

F. No. J-11011/113/2009- 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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Telefax : 011: 2436 3973  
Dated 5<sup>th</sup> September, 2012

To,

Dy. General Manager (TS & Insp.)  
M/s Numaligarh Refinery Limited  
2<sup>nd</sup> Floor AD Building  
P.O. Numaligarh Refinery Limited,  
District Golaghat- 785 699 Assam.

E-mail : [pallab.das@nrl.co.in](mailto:pallab.das@nrl.co.in), [manas.r.barua@nrl.co.in](mailto:manas.r.barua@nrl.co.in), [nright@gw1.vsnl.net.in](mailto:nright@gw1.vsnl.net.in),  
[numgarh@del2.vsnl.net.in](mailto:numgarh@del2.vsnl.net.in) ; Fax No.: 0361-2203146

**Subject:** Paraffin Wax Type (43,300 TPA) and Semi-Microcrystalline Wax Type A (4,500 TPA) within the existing premises of 3 MMTPA Petroleum Refinery at Numaligarh, District Golaghat, Assam by M/s Numaligarh Refinery Ltd. – Environmental clearance reg.

**Ref. :** Your letter no. nil dated 22<sup>nd</sup> July, 2010

Sir,

This has reference to your letter dated 22<sup>nd</sup> July, 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 19<sup>th</sup> August, 2010, 6<sup>th</sup> September, 2010, 11<sup>th</sup> October, 2010, 8<sup>th</sup> August, 2011, 16<sup>th</sup> September, 2011, 13<sup>th</sup> December, 2012, 19<sup>th</sup> December, 2011 and 23<sup>rd</sup> 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 Paraffin Wax Type [43,300 TPA) and Semi-micro Crystalline Wax Type A (4,500 TPA) within existing premises of Petroleum Refinery (3.0 MMTPA) at 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 22 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. 576.60 Crores. Total land requirement for the proposed project will be 12.0 ha within existing refinery complex. A grass root De-waxing / De-oiling unit for the production of Paraffin and Semi-Micro Crystalline Waxes (SMCW) will be installed. Following new units will be installed in the existing refinery complex:

1. De-Waxing & De-Oiling unit
2. Hydro finishing unit
3. Slabbing & Washing unit
4. Warehouse.

Following products will be manufactured:

Products	Type	Capacity (TPA)	On-stream days
Paraffin Wax	1	43,300	260
Semi Microcrystalline Wax	A	4,500	40

**ALTERNATIVELY:**

Paraffin Wax	1	50,000	300
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3.0 Adequate stack height will be provided to fuel gas fired heater. Low NOx burners will be provided in the proposed fuel combustion unit. Low sulphur fuel will be used. Methyl Iso Butyl Ketone (MIBK) solvent will be recovered from process through solvent recovery unit and reused in the system. Total fresh water requirement from Dhanshiri River for the proposed project will be 60 m<sup>3</sup>/hr. Industrial effluent generation will be 5 m<sup>3</sup>/hr and treated in the existing effluent treatment plant (ETP) comprising oil recovery system, secondary and tertiary treatment facility. Oily sludge will be disposed off into Coker. Spent catalyst will be sent to authorized recyclers/re-processors.

