

COMPLIANCE TO MOEF CONDITIONS
(April, 2015 to September, 2015)

Sl. No.	Conditions	Compliance Status
2.0	<p>Electrostatic precipitators will be installed to control emissions from the boiler and co-generation power plant. No odour will emanate due to no captive pulping. Total water requirement from bore wells will be 13,525m³/d. The waste water will be treated in wastewater treatment plant (WWTP) and partly reused in the process or for irrigation and remaining discharged into Sona River through Sapna Nallah by a closed pipeline. The wastewater discharge will decrease from 31.6m³/ton to 27.7m³/ton of paper after the expansion. Reverse Osmosis plant will be installed. The waste water will be colour less due to absence of captive pulping. No bleaching will be involved. The boiler ash will be used for manufacturing bricks in company's own fly ash brick manufacturing machines and for road construction. Waste pulp will be used for firing in the boilers.</p>	<p>ESP has been installed to control the emissions from boiler of 15MW Co-generation power plant. No captive pulping is there, hence no odour will emanate. Present average water consumption is about 7778 m³/day. The entire waste water generated from the manufacturing process goes to waste water treatment plant (WWTP) for treatment. Final treated water is partly used for irrigation, partly for sludge dewatering plant, coal yard, road spraying, ash quenching and remaining is discharged to Sapna nallah. Final treated effluent from secondary clarifier passes through closed pipe line and then covered cemented drain which meets Sapna nallah. The treated effluent passing through Sapna nallah is also taken by the farmers to use for cultivation purpose during summer & winter season. This water is the only source for the farmers of near by locality adjacent to Sapna nallah, so open drain facilitates the farmers for irrigation/cultivation purpose. The average discharge volume is 12.9 m³/ton of paper produced which is partly used for cultivation & remaining goes to Sapna nallah. The waste water generated from ETP is colour less. RO plant has been installed for water treatment for boiler feeding. Fly ash generated is being used for manufacturing fly ash bricks which supplied to outside brick manufacturer 50nos.</p>
3.0	<p>Public hearing meeting was held on 19th June, 2006. 'No Objection Certificate has been accorded by the Orissa Pollution Control Board (OSPCB) vide letter no. 20697/Ind.II-NOC-4243 dated 24th August, 2006. Total cost of the project is 330.0 Crores.</p>	<p style="text-align: center;">----</p>
4.0	<p>The Ministry of Environment and Forests hereby accords environmental clearance to the proposed of the above project under the provisions of EIA Notification dated 14th September, 2006 subject to strict compliance of the following specific and general conditions.</p>	<p style="text-align: center;">----</p>

A SPECIFIC CONDITIONS

i.	<p>The gaseous emissions (SPM, RPM SO₂, NO_x, H₂S, CO and Pb) from various process units shall conform to the standards prescribed from time to time. The Orissa State Pollution Control Board (OSPCB) may specify more stringent standards for the relevant parameters keeping in view the nature of the industry, its size and location. At no time, the emission level shall go beyond the prescribed standards. In the event of failure of any pollution control system(s) adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Ambient air quality shall be regularly monitored and records maintained and reports submitted to the Ministry / CPCB / OSPCB once in six months.</p>	<p>The mill produces paper from recycled fiber based on waste paper. There is no digester pulping and hence no gaseous emission from process units. So it is not applicable. In-house stack emission quality monitoring is done regularly and records maintained and reports submitted to the Ministry/CPCB/OSPCB once in six months as in Annexure-I.</p>
ii.	<p>The flue gases from recovery boiler shall be analyzed continuously for SPM, SO₂, NO_x, H₂S. Continuous monitoring shall be carried out for H₂S near the major source of emission and in the ambient air near the plant boundary at three locations. No odour should emanate as there will be no captive pulping. In case, any odour from any source is generated, same shall be adequately treated to alleviate the odour problem.</p>	<p>As per MoEF notification dated 16.11.2009 on NAAQ standard, H₂S parameter is not mentioned. In absence of digester pulping and recovery boiler, no odour is being generated. As the mill is using only waste paper for manufacturing of paper neither wood/bamboo nor any agro residues are used and there is no black liquor generation and hence no chemical recovery plant exist. Hence we have written to MoEF vide our letter dated 18th Jan 2012 and reminder on 18.05.2012 that this clause should be exempted.</p>
iii.	<p>The company shall install Electrostatic precipitators to control emissions from the boiler and co-generation power plant, dust extraction system in chemical recovery plant and dust suppression system in conveyors to control gaseous and fugitive emissions. The particulate emissions from the stacks shall not exceed 75 mg/Nm³. The efficiency of ESP shall be 99.9%.</p>	<p>ESP has been installed to control the emissions from boiler. Dust suppression system has been installed in coal crusher & conveying area (various transfer point) to control the fugitive dust emission. The particulate emission from stack remains well below the prescribed standard. As there is no recovery boiler, dust extraction system in chemical recovery plant is not applicable. Industry has written to MoEF to delete the points connected with dust extraction system in the chemical recovery plant.</p>
iv.	<p>The company shall adopt environment friendly Element Chlorine Free (ECF) pulp bleaching process. Existing straw pulping will be ceased to make mill environment friendly. No captive pulping will be carried out. No straw or forest based raw material will be used. Since new material mix will consist of 60% local waste paper and 40% imported, availability of waste paper shall be tied up prior to expansion.</p>	<p>As indicated above, the mill produces paper using recycled fibre based on waste paper and no conventional pulp bleaching is carried out. There is no bleaching done with chlorine and hypochlorite. Industry has requested MoEF vide our letter dated 18th Jan 2012 to delete this condition as it is not applicable.</p>

