

# Bharat Petroleum Corporation Ltd., Mumbai Refinery

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## 1. 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

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 01.10.2018
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	Being complied with.
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 regularly sent to MoEF & CC Western Regional Office at Nagpur.
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.	All stacks have been provided with analyzers for continuous online monitoring of Sox, NO <sub>x</sub> , CO & SPM. Similarly, Analyzers will be installed at GTU 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 being procured for the same.
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 will be supplied to GTU 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 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	Complied.

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	permission shall be obtained from competent authority. About 300 m <sup>3</sup> /hr of cooling water blow down will be discharged to sea.	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. Comprehensive water audit was carried out at BPCL Mumbai Refinery and report for the same is expected shortly. Please refer <b>Annexure-1</b> for Water Balance.
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 server.
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 off 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-6</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 2017-18, Form- IV was filled on 14 <sup>th</sup> June-2018.
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	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.

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	as per the CPCB guidelines in consultation with the DFO.	<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- 7</b>: Certificate from APMC Vashi).</li> <li>- In 2016-17, more than 3000 trees were planted at MIDC area at Taloja. (Refer <b>Annexure- 8</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. (Refer <b>Annexure- 4</b>: Certificate from Certificate from TMC, Thane).</li> <li>- In 2018-19, more than 1000 saplings were planted at Marine Oil Terminal area. MBPT area and inside BPCL refinery.</li> </ul>
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.	Noted. Latest standards applicable (OISD, API, ASTM, IBR) have been incorporated at the design stage itself to ensure safety and mechanical integrity of the unit.
xiii.	All the recommendations motioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	Noted. As per risk assessment report, blast proof control room has been built up at GTU site. Hydrocarbon & H2S meters will be installed at critical locations.
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.	Complied.  Please refer <b>Annexure-5</b> for Enterprises Social Commitment (ESC) expenditure details.

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xv.	Zero liquid discharge to be ensured.	Noted. At BPCL Mumbai Refinery, Effluent water, after treatment in Effluent Treatment Plant (ETP), is recycled back in process cooling tower. There are analyzers fitted at ETP outlet for PH, BOD, COD and TSS with continuous data connectivity to CPCB/ MPCB server.
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### B.GENERAL CONDITIONS:

Sr. No.	Condition	Status
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.	Complied
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.	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 & Relative humidity as per National Ambient Air Quality Standards (NAAQS). Real time AMS data is being transmitted to CPCB/ MPCB site.
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. The quality is conforming with the standard as specified in the NAAQS.

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		Ambient air Quality at North west corner of Refinery for Jan-2018 to July-2018 is attached as <b>Annexure-9</b> .
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).	Noted. Ambient Noise levels conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules. Monitoring carried out in the periphery of the refinery is attached. (Refer <b>Annexure-9</b> for Noise Monitoring Data).
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.	Complied. Rain water harvesting systems are provided at BPCL MR at 12 locations out of which RWH system at CCR & DHT SRR roof top were commissioned in June-2018. Details of total Rain water harvested are as below: 2016-17: 88 Thousand KL 2017-18: 65.7 Thousand KL
vii.	Training shall be imparted to all employees on safety & health aspects of chemicals handling. Pre –employment & routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	Complied. Safety trainings are carried out for BPCL employees as well as contractor employees which includes Hands on fire fighting, Behavior based safety training & safety in refining etc. Mandatory periodi 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 & Safety Dept.
viii.	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.	Being implemented.

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ix.	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.	Being implemented. 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.
x.	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Complied. BPCL is providing scholarships to needy students through local schools. Also felicitates 10 <sup>th</sup> & 12 <sup>th</sup> std. students every year.  E & E department carry out tree plantation and awareness functions in nearby schools as a part commitment towards sustainable environment.
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.	BPCL refinery already has an Environment section to carry out environmental management and monitoring functions.  Refinery also has a full-fledged NABL approved Laboratory.
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.	Adequate funds shall be provided towards capital and recurring cost. Various Environmental projects incurring capital expenditure are being carried out regularly.  List of recent Environment projects is attached as <b>Annexure-3</b> .

