along with the application in prescribed

format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

2. M/s. Mohashakti Ferro Alloys Pvt Ltd proposes to install a new manufacturing unit for production of 18000 TPA low carbon ferro alloys plant. It is proposed to set up a unit Low Carbon Ferro chrome Plant of 6000 TPA capacity over an area of 4.5 Acre based on Aluminothermic process. The project proponent submitted an application in the prescribed format along with Form-1 and other reports to the Ministry online on 06.03.2019 vide Online Application No. IA/OR/IND/97783/2019.

3. The existing project was accorded Consent to establish by Odisha State Pollution Control Board vide Letter. no. 2033/CTE-181 dated 24.09.2018. As per MoEF&CC Notification, secondary metallurgical processing industrial units, those projects involving operation of furnaces only such as induction and electric arc furnace, submerged arc furnace, and cupola with capacity more than 30,000 tonnes per annum (TPA) would require environmental clearance. As the existing capacity of the project is 12000 TPA (i.e. <30,000TPA), prior environmental clearance was not required for the project.

4. The proposed unit will be located at Village: Baragada, Taluka: Bayree, District: Jajpur, State: Odisha.The land area acquired for the proposed plant is 1.8225Ha (4.5Acre) which has been converted to industrial Land. No forest land involved. The entire land has been acquired for the project, out of the total area 0.601Ha (33%) land will be used for green belt development.

5. 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.

6. Total project cost is approx 12.34 Crore rupees. Proposed employment generation from proposed project will be 15nos direct employment and 23nos indirect employment.

7. The targeted production capacity of the Low Carbon Ferro Chrome is 6000 TPA. The transportation will be done through existing road facilities. The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
Proposed Production			
Low Carbon Ferrochrome	1	6000 Tons per Annum	6000 Tons per Annum
Existing Unit (CTE Obtained by OSPCB, Bhubaneswar)			
Low Carbon Ferromanganese	1	6000 Tons per Annum	6000 Tons per Annum
Ferro Vanadium	1	3000 Tons Per Annum	3000 Tons Per Annum

Ferro Molybdenium	1	3000 Tons Per Annum	3000 Tons Per Annum
Alumina Bricks (From Generated Slag)	1	10000 Nos per Annum	10000 Nos per Annum

8. The electricity load of 11KV will be procured from CESU near to the plant premises. A distribution transformer of 500KVA, 11KV/440V will step down the voltage level for the plant.

9. Proposed raw material and fuel requirement for project are 23580TPA i.e.12000TPA of Chrome Concentrate, 6000TPA of roasted Manganese, 3600TPA of Aluminium Ingot, 600TPA of Mill Scale, 780TPA of Lime powder & 600TPA of Fluorspar. The requirement would be fulfilled by different mines at Sukinda, Joda, Barbil, NALCO, Anugul, Katni MP and Sundergarh Odisha. There is no requirement of fuel for the production purpose, only for DG Set.

10. Water Consumption for the proposed project will be 5KLD and no waste water will be generated as it is a dry process. Domestic waste water will be treated in soak pit through septic tank.

11. The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

12. Name of the Consultant: M/s Kalyani Laboratories Private Limited; Sl. No in the List of Accredited Consultant as on 7.03.2019: 93

Observations and Recommendations of the Committee: -

13. After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs 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. Action plan for 100% utilization of slag for making refractory bricks shall be submitted.
ii. Traffic study shall be carried out inter-alia including existing road details with traffic load, proposed quantum of material to be transported by rail/road with anticipated rakes/vehicles details, line source modelling and infrastructure strengthening details etc., These details shall be included in the EIA report.
iii. Public Hearing to be conducted by the concerned State Pollution Control Board.
iv. 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.
v. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

5.20 Upgradation of Existing Production Units and Additional Facilities to Create 0.6 Million Tonnes Capacity of Steel by **M/s. Neo Metaliks Limited**, located at Mouza Gopalpur, District Paschim Bardhaman, West Bengal [Online proposal No. IA/WB/IND/98492/2019; MoEF&CC File No. J-11011/597/2007-IA-II(I)] **– Terms of Reference.**

M/s. Neo Metaliks Limited has made online application vide proposal no. IA/WB/IND/98492/2019dated 7th March, 2019along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

2. M/s. Neo Metaliks Limited is presently running a plant having 215 m^3 Mini Blast Furnace, 33 m^2Sinter Plant and 4.5 MW Captive Power Plant for producing 0.188 MTPA of pig iron. M/s. Neo Metaliks Limited was granted Environment Clearance on 04/11/2008 for expansion of the plant to a steel plant by adding Sinter Plant, IF, EAF and Bar & Rod Mill vide letter No. J-11011/779/2007-IA II(I).

