

# **Half Yearly EC Compliance Report**

**Period: Oct-2022 to Mar-2023**

**BPCL, Mumbai Refinery**

**Compliance Status Report for Gasoline Hydro Treatment Unit (GTU) (0.9 MMTPA) & associated facilities to produce 100% BS-VI MS**

EC Letter no. J-11011/98/2016-1A II (I) dated 20<sup>th</sup> March 2017

Consent To Operate (CTO) for Gasoline Treatment Unit (GTU) amalgamated with existing refinery CTO has been received from Maharashtra Pollution Control Board (MPCB) on 13<sup>th</sup> Sept-2019.

GTU plant was commissioned on 22<sup>nd</sup> Oct 2019.

As per the stipulations given in the Environmental Clearance for Gasoline Hydro Treatment Unit (GTU) (0.9 MMTPA) & its associated facilities to produce 100% BS-VI MS, the detailed compliance status is given below:

**A. SPECIFIC CONDITIONS :**

Sr. No.	SPECIFIC CONDITION	STATUS as on 31.03.2023
i.	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
ii.	Compliance to all the environmental conditions stipulated in the environmental clearance letter no. J J-11011/582/2011-IA II (I) dated 7 <sup>th</sup> June'2013, letter no. J-11011/140/2012-IA II (I) dated 12 <sup>th</sup> June 2013, letter no.-J-11011/270/2013-IA II (I) dated 8 <sup>th</sup> August 2014 and letter no. J-11011/21/2013-IA II (I) dated 13 <sup>th</sup> August 2015, shall be satisfactorily implemented and compliance reports submitted to the Ministry's Regional Office.	Complied  Compliance reports are uploaded on PARIVESH portal on 6 monthly basis.
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.	The following features at GTU ensure process emissions to confirm to the standards prescribed under EPA <ul style="list-style-type: none"> <li>• Air preheater provided for improving efficiency</li> <li>• Provision of stack dampers, on-line indication for stack temperature, excess O<sub>2</sub></li> <li>• Stacks of adequate height</li> <li>• Analyzers have been installed at GTU stacks for continuous on-line monitoring of SO<sub>2</sub>, NO<sub>x</sub> CO and PM.</li> <li>• Low NO<sub>x</sub> burners have been installed at two furnaces of GTU.</li> </ul> <p>Similarly, all stacks in BPCL MR have been provided with analyzers for continuous online monitoring of SO<sub>x</sub>, NO<sub>x</sub>, CO &amp; SPM.</p>

		Stack analyzers are connected to MPCB and CPCB servers for real time data transmission.
iv.	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.	Noted Power is supplied to GTU unit from existing Captive Power Plant at Mumbai Refinery or shall be imported from Tata Electric Company, if required.  Additional DG set is not required for GTU unit and Existing refinery DG set is not operating continuously. It supplies power to critical equipment's in the refinery only in case of total power failure.
v.	Fresh water requirement from MCGM shall not exceed 15950 m <sup>3</sup> /day. After expansion and prior permission shall be obtained from competent authority. About 300 m <sup>3</sup> /hr of cooling water blow down will be discharged to sea.	Complied  Please refer <b>Annexure-1</b> for Water Balance.
vi.	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.	Noted Last water audit was carried out in 2018 through M/s CII. 5 recommendations out of 7 have been completed and 2 are in progress.
vii	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 MoEF&CC and in the Company's website.	Complied  On line analyzers have been provided at Effluent Treatment Plant outlet for measuring PH, BOD, COD & TSS with continuous connectivity to CPCB/ MPCB servers.  ETP outlet water is 100% recycled to raw cooling water towers make up (ZLD).
viii	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.	Complied Hazardous Waste is disposed of as and when generated as per Hazardous waste rules and as per Consent to Operate issued by MPCB to MPCB approved Recycler party M/s MWML (Mumbai Waste Management Ltd.). (Refer <b>Annexure-2</b> : Membership Certificate of M/s MWML).  Hazardous Waste annual return form (Form-IV) is filled up every year before 30 <sup>th</sup> June of every year for previous financial year.

		For 2022-23, Form- IV was filled on 24 <sup>th</sup> June-2022. Please refer <b>Annexure-2a</b> .
ix.	Acoustic enclosure/silencer shall be installed wherever it is possible.	Noted
x.	Occupational Health Surveillance of the workers should be done on regular basis and records maintained as per the Factories Act.	Complied Periodic Health check-up for employees is carried out regularly.
xi.	Green belt over 33% area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.	Noted  GTU unit is within the premises of existing Mumbai refinery. Tree plantation is being carried out in and around Chembur / Mumbai to mitigate the effect of emissions. <ul style="list-style-type: none"> <li>- In the year 2014-15, 10000 tree saplings were planted at various locations around Mumbai (Among these saplings, 3000 were planted at AMPC Vashi to develop four acres of green belt in the heart of Navi Mumbai. Refer <b>Annexure- 3:</b> Certificate from APMC Vashi).</li> <li>- In 2016-17, more than 3000 trees were planted at MIDC area at Taloja. (<b>Refer Annexure- 4:</b> Certificate from M/s Mumbai Waste Management Limited (MWML)).</li> <li>- In 2017-18, 5000 Trees were planted at Thane Municipal Corporation in the year 2017. (<b>Refer Annexure- 5:</b> Certificate from TMC, Thane).</li> <li>- In 2018-19, more than 1350 saplings were planted at Marine Oil Terminal area, MBPT area, inside BPCL refinery and National Park Borivali.</li> <li>- In 2019-20, a total of 10000 tree saplings were planted at different locations around Mumbai regions through M/s CERE and all the trees were Geo-tagged. (<b>Refer Annexure- 5a:</b> Certificate M/s CERE)</li> <li>- In 2020-21, a total of 300 tree saplings were planted at Mumbai through M/s Unique Pest Control.</li> <li>- In 2021-22, a total of 1000 tree saplings were planted using MIYAWAKI METHOD at LTT</li> </ul>