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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 / Environment</a> Clearance.
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 was sent to the regional office of MoEF, Nagpur, Zonal office of CPCB, and SRO/ RO office of MPCB in July-2018. 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) is submitted to MPCB office every year before 30 <sup>th</sup> Sept-2018 of next year.  For 2017-18 also, Form-V was submitted to MPCB on 19 <sup>th</sup> Sept-2018. ( <b>Refer Annexure-2</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 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.	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 & Maharashtra Times Marathi) on 7 <sup>th</sup> of April 2017. <b>Annexure-10 &amp; 10a.</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.	The date of financial closure shall be informed to the appropriate authorities.



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## **2. 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:

Sr. No.	SPECIFIC CONDITION	STATUS as on 01.10.2018
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 2013and 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.	Compiled Compliance reports are regularly sent to MoEF & CC Western Regional office at Nagpur.
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.  Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.
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 event of failure	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> <li>• Provision of stack dampers, on-line indication for stack</li> </ul>



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	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>temperature, excess O<sub>2</sub>.</p> <ul style="list-style-type: none"> <li>Stacks of adequate height.</li> </ul> <p>At BPCL refinery, Ambient Air Quality monitoring is carried out on regular basis which includes parameters SO<sub>x</sub>, NO<sub>x</sub>, 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> <p>Ambient air quality as monitored at refinery) is attached as <b>Annexure-9</b>.</p>
v.	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>LDAR program is already being followed in the existing refinery. 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 11</b> for typical LDAR report.</p>
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.	<p>Complied.</p> <p>Tail Gas Treatment Units (TGTU) is commissioned in Nov-2017 for improving SRU efficiency to 99.9 %. Please refer <b>Annexure- 12</b>.</p>
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.	<p>Typical Sulfur balance from the existing refinery attached as <b>Annexure-12</b></p>
viii	Ambient air quality monitoring stations,	Three Ambient Air Quality Monitoring

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	[PM10, PM2.5, 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.	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 & non methanic hydrocarbons, benzene, Ammonia, Ozone and meteorological parameters of Wind speed, wind direction, temperature, & Relative humidity is being carried out as per National Ambient Air Quality Standards (NAAQS). Real time data is continuously sent to CPCB / MPCB site. Please refer <b>Annexure-9</b> for environment monitoring reports.
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.	Ambient air quality data is being collected at three locations in the existing refinery. The quality is conforming with the standard as specified in the NAAQS.  Ambient air Quality at North west corner of Refinery is attached as <b>Annexure-9</b>
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 DHT unit from Captive Power Plant existing at the refinery. Additional requirement of power shall be imported from Tata Electric Company. DG set is not operating continuously. It supplies power to critical equipment's in the refinery only in case of total power failure.
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 GTU compliance report dated 1 <sup>st</sup> Oct-2018.  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

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		<p>2014.</p> <p>Please refer <b>Annexure-1</b> for Water Balance.</p> <p>BPCL has provided analyzers for COD, BOD, TSS, PH monitoring with direct connectivity to CPCB/ MPCB server.</p>
xiii.	Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	<p>Complied.</p> <p>Oil catchers equipped with skimmers, weirs, drum skimmer, rope skimmer, hay filters etc have been provided.</p> <p>Please refer GTU compliance report dated 1<sup>st</sup> Oct-2018.</p>
xiv.	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.	<p>Complied.</p> <p>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.</p> <p>Please refer <b>Annexure-1</b> for Water Balance.</p>
xv.	Automatic /online monitoring system ( 24X7 monitoring devices ) For flow measurement and relevant pollutants in the treatment system to be installed. The data to be made available to respective SPCB, Regional office of MoEF & CC and Company's site	<p>Complied.</p> <p>BPCL has provided analyzers for COD, BOD, TSS, PH monitoring with direct connectivity to CPCB/ MPCB server.</p>
xvi.	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.	<p>Not Applicable</p> <p>There is no coker installed at BPCL Mumbai Refinery.</p>
xvii.	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	<p>Complied.</p> <p>Please refer GTU compliance report dated 1<sup>st</sup> Oct-2018 for further details.</p>

