

**F. No. IA-J-11011/351/2017-IA-II(I)**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(IA-II Section)**

Indira Paryavaran Bhawan  
Jorbagh Road, New Delhi -3  
Dated: 10<sup>th</sup> August, 2018

To

M/s Bharat Petroleum Corporation Ltd  
Village Baulsingha, Tehsil Bhatli  
District Bargarh (Odisha)

**Sub: Ligno-cellulosic 2G Ethanol Plant of 100 KLPD at Village Baulsingha, Tehsil Bhatli, District Bargarh (Odisha) by M/s Bharat Petroleum Corporation Ltd - Environmental Clearance - reg.**

Sir,

This has reference to your proposal No.IA/OR/IND2/65843/2017 dated 10<sup>th</sup> July, 2018, submitting the EIA/EMP report with public consultation details on the above subject matter.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project for setting up 100 KLPD ligno-cellulosic 2G Ethanol Plant by M/s Bharat Petroleum Corporation Ltd in a total area of 58.44 acres located at Village Baulsingha, Tehsil Bhatli, District Bargarh (Odisha).

3. Total estimated project cost is Rs.747.46 crores. Total capital cost earmarked towards pollution control measures is Rs.13.86 crores and the recurring cost (operation and maintenance) will be about Rs.0.70 crores per annum. Employment opportunity for 200 persons directly and around 1000 persons indirectly (biomass supply chain management) is envisaged during operation phase. Industry proposes to allocate Rs.7.47crores towards Corporate Environment Responsibility.

4. There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km from the project site. Danta river is flowing in the North (5 km) and Jira river is 8 km in South from the project site.

5. Total fresh water requirement is estimated to be 133 cum/hr (3192 cum/day), which is proposed to be met from Bargarh Canal. The designated Committee in the State Government has accorded its approval to meet the water requirement for the ligno-cellulosic Ethanol plant.

Total effluent of 45 cum/hr will be treated through the RO based plant inside 2G Ethanol complex. The treated water shall be reused/recycled in the process. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

Power requirement for the project is 9.65 MW, which will be met from State Grid. DG sets have been envisaged for emergency power. Boiler with agricultural waste/lignin feed shall be installed. The solid waste produced during operation phase will be sold to brick/cement industries or used as manure for agricultural fields.

6. The project/activity is covered under category A of item 5(g) 'Distilleries' of Schedule of Environment Impact Assessment (EIA) Notification, 2006, and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

7. The terms of reference (ToR) for the project was granted on 17<sup>th</sup> August 2017 and public hearing was conducted by the Odisha State Pollution Control Board on 27<sup>th</sup> June, 2018.

8. The proposal for environmental clearance was considered by the EAC (Industry-2) in its meeting held on 25-27 July, 2018. The project proponent and their consultant M/s Engineers India Limited presented the EIA/EMP report. The Committee found the EIA/EMP report complying with the terms and conditions of the ToR, and recommended the proposal for environmental clearance to the project with certain conditions.

9. Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), the Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to the project for setting up **100 KLPD Ligno-cellulosic 2G Ethanol Plant** by M/s Bharat Petroleum Corporation Ltd at Village Baulsingha, Tehsil Bhatli, District Bargarh (Odisha), under the provisions of the EIA Notification, 2006, read with subsequent amendments therein, subject to compliance of the terms and conditions as environmental safeguards, as per **Annexure**.

10. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.

SKJ  
10/8/2018

(S. K. Srivastava)  
Scientist E

**Copy to: -**

1. The Principal Secretary, Department of Forest and Environment, Government of Odisha, Bhubaneswar (Odisha)
2. The Additional PCCF (C), MoEF&CC Regional Office (EZ), A/3, Chandrasekharpur, Bhubaneswar - 23 (Odisha)
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
4. The Member Secretary, Odisha State Pollution Control Board, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit - VIII, Bhubaneswar -12 (Odisha)
5. Guard File/Monitoring File/Website/Record File

SKJ  
10/8/2018

(S. K. Srivastava)  
Scientist E

**Environmental clearance to the project for setting up 100 KLPD lingo-cellulosic 2G Ethanol Plant at Village Baulsingha, Tehsil Bhatli, District Bargarh (Odisha) by M/s Bharat Petroleum Corporation Ltd**

**[F. No. IA-J-11011/351/2017-IA-II(I); Proposal No. IA/OR/IND2/65843/2017 dated 10<sup>th</sup> July, 2018]**

**TERMS AND CONDITIONS**

- (i) Ethanol shall be used exclusively for fuel blending only.
- (ii) Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
- (iii) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.
- (iv) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.
- (v) To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- (vi) Total fresh water requirement shall not exceed 3192 cum/day, proposed to be met from Bargarh Canal.
- (vii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through a separate conveyance system.
- (viii) 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.
- (ix) The company shall undertake waste minimization measures as below:-
  - (a) Metering and control of quantities of active ingredients to minimize waste.
  - (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
  - (c) Use of automated filling to minimize spillage.
  - (d) Use of Close Feed system into batch reactors.
  - (e) Venting equipment through vapour recovery system.
  - (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (x) The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xi) All the commitments made regarding issues raised during the public hearing/ consultation meeting shall be satisfactorily implemented.
- (xii) At least 1% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and the details along with time bound action plan shall be submitted to the Ministry's Regional Office.

- (xiii) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- (xiv) 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.
- (xv) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- (xvi) There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.
- (xvii) Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xviii) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xix) CO<sub>2</sub> generated from the process shall be bottled/made solid ice and sold to authorized vendors.

### **GENERIC CONDITIONS**

- (i) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board, Central Pollution Control Board, 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, Forest and Climate Change. 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 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 station each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.
- (iv) The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 shall be followed.
- (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) 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, and risk mitigation measures relating to the project shall be implemented.

- (ix) The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. ESC activities shall be undertaken by involving local villages and administration.
- (x) The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- (xi) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change 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.
- (xii) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, ZillaParishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- (xiii) 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&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- (xiv) 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&CC by e-mail.
- (xv) 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 <http://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.
- (xvi) 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.