

COMPLIANCE STATUS ON THE CONDITIONS OF ENVIRONMENTAL CLEARANCE FOR COMPLETE EURO-IV HSD PROJECT ALONGWITH INSTALLTION OF LPG MOUNDED BULLET AND MODIFICATION OF EXISTING LPG BOTTLING FACILITY OBTAINED VIDES LETTER NO. J-110011/150/2015-IA II (I) dated 9th Dec,16 FROM MOEFCC, NEW DELHI

A. SPECIFIC CONDITIONS:

- i. NRL 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.

- *Compliance status of few points are as follows:*

(a) *Secondary seals in IFRT and EFRT tanks -installation of double seals in EFRT, IFRT tanks in progress. Out of 35 nos. of tanks, installation completed in 33 tanks.*

(b) *LDAR-programme: The same is under implementation.*

(c) *Implementation of VOC recovery system in ETP: VOC recovery system in ETP has been implemented.*

- ii. Compliance to all the environmental conditions stipulated in the environmental clearance letter nos. J011011/16/90-1A.II dated 31.05.1991, J011014/2/1991-1A (I) dated 18.01.1994, J011011/92/2003-1A.II (I) dated 13.02.2004, J011011/203/2003-IA. II (I) dated 22.03.2004, J011011/272/2008-IA. II (I) dated 10.11.2008, J011011/113/2009-IA. II (I) dated 05.09.2012, J011011/534/2009-IA. II (I) dated 12.09.2012 shall be satisfactorily implemented and monitoring reports submitted to the Ministry's Regional Office at Shillong.

- *Being complied. Half yearly compliance report of all Ecs reggulary being sent to RO Shillong.*

- iii. Continuous on-line stack monitoring for SO₂, NO_x and CO of all the stacks shall be carried out. Low NO_x burners shall be installed

- *Online Sox, NO_x , CO and SPM analyser installed in all the stacks. Low NO_x burners installed in all the stacks*

- iv. 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. In the event of failure of pollution control system(s) adopted bythe unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency of the pollution control device has been achieved.

- *complied.*

- v. Leak Detection and Repair programme shall be prepared and implemented to control HC/VOC emissions. Focus shall be given to prevent 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. Fugitive emissions of HC from product storage tank yards etc. must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations.
- *LDAR program under implementation for DHT in line with the existing practice carried out in various units.*
- vi. SO₂ emissions after expansion from the plant shall not exceed 256 kg/hr and further efforts shall be made for reduction of SO₂ load through use of low sulphur fuel. Sulphur recovery unit with tail gas treating facilities having 99.9 % efficiency shall be provided.
- SO₂ emission within limit. Noted for compliance.
- vii. 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.
- *Complied. Regular Sulphur balance for the refinery is carried out and record maintained. Also, sulfur balance post DHDH prepared.*
- viii. Ambient air quality monitoring stations, [PM₁₀, PM_{2.5}, SO₂, NO_x, H₂S, mercaptan, non-methane-HC and Benzene] shall be set up in the complex in consultation with Maharashtra Pollution Control Board, based on occurrence of maximum ground level concentration and down-wind direction of wind
- *Monitoring of ambient air quality parameter is being complied as per NAAQM, 2009. Installation of New CAAQMS alongwith Mercaptan / methanated & non methanated analyser inside the refinery premises based on occurrence of maximum ground level concentration and down-wind direction of wind under progress.*
- ix. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.
- *Complied as per CPCB standard.*
- x. Fresh water requirement from Dhansiri River shall not exceed 688 m³/hr after expansion and prior permission shall be obtained from the competent authority. Industrial effluent generation will be 130 m³/hr and treated in the

Effluent Treatment Plant. Treated effluent shall be fully reused/recycled as make-up water for raw water cooling towers.

- *Treated effluent is being fully recycled .*

- xi. No effluent shall be discharged outside the plant premises and „Zero“ effluent discharge concept shall be followed.

- *The same has been complied.*

- xii. Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MEF&CC. Outcome from the report to be implemented for conservation scheme

- *Water audit completed.*

- xiii. Automatic /online monitoring system (24 x 7 monitoring devices) for flow measurement and relevant pollutants in the treatment system to be installed. The data to be made available to the respective SPCB, Regional Office of MoEFCC and in the Company's website.

-Flowmeter in the treated effluent line installed in Nov'18. For pollutant level measurement pH & TOC (for measurement of pH,COD & BOD)analyser is already exist. TSS analyser installaed in November'18.