v.	<p>Total water requirement from bore wells shall not exceed 13,525m³/day as per the permission accorded by the Central Ground Water Authority (CGWA). The wastewater will be treated in the wastewater treatment plant (WWTP) and reused in the process or for irrigation purpose. Remaining treated wastewater will be discharged into Sona River through Sapna Nullah by a closed pipeline. Reverse Osmosis plant will be installed. The wastewater shall be colourless due to absence of captive pulping. No bleaching will be involved. Regular monitoring of Mercaptans, Methylene Chloride, TOC and AOx in the treated effluent and AOx levels in the river (surface) water shall be carried out once in month. TOC analyzer shall be installed to monitor TOC in the effluent regularly. Domestic sewage will be monitored regularly and reports submitted to the Ministry and its Regional Office at Bhubaneswar.</p>	<p>Present average water consumption is about 7778 m³/day which is much below the permitted figure 13525m³/day. Final treated waste water is partially used for irrigation, process and coal yard & ash handling plant. The treated effluent is also used for farming by local farmers and water pumping facilities are provided at many points as per their request and hence it can not pass through closed pipe line.</p> <ul style="list-style-type: none"> - Reverse osmosis plant has been installed for water treatment for boiler feed purpose. - As there is no captive pulping, the waste water is colour less. - Mercaptans, Methylene chloride, TOC and AOX are generated in the captive pulping through digester (kraft process) followed by chorine based bleaching. In our case, we do not have such process. Hence it is not applicable to monitor all these parameters. In this regard we hade requested MoEF to amend this condition suitably vide our letter dated 18.01.2012
vi.	<p>As proposed in EIA/EMP, water requirement will be reduced from 31.6m³/ton to 27.7m³/ton of paper after the expansion.</p>	<p>Present fresh water consumption is coming about 21.6 m³/ton of paper produced. (Annexure-II).</p>
vii.	<p>Solid waste generated in the form of boiler ash shall be used for manufacturing bricks in company's own fly ash manufacturing machines and for road construction. Waste pulp from wastewater treatment plant (WWTP) will be used for firing in the boilers. ETP sludge shall be used as manure for green belt development.</p>	<ul style="list-style-type: none"> a) 100% boiler ash (fly ash) is being used for bricks manufacturing. b) Waste pulp (Primary sludge) is used as co-fuel in the boiler. c) ETP sludge i.e. secondary sludge (biomass) is used as manure/land fill.
viii.	<p>As per the recommendations made in the Charter on Corporate Responsibility for Environmental Protection (CREP), the company shall undertake measures for discharge of AOx less than 1.5 kg/ton of paper within two years and 1.0 kg/ton of paper in 5 years. The wastewater discharge per ton of paper shall be less than 59 m³/ton of paper</p>	<p>There is no generation of AOX as no chlorine is used in the process. The average waste water discharge to river is about 12.9 m³/T of paper product, which is much below the permitted figure 59 m³/ton of paper.</p>

ix.	Green belt shall be raised in at least 14.2 ha. Out of total 35.2 ha. To mitigate the effects of fugitive emissions all around the plant in as per the CPCB guidelines.	Green belt development is a continuous process. We have planted about 64134 numbers of plants in and around the plant. Species planted are Kadamba, Acacia, Jhaun and Ashoka. It covers plantation area more than 25 ha. in a scattered manner. Plantation status for the year 2015-16 is given in Annexure-III .
x.	The company shall undertake rainwater harvesting measures to recharge the ground water.	The unit has provided total nine numbers of rain water run off /rain water recharging structures and all are in operation.

