

**Compliance of Environmental Clearance conditions for the period 1<sup>st</sup> April 2018 to 30<sup>th</sup> September 2018.**

**Project: Expansion of Visakh Refinery from 8.33 to 15.0 MMTPA at Village Malkapuram, Tehsil Visakhapatnam (Urban), District Visakhapatnam, Andhra Pradesh by M/s HPCL**

Reference No.: F. No. J-11011/63/2013-IA-II(I) dated Feb 11, 2016 by Ministry of Environment, Forests and Climate Change, GOI

**A. SPECIFIC CONDIITONS**

S.No.	Particulars	Compliance Status
i.	Compliance to all the environmental conditions stipulated in the environmental clearance letter no. J-11011/22/94-1A 11(1) dated 30 <sup>th</sup> May, 1995, F. No. J-11011/88/96- IA 11 (1) dated 10 <sup>th</sup> April, 1997, J11013/55/2003- IA 11 (I) dated 3 <sup>rd</sup> February, 2004 and J-11011/66/2007-IA 11 (I) dated 7 <sup>th</sup> March, 2008 and J-11011/408/2009-IA 11 (1) dated 2 <sup>nd</sup> September, 2009 shall be satisfactorily implemented and compliance reports submitted to the Ministry's Regional Office at Chennai.	All conditions stipulated in various ECs mentioned are being complied.
ii.	M/s HPCL shall comply with new standards/norms for Oil Refinery industry notified under the Environment (Protection) Rules, 1986 vide G.S.R. 186(E) dated 18 <sup>th</sup> March, 2008	Being complied with.
iii.	Continuous on-line stack monitoring for SO <sub>2</sub> , NO <sub>x</sub> and CO of all the stacks shall be carried out. Low NO <sub>x</sub> burners shall be installed.	On-line stack monitoring facilities shall be provided to all new VRMP stacks.
iv.	The process emissions [SO <sub>2</sub> , NO <sub>x</sub> , 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 of the pollution control device has been achieved.	Being complied with.

v.	<p>Leak Detection and Repair program 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 seats 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.</p>	<p>LDAR Program implemented in existing refinery shall be extended to New facilities under VRMP. HC detectors are considered during detail engineering lay out finalization at strategic locations.</p>
vi.	<p>SO<sub>2</sub> emissions after expansion from the plant shall not exceed 11.5 TPD and further efforts shall be made for reduction of SO<sub>2</sub> load through use of low sulphur fuel. Sulphur recovery unit with tail gas treating facilities having 99.9 % efficiency shall be provided.</p>	<p>Currently being complied with for existing refinery Low Sulphur fuel has been considered for process heating and steam generation. New SRU with 99.9 % efficiency has been considered.</p>
vii.	<p>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.</p>	<p>Sulphur balance record in line with existing practice and as stipulated in condition shall be maintained for post VRMP operations.</p>
viii.	<p>Ambient air quality monitoring stations, [PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, H<sub>2</sub>S, mercaptan, non-methane-HC and Benzene] shall be set up in the complex in consultation with Andhra Pradesh 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 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.</p>	<p>The Main VRMP units will be located in the Existing refinery boundary which already has ambient monitoring stations.</p>
ix.	<p>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. Besides, acoustic enclosure /silencer shall be installed wherever noise levels exceed the limit.</p>	<p>Shall be complied with.</p>
x.	<p>Fresh water requirement from Greater Visakha Municipal Corporation shall not exceed 873 m<sup>3</sup>/hr after expansion and prior permission shall be obtained from the competent authority. Industrial effluent generation will be</p>	<p>Shall be complied with.</p>

	902 m <sup>3</sup> /hr and treated in the new state-of-the-art Integrated Effluent Treatment Plant (IETP). Treated effluent shall be fully reused/recycled as make-up water for raw water cooling towers. Domestic sewage shall be treated in sewage treatment plant (STP).	
xi.	Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MoEF&CC. Outcome from the report to be implemented for conservation scheme.	Shall be complied with.
xii.	Automatic/online monitoring system (24x7 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 MoEF&CC and in the Company's website.	Shall be complied with.
xiii.	Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.	Shall be complied with.
xiv.	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.	This item is not applicable. (Coker is not considered in VRMP configuration nor available in existing refinery). Oily sludge shall be disposed off as per existing practice.
xv.	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.	Shall be complied with.
xvi.	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 Bhopal. 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.	Shall be complied with. Presently, the solid and hazardous waste is being sent to CPCB authorized TSDF site namely Coastal Waste Management Project at Vishakhapatnam.
xvii.	Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.	Shall be complied with.
xviii.	Acoustic enclosure / silencer shall be installed wherever it is possible.	Shall be complied with.