3. The plant is located in Industrial area of Mouza Gopalpur, District Paschim Bardhaman, West Bengal.

4. M/s. Neo Metaliks Limited now proposed for another expansion of the plant by upgradation of existing production units and installation of additional facilities. Expansion will be from 0.188 MTPA of pig iron to 0.6 MTPA of steel by upgrading MBF to 450 m3 and installing facilities for 0.2 MTPA of TMT re-bars, 0.3 MTPA of wire rods and 0.1 MT PA of balance billets will be sold directly.

5. The expansion units will be within the boundaries of the existing plant of 78.4 acres. 90.045-acre land is acquired by company out of which 78.4 acre forms the plant boundary while the rest 11.645 acres is adjacent land where plantation is also proposed.

6. The total estimated cost of proposed expansion is INR 956 Crores. The proposal for obtaining ToR was uploaded on Parivesh.nic.in on 7th March, 2019 under proposal no. IA/WB/IND/98492/2019.

7. 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.

8. The details of the existing and proposed expansion is furnished as below:

Description	Existing Capacities	Proposed Expansion		Ultimate Capacity
		Existing Capacity Enhancement	New installation	
Mini Blast Furnace	188000 TPA	284500 TPA	-	472500 TPA
Sinter Plant	300000 TPA	361500 TPA	-	661500 TPA
Pulverised Coal Injection	Compatible PCI (Post facto permission for installation of PCI for the existing BF has been received from MoEF)	22560 TPA @ 120 kg/t HM (PCI will be gradually increased to 170 kg coal/t HM)	-	56700 TPA @ 120 kg/t HM (PCI will be gradually increased to 170 kg coal/t HM)
Captive Power Plant	4.5 MW	To 5 MW	35 MW	40 MW
Oxygen Plant	-	-	250 TPD	250 TPD
Sponge Iron Plants	-	-	2,27,100 TPA	2,27,100 TPA
Zero Power Furnace	-	-	4,62,000 TPA	4,62,000 TPA
Induction Furnaces	-	-	1,73,575 TPA	1,73,575 TPA
Ladle Furnaces	-	-	2 nos. 1*30 t and 1*50 t"	2 nos. 1*30 t and 1*50 t
Casters	-	-	2 nos.- Total Capacity: 6,22,863 TPA 2-strand 6/11 m and 4 Strand 6/11 m	2 nos.- Total Capacity: 6,22,863 TPA 2-strand 6/11 m and 4 Strand 6/11 m
Rolling Mills	-	-	2 nos. Rebar Mill of capacity 2,00,000 TPA and Wire Rod Mill of capacity 3,00,000 TPA	2 nos. Rebar Mill of capacity 2,00,000 TPA and Wire Rod Mill of capacity 3,00,000 TPA
Vacuum Degassing furnace	-	-	50 t	50 t

9. The power requirement after the proposed expansion is 72.6 MW which will be procured from Damodar Valley Corporation.

10. Proposed raw material and fuel requirement for project are 19,78,107 TPA. The requirement would be fulfilled by IronOre from Odisha/Jharkhand, Cokefrom Russia, Haldia,

Lime from UAE, Dolomite from Birpara, as well as Quartzite from Durgapur.

11. The total water requirement of the expanded project is 7440 KLD. At present, Neo Metaliks Limited have permission of 2090 KLD from ADDA (Asansol Durgapur Development Authority, City Centre, Durgapur) for surface water from river Damodar. Additional requirement of 5350 KLD shall be catered through ADDA.

12. The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

13. Name of the Consultant: GreenCIndia Consulting Private Limited; Sl. No.73 in the List of Accredited Consultant as on 7.03.2019.