4.0 All petro-chemical complexes are listed at S.N. 5(c) under category 'A' and appraised at Central level.

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

6.0 The proposal was considered by the Expert Appraisal Committee (Industry-2) in its 93<sup>rd</sup>, 15<sup>th</sup> and 30<sup>th</sup> meetings held during 14<sup>th</sup>-16<sup>th</sup> April, 2009, 22<sup>nd</sup>-23<sup>rd</sup> October, 2010 and 15<sup>th</sup>-16<sup>th</sup> 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 14<sup>th</sup> 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 31<sup>st</sup> May, 1991, J011011/92/2003-IA.II (I) dated 13<sup>th</sup> February, 2004, J011011/203/2003-IA.II (I) dated 22<sup>nd</sup> March, 2004, J011011/272/2008-IA.II (I) dated 10<sup>th</sup> November, 2008 shall be satisfactorily implemented and monitoring reports submitted to the Ministry's Regional Office at Shillong.
- ii. M/s Numaligarh Refinery Limited shall comply with new standards/norms for Oil Refinery Industry and petrochemical industry notified under the Environment (Protection) Rules, 1986.
- iii. Environmental clearance is subject to their obtaining prior clearance from wildlife angle due to nearby location of Kaziranga National Park (KNP) and clearance from the Standing Committee of the National Board for Wildlife as applicable.
- iv. No heavy equipments shall be routed through Kaziranga National Park, for which only the route identified earlier shall be used.
- v. Adequate stack height shall be provided to fuel gas fired heater as per CPCB/ Assam Pollution Control Board (APCB) guidelines to disperse waste gases into atmosphere. Low NOx burners shall be installed with on-line analyzers. Low sulphur fuel shall be used in boiler.
- vi. Continuous on-line stack monitoring equipment shall be installed for the measurement of particulate matter, VOCs, SO<sub>2</sub>, NO<sub>x</sub>, non-methanated hydrocarbon (Benzene, Xylene and Toluene).

- vii. Fugitive emissions from HVGO, MVGO and MIBK shall be recovered and controlled. Fugitive emissions in the work zone environment from product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits imposed by Assam Pollution Control Board.
- viii. The process emissions [ $\text{SO}_2$ ,  $\text{NO}_x$ , HC (Methane & Non-methane)], VOCs and Benzene from various units shall conform to the standards prescribed under the Environment (Protection) Act. 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.
- ix. Ambient air quality monitoring stations, [SPM,  $\text{SO}$ ,  $\text{NO}_x$ ,  $\text{H}_2\text{S}$ , 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  $\text{SO}_x$ ,  $\text{NO}_x$ , SPM, CO and HC.
- x. Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry on 16<sup>th</sup> 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.
- xi. 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.
- xii. A proper Leak Detection and Repair (LDAR) Program shall be prepared and implemented. Focus shall be given for prevention of fugitive emissions for which preventive maintenance of pumps, valves, pipelines are required. Proper maintenance of mechanical seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to.
- xiii. Methyl Iso Butyl Ketone (MIBK) solvent should be handled as per the standards, procedure and guidelines issued time to time. MIBK solvent should be stored in cool and dry place, recovered from process through solvent recovery unit and reused in the system.
- xiv. Total fresh water requirement from River Dhansiri for the proposed unit shall not exceed  $60 \text{ m}^3/\text{hr}$ . and prior permission shall be obtained from the competent authority. The industrial effluent generation shall not exceed  $5 \text{ m}^3/\text{hr}$ . The industrial effluent shall be treated in the ETP 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).
- xv. No effluent shall be discharged outside the factory premises and 'Zero water concept' shall be adopted.
- xvi. Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.

- xvii. Methyl-Iso-Butyl Ketone (MIBK) shall not be allowed to mixed with the effluent as well as storm water and ground water.
- xviii. 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.
- xix. The Company should strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 and January, 2000. Hazardous waste should be disposed of as per Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008 and amended time to time.
- xx. The membership of common TSDF should be obtained for the disposal of hazardous waste. Otherwise, secured land fill should be created at the site as per the guidelines of CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF should be submitted to Ministry's Regional Office at Shillong.
- xxi. Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.
- xxii. The company shall strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).
- xxiii. 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.
- xxiv. 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.
- xxv. 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.
- xxvi. Company shall prepare project specific environmental manual and a copy shall be made available at the project site for the compliance.
- xxvii. All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.
- xxviii. All the issues raised and commitment made during the public hearing/consultation meeting held on 14<sup>th</sup> July, 2011 shall be satisfactorily implemented. Accordingly, provision of budget to be kept.
- xxix. Company shall adopt Corporate Environment Policy as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26<sup>th</sup> April, 2011 and implemented
- xxx. 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:**

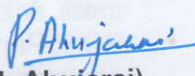
- i. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), State Government and any other statutory authority.
- ii. No further expansion or modification in the project shall be carried out without prior approval of the Ministry of Environment & 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, SO<sub>2</sub>, NO<sub>x</sub>, 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 31<sup>st</sup> 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.

  
(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