

Half Yearly EC Compliance Report

Period: Apr-2022 to Sep-2022

BPCL, Mumbai Refinery

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

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

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

GTU plant was commissioned on 22nd Oct 2019.

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

A. SPECIFIC CONDITIONS :

Sr. No.	SPECIFIC CONDITION	STATUS as on 01.12.2022
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 th March,2008	Complied
ii.	Compliance to all the environmental conditions stipulated in the environmental clearance letter no. J J-11011/582/2011-IA II (I) dated 7 th June'2013, letter no. J-11011/140/2012-IA II (I) dated 12 th June 2013, letter no.-J-11011/270/2013-IA II (I) dated 8 th August 2014 and letter no. J-11011/21/2013-IA II (I) dated 13 th August 2015, shall be satisfactorily implemented and compliance reports submitted to the Ministry's Regional Office.	Complied Compliance reports are uploaded on PARIVESH portal on 6 monthly basis.
iii.	Continuous on-line stack monitoring for SO ₂ , NO _x and CO of all the stacks shall be carried out. Low NO _x burners shall be installed.	The following features at GTU ensure process emissions to confirm to the standards prescribed under EPA <ul style="list-style-type: none"> • Air preheater provided for improving efficiency • Provision of stack dampers, on-line indication for stack temperature, excess O₂ • Stacks of adequate height • Analyzers have been installed at GTU stacks for continuous on-line monitoring of SO₂, NO_x CO and PM. • Low NO_x burners have been installed at two furnaces of GTU. <p>Similarly, all stacks in BPCL MR have been provided with analyzers for continuous online monitoring of SO_x, NO_x, CO & SPM.</p>

		Stack analyzers are connected to MPCB and CPCB servers for real time data transmission.
iv.	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Besides, acoustic enclosure/silencer shall be installed wherever noise levels exceed the limit.	Noted Power is supplied to GTU unit from existing Captive Power Plant at Mumbai Refinery or shall be imported from Tata Electric Company, if required. Additional DG set is not required for GTU unit and Existing refinery DG set is not operating continuously. It supplies power to critical equipment's in the refinery only in case of total power failure.
v.	Fresh water requirement from MCGM shall not exceed 15950 m ³ /day. After expansion and prior permission shall be obtained from competent authority. About 300 m ³ /hr of cooling water blow down will be discharged to sea.	Complied Please refer Annexure-1 for Water Balance.
vi.	Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MoEF & CC. Outcome from the report to be implemented for conservation scheme.	Noted Last water audit was carried out in 2018 through M/s CII. 5 recommendations out of 7 have been completed and 2 are in progress.
vii	Automatic/online monitoring system (24 X 7 monitoring devices) for flow measurement and relevant pollutants in the treatment system to be installed. The data to be made available to the respective SPCB, Regional Office of MoEF&CC and in the Company's website.	Complied On line analyzers have been provided at Effluent Treatment Plant outlet for measuring PH, BOD, COD & TSS with continuous connectivity to CPCB/ MPCB servers. ETP outlet water is 100% recycled to raw cooling water towers make up (ZLD).
viii	The Company should strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 and January, 2000. Hazardous waste should be disposed of as per Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and amended time to time.	Complied Hazardous Waste is disposed of as and when generated as per Hazardous waste rules and as per Consent to Operate issued by MPCB to MPCB approved Recycler party M/s MWML (Mumbai Waste Management Ltd.). (Refer Annexure-2 : Membership Certificate of M/s MWML). Hazardous Waste annual return form (Form-IV) is filled up every year before 30 th June of every year for previous financial year.

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

		<p>Railway Station Mumbai through M/s Green Yatra. Also, a total of 145 number of trees of native species were planted at Trees for Tigers, Panna, Tiger Reserve, Madhya Pradesh, India through M/s Grow Trees.</p> <p>- In Jun-2022 around 400 trees have been planted by BPCL MR at Sewree and Mahul locations.</p>
xii.	The company should make the arrangement for protection of possible fire and explosion hazards during construction and operation phase. To prevent fire and explosion at oil and gas facility, potential ignition sources shall be kept to a minimum and adequate separation distance between potential ignition sources and flammable materials shall be in place.	Complied
xiii.	All the recommendations motioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	<p>Complied</p> <p>As per risk assessment report, blast proof control room has been built up at GTU site. Hydrocarbon & H2S meters has been installed at critical locations.</p>
xiv.	At least 2% of the total cost of the project shall be earmarked towards the Enterprises Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry Of Regional Office. Implementation of such program shall be ensured accordingly in a time bound manner.	<p>Noted</p> <p>Please refer Annexure-6 for Enterprises Social Commitment (ESC) expenditure details.</p>
xv.	Zero liquid discharge to be ensured.	<p>Noted</p> <p>There is no additional requirement of fresh water and no additional generation of effluent from GTU project.</p> <p>ETP outlet water is 100% recycled to process cooling towers (ZLD).</p>

B.GENERAL CONDITIONS:

Sr. No.	Condition	Status as on 01.12.2022
i.	The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board (SPCB), State Government and any other statutory authority.	Complied

ii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In case of deviations or alterations in the project proposed from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Noted
iii.	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one station is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	<p>Three Ambient Air Quality Monitoring Stations are existing in the refinery for on-line monitoring of PM-10, PM-2.5, SO₂, NO_x, 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.</p> <p>Also, online data of parameters namely Benzene, Toluene, O/M/P- Xylene and Methane & Non Methane hydrocarbon from AMS have been successfully connected and transmitted to MPCB and CPCB servers since 31st Dec 2018.</p> <p>Also, Mercaptan analyzer has been installed at AMS and data is being transmitted to MPCB/CPCB servers.</p> <p>As per MPCB, there is no additional requirement of Continuous Ambient Air Quality Monitoring Station for GTU project.</p>
iv.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No.826 (E) dated 16 th November, 2009 shall be followed.	Ambient Air quality data is being collected at three locations in the existing refinery (AMS-1/2/3). The quality is conforming to the standard as specified in the NAAQS.
v.	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules and 1989 viz. 75 dBA (daytime) and 70 dBA (night time).	<p>Noted</p> <p>Ambient Noise levels conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules.</p> <p>Also, sign painting is done for High Noise area and instructions have been mentioned to use PPEs.</p>
vi.	The company shall harvest rain water from roof tops of the buildings and storm water drains to recharge the ground water and use the same waste for the process activities to the project to conserve fresh water.	<p>Complied</p> <p>Rain water harvesting systems are provided at BPCL MR at 14 locations out of which RWH system at DHDS & DHT</p>

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

xi.	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	There is no requirement of additional Laboratory for GTU Project. Existing BPCL Laboratory is used for GTU. Refinery has a full-fledged NABL approved Laboratory. BPCL refinery already has an Environment section to carry out environmental management and monitoring functions.
xii.	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management / pollution control measures shall not be diverted for any other purpose.	Various Environmental projects incurring capital expenditure are being carried out regularly.
xiii.	A copy of clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad / Municipal Corporation, Urban local Body and the Local Body and the local NGO, if any from whom any suggestions / representations, if any, from whom suggestions / representations, if any, were received while processing the proposal.	Complied Environment Clearance letter has been put on the BPCL corporate website www.bharatpetroleum.in/EnergizingEnvironment/Health Safety & Environment/ . Environment Clearance letter has been sent to Municipal corporation
xiv.	The project proponent shall also submit six monthly reports on status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environment Clearance and six monthly compliance status report shall be posted on the website of the company.	Complied. Six monthly compliance statement is uploaded on PARIVESH portal of MoEF&CC and soft copy is sent to CPCB, and SRO/ RO office of MPCB through e-mail. The Environment Clearance and six monthly compliance report was also posted on the BPCL corporate website.
xv.	The Environmental Statement for each financial year ending 31 st March in Form-V as is mandated to be submitted to the concerned State Pollution Control Board as prescribed under Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the web site of company along with compliance of Environmental Clearance conditions and shall also be sent to the respective Regional Office of MoEF&CC by e-mail.	Duly filled form V (Environment Statement) for every financial year is submitted to MPCB office before 30 th Sept of every assessment year. For 2021-22 also, Form-V was submitted to MPCB on 25 th Sept-2022. Please refer Annexure- 7 .
xvi.	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be	Subsequent to obtaining Env. Clearance from MoEF for GTU, dt 20 th March-17, the same was published in two newspapers (Indian Express in English &

	seen at Website of Ministry at http://moef.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of same shall be forwarded to the Regional Office of the Ministry.	Maharashtra Times Marathi) on 7 th of April 2017. Annexure- 8 & 8a.
xvii.	The project authorities shall inform the Regional office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Complied

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

EC Letter no. J-11011/21/2013-1A II (I) dated 13th 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 01.12.2022
i.	Compliance to all the environmental conditions stipulated in the environmental clearance letter no. J-11011/180/2008-IA II(I) dated 28 th April, 2008 , F.No.J-11011/140/2012-IA II I dated 12 th June 2013, J-11011/582/2011-IA II (I) dated 7 th June 2013 and J-11011/270/270/2013-IA (I) dated 8 th August 2014 , shall be satisfactorily implemented and compliance reports submitted to Ministry's regional office at Bhopal.	Complied Compliance reports are uploaded on PARVISH portal of MoEF & on six monthly basis.
ii.	M/s BPCL shall comply with new standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules. 1986 vide G S R 186(E) dated 18 th March, 2008.	Complied
III.	Continuous on-line stack monitoring for SO ₂ , NO _x and CO of all the stacks shall be carried out. Low NO _x burners shall be installed.	Analyzers are installed at DHT stacks for continuous on-line monitoring of SO ₂ , NO _x CO and PM. Low NO _x burners are provided.
iv	The process emissions [SO ₂ , NO _x , HC (Methane & No-methane)], VOCs and Benzene from various units shall conform to the standards prescribed under the Environment (Protection) Act. At no time the emission levels shall go beyond the stipulated standards. In the	The following features at DHDT process emissions to conform with the standards prescribed under EPA <ul style="list-style-type: none"> • Fuel gas is fired in the furnaces. • Air pre-heater provided for improving efficiency

