COMPLIANCE STATUS ON THE CONDITIONS OF ENVIRONMENTAL CEARANCE FOR THE WAX PROJECT OBTAINED VIDES LETTER NO. J-110011/113/2009-IA II (I) dated 5th Sep,12 FROM

MOEF, NEW DELHI

**A. SPECIFIC CONDITIONS:**

i Compliance to all the environmental conditions stipulated in the environmental clearance letter nos. J011011/16/90-1A.ll dated 31st May, 1991, J011011/92/2003-1A.ll (I) dated 13th February, 2004, J011011/203/2003-IA. II (I) dated 22nd March, 2004, J011011/272/2008-IA. II (I) dated 10nd November, 2008 shall be satisfactorily implemented and monitoring reports submitted to the Ministry’s Regional Office at Shillong.

* *Complied.*

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.

* *Complied.*

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.

 *-The same has been noted. The matter has been discussed with Chief Wildlife Warden of Assam and Director, Kaziranga National Park. However, the project has been constructed within the existing refinery premises, hence it does not require any additional land. As such, the requirement of approval from wild life is not envisaged.*

iv. No heavy equipments shall be routed through Kaziranga National Park, for which only the route identified earlier shall be used.

* *Complied.*

v. Adequate stack height shall be provided to fuel gas fired heaters as per CPCB/Assam pollution Control Board (APCB) guidelines to disperse waste heat into atmosphere Low NOx burners shall be installed with on-line analyzers. Low sulfur fuels shall be used in boiler.

* *Not applicable for the Wax Unit.*

vi. Continuous on-lines stack monitoring equipment shall be installed for the measurement of particulate matter, VOCs, SO*2*, NO*X*, non-machinated Hydrocarbons (Benzene, Xylene and Tolune).

* *Not applicable for the Wax Unit*

vii. Fugitive emissions from HVGO, MVGO and MIBK shall be recovered and controlled. Fugitive emissions in the work environment from product raw material storage area etc. shall be regularly monitored. The emissions shall conform to the limits imposed by Assam Pollution Control Board.

*-Regular fugitive emission survey is being carried out with the help of GMI Gaskoseeker as a part of monitoring and control of fugitive emission. The GMI survey has been carried in all gas/vapour valves, light liquid valves, hydrogen valves, light liquid pump seals, hydrocarbon compressor seals, hydrogen compressor seals, safety relief valves, flanges, connections, open-ended lines, drains, tankages, furnaces etc. It is being practiced in all the Process Units including the Wax Units, Tankage areas, Marketing Terminal, ETP and other important locations.*

viii. The process emissions [SO*2*, NOx, 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 systems 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.

 *Complied.*

ix. Ambient air quality monitoring stations [SPM, SO*2*, NOx, H*2*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 Kazirang National Park for SO", NO", SPM, CO and HC.

 *-As an action of compliance, five (5) nos. of ambient air quality monitoring stations have been set up at the following locations:*

*SS 1 : Inside the refinery (Near WT No.5).*

*SS 2 : At the Eco-Park in NRL Township.*

# *SS 3 : At the Raw Water Intake.*

# *SS 4 : Near the NH-39 bypass.*

*SS 5 : Near the Kaziranga Wildlife Sanctuary at Agartoli.*

Ambient Air Quality monitoring at the above locations is being carried out *in line with NAAQS-2009 in totality.* The Ambient Air Quality Monitoring reports are regularly submitted to the PCBA HQ Guwahati, PCBA Regional Office, Golaghat and CPCB Regional Office, Shillong in every month. Further, continuous ambient air quality data and online stack anayser data have been linked to CPCB server since Sept’11.

- *Automatic online stack analysers have been provided in all the major Stacks for continuous monitoring of SO2 and NOx. The monitoring reports of stacks emissions are regularly submitted to the PCBA Regional Office, Golaghat and CPCB Regional Office, Shillong in every month and to the MoEF&CC Regional Office, Shillong in every six month.*

 *NRL has installed one continuous Ambient Air Monitoring System inside the refinery premises.*

-Ambient air quality for the period *Aprt’16 to Sept’16* is enclosed as Anexure-IV.

x. Ambient air quality data shall be collected as per NAAQS standard 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.

 *-Complied.*

xi. Monitoring of fugitive emission 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 flares system shall be designed for smoke less burning.

 *-Complied.*

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 s shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to.

 *- Complied.*

xiii. Methyl lso Butyl Ketone ( MIBK) solvent should be handled as per the standard procedure and guidelines issued time to time. MIBK solvents should be stored in cool and dry place, recovered from process through solvent recovery unit and reused in the system.