		<p>Railway Station Mumbai through M/s Green Yatra. Also, a total of 145 number of trees of native species were planted at Trees for Tigers, Panna, Tiger Reserve, Madhya Pradesh, India through M/s Grow Trees.</p> <p>- In 2022-23 around 4000 trees have been planted by BPCL MR at Station 6, Sewree and Swami Vivekanand College locations.</p>
xii.	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.	Complied
xiii.	All the recommendations motioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	<p>Complied</p> <p>As per risk assessment report, blast proof control room has been built up at GTU site. Hydrocarbon &amp; H2S meters has been installed at critical locations.</p>
xiv.	At least 2% of the total cost of the project shall be earmarked towards the Enterprises Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry Of Regional Office. Implementation of such program shall be ensured accordingly in a time bound manner.	Noted
xv.	Zero liquid discharge to be ensured.	<p>Noted</p> <p>There is no additional requirement of fresh water and no additional generation of effluent from GTU project.</p> <p>ETP outlet water is 100% recycled to process cooling towers.</p>

#### B.GENERAL CONDITIONS:

Sr. No.	Condition	Status as on 31.03.2023
i.	The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board (SPCB), State Government and any other statutory authority.	Complied

ii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In case of deviations or alterations in the project proposed 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.	Noted
iii.	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one station is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	<p>Three Ambient Air Quality Monitoring Stations are existing in the refinery for on-line monitoring of PM-10, PM-2.5, SO<sub>2</sub>, NO<sub>x</sub>, CO, Ammonia, Ozone and Meteorological parameters of Wind speed, Wind Direction, Temperature &amp; Relative humidity as per National Ambient Air Quality Standards (NAAQS). Real time AMS data is being transmitted to CPCB/ MPCB site.</p> <p>Also, online data of parameters namely Benzene, Toluene, O/M/P- Xylene and Methane &amp; Non Methane hydrocarbon from AMS have been successfully connected and transmitted to MPCB and CPCB servers since 31<sup>st</sup> Dec 2018.</p> <p>Also, Mercaptan analyzer has been installed at AMS and data is being transmitted to MPCB/CPCB servers.</p> <p>As per MPCB, there is no additional requirement of Continuous Ambient Air Quality Monitoring Station for GTU project.</p>
iv.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No.826 (E) dated 16 <sup>th</sup> November, 2009 shall be followed.	Ambient Air quality data is being collected at three locations in the existing refinery (AMS-1/2/3). The quality is conforming to the standard as specified in the NAAQS.
v.	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 should conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules and 1989 viz. 75 dBA (daytime) and 70 dBA (night time).	<p>Noted</p> <p>Ambient Noise levels conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules.</p> <p>Also, sign painting is done for High Noise area and instructions have been mentioned to use PPEs.</p>
vi.	The company shall harvest rain water from roof tops of the buildings and storm water drains to recharge the ground water and use the same waste for the process activities to the project to conserve fresh water.	<p>Complied</p> <p>Rain water harvesting systems are provided at BPCL MR at 14 locations out of which RWH system at DHDS &amp; DHT</p>

		<p>substation roof top were commissioned in June-2019. Details of total Rain water harvested are as below:</p> <p>2016-17: 88 Thousand KL  2017-18: 65.7 Thousand KL  2018-19: 42.8 Thousand KL  2019-20: 71 Thousand KL  2020-21: 67 Thousand KL  2021-22: 33 Thousand KL  2022-23: 51 Thousand KL</p>
vii.	<p>Training shall be imparted to all employees on safety &amp; health aspects of chemicals handling. Pre – employment &amp; routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.</p>	<p>Complied</p> <p>Safety trainings are carried out for BPCL employees as well as contractor employees which includes Hands on fire fighting, Behavior based safety training &amp; safety in refining etc. Mandatory periodic health check is done for employees and also pre-employment check is carried out at BPCL medical center. Comprehensive safety training is provided to contractor staff during registration process by Fire &amp; Safety Dept.</p>
viii.	<p>The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management and risk mitigation measures relating to the project shall be implemented.</p>	<p>Complied</p>
ix.	<p>The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.</p>	<p>Being implemented.</p> <p>CSR activities are conducted on regular basis for local villages which involves Cancer screening camp, Eye screening camp Blood donation camp, Public health center, Ambulance service during emergency, providing fish nets to local fishermen.</p>
x.	<p>The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.</p>	<p>Complied</p> <p>BPCL is providing scholarships to needy students through local schools. Also felicitates 10<sup>th</sup> &amp; 12<sup>th</sup> std. students every year.</p> <p>Environment (HSSE) department carries out tree plantation and awareness functions in nearby schools as a part commitment towards sustainable environment.</p>