	<p>event of failure of pollution control system(s) adopted by the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency of the pollution control device has been achieved.</p>	<ul style="list-style-type: none"> • Provision of stack dampers, on-line indication for stack temperature, excess O₂. • Stacks of adequate height. <p>At BPCL refinery, Ambient Air Quality monitoring is carried out on regular basis which includes parameters SOX, NO_x, CO, O₃, NH₃, PM-10. PM-2.5, Hydrocarbon. Also analyzers have been installed at each AMS for transmitting data to MPCB/ CPCB server.</p>
v.	<p>Leak Detection and Repair program shall be prepared and implemented to control HC/VOC emissions. Focus shall be given to prevent fugitive emission for which preventive maintenance of pumps, valves, pipelines are required. Proper maintenance of mechanical seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to. Fugitive emissions of HC from product storage tank yard etc. must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations.</p>	<p>LDAR program is already being followed in the existing refinery as per GSR-186 (E). Compressors, exchangers, pumps, valves, equipment's, etc are being regularly monitored for identifying VOC emissions and rectifying the identified leaks.</p> <p>HC leak detectors are provided in the plant area at strategic locations.</p> <p>Preventive maintenance schedule exists for all critical pumps / compressors and is being adhered to.</p> <p>In consecutive quarterly LDAR reports of Jun-2019 & Oct-2019, the component wise leaks were less than 2%. Hence, as per GSR-186 (E) next LDAR monitoring of all refinery units will be carried out on half yearly basis.</p> <p>Please refer Annexure-9 for typical LDAR report and Annexure -10 for Note file for revision in LDAR monitoring frequency.</p>
vi.	<p>SO₂ emissions after expansion from the plant shall not exceed 10.44 TDP, Sulphur recovery units shall be installed for control of H₂S emissions.</p>	<p>Complied</p>
vii	<p>As proposed, record of sulphur balance shall be maintained at the Refinery as part of the environmental data on regular basis. The basic component of sulphur balance include sulphur input through feed (sulphur content in crude oil), sulphur output from Refinery through products, byproduct (elemental sulphur), atmospheric emissions etc.</p>	<p>Noted</p>
viii	<p>Ambient air quality monitoring stations, [PM₁₀, PM_{2.5}, SO₂, NO_x, H₂S, mercaptan, non-methane-HC and Benzene] shall be set up in the complex in consultation with Maharashtra Pollution Control Board, based on occurrence of maximum ground level</p>	<p>Three Ambient Air Quality Monitoring Stations are existing in the refinery. On-line monitoring of PM-10, PM-2.5, SO₂, NO_x, H₂S, CO, Methanic & non methanic hydrocarbons, benzene, Ammonia,</p>

	concentration and down-wind direction of wind. The monitoring network must be decided based on modeling exercise to represent short term GLCs.	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.
ix	Ambient air quality data shall be collected as per NAAQEA standards notified by the Ministry on 16 th 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 through third party. The quality is conforming with the standard as specified in the NAAQS.
x.	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Besides, acoustic enclosure/silencer shall be installed wherever noise levels exceed the limit.	Noted Power is supplied to DHT unit from Captive Power Plant existing at the refinery. Additional requirement of power shall be imported from Tata Electric Company. Additional DG set is not required for DHT unit.
xi.	Total fresh water requirement from Municipal Corporation of Greater Mumbai after expansion shall not exceed 16,100m ³ /day. After expansion and prior to permission shall be obtained from competent authority.	Complied Please refer Annexure-1 for Water Balance.
xii	Industrial effluent generation shall not exceed 155 m ³ /Hr and treated in effluent treatment plant. Treated effluent shall be fully as make-up water for raw water cooling towers. Domestic Sewage shall be treated in sewage treatment plant (STP)	Treated effluent is fully recycled as make water to various raw water cooling towers in the Refinery. A new Sewage Treatment plant with a capacity of 250 CMD for administrative block has been commissioned in Dec 2014. Please refer Annexure-1 for Water Balance. BPCL has provided analyzers for COD, BOD, TSS, PH monitoring with direct connectivity to CPCB/ MPCB server.
xiii	Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	Complied Oil catchers equipped with skimmers, weirs, drum skimmer, rope skimmer, hay filters etc have been provided.
xi v.	As committed, BPCL needs to implement the outcome of study for water reduction and its optimize use as result of water auditing. No process effluent shall be discharged outside the premises.	Complied Treated effluent is fully recycled as make water to various raw water cooling towers in the Refinery. BPCL has provided analyzers for COD, BOD, TSS, PH

		<p>monitoring with direct connectivity to CPCB/ MPCB server.</p> <p>Please refer Annexure-1 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	Complied BPCL has provided analyzers for COD, BOD, TSS, PH monitoring with direct connectivity to CPCB/ MPCB server.
xv i.	Oily sludge shall be disposed off into Cocker. Annual oily sludge generation and disposal data shall be submitted to Ministry of Regional offices and CPCB.	Not Applicable There is no coker installed at BPCL Mumbai Refinery.
xv ii.	The Company should strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules,1989 as amended in October, 1994 and January,2000 Hazardous waste should be disposed of as per Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and amended time to time	Complied
xv iii.	The membership of common TSDF should be obtained for the disposal of hazardous waste. Copy of authorization or membership of TSDF should be submitted to Ministry's Regional Office at Bhopal Chemical/inorganic sludge shall be sent to treatment storage disposal facility (TSDF) for hazardous waste. Spent catalyst shall be sent to authorize recyclers/re-processors.	BPCL MR has membership of Mumbai Waste Management Limited, which is authorized TSDF. Membership certificate is attached as Annexure-2 .
xi x.	Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.	Complied Please Refer GTU compliance report as on 01.12.2022 for further details.
xx	Acoustic enclosure/silencer shall be installed wherever it is possible.	Please Refer GTU compliance report as on 01.12.2022 for further details.
xx i	The company shall strictly follow all the recommendations mentioned in the charter on Corporate Responsibility for Environmental protection (CREP).	Please refer Annexure-11 for details of Corporate Responsibility for Environmental protection (CREP).
xx ii.	To prevent fire and explosion at oil and gas facility, potential ignition sources shall be kept to a minimum and adequate separation distance between potential ignition source and flammable material shall be in place.	Complied.
xx ii.	To prevent fire & explosion at oil & gas facility, potential ignition, sources and flammable materials shall be in place.	Complied.

xx iii.	Thick greenbelt with suitable plants species shall be developed around unit, Selection of plants a per CPCB guidelines.	Please Refer GTU compliance report as on 01.12.2022 for further details.
xx iv.	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	Complied.
xx v.	At least 2.5% of the total cost of the project shall be unmarked towards the Enterprise social responsibility based on need of the affected people with consultation 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.	Complied.
xx vi	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Project is completed and commissioned.

B.GENERAL CONDITIONS:

Sr. No.	Condition	Status as on 01.12.2022
i.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), state government and any other statutory authority.	Complied
ii.	No further expansion or modifications in the project shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviation or alterations in the project proposed from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Noted
iii.	The project authorities must strictly comply with the rules & regulation under manufacture. Storage and import of Hazardous chemical Rules, 2000 as amended subsequently. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate, etc. must be obtained, wherever applicable.	Complied
iv.	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosure etc, on all sources of noise generation. The ambient noise levels should conform	Complied

	the standards prescribed under Environmental (Protection) Act, 1986 Rules and 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	
v.	A separate environmental management cell equipped with full-fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.	BPCL refinery already has an Environment section to carry out environmental management and monitoring functions. The Refinery also has a full-fledged NABL approved Laboratory.
vi.	Adequate funds shall be earmarked towards capital cost and recurring cost for environment pollution control measures and shall be used to implement the conditions stipulated by MOEF as well as state government along with implementation schedule for all the conditions stipulated herein. Funds so provided should not be diverted for any other purpose.	Adequate funds are being provided for environment pollution control measures. Various Environment projects incurring capital expenditure are being carried out regularly.
vii.	The Regional office of the Ministry/ data and the statistical interpretation shall be submitted CPCB will be monitor stipulated conditions. A six monthly compliance report and the monitored regularly.	Complied.
viii.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zillparishad / Municipal Corporation Urban Local Body and Local NGO, if any from whom any suggestions / representations, if any, here received while processing proposal. The clearance letter shall be put on web site of company proponent.	Complied. Please Refer GTU compliance report as on 01.12.2022 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 ₁₀ ,PM _{2.5} ,SO ₂ ,NOX,HC (Methane & Non-Methane) , VOC's (ambient levels as well as stack emission)or critical sectoral parameters, indicated for projects shall be monitored and displayed at the convenient location near main gate of the company in public domain.	Complied. Six monthly compliance statement of EC is being uploaded on PARIVESH portal of MoEF&CC and soft copy is being shared with CPCB and MPCB. The compliance report is also posted on the BPCL corporate website. Environmental display board has been provided at the main gate of the refinery, which continuously displays ambient air quality monitored at the north west corner of the refinery.
x.	The project proponent shall also submit six monthly reports on status of compliance of stipulated environmental conditions including results of monitored data (both in hard copies as well as by email) to the Regional office of MoEF, the respective Zonal Office of CPCB and SPCB. The Regional Office	Complied Six monthly compliance statement of EC is being uploaded on PARIVESH portal of MoEF&CC and soft copy is being shared with CPCB and MPCB.

	of Ministry/CPCB/SPCB shall monitor the stipulated conditions.	
xi.	The Environmental Statement for each financial year ending 31 st March in Form-V as mandated to be submitted by project proponent concerned SPCB as prescribed under Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the web site of company along with compliance of Environmental conditions and shall also be sent to respective Regional Office of MoEF by e-mail.	Complied
xii.	The project proponent shall inform the public that the project has been accorded environmental clearance by the ministry and copies of the clearance are available with the SPCB and may also be seen at website of Ministry of Environment and Forests at http://envfor.nic.in . 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 th August-15, the same was published in two newspapers (Indian Express in English & Maharashtra Times Marathi) on 25 th August-2015.
xiii.	Project authorities shall inform the Regional office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Noted