 *- Complied. MIBK solvent has been handled as per the standard practice in line with the requirements with due care during storage and handling.*

xiv. Total fresh water requirement from River Dhansiri for the proposed unit shall not exceed 60 m3/hr. and prior permission shall be obtained from the competent authority. The industrial effluent generation shall not exceed 5 m3/hr. The industrial effluents shall be treated in the ETP and the treated effluent shall meet the prescribed standards. Treated effluents hall be recycled/reused within the factory premises. Domestic sewages hall be treated in Sewage Treatment Plant( STP).

*-Complied. 100% reuse of treated effluent both from refinery and township is sustained.*

xv. No effluent shall be discharged outside the factory premises and Zero Water Concept shall be adopted.

*-Total recycle of treated effluent has been ensured. Since**October, 2006 no effluent from refinery has been discharged into the River Dhansiri and since April, 2007 township effluent also routed to the refinery, so no effluent from refinery & township is discharged outside and the total effluent is recycled and reused within the Refinery as Fire water makeup, watering Green Belt and filter back washing in Cooling Tower.*

*Treated effluent quality for the period Aprt’16 to Sept’16 is enclosed as annexure-V.*

xvi. Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.

*-Oil catchers/oil traps are installed in various locations in the storm water channel to avoid any oil carry over to the open channel. Insignificant quantities of emulsified oil generated if any has been recovered and reused with the help of MOSRU (Mobile Oil Spill Recovery Unit).*

xvii. Methyl-lso-Butyl Ketone (MIBK) shall not be allowed to mix with the effluents as well as with storm water and ground water.

 -*Complied.*

xviii. Oily sludge shall be disposed off into coker. Annual oily sludge generation and shall be submitted to the Ministry's Regional Office and CPCB.

 *Present generation oily sludge is very less. Some amount of oily sludge generated post BLABO process is disposed off by Bioremediation. Further, small quantity of oily sludge generated in ETP is disposed in the SLF after meeting the requirements. As advised by CPCB, another alternate option is being explored for disposal of oily sludge by selling to CPCB/SPCB authorized recycles. Annual oily sludge generation report is being sent to Ministry's Regional Office and CPCB as per the requirement.*

xix. The Company should strictly comply with the rules and guidelines under Manufacture, and import of Hazardous storage chemical 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.

*- The rules and regulations under the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 and as amended in 2000 are adhered to.*

*Approvals from Chief Inspectorate of Factories, Chief Controller of Explosives etc as applicable for the Numaligarh Refinery have been obtained.*

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.

 *Common TSDF is not available here. NRL has installed its own Secured Landfill Facility (SLF) as per CPCB guidelines with authorization from PCBA for disposal of oily sludge generated post BLABO process of crude oil tank cleaning.*

xxi. Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products of and ensure regular monitoring.

*-* The same has been noted. a porper oil spill management plant is being followed in the refinery. NRL is using one Mobile Oil Spill Recovery Unit (MOSRU) for recovering the oil spilled if any. Also, hay filters, oil adsorbent booms has been placed in various locations as a part of oil spill management*.*

xxii. The company shall strictly follow all the recommendation mentioned in the charter of Corporate Responsibility for Environmental Protection (CREP).

 -Complied*.*

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.

*-* Complied.

xxiv. To prevent fire and explosion at oil and gas facility, potential ignition sources shall be minimum and kept to a adequate separation distance between potential ignition sources and flammable material shall be in place.

* *Complied*.

xxv. Green belt shall be developed at least in 33% of the total plant area in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with DFO. Thick greenbelt with suitable plant species shall be developed around units. Selection of plant species as per the CPCB guidelines.

*- Initially, as per Environmental Clearance granted for the Numaligarh Refinery Project, Ministry of Environment & Forest had stipulated a 500 mtrs wide green belt all around the refinery based on the EIA of Numaligarh Refinery carried out by NEERI.*

*On request from Numaligarh Refinery, the width of the Green Belt was later reduced from the suggested width of 500 mtrs to 100 mtrs because of the reason that almost all the surrounding areas are having tea garden with shade trees (Sirish trees). A wide natural green belt already existed all around the refinery.*

*Accordingly, a Green Belt covering a total area of around 60 hectares of land and around 100 mtrs width around the refinery and around 25 mtrs width around the NRMT has been developed as per the Green Belt Development Plan. (The Green Belt Development Plan has been submitted to MoEF along with the Half Yearly Report to MOEF on the 15th October, 2001).*

*Massive Plantation have been carried out in the Green Belt so that it can provide a natural barrier for attenuation of noise and air pollution. No. of local variety have been planted including some fruit bearing samplings in & all around Green Belt. Again it has been planned to increase the density by planting more saplings in the Green Belt in the days ahead.*

 xxvi. Company shall prepare project specific environmental manual and a copy should be made available at the project site for the compliance.