Observations and Recommendations of the Committee: -

14. After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs 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. Action plan for 100% utilization of slag shall be submitted.

ii. Scheme for achieving Zero liquid discharge shall be furnished.

iii. No ground water abstraction is permitted.

iv. Briquetting of dust shall be carried out and no reheating furnace shall be used.

v. Traffic study shall be carried out inter-alia including existing road details with traffic load, proposed quantum of material to be transported by rail/road with anticipated rakes/vehicles details, line source modelling and infrastructure strengthening details etc., These details shall be included in the EIA report.

vi. Public Hearing to be conducted by the concerned State Pollution Control Board.

vii. 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.

viii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

5.21 Proposed project regarding manufacture of Steel Ingots/Billets (90,000 TPA), Rolled Products (90,000 TPA) and Ferro Alloys (Fe-Si: 4150 TPA; Si-Mn: 9265 TPA; Fe-Mn: 12,000 TPA) **by M/s Kshitiz Agro Products (P) Limited** located at P.H. No. 101, Village Urla, Tehsil Dharsiwa, District Raipur, Chhattisgarh [Online proposal No. IA/CG/IND/4081/2011; MoEF&CC File No. J-11011/302/2009- IA II (I)] **– Validity extension of environmental clearance.**

Consideration of the proposal was deferred as the Project Proponent did not attend the meeting. The proposal may be considered subject to satisfactory explanation of the reasons of absence by the applicant.

5.22 Integrated Cement Plant (Clinker 2.5 MTPA; Cement – 3.5 MTPA) along with captive power plant (50MW) and captive lime stone mine (3.75 MTPA) **by M/s Saraswati Power and Industries Private Limited** located at Tangeda, Vemavaram & Chennayapalem villages of Dachepalli & Machavaram Mandals of Guntur District in Andhra Pradesh [Online proposal No. IA/AP/IND/5557/2010; MoEF&CC File No. J-11011/543/2009- IA.II (I)] **– Validity extension of environmental clearance.**

M/s Saraswati Power and Industries Pvt. Ltd, vide online proposal no. IA/AP/IND/5557/2010 dated 21st February, 2019 along with the application in prescribed format (Form-I) for extension of validity of Environmental Clearance under the provisions of EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

2.0 M/s Saraswati Power and Industries Pvt. Ltd has been accorded Environmental Clearance (EC) for Integrated Cement Plant (Clinker 2.5 MTPA; Cement – 3.5 MTPA) along with captive power plant (50MW) and captive lime stone mine (3.75 MTPA) vide letter no F.NO.J-11011/543/2009 –IA II (I) dated 29.03.2012. The EC granted is valid upto 29.03.2019 as per MoEFCC circular no F.No. 22-27/2015 IA – III dated 12.04.2016.

3.0 The Cement Plant along with Colony is proposed an area of 121.4 Ha. Of this, 100.34 Ha is already acquired.

4.0 Total Area of Mine : 613.476 Ha (Govt. waste land : 10.028 Ha + Private Land : 603.448 Ha). Area already acquired is 325.47 Ha

5.0 SPIPL implementing the project phase wise as given below:

- **CLINKER: 2.5 MTPA**
  Phase I : 1.25 MTPA
  Phase II : 1.25 MTPA
- **CEMENT: 3.5 MTPA**
  Phase I : 1.75 MTPA
  Phase II : 1.75 MTPA
- **CAPTIVE POWER PLANT (50 MW)**
  Phase I : 25 MW
  Phase II : 25 MW

6.0 The project could not be implemented within the EC validity period due to economic down turn and sluggish market conditions, and also for delay in land acquisition due to unavoidable circumstances.

Work Progress:

- Acquisition of the total land area required for the proposed project i.e. 121.4 Ha. for the Cement Plant along with colony and CPP.
- Mining lease of 328 Ha is acquired out of total mining lease area of 613.476 Ha.
- Application filed to south central railways for Railway Siding and in-principal approval obtained.

- Permission obtained from Ground water Department for Drawl of ground water.
- Application filed to statement government for drawl of water from Krishna river ,it is under process.
- Topography survey has been completed.
- Other technical studies such as Geotechnical studies, survey for electric power line and detailed project engineering are in advance stage.

Reasons for Delay:

- Delay in land acquisition
- Severe recession in the market

7.0 Demand for cement will gradually increase and market will stabilize in near feature in view of upcoming infrastructure developmental projects/planned by the Govt. of Andhra Pradesh for new state capital establishment.