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

EC Letter no. J-11011/270/2013-1A II (I) dated 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), the detailed compliance status is given below:

Sr. No.	Specific Condition	Status as on 01.12.2022
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	Complied

	Environment (Protection) Rules. 1986 vide G S R 186(E) dated 18th March,2008 and GSR 820(E) dated 9th November 2012.	
iii.	Continuous on-line stack monitoring for SO ₂ ,NO _x and CO of all the stacks shall be carried out. Low NO _x burners shall be installed.	Complied
iv.	The process emissions [SO ₂ ,NO _x ,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.	Complied
v.	Leak Detection and Repair programme shall be prepared and implemented to contain HC/VOC emissions. Focus shall be given to prevent fugitive emission for which preventive maintenance of pumps, valves, pipelines are required. Proper maintenance of mechanical seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to. Fugitive emissions of HC from product storage tank yard etc. must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations.	Complied
vi.	SO ₂ emissions after expansion from the plant shall not exceed 10.44 TDP, Sulphur recovery units shall be installed for control of H ₂ S emissions. The overall sulphur recovery efficiency of Sulphur recovery unit with tail gas treating shall not be less than 99.9 %.	Tail Gas Treatment Units (TGTU) was commissioned for increasing existing SRU efficiency to 99.9%.
vii.	As proposed, record of sulphur balance shall be maintained at the Refinery as part of the environmental data on regular basis. The basic component of sulphur balance include sulphur input through feed (sulphur content in crude oil), sulphur output from Refinery through products, byproduct (elemental sulphur), atmospheric emissions etc.	Noted
viii.	Ambient air quality monitoring stations, [PM ₁₀ , PM _{2.5} , SO ₂ , NO _x , H ₂ S, mercaptan, non-methane-HC and Benzene] shall be set up in the complex in consultation with Maharashtra Pollution Control Board, based on occurrence of maximum ground level concentration and down-wind direction of wind. The monitoring network must be decided based on modeling exercise to represent short term GLCs.	Complied
ix.	Ambient air quality data shall be collected as per NAAQEA standards notified by the Ministry on 16th November, 2009 and trend analysis w.r.t. past monitoring results shall also be carried out. Adequate measures based on the trend analysis shall be taken to improve the ambient air quality in the project area.	Complied

x.	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Besides, acoustic enclosure/silencer shall be installed wherever noise levels exceed the limit.	Complied Power is supplied to ISOM unit from Captive Power Plant existing at the refinery, or shall be imported from Tata Electric Company. DG set is not operating continuously. It supplies power to critical equipments in the refinery only in case of total power failure.
xi.	Total raw water requirement from Municipal Corporation of Greater Mumbai water supply shall not exceed 16500 m ³ /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
xii.	Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	Oil catchers equipped with skimmers, weirs, oil adsorbent booms, pillows, hay filters etc have been provided.
xiii.	Oily sludge shall be disposed off into Coker. Annual Oily sludge generation and disposal data shall be submitted to the Ministry's Regional Office and CPCB.	Not Applicable There is no coker installed at BPCL Mumbai Refinery. Other Oily sludge generated in the refinery is subject to mechanical/chemical treatments for oil recovery, and the residual sludge is bio-remediated using bacteria supplied by M/S MIEBRS.
xiv.	The Company should strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 and January, 2000 Hazardous waste should be disposed of as per Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and amended time to time.	Complied
xv.	The membership of common TSDF should be obtained for the disposal of hazardous waste. Copy of authorization or membership of TSDF should be submitted to Ministry's Regional Office at Bhopal Chemical/inorganic sludge shall be sent to treatment storage disposal facility (TSDF) for hazardous waste. Spent catalyst shall be sent to authorized recyclers/re-processors.	BPCL MR has membership of Mumbai Waste Management Limited, which is authorized TSDF. A membership certificate is attached as Annexure-2 .
xvi.	Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.	Proper oil spillage prevention management plan exist. Closed sampling system has been provided to avoid spillage/leakage of oil. Gully sucker is available in the refinery to take care of any spillages.
xvii.	The company shall strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).	Please refer Annexure-11 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	Complied

	and adequate separation distance between potential ignition sources and flammable materials shall be in place.	
xix.	Green belt shall be developed at least in 45 acres area land around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Thin greenbelt with suitable plant species shall be developed around unit. Selection of plant species shall be as per the CPCB guidelines.	Tree plantation is done in and around Mumbai Region. Please refer Annexures-3/4/5.
xx.	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	Complied
xxi.	Company shall adopt Corporate Environment Policy as per the Ministry's OM No J-11013/41/2006-IA II(I) dated 26 th April 2011 and implemented.	BPCL MR is an ISO 14001 certified company. Quality, Environment, Occupational Health & Safety policy as per Integrated Management Systems is in place.
xxii.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Project is completed and commissioned.

Sr. No.	General Condition	Status as on 01.12.2022
i.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), state government and any other statutory authority.	Complied
ii.	No further expansion or modifications in the project shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviation or alterations in the project proposed from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any	Noted
iii.	The project authorities must strictly comply with the rules & regulation under manufacture. Storage and import of Hazardous chemical Rules, 2000 as amended subsequently. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate, etc. must be obtained, wherever applicable.	Complied
iv.	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosure etc, on all sources of noise generation. The ambient noise levels should conform the standards prescribed under Environmental	Complied

	(Protection) Act, 1986 Rules and 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	
v.	A separate environment management cell equipped with full fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.	BPCL MR already has an Environment section to carry out environmental management and monitoring functions. The Refinery also has a full-fledged NABL approved Laboratory.
vi.	Adequate funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures and shall be used to implement the conditions stipulated Ministry of Environment and Forests as well as state government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	Various Environmental projects incurring capital expenditure are being carried out regularly.
vii.	The Regional Office of this Ministry / Central Pollution control Board / State Pollution Control Board will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation should be submitted to them regularly.	Complied Six monthly compliance Report is being uploaded on PARIVESH portal of MoEF&CC and soft copy is being shared with CPCB and MPCB. Also, it is published on BPCL corporate website.
viii.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila parishad/Municipal Corporation, Urban local body, and the local NGO if any, from whom suggestions, representations, if any were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Complied
ix.	The project proponent shall upload the status of compliance of the stipulated environmental conditions including the results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the regional office of MoEF, the respective zonal office of CPCB, and the SPCB. The criteria pollutant levels, namely PM10, PM2.5, SO2, NOx, HC (Methane & non-methane), VOCs (ambient levels as well as stack emissions) or critical sectoral parameters indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Complied Six monthly compliance Report is being uploaded on PARIVESH portal of MoEF&CC and soft copy is being shared with CPCB and MPCB. Also, it is published on BPCL corporate website. Environmental display board has been provided at Refinery Main Gate which continuously displays ambient air quality monitored at the north west corner of the refinery.
x.	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional office of MoEF, the respective zonal office of CPCB, and the SPCB. The Regional office of this ministry, CPCB/SPCB shall monitor the stipulated conditions.	Six monthly compliance Report is being uploaded on PARIVESH portal of MoEF&CC and soft copy is being shared with CPCB and MPCB. Also, it is published on BPCL corporate website.
xi.	The Environmental statement for each financial year ending 31st March in form V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under	Complied

	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.	
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 http://envfor.nic.in . 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 3 rd of September 2014.
xiii.	Project authorities shall inform the Regional office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Noted.

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

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

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

Status of the projects (as of 1.07.2016)

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

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

SPECIFIC CONDITIONS:

Sr. No.	SPECIFIC CONDITION	Status as on 01.12.2022
i	Compliance to all the environmental conditions stipulated in the environmental clearance letter no. J-11011/180/2008-1A II (I) dated 28 th April 2008 shall be satisfactorily implemented and compliance reports submitted to the Ministry's Regional Office at Bhopal.	Complied
ii.	M/s BPCL shall comply with new standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules. 1986 vide G S R 186(E) dated 18 th	Complied

	March,2008 and GSR 820(E) dated 9 th November-2012	
III.	Continuous on-line stack monitoring for SO ₂ , NO _x and CO of all the stacks shall be carried out. Low NO _x burners shall be installed.	Complied.
iv	The process emissions [SO ₂ , NO _x ,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.	Complied
v.	Leak Detection and Repair programme shall be prepared and implemented to con HC/VOC emissions. Focus shall be given to prevent fugitive emission for which preventive maintenance of pumps, valves, pipelines are required. Proper maintenance of mechanical seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to. Fugitive emissions of HC from product storage tank yard etc. must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations.	Complied
vi.	SO ₂ emissions after expansion from the plant shall not exceed 10.44 TDP, Sulphur recovery units shall be installed for control of H ₂ S emissions. The overall sulphur recovery efficiency of Sulphur recovery unit with tail gas treating shall not be less than 99.9 %.	Complied
vii	As proposed, record of sulphur balance shall be maintained at the Refinery as part of the environmental data on regular basis. The basic component of sulphur balance include sulphur input through feed (sulphur content incruce oil), sulphur output from Refinery through products, byproduct (elemental sulphur), atmospheric emissions etc.	Complied
Viii	Ambient air quality monitoring stations,[PM ₁₀ ,PM _{2.5} ,SO ₂ , NO _x , H ₂ S, mercaptan, non-methane-HC and Benzene] shall be set up in the complex in consultation with Maharashtra Pollution Control Board, based on occurrence of maximum ground level concentration and down-wind direction of wind. The monitoring network must be decided based on modeling exercise to represent short term GLCs.	Complied
Ix	Ambient air quality data shall be collected as per NAAQEA standards notified by the Ministry on 16 th November-2009 and trend analysis w.r.t. past	Complied