xi.	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	There is no requirement of additional Laboratory for GTU Project. Existing BPCL Laboratory is used for GTU. Refinery has a full-fledged NABL approved Laboratory.  BPCL refinery already has an Environment section to carry out environmental management and monitoring functions.
xii.	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management / pollution control measures shall not be diverted for any other purpose.	Various Environmental projects incurring capital expenditure are being carried out regularly.
xiii.	A copy of clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad / Municipal Corporation, Urban local Body and the Local Body and the local NGO, if any from whom any suggestions / representations, if any, from whom suggestions / representations, if any, were received while processing the proposal.	Complied Environment Clearance letter has been put on the BPCL corporate website <a href="http://www.bharatpetroleum.in/EnergizingEnvironment/HealthSafety&amp;Environment/">www.bharatpetroleum.in/EnergizingEnvironment/Health Safety &amp; Environment/</a> . Environment Clearance letter has been sent to Municipal corporation
xiv.	The project proponent shall also submit six monthly reports on status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environment Clearance and six monthly compliance status report shall be posted on the website of the company.	Complied. Six monthly compliance statement is uploaded on PARIVESH portal of MoEF&CC and soft copy is sent to CPCB, and SRO/ RO office of MPCB through e-mail. The Environment Clearance and six monthly compliance report was also posted on the BPCL corporate website.
xv.	The Environmental Statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated to be submitted to the concerned State Pollution Control Board as prescribed under Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the web site of company along with compliance of Environmental Clearance conditions and shall also be sent to the respective Regional Office of MoEF&CC by e-mail.	Duly filled form V (Environment Statement) for every financial year is submitted to MPCB office before 30 <sup>th</sup> Sept of every assessment year.  For 2021-22 also, Form-V was submitted to MPCB on 25 <sup>th</sup> Sept-2022. Please refer <b>Annexure- 6</b> .
xvi.	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/Committee and may also be	Subsequent to obtaining Env. Clearance from MoEF for GTU, dt 20 <sup>th</sup> March-17, the same was published in two newspapers (Indian Express in English &



	seen at Website of Ministry at <a href="http://moef.nic.in">http://moef.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 same shall be forwarded to the Regional Office of the Ministry.	Maharashtra Times Marathi) on 7 <sup>th</sup> of April 2017. <b>Annexure- 7 &amp; 8.</b>
xvii.	The 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

**Compliance Status Report for Diesel Hydro treatment Unit (DHT) & associated facilities to produce 100% BS-IV HSD**

**EC Letter no. J-11011/21/2013-1A II (I) dated 13<sup>th</sup> Aug-2015**

As per stipulations given in the Environmental Clearance for Diesel Hydro Treatment (DHT) Unit & associated facilities to produce 100% BS-IV HSD.

DHDT Unit was commissioned on 26.06.2017

**Specific Conditions:**

<b>Sr. No.</b>	<b>SPECIFIC CONDITION</b>	<b>Status as on 31.03.2023</b>
i.	Compliance to all the environmental conditions stipulated in the environmental clearance letter no. J-11011/180/2008-IA II(I) dated 28 <sup>th</sup> April, 2008 , F.No.J-11011/140/2012-IA II I dated 12 <sup>th</sup> June 2013, J-11011/582/2011-IA II (I) dated 7 <sup>th</sup> June 2013 and J-11011/270/270/2013-IA (I) dated 8 <sup>th</sup> August 2014 , shall be satisfactorily implemented and compliance reports submitted to Ministry's regional office at Bhopal.	Complied  Compliance reports are uploaded on PARVISH portal of MoEF & on six monthly basis.
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.	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.	Analyzers are installed at DHT stacks for continuous on-line monitoring of SO <sub>2</sub> , NO <sub>x</sub> CO and PM. Low NO <sub>x</sub> burners are provided.
iv	The process emissions [SO <sub>2</sub> , NO <sub>x</sub> , HC (Methane & No-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	The following features at DHDT process emissions to conform with the standards prescribed under EPA <ul style="list-style-type: none"> <li>• Fuel gas is fired in the furnaces.</li> <li>• Air pre-heater provided for improving efficiency</li> </ul>

	<p>event of failure of pollution control system(s) adopted by 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.</p>	<ul style="list-style-type: none"> <li>• Provision of stack dampers, on-line indication for stack temperature, excess O<sub>2</sub>.</li> <li>• Stacks of adequate height.</li> </ul> <p>At BPCL refinery, Ambient Air Quality monitoring is carried out on regular basis which includes parameters SOX, NOx, CO, O<sub>3</sub>, NH<sub>3</sub>, PM-10. PM-2.5, Hydrocarbon. Also analyzers have been installed at each AMS for transmitting data to MPCB/ CPCB server.</p>
v.	<p>Leak Detection and Repair program shall be prepared and implemented to control HC/VOC emissions. Focus shall be given to prevent fugitive emission 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 yard etc. must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations.</p>	<p>LDAR program is already being followed in the existing refinery as per GSR-186 (E). Compressors, exchangers, pumps, valves, equipment's, etc are being regularly monitored for identifying VOC emissions and rectifying the identified leaks.</p> <p>HC leak detectors are provided in the plant area at strategic locations.</p> <p>Preventive maintenance schedule exists for all critical pumps / compressors and is being adhered to.</p> <p>Please refer <b>Annexure-9</b> for typical LDAR report.</p>
vi.	<p>SO<sub>2</sub> emissions after expansion from the plant shall not exceed 10.44 TDP, Sulphur recovery units shall be installed for control of H<sub>2</sub>S emissions.</p>	<p>Complied</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>Noted</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 Maharashtra 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.</p>	<p>Three Ambient Air Quality Monitoring Stations are existing in the refinery. On-line monitoring of PM-10, PM-2.5, SO<sub>2</sub>, NO<sub>x</sub>, H<sub>2</sub>S, CO, Methanic &amp; non methanic hydrocarbons, benzene, Ammonia, Ozone and meteorological parameters of Wind speed, wind direction, temperature, &amp; Relative humidity is being carried out as per National Ambient Air Quality Standards (NAAQS). Real time data is continuously sent to CPCB / MPCB site.</p>
ix	<p>Ambient air quality data shall be collected as per NAAQEA standards notified by the Ministry on 16<sup>th</sup></p>	<p>Ambient air quality data is being collected at three locations in the existing refinery</p>

