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GM (Technical Service) OFFICE
Numaligarh Refinery Ltd.

F. No. J-11011/534/2009- IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

Paryavaran Bhawan
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New Delhi – 110 003

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Dated 12th September, 2012

To,

Deputy General Manager (TS & Insp.)
M/s Numaligarh Refinery Limited.
2nd Floor AD Building
P.O. Numaligarh Refinery Limited,
District Golaghat – 785 699, Assam.

E-mail : manas.r.barua@nrl.co.in ; Fax No. : 03776-2665578.

Subject: Naptha Splitter Unit (160,000 TPA) in the existing Refinery at District Golaghat, Assam by M/s Numaligarh Refinery Limited, a subsidiary of Bharat Petroleum Corporation limited – Environmental clearance reg.

Ref. : Your letter no. nil dated 31st March, 2010.

Sir,

This has reference to your letter dated 31st March, 2010 on the above mentioned subject alongwith project documents including Prefeasibility Report, Draft Terms of References, EIA/EMP report, Public Hearing report and subsequent communications vide letter dated 20th September, 2010, 15th September, 2011, 5th December, 2011, 13th December, 2011, 19th December, 2011, 23rd January, 2012 and 28th January, 2012 on the above mentioned subject.

2.0 The Ministry of Environment & Forests has examined your application. It is noted that the proposal is for setting up of the Naphtha Splitter unit (NSU) for production & supply of 160,000 TPA of Petrochemical grade Naphtha in the existing Numaligarh Refinery Complex (3.0 MMTPA), Numaligarh, District Golaghat, Assam by M/s Numaligarh Refinery Limited (M/s NRL), a subsidiary of Bharat Petroleum Corporation limited. Kaziranga National Park is located at a distance of 23 km. River Dhansiri, the tributary of River Bhrahmaputra and River Kaliani are flowing at 2 Km and 3 Km respectively. Total cost of the project is Rs. 60.00 Crores. The refinery produces different petroleum products such as LPG, Naphtha, ATF, SKO, BS-II Grade HSD, Euro-III Grade HSD, RPC and elemental Sulphur as by-product. M/s NRL will supply petrochemical grade naphtha (160 TMTA) to M/s Brahmaputra Crackers & Polymers Limited (BCPL) as feed stock. The unit will utilize natural gas (NG) to replace Naphtha as fuel in GTG, as feed & fuel in Hydrogen Generation Unit (H₂U). After commissioning of NG project, surplus Naphtha available will be used as feed to the Naphtha splitter unit. The main existing units of M/s NRL are as under:

S. N.	Units	Capacity
1	Crude Distillation Unit (CDU)	3.00 MMTPA
2	Vacuum Distillation unit (VDU)	1.32 MMTPA

3	Delayed Coke Unit (DCU)	0.306 MMTPA
4	Hydro Cracker Unit (HCU)	1.45 MMTPA
5	Hydrogen Generation Unit (H ₂ U)	0.0486 MMTPA
6	Motór Spirit Unit (MSP)	0.225 MMTPA
7	Coke Calcination Unit (CU)	0.10 MMTPA
8	Sulphur Recovery Unit (SRU)	0.0065 MMTPA

3.0 Low NOx burners will be provided in the proposed fuel combustion unit. Continuous on-line monitoring system for SO₂ and particulate matter will be installed in all the stacks of various process units. The fresh water requirement from River Dhansiri for the existing unit is 11,787 m³/day and additional water requirement for the proposed activity will be 120 m³/day. Wastewater generation from the existing unit is 110 m³/hr and treated in effluent treatment plant (ETP) comprising oil recovery system, secondary and tertiary treatment facility. No wastewater will be generated due to the proposed activities. Oily sludge will be disposed off into Coker. Spent catalyst will be sent to authorized recyclers/re-processors.

4.0 All Petroleum Refining Industries are listed at S.N. 4(a) under category 'A' and appraised at Central level.

5.0 Public hearing/consultation was conducted on 14th July, 2011.

6.0 The proposal was considered by the Expert Appraisal Committee (Industry-2) in its 4th, 14th and 30th meetings of the Expert Appraisal Committee (Industry) held during 23rd-24th October, 2009, 16th-17th September, 2010 and 15th-16th December, 2011 respectively.

7.0 The Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14th September, 2006 subject to strict compliance of the following specific and general conditions:

A. SPECIFIC CONDITIONS :

- i. Compliance to all the environmental conditions stipulated in the environmental clearance letter nos. J011011/16/90-IA.II dated 31st May, 1991, J011011/92/2003-IA.II (I) dated 13th February, 2004, J011011/203/2003-IA.II (I) dated 22nd March, 2004, J011011/272/2008-IA.II (I) dated 10th November, 2008 shall be satisfactorily implemented and monitoring reports submitted to the Ministry's Regional Office at Shillong.
- ii. Environmental clearance is subject to their obtaining prior clearance from wildlife angle due to location of Kaziranga National Park (KNP) nearby including clearance from the Standing Committee of the National Board for Wildlife as applicable.
- iii. No heavy equipments shall be routed through Kaziranga National Park, for which only the route identified earlier shall be used.
- iv. M/s Numaligarh Refinery Limited shall comply with new standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules, 1986 vide G.S.R. 186(E) dated 18th March, 2008.