	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.	
x.	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Besides, acoustic enclosure/silencer shall be installed wherever noise levels exceed the limit.	Noted Power is supplied to new CDU/VDU (CDU4) unit from Captive Power Plant existing at the refinery, or shall be imported from Tata Electric Company. Additional DG set is not required for CDU4 unit.
xi.	Total raw water requirement from Municipal Corporation of Greater Mumbai water supply shall not exceed 687.4 m ³ /hr and prior permission shall be obtained from the competent authority. Industrial effluent generation from new CDU/VDU project shall be 60 m ³ /hr and treated in the effluent treatment plant. Treated effluent shall be recycled /reused recycled as make up for the raw water cooling tower. Domestic sewage shall be treated in sewage treatment plant (STP).	Complied
xii.	Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	Complied
Xiii	Oily sludge shall be disposed off into Coker. Annual Oily sludge generation and disposal data shall be submitted to the Ministry's Regional Office and CPCB.	Not applicable
xiv	The Company should strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules,1989 as amended in October, 1994 and January,2000 Hazardous waste should be disposed of as per Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and amended time to time	Complied
xv	The membership of common TSDF should be obtained for the disposal of hazardous waste. Copy of authorization or membership of TSDF should be submitted to Ministry's Regional Office at Bhopal Chemical/inorganic sludge shall be sent to treatment storage disposal facility (TSDF) for hazardous waste. Spent catalyst shall be sent to authorized recyclers/re-processors.	Complied
xvi.	Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.	Proper oil spillage prevention management plan exists. Closed sampling system has been provided to avoid spillage/leakage. Gully Sucker is available in the refinery to take care of any spillages.

xvii.	The company shall strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).	Complied. Please refer Annexure-11 for details Corporate Responsibility for Environmental Protection (CREP).
xviii.	To prevent fire and explosion at oil and gas facility, potential ignition sources shall be kept to a minimum and adequate separation distance between potential ignition sources and flammable materials shall be in place.	Complied
xix.	Green belt shall be developed at least in 45 acres area land around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Think greenbelt with suitable plant species shall be developed around unit. Selection of plant species shall be as per the CPCB guidelines.	Tree plantation is being done in & around Mumbai Region.
xx.	All the issues raised and commitment made during the public hearing/consultation meeting held on 25 th September,2012 shall be satisfactorily implemented. Accordingly, provision of budget to be kept.	Complied
xxi	Based on Hazop study carried out and recommendation to reduce the risk shall be expeditiously implemented, and report sent to regional office of ministry	Complied
xxii	Company shall adopt Corporate Environment policy as per ministry's O.M. No J-11013/41/2006-IA II(I) dated 26 th April 2011 and implemented.	BPCL MR is an ISO 14001 certified company. Quality, Environment, Occupational Health & Safety policy as per Integrated Management Systems is in place.
xxiii	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc.The housing may be in the form of temporary structures to be removed after the completion of the project.	Project is completed and commissioned.

A. GENERAL CONDITIONS :

Sr. No.	Condition	Status as on 01.12.2022
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	Noted

	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.	
iii.	The project authorities must strictly comply with the rules & regulation under manufacture. Storage and import of Hazardous chemical Rules, 2000 as amended subsequently. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate, etc. must be obtained, wherever applicable.	Complied
iv.	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosure etc, on all sources of noise generation. The ambient noise levels should conform the standards prescribed under Environmental (Protection) Act, 1986 Rules and 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Complied
v.	A separate environment management cell equipped with full-fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.	Complied BPCL MR already has an Environment section to carry out environmental management and monitoring functions. The Refinery also has a full-fledged NABL approved Laboratory
vi.	Adequate funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures and shall be used to implement the conditions stipulated Ministry of Environment and Forests as well as state government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	Adequate funds are being provided for environmental pollution control measurement.
vii.	The Regional Office of this Ministry / Central Pollution control Board / State Pollution Control Board will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation should be submitted to them regularly.	Complied
viii.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila parishad/Municipal Corporation, Urban local body, and the local NGO if any, from whom suggestions, representations, if any were received while processing the proposal. The clearance letter shall	Complied

	also be put on the web site of the company by the proponent.	
ix.	The project proponent shall upload the status of compliance of the stipulated environmental conditions including the results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the regional office of MoEF, the respective zonal office of CPCB, and the SPCB. The criteria pollutant levels, namely PM10, PM2.5, SO2, NOx, HC (Methane & non-methane), VOCs (ambient levels as well as stack emissions) or critical sectoral parameters indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain	Complied
x.	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional office of MoEF, the respective zonal office of CPCB, and the SPCB. The Regional office of this ministry, /CPCB/SPCB shall monitor the stipulated conditions.	Complied
xi.	The Environmental statement for each financial year ending 31 st March in form V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986 as amended subsequently, shall also be put on the website of the company along with the status of compliance of Environmental conditions and shall also be sent to the respective Regional Offices of the MoEF by e-mail	Complied
xviii.	The project proponent shall inform the public that the project has been accorded environmental clearance by the ministry and copies of the clearance are available with the SPCB and may also be seen at website of Ministry of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in vernacular language of the locality concerned, and a copy of same shall be forwarded to the Regional Office.	Subsequent to obtaining Env. Clearance from MoEF for CDU/VDU, dt 12 th June-13, the same was published in two newspapers (Indian Express in English & Maharashtra Times Marathi) on 18 th of June 2013.
xix.	Project authorities shall inform the Regional office as well as the Ministry, the date of financial closure and final approval of the project by the concerned	Noted

	authorities and the date of commencing the land development work.	
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Compliance Status Report for Installation of Continuous Catalytic Regeneration Reformer (CCR 1.2 MMT) at BPCL Mumbai Refinery

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

The Ministry of Environment and Forests accorded environmental clearance for installation of new Continuous Catalytic Regeneration Reformer (CCR 1.2 MMTPA) within the premises of BPCL Mumbai Refinery. As per the stipulations given in the Environmental Clearance, the detailed compliance status is given below:

Status of the CCR Project

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

Sr. No.	SPECIFIC CONDITIONS	Status as on 01.12.2022
i.	Compliance to all the Environmental conditions stipulated in the environmental clearance letter no J-11011/180/2008-1A II (I) dated 28 th April 2008 shall be satisfactorily implemented and compliance reports submitted to the Ministry's Regional office at Bhopal	Complied
ii.	M/s BPCL shall comply with new standards/norms for Oil refinery Industry notified under Environment (Protection) Rules 1986 vide GSR 186 (E) dated 18 th March 2008	Complied
iii.	Continuous on-line stack monitoring for SO ₂ , NO _x and CO of all the stacks shall be carried out. Low NO _x burners shall be installed.	Complied
iv.	The process emissions {SO ₂ , NO _x , HC (Methane & Non methane)}, VOC's and benzene from various units shall conform to the standards prescribed under Environment (Protection) Act. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency of the pollution control device has been achieved.	Complied
v.	Leak detection and Repair program shall be prepared and implemented to control HC/VOC emissions. Focus shall be given to prevent fugitive emissions for	Complied

	<p>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>	
vi.	<p>SO₂ emissions after expansion from the plant shall not exceed 12 TPD. Sulfur recovery units shall be installed for control of H₂S 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 & NHT furnaces.</p> <p>Efficiency of existing Sulfur Recovery Units (SRU) is 99%. In Nov-2017, Tail Gas Treatment Unit (TGTU) has been commissioned which has improved sulfur recovery efficiency to 99.99 %.</p> <p>As cited in Environment Clearance received for CDU-4 project (commissioned in Dec-2015), SO₂ emissions from refinery are well below 10.44 MT/D.</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>	Noted
viii.	<p>Ambient Air quality monitoring stations {PM₁₀, PM_{2.5}, SO₂, NO_x, H₂S, mercaptan, non methane-HC and benzene shall be set up in the complex in consultation with Maharashtra Pollution Control Board based on occurrence of maximum ground level concentration and down wind direction of wind. The monitoring network must be decided based on modeling exercise to represent short term GLCs.</p>	Complied
ix.	<p>Ambient air quality data shall be collected as per N AAQES standards notified by the ministry on 16th 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>	Complied
x.	<p>The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be</p>	Noted

	provided to the DG sets to mitigate the noise pollution. Besides acoustic enclosure/silencer shall be installed where ever noise pollution exceeds the limit.	Power is being provided to CCR unit from Captive Power Plant existing at the refinery or is being imported from Tata Electric Company. Additional DG set is not required for CCR unit.
xi.	Total raw water requirement for the proposed project shall not exceed 4995 m3/day and prior permission shall be taken from competent authority. Industrial effluent generation from CCR unit shall not exceed 129 m3/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)	Complied
xii.	Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	Complied
xiii.	Oily sludge shall be disposed off into Coker. Annual oily sludge generation and disposal data shall be submitted to the ministry's Regional office and CPCB.	Not Applicable There is no coker installed at BPCL Mumbai Refinery. There is no oily sludge generation from CCR complex. Other Oily sludge generated in the refinery is subject to mechanical/chemical treatments for oil recovery and the residual sludge is bio-remediated through M/s MIEBRS bacteria to reduce oil content below 0.5 wt% before it can be disposed off as per Hazardous waste Rule 2016.
xiv.	The company should strictly comply with the rules and guidelines under manufacture, storage and import of hazardous chemicals Rules 1989 as amended in October 1994 and January 2000. Hazardous waste should be disposed off as per Hazardous waste (Management, Handling and Trans-boundary movement) rules 2008 and amended time to time.	Complied
xv.	The membership of common TSDF should be obtained for the disposal of hazardous waste. Copy of authorization or membership of TSDF should be submitted to Ministry's regional office at	Complied

	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.	
xvi.	Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.	Complied Closed sampling system has been provided to avoid spillage/leakage of oil. Gully Suckers are available to take care of any spillage. Close Blow down system is operational for close draining of hydrocarbons during maintenance activity. Oil catchers are provided for removing oil from water going out of refinery.
xvii.	The company shall strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP)	Complied Please refer Annexure-11 .
xviii.	To prevent fire and explosion at oil and gas facility, potential ignition sources shall be kept to minimum and adequate separation distance between potential ignition sources and flammable materials shall be in place.	Complied.
xix.	Green belt shall be developed at least in 33% of the plant area in and around the plant premises to mitigate the effect of fugitive emissions all around the plant as per the CPCB guidelines.	Please refer GTU compliance report as on 01.12.2022.
xx.	All the recommendations mentioned in the rapid risk assessment report, disaster management plan, and safety guidelines shall be implemented.	Complied
xxi.	All the issues raised and commitment made during public hearing/consultation meeting held on the 25 th September 2012 shall be satisfactorily implemented. Accordingly, provision of budget to be kept.	Complied
xxii.	Company shall adopt Corporate Environment policy as per ministry's O.M. No J-11013/41/2006-IA II(I) dated 26 th April 2011 and implemented.	BPCL MR is an ISO 14001 certified company. Quality, Environment, Occupational Health & Safety policy as per Integrated Management System.
xxiii.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health	Project is completed and commissioned.