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	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	
xviii	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. Membership certificate is attached as <b>Annexure-6</b> .
xix.	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 dated 1 <sup>st</sup> Oct-2018.
xx	Acoustic enclosure/silencer shall be installed wherever it is possible.	Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018.
xxi	The company shall strictly follow all the recommendations mentioned in the charter on Corporate Responsibility for Environmental protection (CREP).	Please refer <b>Annexure-13</b> for details of Corporate Responsibility for Environmental protection (CREP).
xxii.	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.
xxii.	To prevent fire & explosion at oil & gas facility, potential ignition, sources and flammable materials shall be in place.	Complied.
xxiii	Thick greenbelt with suitable plants species shall be developed around unit, Selection of plants a per CPCB guidelines.	Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018.
xxiv	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	Implemented.
xxv.	At least 2.5% of the total cost of the project	Complied.

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	shall be unmarked towards the Enterprise social responsibility based on need of the affected people with consultation 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.	Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018.
xxvi	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
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.	Complied
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. CCOE, OISD and other approvals taken prior to commissioning of the plant.

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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.  Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018.
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. List of recent environmental projects is attached as <b>Annexure-3</b> .
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 Six monthly compliance report is regularly sent to MOEF&CC WR office.
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 dated 1 <sup>st</sup> Oct-2018 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	Complied. Six monthly compliance statement of EC is being sent to the regional office of MoEF&CC, Nagpur zonal office of CPCB, and MPCB. The compliance report is also posted on the BPCL corporate website.  Environmental display board

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	location near main gate of the company in public domain.	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 sent to the regional office of MoEF&CC, Vadodara zonal office of CPCB and MPCB office.
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  Please refer GTU compliance report dated 1st Oct-2018 for further details.
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.	The date of financial closure shall be informed to the appropriate authorities.



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## **3. Compliance Status Report for Conversion of existing Catalytic Reformer Unit (CRU) to Isomerization Unit 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 8th 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), Project was completed and commissioned in Jan-2017.

The detailed compliance status is given below:

<b>Sr. No.</b>	<b>Specific Condition</b>	<b>Status as on 01.10.2018</b>
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.	Analyzers are installed at ISOM stack 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 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.	Please Refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.

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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.	LDAR programme is already being followed in the existing refinery. Valves, pumps, pipelines, equipment's, etc are being regularly monitored for identifying VOC emissions and rectifying the identified leaks. HC leak detectors have been provided in the plant area at strategic locations. Preventive maintenance schedule exists for all critical pumps/compressors and is being adhered to.  Please refer <b>Annexure-11</b> for LDAR report details.
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.	Typical Sulfur balance from the existing refinery attached as <b>Annexure-12</b> .
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.	Please Refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.
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.	Please Refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.
x.	The gaseous emissions from DG set shall be	Compiled

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	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.	Power will be 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 not exceed 16500 m <sup>3</sup> /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).	Complied. Treated effluent water from ETP is fully recycled to various raw water cooling towers as make up. 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.
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 Oil Zapper bacteria supplied by M/S OTBL. Report regarding sludge is sent to MPCB.
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.	BPCL MR has membership of Mumbai Waste Management Limited, which is authorized TSDF. A membership certificate is attached as <b>Annexure-6</b> .