B. GENERAL CONDITIONS:

i)	The project authorities must strictly adhere to the stipulations made by the Orissa State Pollution control Board and the State Government.	Industry is completely adhered to stipulation made by SPCB, Orissa State Govt.
ii)	No expansions or modification in the plant shall be carried out without prior approval of the Ministry of Environmental and Forests.	It will be complied accordingly.
iii)	Adequate ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of SPM, SO ₂ and NO _x are anticipated in consultation with the OSPCB. Data on ambient air quality, fugitive emission and stack emissions shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and Orissa state Pollution control Board once in six months.	Ambient air quality monitoring stations are being established in proper places to monitor PM ₁₀ & PM _{2.5} , SO ₂ & NO _x after consulting to officials of OSPCB. Ambient air and stack emissions quality monitoring is done regularly and reports were submitted to the Authorities. Latest test reports are attached herewith (Annexure-IV) & the results are well within the norms.
iv.	The overall noise levels in and around the plant area should be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time).	Noise levels in and around the plant area are monitored. The report is enclosed (Annexure-V) for your information.
v.	The company shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report. Further, the company shall earmark funds separately for improving socio-economy and ecology of the region.	Details of environmental protection measures and safeguards recommended in EIA/EMP report are given in the enclosed (Annexure-VI). Industry makes separate budget for improving socioeconomic & ecology of the region and the fund allocated is 50 lacs per annum.

vi	The project authorities shall provide Rs. 23.00 crores and Rs. 2.05 Crores towards capital and recurring cost/annum to implement the conditions stipulated by the Ministry of Environment and forests as well as the State Government and submit an implementation schedule for the conditions stipulated herein to the Ministry's Regional Office at Bhubaneswar. The funds so provide shall not be diverted for any other purposes.	Industry had invested 23 Crores for pollution control measures. Recurring expenses towards environmental management is about 523 lacs (approx) for the year 2015-16.
vii.	The Regional Office of this Ministry at Bhubaneswar / CPCB / OSPCB will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	As per letter No. 106-104/13 (1)/EPE dated 26.04.2013 Six monthly compliance status are being sent to all concerned officers.
viii.	The company shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the OSPCB/committee and may also be seen at website of the Ministry of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional Office.	Complied.
ix.	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the data of commencing the land development work.	Complied.
5.0	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	----
6.0	The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner will implement these conditions.	----
7.0	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & control of Pollution) Act, 1974, the Air (Prevention & control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Hazardous Wastes (Management and Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	---

Annexure - I

EMAMI PAPER MILLS LIMITED

In house Stack Emission Monitoring Report

Date	PM (mg/NM³)
15.04.15	58(15MW)
27.04.15	49(5MW)
10.05.15	47(5MW)
20.05.15	59(15MW)
04.06.15	48(5MW)
18.06.15	57(15MW)
06.07.15	50(5MW)
22.07.15	58(15MW)
07.08.15	56(15MW)
19.08.15	48(5MW)
10.09.15	58(15MW)
21.09.15	47(5MW)

EMAMI PAPER MILLS LIMITED
Water Consumption Report

Month	Water Consumption, M³	Finished Production, MT
April,15	234360	10956
May,15	243478	11183
June,15	226094	10675
July,15	242785	11362
August,15	242902	11089
September,15	233755	10745

Avg. Water Consumption = 7778 M ³ /day
Avg. Water Consumption = 21.6 M ³ /MT of paper

Annexure - III

EMAMI PAPER MILLS LIMITED
Plantation Status 2015-16

Area	No. of Plants
Emami Board Plant area	5722
BM4 Costal security gate	237
Coal yard site	155
PM3 site	12
Emami ETP area	630
Govt. Polytechnic College, Vidyadharpur, Balasore	1717
Bania Gaon (Block Plantation)	2500
Seedling distribution to village Kurunia (349 Family)	1745
Seedling distribution to near by school (11 nos. School)	116
Seedling distribution to staffs & Workers of Emami	51300
TOTAL	64134

Types of Plant

Acasia Mengium, Mango, Debdaru, Krushnnachuda, Kadamba etc.
Mango, Sapeta, Lemon, Banana, Guava, Papaya