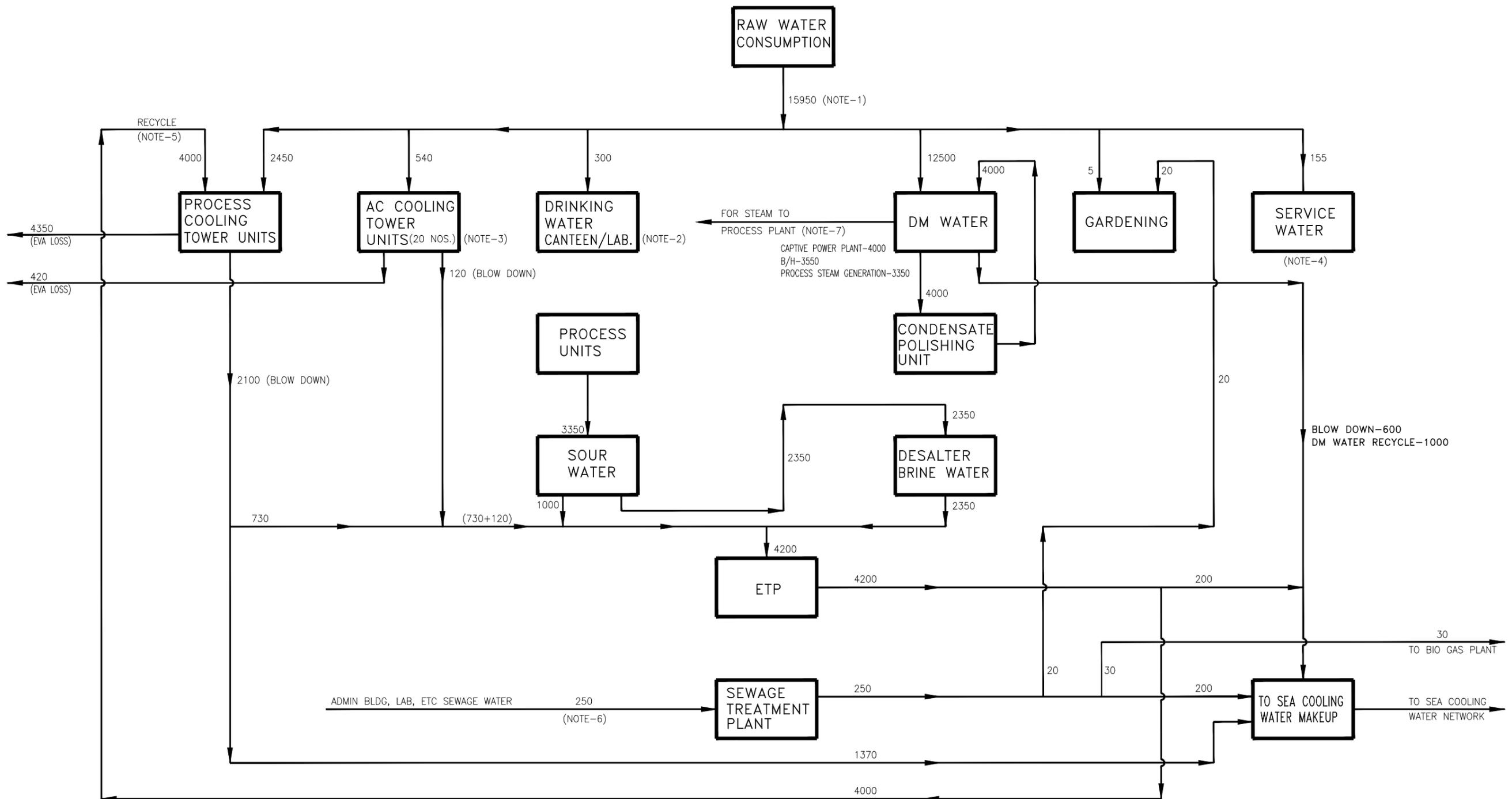
	care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	
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SR. NO.	GENERAL CONDITIONS	Status as on 01.12.2022
i.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), state government and any other statutory authority.	Complied
ii.	No further expansion or modifications in the project shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviation or alterations in the project proposed from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required , if any	Noted
iii.	The project authorities must strictly comply with the rules & regulation under manufacture. Storage and import of Hazardous chemical Rules, 2000 as amended subsequently. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate, etc. must be obtained, wherever applicable.	Complied
iv.	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosure etc, on all sources of noise generation. The ambient noise levels should conform the standards prescribed under Environmental (Protection) Act, 1986 Rules and 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Complied
v.	A separate environment management cell equipped with full-fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.	Complied
vi.	Adequate funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures and shall be used to implement the conditions stipulated Ministry of Environment and Forests as well as state government along with the implementation schedule	Complied

	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
viii.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila parishad /Municipal Corporation, Urban local body and the local NGO if any, from whom suggestions, representations, if any were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Complied
ix.	The project proponent shall upload the status of compliance of the stipulated environmental conditions including the results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the regional office of MoEF, the respective zonal office of CPCB, and the SPCB. The criteria pollutant levels, namely PM10, PM2.5, SO2, NOx, HC (Methane & non-methane), VOCs (ambient levels as well as stack emissions) or critical sectoral parameters indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Complied
x.	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional office of MoEF, the respective zonal office of CPCB, and the SPCB. The Regional office of this ministry, /CPCB/SPCB shall monitor the stipulated conditions.	Complied
xi.	The Environmental statement for each financial year ending 31 st 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	Complied

	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 http://envfor.nic.in . 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 th 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

RAW WATER BALANCE FOR BPCL MUMBAI REFINERY



NOTES:

1. ALL UNITS ARE IN M³/DAY.
2. DRINKING WATER IS USE FOR DRINKING PURPOSE, IN CANTEEN FOR WASHING, FOOD PREPARATION & LABORATORY.
3. COOLING TOWER A/C CONSISTS OF 20 NOS. OF PROCESS UNITS AIR CONDITIONING / ELECTRICAL SWITCH HOUSE, ALL OVER REFINERY & ADMINISTRATION BLDG.
4. SERVICE WATER IS USE IN PROCESS UNIT FOR CLEANING OF AIR FINE COOLERS, HYDROTESTING OF HEAT EXCHANGERS POST CLEANING AND FLUSHING OF PROCESS PIPELINE.
5. BASED ON INTERNAL OPTIMISATION BY MAXIMUM RAW WATER RECYCLE AND MINIMUM STEAM CONSUMPTION.
6. BASED ON ADMIN BUILDING, MEDICAL CENTRE, LABORATORY, FIRE STATION & CANTEEN SEWAGE WATER QUANTITY.
7. MAJOR STEAM CONSUMPTION IN STEAM EJECTORS , STEAM REBOILERS , STEAM TO HEATING COILS , STEAM TRACING ETC.

ABBREVIATIONS:

ETP - EFFLUENT TREATMENT PLANT
 CPP - CAPTIVE POWER PLANT
 B/H - BOILER HOUSE
 CT - COOLING TOWER
 A/C - AIR CONDITIONING



भारत पेट्रोलियम कॉर्पोरेशन लिमिटेड
 Bharat Petroleum Corporation Ltd.

**RAW WATER BALANCE FOR BPCL
 MUMBAI REFINERY**



Towards sustainable growth

Mumbai Waste Management Limited

Certificate

M/s, Bharat Petroleum Corporation Ltd. Mumbai Refinery

is a registered member of

CHW-TSDF at MIDC, Talaja

for safe & secure disposal of

Hazardous Waste.

Membership no.: MWML - HzW MUM-3247

This Certificate is valid up to

31st MARCH 2025...