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	Spent catalyst shall be sent to authorized recyclers/re-processors.	
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. Vacuum operated truck system 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-13</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.	Latest standards applicable (OISD, API, ASTM, IBR) have been incorporated at the design stage itself to ensure safety and mechanical integrity of the unit.
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.	Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.
xx.	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.
xxi.	Company shall adopt Corporate Environment Policy as per the Ministry's OM No J-11013/41/2006-IA II(I) dated 26th 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.	Housing facilities was provided by individual contractors for their workmen in the vicinity of Mumbai Refinery site. The basic facilities such as mobile toilets, clean drinking water, and emergency medical facility was also provided for construction labour at ISOM site.

Sr. No.	General Condition	Status as on 01.10.2018
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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	Complied
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	Adequate funds shall be provided towards capital and recurring cost. Various Environmental projects incurring capital expenditure are being carried out regularly. List of recent Environmental projects is attached as <b>Annexure-3</b>

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	provided shall not be diverted for any other purpose.	
vii.	The Regional Office of this Ministry / Central Pollution control Board / State Pollution Control Board will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation should be submitted to them regularly.	Six monthly compliance Report is submitted for the Environmental Clearances granted to BPCL MR to WR office of MoEF & CC.
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 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 statement of EC is being sent to the regional office of MoEF, Vadodara zonal office of CPCB, and MPCB. The compliance report is also posted on the 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	Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.

## Bharat Petroleum Corporation Ltd., Mumbai Refinery

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	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.	
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 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 ISOM, dt 8th August-14, the same was published in two newspapers (Indian Express in English & Maharashtra Times Marathi) on 3rd 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.	Compiled



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## **4. Compliance Status Report for Construction of new Crude Distillation Unit and Vacuum Distillation Unit 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 1.10.2018)**

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 Dec-2015.

### **SPECIFIC CONDITIONS:**

Sr. No.	SPECIFIC CONDITION	STATUS as on 01.10.2018
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.	Compliance reports are being regularly sent to MoEF western Regional office Nagpur.
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	Being complied with.
III.	Continuous on-line stack monitoring for SO <sub>2</sub> , NO <sub>x</sub> and CO of all the stacks shall be carried out. Low NO <sub>x</sub> burners shall be installed.	Analyzers are installed at new CDU/VDU (CDU4) stacks for continuous on-line monitoring of SO <sub>2</sub> , NO <sub>x</sub> , and CO. Low NO <sub>x</sub> burners are provided.  Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.
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	The following features at new CDU/VDU (CDU4) will ensure process emissions to conform with the standards prescribed under EPA

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	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 shall be immediately put out of operation and shall not be restarted until the desired efficiency of the pollution control device has been achieved.	<ul style="list-style-type: none"> <li>• Low sulfur fuel is fired in the furnaces</li> <li>• Air pre heater 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> </ul> <p>Please refer GTU compliance report dated 1<sup>st</sup> Oct-2018 for further details.</p>
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.	<p>LDAR program is already being followed in the existing refinery. Valves, pumps, pipelines, equipment's, etc are being regularly monitored for identifying and rectifying sources of VOC emissions.</p> <p>HC leak detectors have been provided in the plant area at strategic locations. Preventive maintenance schedule exists for all critical pumps/compressors and is being adhered to.</p> <p>Please refer Annexure-11 for typical LDAR report details.</p>
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 %.	Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.
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.	Typical Sulfur balance from the existing refinery attached as <b>Annexure-12</b>
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	Three Ambient Air Quality Monitoring Stations (AMS 1/2/3) exist in the refinery for on-line monitoring concentration of PM-2.5, SO <sub>2</sub> , NO <sub>x</sub> ,

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	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.	H2S, CO, Methanic & non methanic hydrocarbons, ozone, ammonia, benzene and meteorological parameters of Wind speed, wind direction, temperature, & Relative humidity. Online Data already sent to CPCB site. Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.
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.	Ambient air quality data is being collected at three locations in the existing refinery. The quality is conforming to the standard as specified in the NAAQS. Quality at "North West Corner of the Refinery" for (Apr-2018 to July-2018) is attached as <b>Annexure-9</b> .
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 will be supplied to new CDU/VDU (CDU4) 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 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).	Raw water requirement for refinery and generation of effluent from new CDU/VDU (CDU4) is complied with. Treated effluent water from ETP is fully recycled to various raw water cooling towers as make up. A new Sewage Treatment plant with a capacity of 250 CMD has been commissioned in the month of Dec'2014. Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details. Please refer <b>Annexure-1</b> for Water Balance.