8.0 The expenditure incurred so far on the project along with percentage of work completed is given below:

S. No.	Details	% of work completed	Cost incurred/Orders Raised (Rs in crores)
1	Land Acquisition	60	60
2	Implementation Schedule Balance works Schedule	Scheduled to commission by 31-1-2021	

Observations and Recommendations of the Committee: -

9.0 After detailed deliberations the committee recommended the proposal for extension of validity of Environmental Clearance for further period of 3 years, i.e., upto 28.03.2022.

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ANNEXURE –I

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 equipment 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&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Change 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/PCC 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 PM_{10}, $PM_{2.5}$, SO_2, NO_X, 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 analysed 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. Corporate Environment Responsibility (CER)

i. To address the Public Hearing issues, an amount as specified under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018 amounting to Rs. .....crores, shall be earmarked by the project proponent, towards Corporate Environment Responsibility (CER). Distinct CER projects shall be carved out based on the local public hearing issues. Project estimate shall be prepared based on PWD schedule of rates for each distinct Item and schedule for time bound action plan shall be prepared. These CER projects as indicated by the project proponent shall be implemented along with the main project. Implementation of such program shall be ensured by constituting a Committee comprising of the project proponent, representatives of village Panchayat & District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office. No free distribution/donations and or free camps shall be included in the above CER budget

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&CC 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&CC 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 (QCl)/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 SPCBshall 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.

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ANNEXURE-2

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 (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.
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. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
12. Trace metals in waste material especially slag.
13. Trace metals in water
14. Details of proposed layout clearly demarcating various units within the plant.
15. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
16. Details on design and manufacturing process for all the units.
17. 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.
18. 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).
19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.

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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.

ADDITIONAL ToRs FOR 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 sulphides, 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.

ADDITIONAL ToRs FOR 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 changing, charging emission centre, Coke quenching technology, pushing emission control.
5. Scheme for coke oven effluent treatment plant details including scheme for meeting cyanide standard.

ADDITIONAL ToRs FOR 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.

ADDITIONAL ToRs FOR 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.

ADDITIONAL ToRs FOR 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 aluminium, 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

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

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LIST OF PARTICIPANTS OF EAC (I) IN 5th MEETING OF EAC (INDUSTRY-I) HELD ON 27th to 29th MARCH, 2019

SL. No.	NAME AND ADDRESS	POSITION	ATTENDANCE SIGNATURE		
			27th	28th	29th
1	Dr. Chhavi Nath Pandey, IFS(Retired) Email: pandeychhavinath55@gmail.com	Chairman			A
Members					
2.	Dr. B. P. Thapliyal, Representative of Central Pulp and Paper Research Institute, Saharanpur.	Member	A		A
3.	, Representative of Indian Meteorological Department, New Delhi.	Member	A	A	A
4.	Dr. G. Bhaskar Raju Email: gbraju55@gmail.com	Member	A	A	A
5.	Dr. Jagdish Kishwan, IFS (Retd.) Email: jkishwan@gmail.com	Member			
6.	Dr. G.V. Subramanyam Email: sv.godavarthi@gmail.com	Member	A	A	A
7.	Shri. Ashok Upadhyaya Email: ahupadhy@rediffmail.com	Member			
8.	Shri. R.P. Sharma Email: rpsh2@hotmail.com	Member			
9.	Shri. Sanjay Deshmukh docsvd@yahoo.com Email: sanjaydeshmukh@mu.ac.in	Member		A	A
10.	Prof. S.K. Singh Email: sksinghdee@gmail.com singhsk@email.com	Member			A

SL. No.	NAME AND ADDRESS	POSITION	ATTENDANCE SIGNATURE		
			27th	28th	29th
11.	Dr. R. Gopichandran Email: r.gopichandran@vigyanprasar.gov.in	Member	A	A	A
12.	Shri. Jagannath Rao Avasarala Email: avasaralajagan@gmil.com	Member			
13	Shri. J.S. Kamyotra Email: kamyotra@yahoo.co.in	Member			
14.	Shri. Aravind Kumar Agrawal Director, MoEF&CC	Member Secretary			
15.	DR. Ashwani Kr. Dixit Sr Scientist & Incharge Chemical Recovery CPPRI	Invited	X		A

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