



**F.No.J-11011/274/2015- IA II(I)**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(IA-II Section)**

By Speed Post/Online

Indira Paryavaran Bhawan  
 Jorbagh Road, New Delhi - 110003

Dated: 27<sup>th</sup> July, 2020

To

**M/s Numaligarh Refinery Limited**  
 Village Pankagrang  
 District Golaghat, Assam  
 Email: [alok.n.nath@nrl.co.in](mailto:alok.n.nath@nrl.co.in)

**Sub: Expansion of the Refinery from 3 MMTPA to 9 MMTPA at Village Pankagrang, District Golaghat, Assam by M/s Numaligarh Refinery Limited- Environmental Clearance & permission in 'No Development Zone' of Numaligarh -reg.**

Sir,

This has reference to your proposal No. IA/AS/IND2/134396/2018 dated 12<sup>th</sup> February, 2020, submitting the EIA/EMP report 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 Expansion of the Refinery from 3 MMTPA to 9 MMTPA by M/s Numaligarh Refinery Limited in an area of 333.5 ha located at Village Pankagrang, District Golaghat, Assam. The proposal also involves activities requiring prior permission as per the Ministry's Notification vide S.O. 481 (E) dated 5<sup>th</sup> July, 1996 in the 'No Development Zone' of Numaligarh.

3. The details of products and capacity are as under. The production capacity also includes the additional products purchased from outside the refinery, in addition to the product/capacities permitted in the existing environmental clearances.

S. No.	Product Details	Existing (MMTPA)	Proposed (MMTPA)	Total (MMTPA)
1.	LPG	0.066	0.500	0.566
2.	Coke	0.080	0.245	0.325
3.	Motor Spirit BS VI	0.360	1.572	1.932
4.	HSD BS VI	2.236	3.370	5.606
5.	Naphtha	0.288	---	0.288
6.	ATF	0.060	---	0.060
7.	SKO/MTO	0.072	---	0.072
8.	Sulphur	0.0060	0.145	0.151
9.	Wax	0.05	---	0.05

*Handwritten signature*

4. The total land requirement for the project is 88.4 ha which is available in the existing refinery premises of 333.5 ha. Additional land of 180 ha shall be required for some developmental activities/ancillary facilities in "No Development Zone" area around the existing refinery. Greenbelt area of 56 ha has been developed in the refinery complex and additionally 6 ha shall be developed, covering 18.4% of the total area. It is proposed to make plantation in collaboration with Assam Forest Department under compensatory afforestation programme. The estimated project cost is Rs. 22594 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 258 crores and the recurring cost (O&M) will be about Rs.12 crores per annum. The project will provide employment for 500 persons directly and 1500 persons indirectly after expansion. It is proposed to allocate Rs 36.51 crores towards Corporate Environment Responsibility (CER).

5. There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River Dhansiri and Kaliyani are flowing at 1.3 Km in North direction and 2.1 km in NW direction respectively.

6. Total fresh water requirement after expansion is estimated to be 2508 cum/hr, which includes fresh water requirement of 1820 cum/hr for proposed expansion and existing 688 cum/hr. Water demand will be met from Dhansiri river. Effluent will be treated in a new Effluent Treatment Plant with RO-DM facility. The RO reject of 300 cum/hr will be discharged to Dhansiri river through a pipeline.

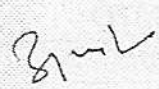
Power requirement for the proposed project will be 135 MW and sourced from state electricity grid and proposed STG. Existing refinery has 9 DG sets of 6430 KVA capacity, additionally one DG set will be used as standby during power failure. Adequate Stack height will be provided as per CPCB norms to the proposed DG set.

Existing refinery has 53 TPH FO/FG/NG fired boiler. Additionally, 3x275 TPH FG/NG fired boiler (2 working, 1 standby) will be installed. Minimum Stack height of 35 m will be provided for the proposed boiler stack.

SOx emission from the proposed project shall be 330 kg/hr and total SOx emission post expansion from the refinery will be 586 kg/hr. For emission management, use of FG/NG in heater as fuel, adequate stack height, use of Low NOX burners in heater & boiler, continuous stack monitoring, developing green belt etc. shall be carried out.

Hazardous solid waste like spent catalyst will be disposed off to CPCB approved recyclers, Tank bottom sludge will be disposed off to CPCB approved recyclers/bioremediation.