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xii.	Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.
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 Oil Zapper bacteria supplied by M/S OTBL. Data related to oily sludge is submitted to state pollution Control Board MPCB.
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	Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.
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 are authorized TSDF. Membership certificates are attached as <b>Annexure-6</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 exists. Closed sampling system has been provided to avoid spillage/leakage. Vacuum operated truck system is available in the refinery to take care of any spillages.  Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.
xvii.	The company shall strictly follow all the	Please refer <b>Annexure-13</b> for details

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	recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).	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.	Latest standards applicable (OISD, API, ASTM, IBR) have been incorporated at the design stage itself to ensure safety and mechanical integrity of the unit.
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.	New CDU/VDU (CDU4) unit is within the premises of existing Mumbai Refinery. Tree plantation is restricted around to new CDU/VDU (CDU4) due to space constraint and safety considerations. Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018.
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.	Points were addressed during public hearing are 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.	Housing facilities were provided by individual contractors for their workmen in the vicinity of Mumbai Refinery site. The basic facilities such as mobile toilets, clean drinking water, and emergency medical facility were also provided for construction labour at to new CDU/VDU (CDU4) site.

### A. GENERAL CONDITIONS :

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Sr. No.	Condition	Status as on 01.10.2018
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.	Complied
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.	CCOE, OISD and other approvals taken before commissioning of the plant.
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).	Noise levels conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules. Monitoring carried out in the periphery of the refinery confirms the same.
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 Environmnet and Forests as well as state government along with the implementation	Adequate funds are being provided for environmental pollution control measurement.  Various Environmental projects incurring capital expenditure are being carried out regularly. List of recent

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	schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	Environmental projects is attached as <b>Annexure-3</b>
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.	Six monthly compliance report is submitted for the Environmental Clearances granted to BPCL MR to WR office of MoEF & CC.
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.	Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.
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	<p>Six monthly compliance statement to EC is sent to the regional office of MoEF, Vadodara zonal office of CPCB, and MPCB.</p> <p>The compliance report is also posted on the BPCL corporate website.</p> <p>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.</p>
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.	<p>Six monthly compliance statement to EC is being sent to the regional office of MoEF, Vadodara zonal office of CPCB, and MPCB.</p> <p>The compliance report is also posted on the BPCL corporate website.</p>
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	Duly filled form V (Environment Statement) being submitted to MPCB for the financial year before the 30th of



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	<p>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>September.</p> <p>Please refer GTU compliance report dated 1<sup>st</sup> Oct-2018 for further details.</p>
xviii.	<p>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.</p>	<p>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 &amp; Maharashtra Times Marathi) on 18<sup>th</sup> of June 2013.</p>
xix.	<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>Shall be informed to the appropriate authorities</p>

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

EC letter No: 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 MMT) 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.

<b>Sr. No.</b>	<b>SPECIFIC CONDITIONS</b>	<b>STATUS as on 1.10.2018</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	Compliance reports sent to MoEF & CC western Regional office. Project has been commissioned on 4 <sup>th</sup> March-2014.
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	Please Refer GTU compliance report dated 1 <sup>st</sup> Oct-2018.
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  Analyzers have been installed at CCR & NHT stacks for continuous on-line monitoring of SO <sub>2</sub> and NO <sub>x</sub> . Low NO <sub>x</sub> burners have been installed at CCR & NHT furnaces.  Please Refer GTU compliance report dated 1 <sup>st</sup> Oct-2018 for further details.
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	The following features at CCR ensure process emissions to conform to the standards prescribed under