	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.	through third party. The quality is conforming with the standard as specified in the NAAQS.
x.	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.	Noted Power is supplied to DHT unit from Captive Power Plant existing at the refinery. Additional requirement of power shall be imported from Tata Electric Company. Additional DG set is not required for DHT unit.
xi.	Total fresh water requirement from Municipal Corporation of Greater Mumbai after expansion shall not exceed 16,100m <sup>3</sup> /day. After expansion and prior to permission shall be obtained from competent authority.	Complied  Please refer <b>Annexure-1</b> for Water Balance.
xii	Industrial effluent generation shall not exceed 155 m <sup>3</sup> /Hr and treated in effluent treatment plant. Treated effluent shall be fully as make-up water for raw water cooling towers. Domestic Sewage shall be treated in sewage treatment plant ( STP )	Treated effluent is fully recycled as make water to various raw water cooling towers in the Refinery. A new Sewage Treatment plant with a capacity of 250 CMD for administrative block has been commissioned in Dec 2014.  Please refer <b>Annexure-1</b> for Water Balance. BPCL has provided analyzers for COD, BOD, TSS, PH monitoring with direct connectivity to CPCB/ MPCB server.
xiii .	Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	Complied  Oil catchers equipped with skimmers, weirs, drum skimmer, rope skimmer, hay filters etc have been provided.
xi v.	As committed, BPCL needs to implement the outcome of study for water reduction and its optimize use as result of water auditing. No process effluent shall be discharged outside the premises.	Complied Treated effluent is fully recycled as make water to various raw water cooling towers in the Refinery. BPCL has provided analyzers for COD, BOD, TSS, PH monitoring with direct connectivity to CPCB/ MPCB server.  Please refer <b>Annexure-1</b> for Water Balance.
xv .	Automatic /online monitoring system (24X7 monitoring devices) For flow measurement and relevant pollutants in the treatment system to be installed.	Complied BPCL has provided analyzers for COD, BOD, TSS, PH monitoring with direct connectivity to CPCB/ MPCB server.

	The data to be made available to respective SPCB, Regional office of MoEF & CC and Company's site	
xv i.	Oily sludge shall be disposed off into Cocker. Annual oily sludge generation and disposal data shall be submitted to Ministry of Regional offices and CPCB.	Not Applicable There is no coker installed at BPCL Mumbai Refinery.
xv ii.	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	Complied
xv iii.	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 authorize recyclers/re-processors.	BPCL MR has membership of Mumbai Waste Management Limited, which is authorized TSDF. Membership certificate is attached as <b>Annexure-2</b> .
xi x.	Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.	Complied Please Refer GTU compliance report as on 31.03.2023 for further details.
xx	Acoustic enclosure/silencer shall be installed wherever it is possible.	Please Refer GTU compliance report as on 31.03.2023 for further details.
xx i	The company shall strictly follow all the recommendations mentioned in the charter on Corporate Responsibility for Environmental protection (CREP).	Please refer <b>Annexure-10</b> for details of Corporate Responsibility for Environmental protection (CREP).
xx ii.	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 source and flammable material shall be in place.	Complied.
xx ii.	To prevent fire & explosion at oil & gas facility, potential ignition, sources and flammable materials shall be in place.	Complied.
xx iii.	Thick greenbelt with suitable plants species shall be developed around unit, Selection of plants a per CPCB guidelines.	Please Refer GTU compliance report as on 01.12.2022 for further details.
xx iv.	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	Complied.
xx v.	At least 2.5% of the total cost of the project shall be unmarked towards the Enterprise social responsibility based on need of the affected people with consultation	Complied.

	of local Administration and item-wise details along with long time bound action plan shall be prepared and submitted TO Ministry of Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.	
xx vi	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.	Project is completed and commissioned.

**B.GENERAL CONDITIONS:**

Sr. No.	Condition	Status as on 31.03.2023
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.	Complied
ii.	No further expansion or modifications in the project shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviation or alterations in the project proposed 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.	Noted
iii.	The project authorities must strictly comply with the rules & regulation 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.	Complied
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, enclosure etc, on all sources of noise generation. The ambient noise levels should conform the standards prescribed under Environmental (Protection) Act, 1986 Rules and 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Complied
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 refinery already has an Environment section to carry out environmental management and monitoring functions. The Refinery also has a full-fledged NABL approved Laboratory.