Onkar A. Kulkarni
Manager - MBD

Somnath Malgar
Director



Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

Form 4

See rules 6(5),13(8),16(6) and 20(2) of Hazardous and other wastes 2016

FORM FOR FILING ANNUAL RETURNS

[To be submitted to state pollution control board/pollution control committee by 30th June of every year for the preceeding period April to march]

Unique Application Number:

MPCB-HW_ANNUAL_RETURN-0000028973

Submitted On:

24-06-2022

Submitted for Year:

April 2021 to March 2022

1. Name of the generator/operator of facility

SHRI. SUBRAMONI IYER M R , EXECUTIVE DIRECTOR, MUMBAI REFINERY

Address of the unit/facility

BHARAT PETROLEUM CORPORATION LTD.,
MUMBAI REFINERY, MAHUL, CHEMBUR,
MUMBAI-400074

1b. Authorization Number

Format 1.0/CAC/ UAN No.0000114233/ CR-2110000341

Date of issue

Oct 7, 2021

Date of validity of consent

Aug 31,
2022

2. Name of the authorised person

SUNIL RAUT, DGM, ENVIRONMENT

Full address of authorised person

HSSE, BHARAT PETROLEUM CORPORATION LTD.,
MUMBAI REFINERY, MAHUL, CHEMBUR,
MUMBAI-400074

Telephone

02225533174

Fax

NA

Email

rauts@bharatpetroleum.in

3. Production during the year (product wise), wherever applicable

Product Type *	Product Name *	Consented Quantity	Actual Quantity	UOM
Oil Refinery (Mineral Oil or Petro Refineries)	LPG & POLY PROPYLENE FEED STOCK	1764.0000	1510	MT/Day
Oil Refinery (Mineral Oil or Petro Refineries)	BENZENE & TOLUENE	350.0000	158	
Oil Refinery (Mineral Oil or Petro Refineries)	SBP, HEXANE, MS, MTBE, NAPHTHA	8269.0000	8078	
Oil Refinery (Mineral Oil or Petro Refineries)	SKO, MTO, ATF	5217.0000	1377	
Oil Refinery (Mineral Oil or Petro Refineries)	HSD, LDO	15723.0000	18769	
Oil Refinery (Mineral Oil or Petro Refineries)	FO, LSHS, BITUMEN, SULFUR	6140.0000	4465	
Oil Refinery (Mineral Oil or Petro Refineries)	LUBE OIL BASE STOCK (LOBS)	680.0000	938	
Oil Refinery (Mineral Oil or Petro Refineries)	HYDROTREATED GASOLINE	2692.8000	2662	

PART A: To be filled by hazardous waste generators

1. Total Quantity of waste generated category wise

Type of hazardous waste	Waste Name	Consented Quantity	Quantity	UOM
4.2 Spent catalyst	CCU Spent Catalyst	2538.750	86.73	MTA
4.2 Spent catalyst	ARU Spent Alumina	2538.750	2.305	MTA

4.2 Spent catalyst	Spent Clay	2538.750	52.16	MTA
4.2 Spent catalyst	Spent Charcoal	2538.750	20.31	MTA
4.2 Spent catalyst	Spent Coke	2538.750	20.315	MTA
4.2 Spent catalyst	Spent Resin	2538.750	12.43	MTA
4.2 Spent catalyst	Spent Catalyst from LOBS & CCR	2538.750	40.619	MTA
4.2 Spent catalyst	Spent Adsorbent	2538.750	148.305	MTA
4.2 Spent catalyst	Spent Salt	2538.750	103.67	MTA
28.3 Spent carbon	Spent Carbon	100.000	21.9	MTA
4.1 Oil sludge or emulsion	Oily Sludge	8100.000	1200	MTA

2. Quantity dispatched category wise.

Type of Waste	Quantity of waste	UOM	Dispatched to	Facility Name
4.2 Spent catalyst	86.73	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	2.305	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	52.16	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	20.31	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	20.315	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	12.43	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	40.619	MTA	Recycler or Actual user	HP PLATINUM NAVI MUMBAI
4.2 Spent catalyst	148.305	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	103.67	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	21.9	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208

3. Quantity Utilised in-house,If any

Type of Waste	Name of Waste	Quantity of Waste	UOM
	NA	0	MTA

4. Quantity in storage at the end of the year

Type of Waste	Name of Waste	Quantity of Waste	UOM
	NA	0	MTA

PART B: To be filled by Treatment, storage, and disposal facility operators

1. Total Quantity received	UOM	State Name
NA	KL/Anum	Maharashtra
2. Quantity in stock at the beginning of the year	UOM	
NA	KL/Anum	
3. Quantity treated	UOM	
NA	KL/Anum	
4. Quantity disposed in landfills as such and after treatment		
Direct landfilling	UOM	
NA	KL/Anum	
Landfill after treatment	UOM	
NA	KL/Anum	
5. Quantity incinerated (if applicable)	UOM	
NA	KL/Anum	
6. Quantity processed other than specified above	UOM	
NA	KL/Anum	
7. Quantity in storage at the end of the year.	UOM	
NA	KL/Anum	

PART C: To be filled by recyclers or co-processors or other users

1. Quantity of waste received during the year

Waste Name/Category	Country Name	State Name	Quantity of waste received from domestic sources	Quantity of waste imported (If any)	Units
NA	India	Maharashtra	NA	NA	KL/Anum

2. Quantity in stock at the beginning of the year

Waste Name/Category	Quantity	UOM
NA	NA	KL/Anum

3. Quantity of waste recycled or co-processed or used

Name of Waste	Type of Waste	Quantity	UOM
NA	NA	NA	KL/Anum

4. Quantity of products dispatched (wherever applicable)

Name of product	Quantity	UOM
NA	NA	KL/Anum

5. Total quantity of waste generated

Waste name/category	quantity	UOM
NA	NA	KL/Anum

6. Total quantity of waste disposed

Waste name/category	quantity	UOM
NA	NA	KL/Anum

7. Total quantity of waste re-exported (If Applicable)

Waste name/category	quantity	UOM
NA	NA	KL/Anum

8. Quantity in storage at the end of the year

Waste name/category	quantity	UOM
NA	NA	KL/Anum

Personal Details

Place	Date	Designation
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Mumbai Agricultural Produce¹³¹ Market Committee, Mumbai

(ESTD. 1977)

HEAD OFFICE : Central Building, Sector-18, Vashi, Navi Mumbai - 400 703

BRANCH OFFICE : Shri Chhatrapati Shivaji Maharaj Mandai,
3rd Floor, Palton, Mumbai - 400 001.

TELEPHONES :

HEAD. OFF. : 2788 9416

EPABX : 2788 8414

FAX : 91-22-27889507

BRANCH OFF. : 2261 6624

FAX : 2261 4888

E-mail : mapmc@bom3.vsnl.net.in

NO.APMC/ENGG.DEPT./ 501 /14

Date : 4/12/14

To,

BPCL Mumbai Refinery,
Mahul, Chembur,
Mumbai 400 074.

Sub : Certification Letter.

Ref : Your request letter No.TA/PC/Gen-II, dtd. 27.11.2014.

Sir,

With reference to the above subject, this is to certify that BPCL Mumbai Refinery (Environment Department) has planted a total No. of 3050 tree saplings at Plot No.8 and Plot no.10 area of APMC, Sector-19, Vashi, Navi Mumbai. The plantation is covering an area of approximately 4 acres. The plantation was carried out in the monsoon season of 2014. The saplings planted are in healthy condition and have gained firm roots as on date, 30th November, 2014.

Addl. Commissioner & Secretary
Mumbai APMC, Mumbai.



Mumbai Waste Management Ltd.

Plot No. P-32, MIDC Talaja, Dist. Raigad,
Tal. Parvel Maharashtra 410 208, India
Tel: 022-2740 1468 to 71 & 2741 1473
Fax: 022-2740 1474
Email: mbdmwmli@ramky.com
www.mumbaiwastemanagement.com

Date: 26/10/2016 To,

To,

Bharat Petroleum Corporation Limited

8931/TA/111, Mahul, Chembur

Mumbai -400074

Sub: Tree Plantation at Mumbai Waste Management Ltd.

Kind Attn: Mr. Joshi

Dear Sir,

As you are aware that your esteemed firm had allotted 3000 trees for plantation at MWML Premises on the occasion of World Environment Day 2016.

MWML is grateful to you for this warm gesture and we would like to inform you that these trees have been planted in our premises at Talaja.

For your reference we are enclosing few photographs with this letter.

Thank You

Sincerely,



26/10/16

Authorized Signatory

Mumbai Waste Management Ltd.

Certified by



bsi.

ISO 9001:2008 | ISO 14001:2004 | OHSAS 18001:2007
C. No. FS 570487 | C. No. EMS 570497 | C. No. OHS 570500

Corporate Office:

Ramky Enviro Engineers Ltd.

Ramky Grandiose Floor, 12, 15, Ramky Tower Complex,

Gachibowli Hyderabad - 500 032.

Tel.: 040-2501 5000 (40 Lines) • Fax: 040-2530 2553 • Website: www.ramky.com



ठाणे महानगरपालिका, ठाणे

महानगरपालिका भवन, डॉ. अल्मेडा रोड, चंदनवाडी, पांचपाखाडी, ठाणे ४००६०२
THE MUNICIPAL CORPORATION OF THE CITY OF THANE

संदर्भ क्र : ठामपा/वृप्रा/वृअ - ७२०

दि. २३/६/२०१७

चला एकत्र येऊया : ठाणे हिरवेगार करूया !

प्रति,
मे. भारत पेट्रोलियम कॉर्पोरेशन लि.,
भारत भवन, करीमभाँय रोड,
बेल्गार्ड इस्टेट, मुंबई. ४००००१



विषय: ५ लक्ष वृक्षलागवड योजना ...

संदर्भ : १. आपले दि. २५/०५/२०१७ रोजीचे पत्र.

२. ठामपा/वृप्रा/वृअ-५२० दि. १३/०६/२०१७

३. आपले आ.क्र. २२२९ दि. २३/०६/२०१७ रोजीचे पत्र.

महोदय,

संदर्भ क्र. २ च्या पत्रान्वये आपणास ५ लक्ष वृक्षलागवड योजनेचा शुभारंभ जागतिक पर्यावरण दिनी ५ जून २०१७ रोजी करण्यात आला असून आपणामार्फत आपल्या स्व:खर्चाने या योजनेमध्ये ५००० वृक्षांचा पुरवठा करण्याबाबत कळविले आहे.

संदर्भ क्र. ३ च्या पत्रान्वये आपणामार्फत वृक्षांचे रोपण करण्याबाबत व त्यांच्या दैनंदिन निगा व देखभालीबाबत विचारणा करण्यात आलेली आहे.

सदर अनुषंगाने आपणास कळविण्यात येते की, आपणामार्फत पुरवठा करण्यात येणाऱ्या वृक्षांचे रोपण व त्यांची दैनंदिन निगा व देखभाल ठाणे महानगरपालिकेमार्फत करण्यात येईल.