xix.	Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	Shall be complied with. Regular health checkups of all the employees in the refinery are carried out and the records are maintained by Occupational health services department.
xx.	The company should make the arrangement for protection of possible fire and explosion hazards during construction and operation phase. 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 materials shall be in place.	Shall be complied with. Proper Barricading of the project sites shall be done from operating process units during construction phase. Hydrocarbon detectors shall be provided along the barricading to detect any hydrocarbon in vicinity of construction area. Proper material movement path within the Refinery shall be identified during the construction phase of the VRMP.
xxi.	The company shall strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).	Shall be complied with.
xxii.	All issues raised during public hearing/consultation shall be satisfactorily implemented and adequate budget provision should be made accordingly.	Budget Provisions made available to implement public hearing issues.
xxiii.	Thick greenbelt with suitable plant species shall be developed around unit. Selection of plant species shall be as per the CPCB guidelines.	Shall be complied with.
xxiv.	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented	Shall be complied with.
xxv.	As proposed, Rs. 60 Crore shall be earmarked towards the Enterprise social responsibility based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Chennai. Implementation of such program shall be ensured accordingly in a time bound manner.	Shall be complied with. HPCL has initiated the task of land identification through District Collector, Visakhapatnam for construction of 50 Bed Specialty Hospital with Burns and Trauma Care Unit. During the Public hearing of VRMP various points in the broad areas of Sanitation/ Education/ Health care /Women empowerment/ Skill Development/ Public Amenities/ Environmental protection were recorded. HPCL is already working in the areas of Child Care, Education, Health Care and Skill development through our various ongoing CSR intervention. The prominent activities implemented in 2017-18 and being implemented in 2018-19 are: <ul style="list-style-type: none"> <li>An institute of excellence i.e. Indian Institute of Petroleum and Energy has been set up at Visakhapatnam for providing higher education in field of petroleum and energy for which Contribution of Rs. 30.00 Crs. was made in 2017-18</li> </ul>

		<ul style="list-style-type: none"> <li>• Scholarship to meritorious SC/ST/OBC/PWD students were provided with a cost of Rs. 4.31 Crs. in 2017-18 and a similar amount is being earmarked for 2018-19</li> <li>• Under project Nanhi Kali, academic, social and material support is being provided to 11471 girl children in Araku and Visakhapatnam with a cost of Rs. 4.41 Crs.</li> <li>• Skill Development Institute, Visakhapatnam has been established for which a contribution of Rs. 4.0 Crs. was made in 2017-18 and a fund of Rs. 8.00 Crs have been allocated for 2018-19</li> <li>• Contribution of Rs. 1 Cr. was made towards construction of King George Hospital, Visakhapatnam in 2017-18</li> <li>• Under Project Akshaya Patra, Mid-Day meal is being provided to 12585 school children in Visakhapatnam a cost of Rs. 1.19 Crs.</li> <li>• Under Project Dhanwantari, two Mobile Medical Vans are operating to provide basic medical facilities in Visakhapatnam at a cost of Rs. 0.56 Cr.</li> <li>• Under Project Unnati, basic Computer education and computer labs are being provided to 1100 school children at a cost of Rs. 0.29 Cr.</li> <li>• Two Mobile science labs and one science center catering to 40000 students and 450 teachers at a cost of Rs. 0.47 Crs.</li> </ul> <p>In addition to the above, various activities for development of health, education and sanitation infrastructure are being implemented in various parts of Visakhapatnam District.</p>
xxvi.	Provision shall be made for the housing of construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, 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.	Project site is within an operating refinery. Sanitary and medical facilities are made available within the Refinery site. Construction labor are from nearby locations.
<b>B. GENERAL CONDITIONS:</b>		
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.	Stipulation of APPCB vide CFE granted dated July 6, 2016 shall be compiled with.

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.	Shall be complied with.
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.	Shall be complied with.
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).	Being complied with in the existing refinery. Shall be complied with post VRMP also.
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.	In existing refinery, Technical Services Department looks after the environmental monitoring functions. The same division will look after VRMP project facilities also after commissioning.
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.	Fund provision has been envisaged for capital /recurring cost towards environment pollution control measures.
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.	Being complied with.
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	Complied with.

	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; PM <sub>10</sub> , PM <sub>2.5</sub> , 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.	Shall be complied with.
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.	Being complied with.
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 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.	Being complied with for existing refinery.
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 <a href="http://envfor.nic.in">http://envfor.nic.in</a> . 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.	Complied with. Advertisement regarding grant of Environmental Clearance was published on Feb 17, 2016 (i.e. within seven days from the date of issue of the clearance letter Feb 11, 2016) in "Eenadu" and "The Hindu". Copy of the same forwarded to the MoEFCC Regional office, Chennai vide letter dated May 26, 2016.
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.	Project approved vide HPCL board Meeting held on July 20, 2016. The Land development of Project unit site started in July 2016.