

F. No. J-11011/343/2013- IA II (I)
Government of India
Ministry of Environment, Forests and Climate Change
(I.A. Division)

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Aliganj, Jorbagh Road,
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Telefax : 011-24695313
Dated 22nd June, 2015

To,
Dr. Bir Kapoor, Unit Head
M/s Indian Rayon (A unit of Aditya Birla Nuvo Ltd.)
Sy. No. 1502, 1511, 1516 & 1493
Junagadh-Veravel, Verval,
District Girsomnath, Gujarat-362266.
E-mail : s.rathore@adityabirla.com; bir.kapoor@adityabirla.com; Fax: 2876-243569;

Subject: Expansion of Viscose Filament Yarn at Veraval, District Gir Somnath, Gujarat by M/s Indian Rayon.- Environmental Clearance reg.

Ref. : Your letter no. nil dated 24th November, 2014.

Sir,
This reference to your letter dated 24th November, 2014 alongwith project documents including Form I, Terms of References, Pre-feasibility Report, EIA/EMP Report, public hearing report regarding above mentioned project and subsequent submission of Monitoring report dated 30th December, 2014 on the above mentioned subject.

2.0 The Ministry of Environment, Forests and Climate Change has examined your application. It is noted that proposal is for expansion of Viscose Filament Yarn at Sy. No. 1502, 1507, 1511, 1516 & 1493, Veraval, District Gir Somnath, Gujarat by M/s Indian Rayon. Total plant area is 176 acres of which greenbelt will be developed in 59 acres. Proposed expansion will be done within the existing plant premises; thus, no additional land is required. It is reported that no national parks/wildlife sanctuaries /biosphere reserve & reserved /protected forest lies within 10 km radius project site. Arabian sea is at 700 m from the plant site. Triveni sangam of the rivers namely Hiran, Kapila, Saraswati is located at 6.5 km from the plant site. The Seasonal River Devka is passing just near the plant site. Cost of the proposed expansion is Rs. 850 crores. Rs. 40 Crore and Rs. 2.0 Crore are earmarked towards capital cost and recurring cost per annum for implementation of EMP. The following products will be manufactured:

| S.N. | Products | Existing Quantity (MTPM) | Proposed additional (MTPM) | Total Quantity after expansion (MTPM) |
|------|------------------------|--------------------------|----------------------------|---------------------------------------|
| 1 | Viscose Filament Yarn | 1650 | 750 | 2400 |
| 2 | Captive Power Plant | 34.5 MW | 20 MW | 54.5 MW |
| 3 | Sodium Sulphate | 2050 | 300 | 2350 |
| 4 | Sodium Sulphite | Nil | 3000 | 3000 |
| 5 | Liquid SO ₂ | Nil | 1500 | 1500 |
| 6 | Sulphuric Acid | 3600 | No change | 3600 |
| 7 | Carbon Disulphide | 1000 | No change | 1000 |

| | | | | |
|----|--|---------------------------|-----------|------------------------|
| 8 | Caustic soda Lye (100 %) | 12000 | No change | 12000 |
| 9 | Chlorine (100 %) | 10560 | No change | 10560 |
| 10 | Compressed Hydrogen | 650000 Nm ³ | No change | 650000 Nm ³ |
| 11 | Sodium Sulphide, (Na ₂ S ¹) | 100 | No Change | 100 |
| 12 | HCl | 1800 | No change | 1800 |
| 13 | Sodium Hypochlorite (100%) | 3750 | No Change | 3750 |

3.0 ESP and adequate stack height will be provided to coal fired boiler. Low NOx burner shall be provided in Captive Co-generation Power Plant to reduce the NOx emissions. Fluidized bed combustion boiler & lime dosing system will be provided to control SO₂ emissions. Bagfilter & cyclone separator will be installed in boiler house to control particulate emissions. Bagfilter will be provided in coal crusher plant. Exhaust containing CS₂ and H₂S gas from rayon plant will be passed through scrubber. Scrubber alongwith stack of adequate height will be provided to Sodium Sulphite and Liquid SO₂ plant. Fresh water requirement from the Umrethi Dam will be increased from 12938 m³/day to 15938 m³/day after expansion. Effluent generation after expansion will be 10540 m³/day and treated in the effluent treatment plant (ETP) to meet stipulated standards before discharge from factory outlet through marine pipeline with diffuser system with more than 77 time dilution into deep sea for design discharge of 15000 m³/day. Effluent recycling reverse osmosis (RO) plant will be installed to produce 2000 m³/day recycle water. Sewage will be treated in the sewage treatment plant (STP). Fly ash will be sent to group cement plant, brick plant & rest of the quantity will be given to the GPCB approved vendors. Process sludge is being stored in identified area and briquettes are formed by use of process sludge, cellulose waste, coal ash, charcoal churry and used in boiler & co-incineration in the Group plant Ultra Tech Rajula. Sulphur sludge will be sent to TSDF site. Waste catalyst will be sent to authorized recycler/re-processors. Waste/spent oil will be handed over to authorized recyclers/re-processors.

4.0 Public hearing/consultation was conducted by the on 4th October, 2014.

5.0 All manmade fibers manufacturing including rayon are listed at S.No. 5(d) under category 'A' of Schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) in the Ministry.