वरीलप्रमाणे रोपे उपलब्ध करून देण्याबाबत उलट टपाली इकडे कळविण्यात यावे व रोपे पुरवठा बाबत प्रगती अहवाल gs@thanecity.gov.in या ई-मेलवर पाठविणेत यावा.

आपण पर्यावरण रक्षणासाठी ठाणे महानगरपालिकेस करीत असलेल्या सहकार्याबद्दल आभार !


(केदार पाटील)

वृक्षअधिकारी

ठाणे महानगरपालिका, ठाणे.

प्रत : मा. अति- आयुक्त सोा यांचे माहितीसाठी सविनय सादर ...

17 SEPTEMBER, 2019

CARBON SEQUESTRATION CERTIFICATE

PRESENTED TO

BPCL



FOR OFFSETTING OVER 15 YEARS

2,543.76 MT of CO₂

WITH THE PLANTATION OF

10,000 Native Trees

IN THE

MUMBAI METROPOLITAN REGION



JANJRI JASANI

HEAD OF SUSTAINABILITY SERVICES
CERE

PROPOSED "ESC" PROJECT SPENDS: 2017-18 TO 2021-22

I. 2017/18: Works to commence and implemented over 18 months.	TOTAL
1. Cleaning & Beautification of Water body – RCF Pond near Ashish Theatre. (Likely spend till March 2018: Rs. 0.15 Crore).	Rs. 1.50 Crores
<ul style="list-style-type: none"> a. Architect, Tendering, Cost Estimation & Certification Fees: Rs. 0.10 Crore b. Erecting Boundary Wall/ painting/ relaying of side walk (1.5 km length approx.) c. Internal beautification/ Lighting/ Landscaping d. Entrance Gate/ CCTV/ Water Fountain/ painting etc. 	
2. MR Main gate to North Gate Boundary Wall/ Area social redesigning. (Likely spend till March 2018: Rs. 0.15 Crore).	Rs. 4.35 Crores
<ul style="list-style-type: none"> a. Architect, Tendering, Cost Estimation & Certification Fees: Rs.0.10 Crore. b. Traffic Island outside Main gate - High Mast LED Lighting/ facelift c. Barricading of Side walk (1 km approx..) d. Smoothing/ Laying Walking track/ Lighting/ CCTV at Side walk e. Painting/ Cladding/ Branding on Boundary Wall 	
3. 4 RO Drinking Water System/ Plant at Mahul, Shankardeol, Vashinaka. (Likely spend till March 2018: Rs. 0.20 Crore).	Rs. 2.00 Crores
Estimates of Vendors sought – approx.. Rs.0.25 cr. each plant and includes: <ul style="list-style-type: none"> a. Borewell/ Plant - Erection/ Installation/ Commissioning b. Maintenance for 3 years 	
4. Waste Disposal System implementation at Mahul/ Ambapada (Likely spend till March 2018: Rs. 0. 50 Crore)	Rs. 0.65 Crore
1 year Operational / Maintenance expenditure: Rs.0.15 Crore.	
(Total likely spend on above 4 Projects as detailed) - Rs. 1.00 Crore.	
Sub Total:	Rs. 8.50 Crores

II. 2018/19: Works to commence and implemented in 12 months	
1. Building, Landscaping of Strategic Traffic junctions near MR/ Chembur.	Rs. 2.10 Crores
2. Completion & Expenditure on PY Works during the year.	Rs. 7.50 Crores
Sub Total:	Rs. 9.60 Crores

III. 2019/20: Works to commence and implemented in 12 months

1. Desilting/ Upgradation & Beautification of Mahul - Jetty/ Nallas	Rs. 2.50 Crores
2. Providing Transit camp/ Housing for MR Contract labor/ Apprentices.	Rs. 2.50 Crores
3. Preliminary work/ Approvals for setting up BPCL-MR School/ Hospital.	Rs. 1.00 Crore
4. Providing Solar Street Lights at Mahul/ MR surroundings	Rs. 1.00 Crore
5. Setting up of CT Scan/ Physiotherapy/ Dialysis Centre at Mahulgaon.	Rs. 3.50 Crores
Sub Total:	Rs. 10.50 Crores

IV. 2020/21-2021/22: 24 mths. Gestation for Estimates/ Approvals & Commissioning

1. Setting up Recreational/ Sports Academy at Ambapada (Detailed Project feasibility incl. land lease cost / Building Plan/ Cost of Construction to be made prior to execution).	Rs. 8.30 Crores
2. Setting up English Medium High School for locals by MR Foundation.	Rs. 12.27 Crores
3. Setting up BPCL Charitable Hospital for locals by MR Foundation.	Rs. 12.26 Crores
Sub Total:	Rs. 32.83 Crores

Total ESC Estimated spend over five years (2017 – 2022) I+II+III+IV**Rs. 53.93 Crores**

We have allocated Rs 54 crores as per EC stipulations. However, as per the circular by MOEF, we need to allocate Rs 7 crores only. So far we have spent Rs 2.29 crores.

S.No	Project	Approved Project Cost (Rs crores)	As per EC (%)	As per MOEF&CC Circular (%)	Actual Allotted (Rs. Crores)	As per MOEF&CC Circular (Rs. Crores)	Actual Expenditure (Rs crores)
1.	CCR	1827	-	-	-	-	
2.	CDU-4	1459	-	-	-	-	
3.	ISOM	715	-	-	-	-	
4.	DHT	1714	2.5	0.25	42.85	4.29	2.09
5.	GTU	554	2	0.50	11.08	2.77	0.20
6.	PRFCC	9783	0.25	0.25	-	-	
Total					53.93	7.06	2.29
					54	7	2.29

F.No.22-65/2017-IA.III
Government of India
Ministry of Environment, Forest and Climate Change
Impact Assessment Division

Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj
New Delhi – 110003

Dated: 1st May, 2018

Office Memorandum

Sub: Corporate Environment Responsibility (CER) – reg.

The Environment Impact Assessment (EIA) Notification, 2006, issued under the Environment (Protection) Act, 1986, as amended from time to time, prescribes the process for granting prior environment clearance (EC) in respect of certain development projects/activities listed out in the Schedule to the Notification.

2. Sustainable development has many important facets/components like social, economic, environmental, etc. All these components are closely inter-related and mutually re-enforcing. Therefore, the general structure of EIA document, under Appendix-III to the notification, prescribes Inter-alia public consultation, social impact assessment and R&R action plan besides environment management plan (EMP).

3. Section 135 of the Companies Act, 2013 deals with Corporate Social Responsibility (CSR) and Schedule-VII of the Act lists out the activities which may be included by companies in their CSR Policies. The concept of CSR as provided for in the Companies Act, 2013 and covered under the Companies (Corporate Social Responsibility Policy) Rules, 2014 comes into effect only in case of companies having operating projects and making net profit as also subject to other stipulations contained in the aforesaid Act and Rules. The environment clearance given to a project may involve a situation where the concerned company is yet to make any net profit and/or is not covered under the purview of the aforesaid Act and Rules. In such cases, the provisions of aforesaid act and Rules will not apply.

4. In the past, it has been observed that different Expert Appraisal Committees / State Expert Appraisal Committees (EACs/SEACs) have been prescribing different formulation of the Corporate Environment Responsibility (CER) and no common principles are followed. Several suggestions have also been received in this regard which inter-alia states that Greenfield projects and Brownfield projects should be treated differently; no CER should be prescribed whereas there is no increase in air pollution load, R&R, etc., besides streamlining percentage of CER.

5. The Ministry has carried out a detailed stakeholder consultation which inter-alia included meeting with Ministry of Petroleum & Natural Gas, Ministry of Power, Chairmen EACs, FICCI, ASSOCHAM, Gujarat Chamber of Commerce and Industry amongst others.

6. In order to have transparency and uniformity while recommending CER by Expert Appraisal Committee (EAC) / State level Expert Appraisal Committee (SEAC) / District level Expert Appraisal Committee (DEAC), the following guidelines are issued:

- (I) The cost of CER is to be in addition to the cost envisaged for the implementation of the EIA/EMP which includes the measures for the pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV and Compensatory Aforestation, required, if any, and any other activities, to be derived as part of the EIA process.
- (II) The fund allocation for the CER shall be deliberated in the EAC or SEAC or DEAC, as the case may be, with a due diligence subject to **maximum percentage** as prescribed below for different cases:

S.No	Capital Investment / Additional Capital Investment (in Rs)	Greenfield Project - % of Capital Investment	Brownfield Project - % of Additional Capital Investment
I	II	III	IV
1.	≤ 100 crores	2.0%	1.0%
2.	> 100 crores to ≤ 500 crores	1.5%	0.75%
3.	> 500 crores to ≤ 1000 crores	1.0%	0.50%
4.	> From 1000 crores to ≤10000 crores	0.5%	0.25%
5.	> 10000 crores	0.25%	0.125%

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- (III) The activities proposed under CER shall be worked out based on the issues raised during the public hearing, social need assessment, R&R plan, EMP, etc.
- (IV) The proposed activities shall be restricted to the affected area around the project.
- (V) Some of the activities which can be carried out in CER, are infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas, etc.
- (VI) The entire activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half-yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.
- (VII) The District Collector may add or delete the activities as per the requirement of the District.
- (VIII) The EAC can vary the above percentage of CER subject to proper diligence, quantification and justification. The EAC based on appraisal, should clearly suggest the activities to be carried out under CER.
- (IX) This CER is not applicable in name change, transfer and amendment involving no additional project investment. In case of amendment in EC involving additional expenditure, CER will be applicable only on the additional expenditure as per column-IV of the table given in para 6(II) above.