7. The Ministry has earlier issued environmental clearances in favour of M/s Numaligarh Refinery Limited, as under. The certified compliance report was forwarded by the Regional Office of the Ministry at Shillong vide letter dated 29/08/2018.



S. No.	Project	MoEFCC File No.	EC dated
1	Petroleum Refinery at Numaligarh	J-11011/16/78-IA. II	May 31, 1991 (OM/Approval)
2	BS-III Motor Spirit Project at NRL	J-11011/92/2003-IA II (I)	February 13, 2004
3	Coke-Calcination Unit (0.1 MTPA)	J-11011/203/2003-IA II (I)	March 22, 2004
4	Diesel Quality Up-gradation Project (DQUP) at NRL	J-11011/272/2008-IA-II (I)	November 10, 2008
5	Paraffin Wax Type (43,000 TPA) & Semi-Microcrystalline Wax Type A (4,500 TPA) within the existing premises of 3 MMTPA Petroleum refinery at NRL	J-11011/113/2009-IA-II (I)	September 5, 2012
6	Naptha Splitter Unit (160,000 TPA) in the existing Refinery at NRL	J-11011/534/2009-IA-II (I)	September 12, 2012
7	Installation of new LPG mounded bullet & up-gradation of existing LPG bottling plant and BS-IV HSD project at NRL	J-11011/150/2015-IA-II (I)	December 9, 2016

8. It is reported that all the process units will be accommodated within the existing premises but for other enabling and associated project activities, additional land shall be required. Based on a meeting conducted with various stake holders, including State forest/wildlife officials, nine (9) sites were recommended for associated project activities like construction sheds, workers camp, warehouse, storage yard, RMC Batch plant, fabrication yard etc., in the Numaligarh 'No Development Zone'.

9. The project/activity is covered under category A of item 4(a) 'Petroleum Refining Industry' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

10. Standard Terms of Reference was issued vide letter dated 21<sup>st</sup> June, 2018 for the proposed project. Public Hearing for the project has been conducted by the Pollution Control Board, Assam on 25<sup>th</sup> October, 2019, which was presided over by the Deputy Commissioner. The main issues raised during the public hearing were related to employment generation, socio economic development and environment.

11. The proposal was considered by the Expert Appraisal Committee (Industry-2) in its meeting held on 13-15 April, 2020 in the Ministry, wherein the project proponent and their accredited consultant M/s Engineers India Limited presented the EIA/EMP report as per the ToR. The Committee found the EIA/EMP report complying with the ToR and recommended the project for grant of environmental clearance.

12. The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and environmental clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues in the study area and the issues raised during the public hearing.

The Committee noted that the certified compliance report was forwarded by the Regional Office MoEFCC, Shillong vide letter dated 29/08/2018. The Committee deliberated the certified compliance report and found in order.

The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC). The Committee also recommended for approval for proposed developmental/associated activities of the refinery, as per the Ministry Notification vide S.O. 481 (E) dated 5<sup>th</sup> July, 1996. The EAC, after detailed deliberations, recommended the project for grant of environmental as per provisions of the EIA Notification, 2006, as well as approval as per the Ministry's Notification dated 5<sup>th</sup> July, 1996 (NDZ).

13. Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), Ministry of Environment, Forest and Climate change hereby accords environmental clearance to the project for **Expansion of the Refinery from 3 MMTPA to 9 MMTPA by M/s Numaligarh Refinery Limited at Village Pankagrang, District Golaghat, Assam**, under the provisions of the EIA Notification, 2006 and **permission for associated activities, as per the Ministry's Notification vide S.O. 481 (E) dated 5<sup>th</sup> July, 1996 in the 'No Development Zone' of Numaligarh**, subject to the compliance of terms and conditions as under:-

- (i) The EC granted to the project/ activity is strictly under the provisions of the EIA Notification 2006 and its amendments. It does not tantamount/ construe to approvals/ consent/ permissions etc. required to be obtained or standards / conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project.