- xiv. 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). **Construction of 6 nos oil catcher Near CDU,HCU,OMS north, near ETP, near PH-3, near storm water final O/L completed , So, complied .** Also storm water recycle system to FW/CW has been commissioned.*

- 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.

- *NRL produces Anode grade coke which is further processed in Coke Calcination Unit (CCU) to get high value Calcined Petroleum coke (CPC). Trial run for processing of sludge in Delayed Coker Unit (DCU) was carried out on an experimental basis. However, the process led to the deterioration of the CPC quality to a great extent and the experiment had to be called off. Instead, NRL follows a robust sludge handling process for disposal wherein oily sludge is suitably disposed in bioremediation or is being sold to CPCB authorized recyclers.*

To waive this condition NRL submitted one application to MoEF, Delhi on 29.01.19.

The annual report of waste disposal (2018-19) attached.

- xvi. 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 Trans-boundary 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. Hazardous waste authorization is valid till 2021.

- xvii. The membership of common TSDF should be obtained for the disposal of hazardous waste. Copy of authorization or membership of TSDF should be submitted to Ministry's Regional Office at Shillong. Chemical/inorganic sludge shall be sent to treatment storage disposal facility (TSDF) for hazardous waste. Spent catalyst shall be sent to authorized recyclers/re-processors.

- NRL has its own SLF for disposal of oily sludge. NRL has constructed a Secured Landfill Facility as recommended by NEERI in 2004 for a safe and systematic disposal of hazardous materials and authorization is accorded from the concerned authorities and renewed as per the requirement. Installation of another SLF as per CPCB recommendation has been completed.

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

- Proper oil spill prevention management in place. Alternately, a MOSROU is used in case of emergency situation if any. 6 Nos. of additional Oil catchers and Hay filters installed in various locations. Oil adsorbent boom is also placed in many locations. Further, OWS & CRWS systems are very effectively constructed to divert the spilled material to ETP for further treatment

- xix. Acoustic enclosure /silencer shall be installed wherever it is possible

- Complied.

- xx. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act

- Complied.

xxi. *The company should make the arrangement for protection of possible fire and explosion hazards during construction and operation phase.*

- Complied.

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

- Complied.

xxiii. *Thick greenbelt with suitable plant species shall be developed around unit. Selection of plant species shall be 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.

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

-The same has been noted & being implemented. QRA by M/s Ifluids completed.

xxv. *At least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Shillong. Implementation of such program shall be ensured accordingly in a time bound manner. Detailed action plan to be submitted to MOEFCC Regional Office, Shillong.*

Comprehensive plan prepared. Many activities under the plan are being executed. Action plan with financial and physical breakup/details with time line submitted to the Ministry's Regional Office at Shillong earlier.

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.

- The stipulations made by the Pollution Control Board of Assam and the State Government are strictly adhered to.

- ii. 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.

- Any expansion or modernization in the plant will be taken up only with prior approval of the Ministry of Environment & Forests.

- iii. 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.

- 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.

- 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 PAR rules, 1989 viz. 75 dBA (day time) and 70 dBA (nighttime).

- The major sources of noise generation in the proposed project are the pumps and the blowers. Strong foundations shall be provided to mitigate the noise generation further. The equipment shall be monitored regularly at a distance of 01 mtr from the source and corrective measure shall be taken to maintain the noise level below 85 dBA. The ambient noise levels all around the refinery is being monitored regularly so as to maintain

within the standards, prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

- v. 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 Chief 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.

- 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 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.

- 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 interpretations shall be submitted to them regularly.

- 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.

- 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 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.

-The same has been noted. Copy of the clearance letter sent to concerned Panchayat/ Zila Parishad/ Circle Office.

- 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.

-Complied.

- 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.

- A six monthly compliance report on the Environmental Clearance conditions of the Numaligarh Refinery along with the monitored data is being submitted regularly to the MoEFCC Regional Office, Shillong.

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

- 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 along with 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 is being complied. The reports as mentioned being uploaded in NRL website. **The environmental statement for financial year, 2018-19** attached.*

- 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 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 DHDT Unit was published in two local newspapers namely, The Assam Tribune (in English) and The Dainik Janambhumi (in Assamese (on the 26th December, 2016 of both the advertisements were forwarded to the MOEF Regional Office, Shillong.

- 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.

- Complied.

- 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 alongwith their amendments and rules.

-The same has been noted.