vi.	Adequate funds shall be earmarked towards capital cost and recurring cost for environment pollution control measures and shall be used to implement the conditions stipulated by MOEF as well as state government along with implementation schedule for all the conditions stipulated herein. Funds so provided should not be diverted for any other purpose.	Adequate funds are being provided for environment pollution control measures. Various Environment projects incurring capital expenditure are being carried out regularly.
vii.	The Regional office of the Ministry/ data and the statistical interpretation shall be submitted CPCB will be monitor stipulated conditions. A six monthly compliance report and the monitored regularly.	Complied.
viii.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zillparishad / Municipal Corporation Urban Local Body and Local NGO, if any from whom any suggestions / representations, if any, here received while processing proposal. The clearance letter shall be put on web site of company proponent.	Complied.  Please Refer GTU compliance report as on 31.03.2023 for further details.
ix.	The project proponent shall upload the status of compliance of stipulated environment clearance conditions, including results of monitored data on their website and shall update the same update periodically. It should simultaneously send to Regional office of MoEF, the respective Zonal office of CPCB and SPCB. .The criteria of pollutant levels namely PM <sub>10</sub> ,PM <sub>2.5</sub> ,SO <sub>2</sub> ,NOX,HC ( Methane & Non-Methane ) , VOC's (ambient levels as well as stack emission ) or critical sect oral of parameters, indicated for projects shall be monitored and displayed at the convenient location near main gate of the company in public domain.	Complied. Six monthly compliance statement of EC is being uploaded on PARIVESH portal of MoEF&CC and soft copy is being shared with CPCB and MPCB.  The compliance report is also posted on the BPCL corporate website.  Environmental display board has been provided at the main gate of the refinery, which continuously displays ambient air quality monitored at the north west corner of the refinery.
x.	The project proponent shall also submit six monthly reports on status of compliance of stipulated environmental conditions including results of monitored data (both in hard copies as well as by email) to the Regional office of MoEF, the respective Zonal Office of CPCB and SPCB. The Regional Office of Ministry/CPCBSPCB shall monitor the stipulated conditions.	Complied  Six monthly compliance statement of EC is being uploaded on PARIVESH portal of MoEF&CC and soft copy is being shared with CPCB and MPCB.
xi.	The Environmental Statement for each financial year ending 31 <sup>st</sup> March in Form-V as mandated to be submitted by project proponent concerned SPCB as prescribed under Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the web site of company along with compliance of Environmental conditions and shall also be sent to respective Regional Office of MoEF by e-mail.	Complied

xii.	The project proponent shall inform the public that the project has been accorded environmental clearance by the ministry and copies of the clearance are available with the SPCB and may also be seen at website of 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 clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in vernacular language of the locality concerned, and a copy of same shall be forwarded to the Regional Office.	Subsequent to obtaining Env. Clearance from MoEF & CC for DHT, dt 13 <sup>th</sup> August-15, the same was published in two newspapers (Indian Express in English & Maharashtra Times Marathi) on 25 <sup>th</sup> August-2015.
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.	Noted

**Compliance Status Report for Conversion of existing Catalytic Reformer Unit (CRU) to Isomerization Unit (ISOM) and revamp of existing Naphtha Hydro desulfurization Unit (NHDS) at BPCL Mumbai Refinery (MR)**

**EC Letter no. J-11011/270/2013-1A II (I) dated 8<sup>th</sup> Aug 2014**

As per the stipulations given in the Environmental Clearance for Conversion of existing Catalytic Reformer Unit (CRU) to Isomerization Unit and revamp of existing Naphtha Hydro desulfurization Unit (NHDS), the detailed compliance status is given below:

Sr. No.	Specific Condition	Status as on 31.03.2023
i.	Compliance to all the environmental conditions stipulated in the environmental clearance letter no. J-11011/180/2008-IA II(I) dated 28th April, 2008 , F.No.J-11011/140/2012-IA II I dated 12th June 2013 shall be satisfactorily implemented and compliance reports submitted to ministry's regional office at Bhopal.	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 18th March,2008 and GSR 820(E) dated 9th November 2012.	Complied
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.	Complied
iv.	The process emissions [SO <sub>2</sub> ,NO <sub>x</sub> ,HC (Methane & No-methane)]. VOCs and Benzene from various units shall conform to the standards prescribed under the Environment (Protection) Act. At no time the	Complied

	emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by 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.	
v.	Leak Detection and Repair programme shall be prepared and implemented to contain HC/VOC emissions. Focus shall be given to prevent fugitive emission 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 yard etc. must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations.	Complied
vi.	SO <sub>2</sub> emissions after expansion from the plant shall not exceed 10.44 TDP, 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 %.	Tail Gas Treatment Units (TGTU) was commissioned for increasing existing SRU efficiency to 99.9%.
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.	Noted
viii.	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 Maharashtra 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.	Complied
ix.	Ambient air quality data shall be collected as per NAAQEA standards notified by the Ministry on 16th 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
x.	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  Power is supplied to ISOM unit from Captive Power Plant existing at the refinery, or shall be imported from Tata Electric Company. DG set is not operating continuously. It supplies power to critical equipments in the refinery only in case of total power failure.
xi.	Total raw water requirement from Municipal Corporation of Greater Mumbai water supply shall	Complied



	not exceed 16500 m3/day. Industrial effluent shall be treated in the effluent treatment plant. Treated effluent shall be recycled/reused recycled as make up for the raw water cooling tower. Domestic sewage shall be treated in sewage treatment plant (STP).	
xii.	Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	Oil catchers equipped with skimmers, weirs, oil adsorbent booms, pillows, hay filters etc have been provided.
xiii.	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.	Not Applicable  There is no coker installed at BPCL Mumbai Refinery. Other Oily sludge generated in the refinery is subject to mechanical/chemical treatments for oil recovery, and the residual sludge is bio-remediated using bacteria supplied by M/S MIEBRS.
xiv.	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.	Complied
xv.	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.	BPCL MR has membership of Mumbai Waste Management Limited, which is authorized TSDF.  A membership certificate is attached as <b>Annexure-2</b> .
xvi.	Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.	Proper oil spillage prevention management plan exist. Closed sampling system has been provided to avoid spillage/leakage of oil. Gully sucker is available in the refinery to take care of any spillages.
xvii.	The company shall strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).	Please refer <b>Annexure-10</b> for details of Corporate Responsibility for Environmental Protection (CREP).
xviii.	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
xix.	Green belt shall be developed at least in 45 acres area land around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Thin greenbelt with suitable plant species shall be developed around unit. Selection of plant species shall be as per the CPCB guidelines.	Tree plantation is done in and around Mumbai Region. Please refer <b>Annexures-3/4/5</b> .

