



03/E&E/202/04  
01.12.2017

The Additional Principal Chief conservator of Forests (C)  
Ministry of Environment, Forest & Climate Change  
4<sup>th</sup> Floor, E&F Wings  
Kendriya sadan  
Koramangala  
Bangalore-560 034

Dear Sir,

**Sub: Submission of Half yearly compliance report of IREP Project on Environmental Clearance issued by the Ministry of Environment, Forests and Climate Change.**

- Ref: 1. Letter from MoEF&CC EP/12.1/2012-13/4/KERALA/4279 dt. 21.10.2013.  
2. EC Nos.J-11011/32/1990-IA-II dt. 20.8.91;J-11011/78/1996-IA.II dated 05.03.1997; J-11011/238/2008-IA.II dated 18.02.2009 issued to the "IREP Project of M/s Bharat Petroleum Corporation Ltd, Kochi at Ambalamugal".

With reference to the above mentioned letter (Ref.1) from MoEF&CC, regarding the compliance report of the EC clearances referred (Ref.2).

Please find enclosed the compliance reports on the various conditions laid down by MoEF &CC, pertaining to the half year period from April 1<sup>st</sup> 2017 to September 31<sup>st</sup> 2017 for the subject project.

Thanking you

Very truly yours

For BPCL Kochi Refinery

**Damien Gracious K. D**  
**Chief General Manager (HSE)**

Encl: 1.Status: Six monthly compliance Report

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Cc:

**1. The Member Secretary  
Central Pollution Control Board  
Parivesh Bhawan  
East Arjun Nagar  
Delhi - 110 032**

**2. The Member Secretary  
Kerala State Pollution Control Board  
Plamoodu Junction  
Pattom Palace  
Thiruvananthapuram - 695 004**

Report on the status of Compliance of stipulated Environmental Conditions - IREP Project BPCL-KR – Period April 1st to Sept 30th

S.No. as per Env.Ltr.No. J-11011/341/201 1-IA II (I), Dtd.: 22/11/12	COMMENTS	Compliance Status
<b>SPECIFIC CONDITIONS:</b>		
i	Compliance to all the environmental conditions stipulated in the environmental clearance letter nos. J-11011/32/90-IA.II dated 20 <sup>th</sup> August, 1991 J-11011/78/1996-IA.II (I) dated 5 <sup>th</sup> March, 1997 and J-11011/238/2008-IA.II (I) dated 18 <sup>th</sup> February, 2009 shall be satisfactorily implemented and compliance reports submitted to the Ministry's Regional Office at Bangalore.	Complied.
ii	M/s BPCL 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.	Complied.
iii	Adequate stack height shall be provided to heaters, furnaces, VGO, HSD and utility boilers as per CPCB/Kerala State Pollution Control Board (KSPCB) guidelines to disperse gases emissions into the atmosphere. Low NOx burners shall be provided to Heaters/furnaces with on-line analyzers. Low sulphur fuel shall be used.	Complied.
iv	Continuous on-line stack monitoring for SO <sub>2</sub> , NOx and CO of all the stacks shall be carried out.	Action initiated for continuous on-line stack monitoring. Consent to operate received on 24.10.2017.
v	The process emissions [SO <sub>2</sub> , 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 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.	Complied.

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S.No. as per Env.Ltr.No. J-11011/341/201 1-IA II (I), Dtd.: 22/11/12	COMMENTS	Compliance Status
vi	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.	Complied.
vii	SO <sub>2</sub> emissions after expansion from the plant shall not exceed 1582 kg/hr and further efforts shall be made for reduction of SO <sub>2</sub> load through use of low sulphur fuel. Sulphur recovery units shall be installed for control of H <sub>2</sub> S emissions. The overall sulphur recovery efficiency of Sulphur Recovery Unit with tail gas treating shall not be less than 99.9%. (The SO <sub>2</sub> emission was reduced from 1582 Kg/Hr to 1518 based on the EC amendment dated 23.05.2014).	Complied.  Complied. The SO <sub>2</sub> emission after IREP commissioning is 1518Kg/h.
viii	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.
ix	Flare gas recovery system shall be installed.	Installation in progress. Expected to be commissioned by December end.
x	Ambient air quality monitoring stations [PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NOx, H <sub>2</sub> S, mercaptan, non-methane-HC and Benzene] shall be set up in the complex in consultation with Kerala State Pollution Control Board, based on occurrence of maximum ground level concentration and	Complied.

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	down-wind direction of wind. The monitoring network must be decided based on modeling exercise to represent short term GLCs.	
xi	Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry on 16 <sup>th</sup> November, 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.
xii	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.	Complied.
xiii	Total water requirement from River Periyar after expansion shall not exceed 3083.3 m <sup>3</sup> /hr and prior permission shall be obtained from the competent authority.  Industrial effluent generation will be 1400 m <sup>3</sup> /hr and treated in the effluent treatment plant. Treated effluent shall be recycled/reused within the factory premises and remaining treated effluent shall be discharged into Chitrapuzha River after conforming to the standards prescribed for the effluent discharge and obtaining permission from the KSPCB, which shall not exceed 410 m <sup>3</sup> /hr. Domestic sewage shall be treated in sewage treatment plant (STP).	Complied.  Complied.
xiv	All the effluents after treatment shall be routed to a properly line guard pond for equalization and final control. In the guard pond, automatic monitoring system for flow rate, pH and TOC shall be provided.	Provided and relocation being explored in consultation with KSPCB/CPCB.
xv	Oil catchers/oil traps shall be provided at all possible locations in	Provided.