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	<p>(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.</p>	<p>EPA</p> <ul style="list-style-type: none"> <li>• Amine treated fuel gas and RLNG is being fired in the furnaces</li> <li>• Air preheated 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.CCR (88.5m), NHT (75 m).</li> </ul> <p>At BPCL refinery, Ambient Air Quality monitoring is carried out on regular basis which includes parameters SO<sub>x</sub>, NO<sub>x</sub>, 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> <p>Ambient air quality as monitored at refinery ) is attached as <b>Annexure-9</b></p>
<p>v.</p>	<p>Leak detection and Repair program shall be prepared and implemented to control HC/VOC emissions. Focus shall be given to prevent fugitive emissions for which preventive maintenance of pumps, valves, pipelines are required. Proper maintenance of mechanical 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.</p>	<p>LDAR program is already being followed in the existing refinery. Pumps, Valves, flanges, pump seals, equipments, etc are being regularly monitored for identifying and rectifying sources of VOC emissions.</p> <p>HC leak detectors have been provided in the plant area at strategic locations.</p> <p>Please refer <b>Annexure-11</b> for typical LDAR monitoring report.</p>
<p>vi.</p>	<p>SO<sub>2</sub> emissions after expansion from the plant shall not exceed 12 TPD. Sulfur recovery units shall be 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%.</p>	<p>Amine treated refinery fuel gas is being used as fuel in the CCR &amp; NHT furnaces.</p> <p>Efficiency of existing Sulfur Recovery Units (SRU) is 99%. In Nov-2017, Tail Gas Treatment Unit (TGTU) has</p>

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		<p>been commissioned which has improved sulfur recovery efficiency to 99.9 %.</p> <p>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.</p> <p>Please refer <b>Annexure- 12</b> for further details.</p>
vii.	<p>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.</p>	<p>Typical Sulfur balance from the existing refinery attached as <b>Annexure-12</b>.</p>
viii.	<p>Ambient Air quality monitoring stations {PM<sub>10</sub>, PM 2.5, 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>Ambient Air Quality Monitoring Stations exist in the refinery for on-line monitoring concentration of PM-2.5, SO<sub>2</sub>, NO<sub>x</sub>, H<sub>2</sub>S, CO, Methanic &amp; non methanic hydrocarbons, ozone, ammonia, benzene and meteorological parameters of Wind speed, wind direction, temperature, &amp; Relative humidity at AMS no 1.</p> <p>Please refer GTU compliance report for further details.</p>
ix.	<p>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.</p>	<p>Ambient air quality data is being collected at three locations in the existing refinery. The quality is conforming to the standard as specified in the NAAQS. Ambient air Quality at is attached as <b>Annexure-9</b>.</p>
x.	<p>The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be</p>	<p>Not Applicable</p> <p>Power is being provided to CCR unit</p>

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	provided to the DG sets to mitigate the noise pollution. Besides acoustic enclosure/silencer shall be installed where ever noise pollution exceeds the limit.	<p>from Captive Power Plant existing at the refinery or is being imported from Tata Electric Company.</p> <p>DG set is not operating continuously. It supplies power to critical equipments in the refinery only in case of total power failure.</p>
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 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)	<p>Complied.</p> <p>Treated effluent is fully recycled /re-used in the existing process cooling towers.</p> <p>New Sewage Treatment plant with a capacity of 250 CMD has been commissioned in the month of Dec'2014.</p> <p>Please refer <b>Annexure-1</b> for Water Balance.</p>
xii.	Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	<p>Complied.</p> <p>There are 3 oil catchers inside BPCL premises equipped with all facilities for removal of oil.</p>
xiii.	Oily sludge shall be disposed off into Coker. Annual oily sludge generation and disposal data shall be submitted to the ministrys Regional office and CPCB.	<p>Not Applicable</p> <p>There is no coker installed at BPCL Mumbai Refinery.</p> <p>There is no oily sludge generation from CCR complex.</p> <p>Other Oily sludge generated in the refinery is subject to mechanical/chemical treatments for oil recovery, and the residual sludge is bio-remediated using Oil Zapper bacteria.</p>
xiv.	The company should strictly comply with the rules and guidelines under manufacture, storage and import of hazardous chemicals Rules 1989	<p>Complied</p> <p>Spent catalyst will be generated from various catalyst beds during</p>