xx.	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	Complied
xxi.	Company shall adopt Corporate Environment Policy as per the Ministry's OM No J-11013/41/2006-IA II(I) dated 26 <sup>th</sup> April 2011 and implemented.	BPCL MR is an ISO 14001 certified company. Quality, Environment, Occupational Health & Safety policy as per Integrated Management Systems is in place.
xxii.	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.	Project is completed and commissioned.

<b>Sr. No.</b>	<b>General Condition</b>	<b>Status as on 31.03.2023</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.	Complied
ii.	No further expansion or modifications in the project shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviation or alterations in the project proposed 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	Noted
iii.	The project authorities must strictly comply with the rules & regulation 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.	Complied
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, enclosure etc, on all sources of noise generation. The ambient noise levels should conform the standards prescribed under Environmental (Protection) Act, 1986 Rules and 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Complied
v.	A separate environment management cell equipped with full fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.	BPCL MR already has an Environment section to carry out environmental management and monitoring functions. The Refinery also has a full-fledged NABL approved Laboratory.

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 Ministry of Environment and Forests as well as state government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	Various Environmental projects incurring capital expenditure are being carried out regularly.
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 should be submitted to them regularly.	Complied Six monthly compliance Report is being uploaded on PARIVESH portal of MoEF&CC and soft copy is being shared with CPCB and MPCB. Also, it is published on BPCL corporate website.
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.	Complied
ix.	The project proponent shall upload the status of compliance of the stipulated environmental conditions including the results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the regional office of MoEF, the respective zonal office of CPCB, and the SPCB. The criteria pollutant levels, namely PM10, PM2.5, SO2, NOx, 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 Six monthly compliance Report is being uploaded on PARIVESH portal of MoEF&CC and soft copy is being shared with CPCB and MPCB. Also, it is published on BPCL corporate website. Environmental display board has been provided at Refinery Main Gate which continuously displays ambient air quality monitored at the north west corner of the refinery.
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.	Six monthly compliance Report is being uploaded on PARIVESH portal of MoEF&CC and soft copy is being shared with CPCB and MPCB. Also, it is published on BPCL corporate website.
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.	Complied
xii.	The project proponent shall inform the public that the project has been accorded environmental clearance by the ministry and copies of the clearance are	Subsequent to obtaining Env. Clearance from MoEF for ISOM, dt 8th August-14, the same was published in two

	available with the SPCB and may also be seen at website o 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 clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in vernacular language of the locality concerned, and a copy of same shall be forwarded to the Regional Office.	newspapers (Indian Express in English & Maharashtra Times Marathi) on 3 <sup>rd</sup> of September 2014.
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.	Noted.

**Compliance Status Report for Construction of new Crude Distillation Unit and Vacuum Distillation Unit (CDU-4) as a replacement of two old crude and vacuum units at BPCL Mumbai Refinery.**

**EC Letter no. J-11011/140/2012-1A II (I) dated 12<sup>th</sup> June 2013**

The Ministry of Environment and Forests accorded environmental clearance for the project as per EIA Notification dated 14th September 2006.

**Status of the projects (as of 1.07.2016)**

As per the stipulations given in the Environmental Clearance for construction of new CDU/VDU (CDU4) as a replacement of two old units,

CDU-4 Unit was commissioned on 30/11/2015

**SPECIFIC CONDITIONS:**

<b>Sr. No.</b>	<b>SPECIFIC CONDITION</b>	<b>Status as on 31.03.2023</b>
I	Compliance to all the environmental conditions stipulated in the environmental clearance letter no. J-11011/180/2008-1A II (I) dated 28 <sup>th</sup> April 2008 shall be satisfactorily implemented and compliance reports submitted to the Ministry's Regional Office at Bhopal.	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 and GSR 820(E) dated 9 <sup>th</sup> November-2012	Complied
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.	Complied.
iv	The process emissions [SO <sub>2</sub> , NO <sub>x</sub> ,HC (Methane & No-methane)]. VOCs and Benzene from various units shall conform to the standards prescribed under the Environment (Protection) Act. At no time the emission	Complied

	levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by 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.	
v.	Leak Detection and Repair programme shall be prepared and implemented to control HC/VOC emissions. Focus shall be given to prevent fugitive emission 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 yard etc. must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations.	Complied
vi.	SO <sub>2</sub> emissions after expansion from the plant shall not exceed 10.44 TDP, 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 %.	Complied
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
Viii	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 Maharashtra 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.	Complied
Ix	Ambient air quality data shall be collected as per NAAQEA 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
x.	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.	Noted Power is supplied to new CDU/VDU (CDU4) unit from Captive Power Plant existing at the refinery, or shall be imported from Tata Electric Company.