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xvi	rain/storm water drainage system inside the factory premises. A study shall be conducted to identify the source of odour and remedial measures to control the odour problem shall be taken. Study report shall be submitted to the Ministry's Regional office at Bangalore within 6 months from the date of issue of this letter.	Complied.
xvii	Improvement in the sludge handling area is required and scheme for final disposal of sludge shall be prepared and submitted to the Ministry's Regional office at Bangalore.	Sludge handling area housekeeping improved and Final sludge disposal scheme submitted.
xviii	Oily sludge shall be disposed off into Coker.	Oily sludge is disposed in Delayed Coker Unit (DCU).
xix	Annual Oily sludge generation and disposal data shall be submitted to the Ministry's Regional Office and CPCB. 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.	Annual sludge generation and disposal data being submitted to Regional Office and CPCB. Complied.
xx	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 Bangalore. 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.	BPCL-KR has entered into a waste disposal agreement with M/s Kerala Enviro Infrastructure Limited to dispose off all wastes including hazardous waste. Spent catalyst is being sent to authorized recyclers/re-processors / disposal agencies.
xxi	Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.	BPCL-KR is having an oil spillage contingency plan for SBM. Inside the refinery complex, adequate facilities are maintained to prevent and contain oil spillage.
xxii	The company shall strictly follow all the recommendation mentioned	Will be complied.

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	in the Charter on Corporate Responsibility for Environmental protection (CREP).	
xxiii	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.	Complied as per OISD guidelines.
xxiv	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 green belt with suitable plant species shall be developed around unit. Selection of plant species shall be as per the CPCB guidelines.	BPCL-KR is developing Green Belt as required.
xxv	Company shall prepare project specific environmental manual and a copy shall be made available at the project site for the compliance.	Complied
xxvi	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	Complied
xxvii	All the issues raised and commitment made during the public hearing/consultation meeting held on 14 <sup>th</sup> February 2012.....	All feasible and applicable concerns addressed.
xxviii	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.	BPCL as a Corporation is having a Corporate HSSE Policy which includes Environment also.
xxix	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, 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.

Report on the status of Compliance of stipulated Environmental Conditions - IREP Project BPCL-KR – Period April 1st to Sept 30th

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<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.	BPCL-KR will adhere to the stipulations made by KSPCB, State Govt and other statutory bodies.
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.	BPCL-KR had sought some amendments to the EC conditions from MoE&F. MoE&F has accorded the EC amendment on 23 <sup>rd</sup> May 2014.
iii	The project authorities must strictly comply with the rules and regulations under manufacture, Storage and import of Hazardous Chemical 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.	BPCL-KR has obtained approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate etc. BPCL-KR complied the rules and regulations under manufacture, Storage and import of Hazardous Chemical Rules, 2000.
iv	The overall noise levels in the 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 (day time) and 70 dBA (night time).	The overall noise level will be limited at the fence as prescribed under EPA rules.
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.	BPCL-KR is having a separate Environment Management cell to carry out environmental management and monitoring functions. We have well equipped Centralised Quality Control Laboratory.



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vi	<p>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.</p>	<p>BPCL-KR has earmarked adequate funds for environment pollution control measures.</p>
vii	<p>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.</p>	<p>Six monthly compliance reports are being submitted by BPCL-KR as per the requirement.</p>
viii	<p>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.</p>	<p>BPCL-KR has complied with this condition.</p>
ix	<p>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; PM10, PM2.5, SO2, NOx, HC (Methane of 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.</p>	<p>Six monthly compliance reports are being submitted by BPCL-KR after receipt of the Environmental Clearance for the IREP project. The same will be sent to the Regional Office of MoEF and also uploaded in the website. The criteria pollutant levels namely; PM10, PM2.5, SO2, NOx, HC (Methane of 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.</p>

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x	<p>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.</p>	<p>Six monthly compliance reports are being submitted by BPCL-KR after receipt of the Environmental Clearance for the IREP project. The same will be sent to the Regional Office of MoEF and also uploaded in the website.</p>
xi	<p>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.</p>	<p>Complied. Statement sent on 28<sup>th</sup> September 2017.</p>
xii	<p>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 the copy of the same shall be forwarded to the Regional Office.</p>	<p>BPCL-KR has complied with this condition.</p>
xiii	<p>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.</p>	<p>The Board approval for pre-project activities for the IREP project was obtained on 31.01.2011 and capital approval was obtained by the Board on 31.03.2012. Land development work commenced in line with the above approval.</p>