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	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.	turnarounds.  As per MPCB consent for 2017-18, Form IV was submitted to MPCB office on 14 <sup>th</sup> June-2018.
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 with M/s Mumbai Waste Management Ltd. Membership certificate is attached as <b>Annexure-6</b> .
xvi.	Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.	Closed sampling system has been provided to avoid spillage/leakage of oil.  Vacuum operated trucks 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-13</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.	Latest standards applicable (OISD, API, ASTM, IBR) have been incorporated at the design stage itself to ensure safety and mechanical integrity of the unit.
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 dated 1 <sup>st</sup> Oct-2018.
xx.	All the recommendations mentioned in the rapid	Quantitative Risk Assessment for

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	<p>risk assessment report, disaster management plan, and safety guidelines shall be implemented.</p>	<p>BPCL MR considering CCR and CDU/VDU-4 project was carried out by M/s EIL.</p> <p>All the recommendations for mitigating risks are being implemented.</p> <p>As per ER DMP Act, new Emergency Response Disaster Management Plan prepared, and same has been approved and certified by DMI (Disaster Management Institute) Bhopal in June-13.</p>
xxi.	<p>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.</p>	<p>The following commitments made during public hearing are complied:</p> <ul style="list-style-type: none"> <li>• Continue the existing mock drills</li> <li>• Ensure adherence to on-site and offsite DMP</li> <li>• Use of clean fuel to ensure no impact on SO2 emission</li> <li>• Installation of Low NOx burners</li> </ul>
xxii.	<p>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.</p>	<p>BPCL MR is an ISO 14001 certified company. Quality, Environment, Occupational Health &amp; Safety policy as per Integrated Management System.</p>
xxiii.	<p>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.</p>	<p>Housing facilities was provided by individual contractors for their workmen in the vicinity of Mumbai Refinery site. The basic facilities such as mobile toilets, clean drinking water, and emergency medical facility was also provided during construction at CCR site and these facilities are being provided during all projects.</p>

SR. NO.	GENERAL CONDITIONS	STATUS as on 1.10.2018



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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 OISD check listing of facilities prior to commissioning was done in the month of May-13.  Project was commissioned on 4 <sup>th</sup> Mar-2014.
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).	Noise levels conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules. Monitoring is being carried out in the periphery of the refinery including process plants.
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.	BPC 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/annum for environment pollution control measures and shall be used to	Please refer <b>Annexure-3</b>

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	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.	
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 submitted regularly for the Environmental Clearances granted to BPCL MR to western region of MOEF office Nagpur, Vadodara zonal office of CPCB, and MPCB office.
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.  Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018.
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.	Six monthly compliance statement of EC is sent to the regional office of MoEF, Vadodara zonal office of CPCB, and MPCB office. The compliance report is also posted on the BPCL corporate website.  Environmental display board has been provided at 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 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	Complied. The six monthly compliance statement to EC is being sent to the regional office of MoEF, Vadodara zonal office of CPCB, and MPCB.

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	zonal office of CPCB, and the SPCB. The Regional office of this ministry, /CPCB/SPCB shall monitor the stipulated conditions.	The compliance report is also posted on the BPCL corporate website.
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.  Duly filled form V (Environment Statement) is submitted to MPCB for the financial year before the 30th of September.  Please refer GTU compliance report dated 1 <sup>st</sup> Oct-2018.
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 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.
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.