		Additional DG set is not required for CDU4 unit.
xi.	Total raw water requirement from Municipal Corporation of Greater Mumbai water supply shall not exceed 687.4 m <sup>3</sup> /hr and prior permission shall be obtained from the competent authority. Industrial effluent generation from new CDU/VDU project shall be 60 m <sup>3</sup> /hr and treated in the effluent treatment plant. Treated effluent shall be recycled /reused recycled as make up for the raw water cooling tower. Domestic sewage shall be treated in sewage treatment plant (STP).	Complied
xii.	Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	Complied
Xiii	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.	Not applicable
xiv	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	Complied
xv	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.	Complied
xvi.	Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.	Proper oil spillage prevention management plan exists. Closed sampling system has been provided to avoid spillage/leakage. Gully Sucker is available in the refinery to take care of any spillages.
xvii.	The company shall strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).	Complied. Please refer <b>Annexure-10</b> for details Corporate Responsibility for Environmental Protection (CREP).
xviii.	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

xix.	Green belt shall be developed at least in 45 acres area land around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Think greenbelt with suitable plant species shall be developed around unit. Selection of plant species shall be as per the CPCB guidelines.	Tree plantation is being done in & around Mumbai Region.
xx.	All the issues raised and commitment made during the public hearing/consultation meeting held on 25 <sup>th</sup> September,2012 shall be satisfactorily implemented. Accordingly, provision of budget to be kept.	Complied
xxi	Based on Hazop study carried out and recommendation to reduce the risk shall be expeditiously implemented, and report sent to regional office of ministry	Complied
xxii	Company shall adopt Corporate Environment policy as per ministry's O.M. No J-11013/41/2006-IA II(I) dated 26 <sup>th</sup> April 2011 and implemented.	BPCL MR is an ISO 14001 certified company. Quality, Environment, Occupational Health & Safety policy as per Integrated Management Systems is in place.
xxiii	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.	Project is completed and commissioned.

#### A. GENERAL CONDITIONS :

Sr. No.	Condition	Status as on 31.03.2023
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.	Complied
ii.	No further expansion or modifications in the project shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviation or alterations in the project proposed 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.	Noted
iii.	The project authorities must strictly comply with the rules & regulation under manufacture. Storage and import of Hazardous chemical Rules, 2000 as	Complied

	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, enclosure etc, on all sources of noise generation. The ambient noise levels should conform the standards prescribed under Environmental (Protection) Act, 1986 Rules and 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Complied
v.	A separate environment management cell equipped with full-fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.	Complied  BPCL MR already has an Environment section to carry out environmental management and monitoring functions. The Refinery also has a full-fledged NABL approved Laboratory
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 Ministry of Environment and Forests as well as state government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	Adequate funds are being provided for environmental pollution control measurement.
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 should be submitted to them regularly.	Complied
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.	Complied
ix.	The project proponent shall upload the status of compliance of the stipulated environmental conditions including the results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the regional office of MoEF, the respective zonal office of CPCB, and the SPCB. The criteria pollutant levels, namely PM10, PM2.5, SO2, NOx, HC (Methane & non-methane),	Complied



	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.	Complied
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	Complied
xviii.	The project proponent shall inform the public that the project has been accorded environmental clearance by the ministry and copies of the clearance are available with the SPCB and may also be seen at website of 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 clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in vernacular language of the locality concerned, and a copy of same shall be forwarded to the Regional Office.	Subsequent to obtaining Env. Clearance from MoEF for CDU/VDU, dt 12 <sup>th</sup> June-13, the same was published in two newspapers (Indian Express in English & Maharashtra Times Marathi) on 18 <sup>th</sup> of June 2013.
xix.	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.	Noted

**Compliance Status Report for Installation of Continuous Catalytic Regeneration Reformer (CCR 1.2 MMT) at BPCL Mumbai Refinery**

**Reference to Letter no. F. No. J-11011/180/2008-IA II(I), DATED 28/4/2008 and J-11011/582/2011-1A II (I) dated 7<sup>th</sup> June 2013.**

**The Ministry of Environment and Forests accorded environmental clearance for installation of new Continuous Catalytic Regeneration Reformer (CCR 1.2 MMTPA) within the premises of BPCL Mumbai**

Refinery. As per the stipulations given in the Environmental Clearance, the detailed compliance status is given below:

**Status of the CCR Project**

- CCR Unit commissioned on 04.03.2014 and on grade product diverted to storage on 08.03.2014. Project completed.

Sr. No.	SPECIFIC CONDITIONS	Status as on 31.03.2023
i.	Compliance to all the Environmental conditions stipulated in the environmental clearance letter no J-11011/180/2008-1A II (I) dated 28 <sup>th</sup> April 2008 shall be satisfactorily implemented and compliance reports submitted to the Ministry's Regional office at Bhopal	Complied
ii.	M/s BPCL shall comply with new standards/norms for Oil refinery Industry notified under Environment (Protection) Rules 1986 vide GSR 186 (E) dated 18 <sup>th</sup> March 2008	Complied
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.	Complied
iv.	The process emissions {SO <sub>2</sub> , NO <sub>x</sub> , HC (Methane & Non methane)}, VOC's and benzene from various units shall conform to the standards prescribed under 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
v.	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 seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to. Fugitive emissions of storage tank yards etc must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations.	Complied
vi.	SO <sub>2</sub> emissions after expansion from the plant shall not exceed 12 TPD. Sulfur recovery units shall be	Amine treated refinery fuel gas is being used as fuel in the CCR & NHT furnaces.