- v. Continuous on-line stack monitoring for SO₂ and SPM of all the stacks shall be carried out. SO₂ on-line analyzers shall be installed in all the furnace stacks. Low NO_x burners shall be installed with on-line analyzers to monitor NO_x emissions shall be provided.
- vi. The process emissions [SO₂, NO_x, HC (Methane & Non-methane)], VOCs and Benzene from various units shall conform to the standards prescribed under the Environment (Protection) Act, 2008. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.
- vii. Ambient air quality monitoring stations, [SPM, SO, NO_x, H₂S, mercaptan, non-methane-HC, and Benzene] shall be set up in the complex in consultation with Assam Pollution Control Board, based on occurrence of maximum ground level concentration and down-wind direction of wind. The monitoring network must be decided based on modeling exercise to represent short term GLCs. Ambient air quality shall also be carried in one location at Kaziranga National Park for SO_x, NO_x, SPM, CO and HC.
- viii. Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry on 16th September, 2009 and trend analysis w.r.t past monitoring results shall also be carried out. Adequate measures based on the trend analysis shall be taken to improve the ambient air quality in the project area.
- ix. Monitoring of fugitive emissions shall be carried out as per the guidelines of CPCB by fugitive emission detectors and reports shall be submitted to the Ministry's Regional Office at Shillong. For control of fugitive emissions, all unsaturated hydrocarbon will be routed to the flare system and the flare system shall be designed for smoke less burning.
- x. Fugitive emissions of HC from product storage tank yards etc. must be regularly monitored. Sensors for detecting HC leakage shall also be provided at strategic locations. The company shall use low Sulphur fuel to minimize SO₂ emissions. Sulphur recovery units shall be installed for control of H₂S emissions. Leak Detection and Repair programme shall be implemented to control HC/VOC emissions. Work zone monitoring shall be carried out near the storage tanks besides monitoring of HC_s/VOC_s in the work zone.
- xi. As proposed, record of sulphur balance shall be maintained at the Refinery as part of the environmental data on regular basis. The basic component of sulphur balance include sulphur input through feed (sulphur content in crude oil), sulphur output from Refinery through products, byproduct (elemental sulphur), atmospheric emissions etc.
- xii. Total water requirement from River Dhansiri after expansion shall not exceed 11,907 m³/day and prior permission shall be obtained from the competent authority. The wastewater shall be treated in the waste water treatment plant and the treated effluent shall meet the prescribed standards. Treated effluent shall be recycled/reused within the factory premises. Domestic sewage shall be treated in sewage treatment plant (STP).
- xiii. No effluent shall be discharged outside the factory premises and 'Zero water concept' shall be adopted.
- xiv. Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.

- xv. Oily sludge shall be disposed off into Coker. Annual Oily sludge generation and disposal data shall be submitted to the Ministry's Regional Office and CPCB.
- xvi. The project authorities must strictly comply with the rules and regulation with regard to handling and disposal of Hazardous Waste (Management, Handling and Trans Boundary Movement) Rules, 2008 wherever applicable. Authorization from the State Pollution Control Board must be obtained for collections / treatment / storage / disposal of hazardous wastes.
- xvii. Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.
- xviii. The company shall strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).
- xix. The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during flaring.
- xx. To prevent fire and explosion at oil and gas facility, potential ignition sources shall be kept to a minimum and adequate separation distance between potential ignition sources and flammable material shall be in place.
- xxi. Green belt shall be developed at least in 33 % of the plant area in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Thick greenbelt with suitable plant species shall be developed around unit. Selection of plant species shall be as per the CPCB guidelines.
- xxii. Company shall prepare project specific environmental manual and a copy shall be made available at the project site for the compliance.
- xxiii. All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.
- xxiv. All the issues raised during the public hearing/consultation meeting held on 14th July, 2011 shall be satisfactorily implemented.
- xxv. Company shall adopt Corporate Environment Policy as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26th April, 2011 and implemented
- xxvi. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

B. GENERAL CONDITIONS:

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

- ii. No further expansion or modification in the project shall be carried out without prior approval of the Ministry of Environment & 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 project authorities must strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 2000 as amended subsequently. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate etc. must be obtained, wherever applicable.
- iv. 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 EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).
- v. A separate Environmental Management Cell equipped with full fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.
- vi. Adequate funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures and shall be used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government alongwith the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purposes.
- vii. The Regional Office of this Ministry/Central Pollution Control Board/State Pollution Control Board will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.
- viii. A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.
- ix. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x, HC (Methane & Non-methane), VOCs (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- x. The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry / CPCB / SPCB shall monitor the stipulated conditions.

- xi. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent 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 alongwith the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.
- xii. 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 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 shall be forwarded to the Regional office.
- xiii. 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 commencing the land development work.

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 shall 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 along with their amendments and rules.

P. Ahujara
(Dr. P L Ahujarai)
Director

Copy to :-

1. Principal Secretary, Department of Environment & Forest, Govt. of Assam, Guwahati, Assam.
2. Chairman, Assam Pollution Control Board, Bahunimatram, Assam, Guwahati.
3. Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 110032.
4. The Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office (Northeast Eastern Regional Office, Uplands Road, Laitumkhrach, Shillong - 793003, Meghalaya.
5. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, New Delhi.
6. Guard File/Record File.

(Dr. P L Ahujarai)
Director