- (ii) The effluent shall be treated and recycled/reused to meet the requirement of different industrial operations and Zero Liquid Discharge shall be achieved. The treated effluent of 300 cum/hr, if discharged to Dhansiri river through pipeline (to downstream only), shall conform to the standards prescribed under the Environment (Protection) Rules, 1986. If Zero Liquid Discharge is not followed, the Project Proponent shall submit plan for achieving Zero Liquid Discharge with its techno-economic feasibility within 3 months before the EAC/Ministry.
- (iii) The project proponent shall finalize and submit the details of sites to be utilized for associated activities of the refinery in the NDZ area within six months. Preference shall be given to the sites which is adjoining/adjacent to the refinery area. The project proponent shall submit MoU/commitment from the stakeholders regarding transfer of the land.
- (iv) The National Emission Standards for Petroleum Oil Refinery issued by the Ministry vide G.S.R. 186(E) dated 18<sup>th</sup> March, 2008 and G.S.R.595(E) dated 21<sup>st</sup> August, 2009 as amended from time to time, shall be followed.
- (v) Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology. For emission control and management, use of FG/NG in heater as fuel, adequate stack height, use of Low NOX burners in heater & boiler, continuous stack monitoring, Sulphur recovery plant, etc. shall be installed/ensured.
- (vi) Total fresh water requirement after expansion shall not exceed 2508 cum/hr to be met from Dhansiri river. Fresh water requirement shall be reduced by recycling/reuse of water. Necessary permission for fresh water procurement shall be obtained from the concerned regulatory authority.
- (vii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- (viii) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.
- (ix) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
- (x) Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided. The ash from boiler shall be sold to brick manufacturers/cement industry.
- (xi) 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.

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- (e) Venting equipment through vapour recovery system.
- (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xii) The green belt of 5-10 m width shall be developed in the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. The project proponent shall ensure 40% greenbelt area vis-à-vis the project area through afforestation in the degraded area. The Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xiii) As proposed, at least Rs. 36.51 crore shall be allocated towards Corporate Environment Responsibility (CER). As proposed, the CER allocation shall be spent mainly for addressing the issues raised during public consultation/hearing including assistance/infrastructure for transport facility, drinking water, social/environmental activities, education & skill development, etc.
- (xiv) 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.
- (xv) 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.
- (xvi) 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. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.
- (xvii) Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken/implemented accordingly.
- (xviii) The project proponent shall implement the Site-Specific Conservation Plan for conservation of Schedule I Species in the study area and obtain approval from the State Chief Wildlife Warden of the Department. The recommendations of the approved Site-Specific Conservation Plan shall be implemented in consultation with the State Wildlife Department. The implementation report shall be furnished along with the six-monthly compliance report.
- (xix) The PP should improve the efficiency of ETP Plant and the water discharge should be as per prescribed CPCB Norms. They should also install 24x7 hours monitoring system (of the discharge) and the same should be connected to the server of SCPB/CPCB.
- (xx) Fly Ash Brick making plant shall be installed for proper disposal of fly ash.

13.1. The grant of environmental clearance is further subject to compliance of other general conditions as under:-

- (i) No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, 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.
- (ii) The energy source for lighting purpose shall be preferably LED based, or advance having preference in energy conservation and environment betterment.
- (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 to utilize the same for process requirements.
- (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. CER activities shall be undertaken by involving local villages and administration and shall be implemented.
- (x) The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- (xi) A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project

area) equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

- (xii) 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.
- (xiii) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- (xiv) 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.
- (xv) The environmental statement for each financial year ending 31<sup>st</sup> 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.
- (xvi) 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 and at <https://parivesh.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.
- (xvii) 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.
- (xviii) This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

14. 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.

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15. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.

16. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

17. The above conditions shall 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, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

18. This issues with approval of the competent authority.

*27/7/2020*  
(Ashok Kr. Pateshwary)  
Director

**Copy to: -**

1. The Deputy DGF (C), MoEF&CC Regional Office (NEZ), Law-U-Sib, Lumbatngen, Near MTC Workshop, Shillong
2. The Secretary, Department of Environment and Forest, Government of Assam, H-Block, 2<sup>nd</sup> Floor, Janata Bhawan, Disupr, Guwahati (Assam)
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi
4. The Member Secretary, Pollution Control Board Assam, Bamunimaidam, Guwahati
5. The District Collector, District Golaghat (Assam)
6. Guard File/Monitoring File/Website/Record File

(Ashok Kr. Pateshwary)  
Director  
Tel.No. 24695290