 *-* Complied.

xxvii. All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.

 *-* Complied*.*

xxviii. All the issues raised and committed made during the public hearing/consultation meeting held on 14th July, 2011 shall be satisfactorily implemented. Accordingly, provision of budget to be kept.

 *-* Complied

xxix. Company shall adopt Corporate Environment policy as per the Ministry’s O .M. No. J- 11013/41/2O06-IA(l) dated 26th April, 2011and implemented.

 -The same has been noted. NRL has already adopted a Env. policy as per the requirement of Environment Management ISO 14000. Action initiated to adopt a corporate policy as per the Ministry’s guidelines.

xxx. Provision shall be made for the housing of construction labour within the site with infrastructure and all necessary 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.

 - Complied

B. GENERACL ONDITIONS:

1. The project authorities must strictly adhere to the stipulations made by the State pollution Control Board ( SPCB) Stale Government and any other statutory authority.

*-* Complied

1. No further expansion or modification in the project shall be carried out without prior approval from 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 environment protection measures required if any.

*-* Complied

1. The project authorities to strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 2008 as amended subsequently. Prior approvals from Chief Inspector of Factories Chief Controller of Explosives Fire Safety Inspector must be obtained wherever applicable.

*-* Complied

1. 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 PAR ules,1 989v iz.75 dBA( day time) and 70 dBA( nighttime).

*-* Complied

1. A separate Environmental Management Cell equipped with full fledged laboratory facilities must be setup to carry out the environmental management on monitoring functions.

*- A fully functional, dedicated environment management cell manned by qualified engineers/officers and headed by a Deputy General Manager (Technical) reporting to General Manager (Technical) has been continuously working for constant improvement, monitoring, safe guarding and reporting of environmental activities of the refinery. Also, a multidisciplinary Apex-level Committee on Environment which includes senior level officers from various departments as members under the chairmanship of Director (Technical) constantly guides the Environment Cell regarding all the environmental issues in the refinery. The Apex Committee that convenes quarterly discusses the unresolved issues if any, regarding the environment and monitors the regular environmental activities.*

1. 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 along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purposes.

*- Adequate funds have been provided for implementing the conditions stipulated by MoEF and the State Govt. and shall not be diverted for any other purpose.*

1. 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 interpretations shall be submitted to them regularly.

*-The same has been noted. Six monthly compliance report is being sent to the Regional Office of this Ministry/Central Pollution Control board/State Pollution Control Board as per the requirement.*

1. 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 suggestion/representation 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.

*-* Complied

1. 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, NOx, HC (Methane& Non-methane),VOCs (ambient levels as wel1 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.

*-* Complied

1. 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.

*-The same has been noted and being complied. Along with the six monthly compliance report, Along with six monthly compliance report, the compliance status on the environmental clearance conditions for the Coke Calcination Unit (CCU), Motor Spirit Unit (MSU) and Diesel Quality Upgradation Project (DQUP) also is being submitted to the MoEF Regional Office at Shillong, CPCB, Shillong and the SPCB, Assam is being submitted regularly on 1st June & 1st December every year as per the EIA Notification.*

*The same is being displayed in the company’s website also.*

1. The environmental statement for each financial year ending 31st March, in form-IV 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 mended subsequently shall also be put in the website of the company alonwith the status of compliance of environmental conditions and shall also be sent to the respective Regional offices of the MoEF by e-mail.

*-The same has been noted. Environmental Statement for each financial year ending 31st March, in form-IV is being sent to SPCB every year as per the requirements.*

1. The Project Proponent shall inform the public that the project has been accorded environmental clearance by Ministry and copies of the clearance letter area available with the SPCB and may also be seen at website of the Ministry of Environment & 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 locally concerned and a copy of the same shall be forwarded to the Regional Office.

*- The same has been complied. Advertisement regarding the environmental clearance for the Diesel Quality Upgradation Project (DQUP) was published in two local newspapers namely, The Assam Trubine (in English) dated 13.09.2012 and The Amar Axom (Assamese) dated 12.09.2012. Copies of both advertisements were forwarded to the MoEF Regional Office, Shillong.*

1. 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.

*-The same has been noted.*

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

 *-The same has been noted.*

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

  *-The same has been noted.*

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

  *-The same has been noted.*

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