	installed for control of H <sub>2</sub> S emissions. The overall sulfur recovery efficiency of Sulfur recovery units with tail gas treating shall not be less than 99.9%.	Efficiency of existing Sulfur Recovery Units (SRU) is 99%. In Nov-2017, Tail Gas Treatment Unit (TGTU) has been commissioned which has improved sulfur recovery efficiency to 99.99 %.  As cited in Environment Clearance received for CDU-4 project (commissioned in Dec-2015), SO <sub>2</sub> emissions from refinery are well below 10.44 MT/D.
vii.	As proposed, record of sulfur balance shall be maintained at the refinery as a part of the environmental data on regular basis. The basic component of sulfur balance include sulfur input through feed (sulfur content in the crude oil), sulfur output from refinery through products, by products, atmospheric emissions etc.	Noted
viii.	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 Maharashtra 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.	Complied
ix.	Ambient air quality data shall be collected as per N AAQES standards notified by the ministry on 16 <sup>th</sup> November 2009 and trend analysis wrt past monitoring results shall be also carried out. Adequate measures based on the trend analysis shall be taken to improve the ambient air quality in the project area.	Complied
x.	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 where ever noise pollution exceeds the limit.	Noted  Power is being provided to CCR unit from Captive Power Plant existing at the refinery or is being imported from Tata Electric Company.  Additional DG set is not required for CCR unit.
xi.	Total raw water requirement for the proposed project shall not exceed 4995 m <sup>3</sup> /day and prior permission shall be taken from competent authority. Industrial effluent generation from CCR unit shall not exceed 129 m <sup>3</sup> /day. Industrial effluent shall be treated in	Complied

	effluent treatment plant. Treated effluent shall be recycled /re-used in the existing cooling tower. Domestic sewage shall be treated in sewage treatment plant. (STP)	
xii.	Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	Complied
xiii.	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.	Not Applicable  There is no coker installed at BPCL Mumbai Refinery.  There is no oily sludge generation from CCR complex.  Other Oily sludge generated in the refinery is subject to mechanical/chemical treatments for oil recovery and the residual sludge is bio-remediated through M/s MIEBRS bacteria to reduce oil content below 0.5 wt% before it can be disposed off as per Hazardous waste Rule 2016.
xiv.	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 off as per Hazardous waste (Management, Handling and Trans-boundary movement) rules 2008 and amended time to time.	Complied
xv.	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.	Complied
xvi.	Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.	Complied  Closed sampling system has been provided to avoid spillage/leakage of oil.  Gully Suckers are available to take care of any spillage. Close Blow down system is operational for close draining of

		hydrocarbons during maintenance activity. Oil catchers are provided for removing oil from water going out of refinery.
xvii.	The company shall strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP)	Complied Please refer <b>Annexure-10</b> .
xviii.	To prevent fire and explosion at oil and gas facility, potential ignition sources shall be kept to minimum and adequate separation distance between potential ignition sources and flammable materials shall be in place.	Complied.
xix.	Green belt shall be developed at least in 33% of the plant area in and around the plant premises to mitigate the effect of fugitive emissions all around the plant as per the CPCB guidelines.	Please refer GTU compliance report as on 31.03.2023.
xx.	All the recommendations mentioned in the rapid risk assessment report, disaster management plan, and safety guidelines shall be implemented.	Complied
xxi.	All the issues raised and commitment made during public hearing/consultation meeting held on the 25 <sup>th</sup> September 2012 shall be satisfactorily implemented. Accordingly, provision of budget to be kept.	Complied
xxii.	Company shall adopt Corporate Environment policy as per ministry's O.M. No J-11013/41/2006-IA II(I) dated 26 <sup>th</sup> April 2011 and implemented.	BPCL MR is an ISO 14001 certified company. Quality, Environment, Occupational Health & Safety policy as per Integrated Management System.
xxiii.	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.	Project is completed and commissioned.

<b>SR. NO.</b>	<b>GENERAL CONDITIONS</b>	<b>Status as on 31.03.2023</b>
i.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board	Complied

	(SPCB), state government and any other statutory authority.	
ii.	No further expansion or modifications in the project shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviation or alterations in the project proposed 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	Noted
iii.	The project authorities must strictly comply with the rules & regulation 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.	Complied
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, enclosure etc, on all sources of noise generation. The ambient noise levels should conform the standards prescribed under Environmental (Protection) Act, 1986 Rules and 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Complied
v.	A separate environment management cell equipped with full-fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.	Complied
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 Ministry of Environment and Forests as well as state government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	Complied
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 should be submitted to them regularly.	Complied

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.	Complied
ix.	The project proponent shall upload the status of compliance of the stipulated environmental conditions including the results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the regional office of MoEF, the respective zonal office of CPCB, and the SPCB. The criteria pollutant levels, namely PM10, PM2.5, SO2, NOx, 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.	Complied
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.	Complied
xii.	The project proponent shall inform the public that the project has been accorded environmental clearance by the ministry and copies of the clearance are available with the SPCB and may also be seen at website o Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This shall be advertised within	Subsequent to obtaining Env. Clearance from MoEF for CCR (1.2 MMTPA), the same was published in two newspapers (Indian Express in English & Maharashtra Times Marathi) on 13 <sup>th</sup> of June 2013.

	seven days from the date of issue of clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in vernacular language of the locality concerned, and a copy of 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.	Noted