6.0 The proposal was considered by the Expert Appraisal Committee (Industry) in its 16th and 34th meetings held during 20th – 21st February, 2014 and 17th-19th February, 2015 respectively. Project Proponent and the EIA Consultant namely JM EnviroNet Pvt. Ltd., have presented EIA / EMP report as per the TOR. EAC has found the EIA / EMP Report and additional information to be satisfactory and in full consonance with the presented TORs. The Committee recommended the proposal for environmental clearance.

7.0 Based on the information submitted by the project proponent, the Ministry of Environment and Forests hereby accords environmental clearance to above project under the provisions of EIA Notification dated 14th September 2006, subject to the compliance of the following Specific and General Conditions:

A. SPECIFIC CONDITIONS:

- i) ESP and adequate stack height shall be provided to coal fired boiler to control the air emissions within the limit stipulated by CPCB and GPCB. Low NOx burner shall be provided in Captive Co-generation Power Plant to reduce the NOx emissions.
- ii) The gaseous emissions (SO₂, NOx, CS₂, H₂S, CO, HC) and particulate matter from process and CPP units shall conform to the norms prescribed by the CPCB/MPCB from time to time. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired

efficiency. Continuous emission monitoring system (CEMS) should be installed to measure SO₂, NO_x and Particulate from the CPP stack and SO₂, CS₂ and H₂S from process plant stacks.

- iii) Exhaust containing CS₂ and H₂S gas from rayon plant shall be passed through scrubber.
- iv) Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry vide G.S.R. No. 826(E) dated 16th September, 2009. The levels of PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CS₂, H₂S, HCl, VOCs and methane and non methane HC shall be monitored in the ambient air and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and GPCB.
- v) In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits stipulated by the GPCB.
- vi) The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.
- vii) Total fresh water requirement from Umrethi Dam supply should not exceed 15938 m³/day and prior permission shall be obtained from the concerned Authority. No ground water should be used. Efforts should be made to reduce the fresh water requirement by adopting 3 R's (Reduce, Reuse and Recycle) concept.
- viii) Total industrial wastewater generation shall not exceed 10540 m³/day. As proposed, effluent should be treated in the effluent treatment plant. Treated effluent shall be discharged into conveyance system for marine disposal after conforming to the standards prescribed for marine discharge norms and obtaining permission from the GPCB. Treated effluent should be passed through guard pond. Online pH meter, TOC analyzer and flowmeter should be installed. No process effluent shall be discharged in and around the project site. Sewage should be treated in STP. The water quality monitoring report for treated effluent should be submitted to the CPCB and Ministry's regional Office at Bhopal.
- ix) As proposed, effluent recycling RO plant shall be installed to produce 2000 m³/day recycle water. Efforts shall be made for recovery of sodium thiosulphate.
- x) Treated effluent should be passed through guard pond. Online pH meter, flow meter and TOC analyzer should be installed. Sulphide contents in the effluent should also be monitored
- xi) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- xii) The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from APPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. A copy of the same shall be submitted to the Ministry and Ministry's Regional Office at Bangalore.
- xiii) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to

time. All Transportation of Hazardous Chemicals shall be as *per* the Motor Vehicle Act (MVA), 1989.

- xiv) All the recommendations mentioned in the Environmental Management Plan, Rapid Risk Assessment Report, Disaster Management Plan and safety guidelines shall be implemented.
- xv) Boiler ash should be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust shall be avoided.
- xvi) All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2008.
- xvii) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.
- xviii) Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the regular medical test records of each employee should be maintained separately.
- xix) Dedicated parking facility for loading and unloading of material should be provided in the factory premises. Unit should develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
- xx) As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xxi) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 4thOctober, 2014 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xxii) The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to being into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xxiii) At least 5 % of the total cost of the project (i.e. Rs 43 Crore) shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.
- xxiv) Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile sewage treatment plant, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.

B. GENERAL CONDITIONS:

- i. The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board (GPCB), State Government and any other statutory authority.



- ii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- iii. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be complied.
- iv. The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one stations is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.
- v. The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- vi. The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.
- vii. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.
- viii. Usage of Personnel Protection Equipments (PPEs) by all employees/ workers shall be ensured.
- ix. The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing relating to the project shall be implemented.
- x. The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.
- xi. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- xii. A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- xiii. The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
- xiv. A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parisad/Municipal Corporation, Urban local Body and the local NGO, if any, from who suggestions/ representations, if any, were received while processing the proposal.
- xv. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the Gujarat Pollution Control Board. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.

- xvi. The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.
- xvii. The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at www.moef.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 shall be forwarded to the concerned Regional Office of the Ministry.
- xviii. 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 date of start of the project.

8.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

9.0 The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.

10.0 The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 alongwith their amendments and rules.

11.0 Environmental Clearance is issued to M/s Indian Rayon for expansion of viscose filament yarn at Veraval, District Gir Somnath, Gujarat.



(Lalit Bokolia)
Additional Director

Copy to:-

1. The Principal Secretary, Forests & Environment Department, Government of Gujarat, Sachivalaya, 8th Floor, Gandhi Nagar - 382 010, Gujarat.
2. The Additional Principal Chief Conservator of Forests(central), Ministry of Environment & Forests, Regional Office, E-5, Arera Colony, Link Road -3, Bhopal -462 016, M.P.
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman, Gujarat State Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhi Nagar-382 043, Gujarat.
5. Monitoring Cell, Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhavan, *Jorbagh Road*, New Delhi.
6. Guard File/Monitoring File/Record File.



(Lalit Bokolia)
Additional Director