Ambient Air Monitoring Report

A-Near PM-3 Weigh Bridge, B-Near PM-3, C-ETP Side

Date	Particulate matter		SO ₂ (µg/M ³)	NO ₂ (µg/M ³)
	PM10 (µg/M ³)	PM2.5 (µg/M ³)		
04.04.15	58(A)	37(A)		
07.04.15	54(B)	34(B)		
10.04.15	52(C)	33(C)	22(C)	28(C)
13.04.15	59(A)	38(A)		
16.04.15	57(B)	37(B)		
19.04.15	51(C)	33(C)		
21.04.15	53(A)	35(A)		
23.04.15	51(B)	33(B)		
26.04.15	50(C)	32(C)		
29.04.15	56(A)	37(A)		
02.05.15	55(B)	34(B)		
05.05.15	51(C)	30(C)		
09.05.15	57(A)	36(A)		
12.05.15	53(B)	31(B)		
15.05.15	50(C)	28(C)		
18.05.15	59(A)	38(A)	20(A)	27(A)
22.05.15	56(B)	37(B)		
25.05.15	51(C)	33(C)		
28.05.15	58(A)	37(A)		
30.05.15	56(B)	34(B)		
02.06.15	50(C)	32(C)		
05.06.15	58(A)	38(A)		
08.06.15	55(B)	36(B)		
11.06.15	51(C)	33(C)		
16.06.15	57(A)	37(A)		
20.06.15	54(B)	35(B)	24(B)	30(B)
23.06.15	49(C)	34(C)		
26.06.15	56(A)	36(A)		
30.06.15	55(B)	34(B)		
03.07.15	50(C)	30(C)		
06.07.15	57(A)	38(A)		
09.07.15	54(B)	36(B)		
13.07.15	51(C)	33(C)	21(C)	27(C)
17.07.15	59(A)	34(A)		
20.07.15	55(B)	35(B)		
23.07.15	50(C)	32(C)		
25.07.15	58(A)	36(A)		
29.07.15	56(B)	35(B)		
03.08.15	49(C)	30(C)		
06.08.15	57(A)	36(A)		
10.08.15	53(B)	33(B)		
14.08.15	48(C)	30(C)		
18.08.15	57(A)	36(A)	23(A)	28(A)
20.08.15	54(B)	33(B)		
24.08.15	49(C)	30(C)		
27.08.15	54(A)	33(A)		
29.08.15	56(B)	35(B)		
02.09.15	53(C)	31(C)		
05.09.15	57(A)	37(A)		
08.09.15	55(B)	35(B)		

12.09.15	51(C)	32(C)		
15.09.15	59(A)	38(A)		
19.09.15	56(B)	36(B)	20(B)	26(B)
22.09.15	52(C)	34(C)		
26.09.15	58(A)	39(A)		
30.09.15	54(B)	37(B)		

Annexure - V

Average sound level measurement data

Month	Ambient Sound Level , dB Day / Night
April,15	65/63
May,15	65/64
June,15	65/64
July,15	66/65
August,15	65/63
September,15	65/63

Annexure-VI

NOTE ON DETAILS PERTAINING TO ENVIRONMENTAL PROTECTION MEASURES AND SAFEGUARDS RECOMMENDED IN THE EIA/EMP

The Environment Management Plan (EMP) is required to ensure sustainable development of the study area (10 km). The environmental attributes in the region include air quality, water quality, ecology and public health. The Management Action Plan/ protection aims at controlling pollution at the source level to the possible extent with the available and affordable technology followed by treatment measures before they are discharged.

Air Quality

Major pollutants envisaged from the project are SPM and Sulphur dioxide. The baseline ambient air quality levels in the project area are within the permissible limits as specified by regulating agency.

The following methods of abatement were employed for the air pollution control:

- Stack of height 70 m has been provided for wider dispersal of pollutants
- High efficiency ESPs has been provided to control particulates

- Greenbelt around the plant area and plantation along the internal roads in the plant premises upgraded, and
- Internal roads have been asphalted to reduce generation of fugitive dust. Water spraying is being practised at all dust generating and coal handing areas.

Wastewater Generation, Treatment and Disposal

The wastewater generation from the plant mainly effluents from paper machine and deinking plant. A new wastewater treatment with activated sludge secondary treatment with diffused aeration system was installed. Part of the treated water is recycled and used for development of green cover.

The treated wastewater meeting the pollution control norms is let out in to the Nallah drain. The AOX level of the treated effluent is lower and within the standards prescribed by CPCB. The mill will constantly make efforts by improving the quality of effluent entering the treatment plant, in order to achieve better and improved efficiencies of operation.

Solid Waste

The main solid waste generated are fly ash from boilers, sludge from wastewater treatment plant and deinking plant.

Fly ash is supplied to brick manufacturing units (50 nos.) for making fly ash bricks.

Sludge from wastewater treatment plant and DIP are thickened and fired along with coal in the boiler.

Greenbelt development

- Greenbelt all around the proposed plant facilities is provided
- Trees are planted along the internal and external roads

Apart from this, the mill has developed greenery in the colony and township areas to an extent of 5 km by planting 1000 number of plants. Adequate attention is paid to the plantation of trees, their maintenance and protection.

All vacant spaces and area along the external roads of the plant location trees planted. Green Belt Development is a continuous process. We have planted about 31000 no of plants in and around the factory site. Plant species are Kadamba, Acacia, Mango, Casurina, Asoka, Eucalyptus etc.Total plantation are covered is more than 18.66ha (more than 33% of plant area).

In addition to the above mentioned plantation inside plant premises, Emami has undertaken social forestry in the surrounding areas, as part of afforestation programme.