7. This issues in supersession of all earlier OMs and guidelines issued in this regard.

8. This issues with the approval of competent authority.


(Sharath Kumar Pallerla)
Director (IA-III-Policy)

1. Chairman, CPCB
2. Chairmen of all the Expert Appraisal Committees
3. Chairperson/Member Secretaries of all the SEIAA/SEACs
4. Chairpersons/Member Secretaries of all SPCBs/UTPCCs
5. All the officers of IA Division

Copy for information to:

1. PS to Minister for Environment, Forest and Climate Change
2. PS to MoS (EF&CC)
3. PPS to Secretary (EF&CC)
4. PPS to AS(AKJ) / AS(AKM)
5. PPS to JS(GB) / JS(JT)
6. Website, MoEF&CC
7. Guard File.



Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2022

Unique Application Number

MPCB-ENVIRONMENT_STATEMENT-0000047422

Submitted Date

25-09-2022

PART A

Company Information

Company Name

Bharat Petroleum Corporation Limited

Application UAN number

NA

Address

Bharat Petroleum Corporation Ltd., Mumbai Refinery.

Plot no

234/482

Taluka

Kurla

Village

Mahul

Capital Investment (In lakhs)

1155100

Scale

L.S.I

City

Mumbai

Pincode

400074

Person Name

Sunil Raut

Designation

DGM (Environment)

Telephone Number

02225533174

Fax Number

Email

rauts@bharatpetroleum.in

Region

SRO-Mumbai III

Industry Category

Red

Industry Type

R56 Oil Refinery (mineral Oil or Petro Refineries)

Last Environmental statement submitted online

yes

Consent Number

FORMAT 1.0/CAC/UAN
NO.0000114233/CR2110000341

Consent Issue Date

2022-08-31

Consent Valid Upto

31/08/2022

Establishment Year

1955

Date of last environment statement submitted

Sep 30 2021 12:00:00:000AM

Industry Category Primary (STC Code) & Secondary (STC Code)

Product Information

Product Name

Liquified Petroleum Gas, C3

Consent Quantity

643860

Actual Quantity

551116

UOM

MT/A

Benzene, Toulene

127750

57533

MT/A

SBP, Hexane, Motor spirit, MTBE, Naphtha

3018185

2948632

MT/A

SKO, Mineral Turpentine Oil, Aviation Turbine Fuel

1904205

502704

MT/A

High Speed Diesel, Light Diesel oil

5738895

6850796

MT/A

Furnace oil, Low sulfur Heavy stock, Bitumen, Sulfur

2241100

1626373

MT/A

Lube product	248200	342357	MT/A
Hydrotreated Gasoline (MS VI)	985564.8	982740	MT/A

By-product Information

By Product Name	Consent Quantity	Actual Quantity	UOM
NA	0	0	MT/A

Part-B (Water & Raw Material Consumption)

1) Water Consumption in m3/day

Water Consumption for Process	Consent Quantity in m3/day	Actual Quantity in m3/day
Cooling	153790.00	68319.00
Domestic	1408.00	980.00
All others	0.00	0.00
Total	175603.00	83665.00

2) Effluent Generation in CMD / MLD

Particulars	Consent Quantity	Actual Quantity	UOM
Effluent from Plants	5760	2657	CMD
Sea water blowdown	146319	39600	CMD

2) Product Wise Process Water Consumption (cubic meter of process water per unit of product)

Name of Products (Production)	During the Previous financial Year	During the current Financial year	UOM
NA	0	0	MT/A

3) Raw Material Consumption (Consumption of raw material per unit of product)

Name of Raw Materials	During the Previous financial Year	During the current Financial year	UOM
Crude Throughput	13053149	14494604	MT/A

4) Fuel Consumption

Fuel Name	Consent quantity	Actual Quantity	UOM
GAS	338501	199009	MT/A
LSHS	232542	163118	MT/A
COKE	109500	88298	MT/A
RLNG	335727	229225	MT/A
BHAG	22630	22256	MT/A
NAPHTHA	9271	0	MT/A
PSA OFF GAS	94900	73952	MT/A

Part-C

Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)

[A] Water

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour	Percentage of variation from prescribed standards with reasons	Standard	Reason
	Quantity	Concentration	%variation		
PH	0	7.57	0	6 to 8.5	NA
Oil & Grease	0	2.22	0	5	NA
BOD (3 days 27°C)	0	11.20	0	15	NA
COD	0	103.01	0	125	NA
Suspended Solids	0	13.45	0	20	NA
Phenols	0	0.20	0	0.35	NA
Sulphides	0	0.28	0	0.5	NA
CN	0	0.0005	0	0.2	NA
Ammonia as N	0	10.94	0	15	NA
TKN	0	26.18	0	40	NA
Phosphate	0	0.8	0	3	NA
Cr (Hexavalent)	0	0.04	0	0.1	NA
Cr (Total)	0	0.009	0	2	NA
Pb	0	0.009	0	0.1	NA
Hg	0	0.009	0	0.01	NA
Zn	0	0.04	0	5	NA
Ni	0	0.009	0	1	NA
Cu	0	0.03	0	1	NA
V	0	0.09	0	0.2	NA
Benzene	0	0.04	0	0.1	NA
Benzo (a)-Pyrene	0	0.09	0	0.2	NA

[B] Air (Stack)

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/NM3)	Percentage of variation from prescribed standards with reasons	Standard	Reason
	Quantity	Concentration	%variation		
SO2	6054	180.12	0	1700	NA
NOx	5709	196.87	0	450	NA
CO	3129	94.23	0	200	NA
Ni & V	6.5	0.12	0	5	NA
SPM	618	6.69	0	100	NA

Part-D

HAZARDOUS WASTES

1) From Process

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
4.2 Spent catalyst	256.087	468.125	MT/A
4.1 Oil sludge or emulsion	441	1200	MT/A

2) From Pollution Control Facilities

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
0	0	0	MT/A

Part-E

SOLID WASTES

1) From Process

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
FERROUS SCRAP	2845.1	2695.12	MT/A
WOOD SCRAP	40	7	MT/A
DRUMS & TINS	3760	2662	Nos./Y
NON FERROUS SCRAP	66.99	175.66	MT/A

2) From Pollution Control Facilities

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
NA	0	0	MT/A

3) Quantity Recycled or Re-utilized within the unit

Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
0	0	0	MT/A

Part-F

Please specify the characteristics(in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

1) Hazardous Waste

Type of Hazardous Waste Generated	Qty of Hazardous Waste	UOM	Concentration of Hazardous Waste
4.2 Spent catalyst	468.125	MT/A	The composition details of hazardous waste is given in form 4 submitted online on 18-06-2020
4.1 Oil sludge or emulsion	1200	MT/A	The composition details of hazardous waste is given in form 4 submitted online on 22-06-2021

2) Solid Waste

Type of Solid Waste Generated	Qty of Solid Waste	UOM	Concentration of Solid Waste
NA	0	MT/A	NA

Part-G

Impact of the pollution Control measures taken on conservation of natural resources and consequently on the cost of production.

Description	Reduction in Water Consumption (M3/day)	Reduction in Fuel & Solvent Consumption (KL/day)	Reduction in Raw Material (Kg)	Reduction in Power Consumption (KWH)	Capital Investment(in Lacs)	Reduction in Maintenance(in Lacs)
Installation of insulation jackets on valves/flanges/strainers/moisture separators, steam distribution manifolds & flow meters	31.6	0	0	0	70	0

Corro-coating of cooling water pumps in DHDS CW pump P-11 B	0	0	0	21.8	6.7	0
Lowering in MAB air in regenerator and utilization of Vacuum Pressure Swing Adsorption (VPSA) O2	0	0	0	200	0	0
New APC strategies for steam reduction in CCU	10.2	0	0	0	0	0
Application of Ceramic Coating in DHDS heater	0	0.54	0	0	9	0
Replacement of conventional cooling tower fan blades in ARU/DHDS with new energy efficient EFRP	0	0	0	121	18	0
Tree Plantation of 1000 no of trees by Miyawaki Method	0	0	0	0	7	0

Part-H

Additional measures/investment proposal for environmental protection abatement of pollution, prevention of pollution. **[A] Investment made during the period of Environmental Statement**

<i>Detail of measures for Environmental Protection</i>	<i>Environmental Protection Measures</i>	<i>Capital Investment (Lacks)</i>
Disposal of Hazardous waste	Hazardous waste management rule,2016	45
Monitoring of stacks, Noise levels, Fugitive emissions, effluent quality, Ambient Air by Approved Laboratory	Routine Environmental monitoring	32
Tree Plantation of 1000 trees by Miyawaki Method	For CO2 Sequestration	7
Zero Waste to Landfill Certification of BPCL MR	System Improvement and Sustainable development	2.25

[B] Investment Proposed for next Year

<i>Detail of measures for Environmental Protection</i>	<i>Environmental Protection Measures</i>	<i>Capital Investment (Lacks)</i>
Installation and commissioning of Kerosene Hydro-treatment Unit (KHT)	Auto fuel policy i.e. for production of low sulphur BS VI grade ATF and KHT product stream blending in BS VI grade HSD	70000
Sale of Used Cooking Oil generated from Trombay Club of BPCL MR for production of Biodiesel	For GHG emission reduction	0
Tree Plantation of 5000 no of trees in and around Mumbai Region	For CO2 Sequestration	40

Part-I

Any other particulars for improving the quality of the environment.

Particulars

Based on the national demand for products (HSD/MS/LOBS etc.), crude processing pattern varies leading to variation in product streams with respect to consented production quantities.

Name & Designation

SUNIL RAUT

UAN No:

MPCB-ENVIRONMENT_STATEMENT-0000047422

Submitted On:

25-09-2022

सर्वात तरुण महिला वैमानिक उडविणार मिग २९

म. टा. विशेष प्रतिनिधी, मुंबई

सर्वात तरुण वयात वैमानिक बनलेली मुंबईची तरुणी आयेशा अजीझ हिने आता ध्वनिपेक्षाही अधिक वेगाने आभाळात उडणारे मिग २९ हे रशियन विमान उडविण्याचे मनावर घेतले आहे. मुंबईच्या बॉम्बे फ्लाईंग क्लबमध्ये उड्डाण प्रशिक्षण घेतलेल्या आयेशाला नुकताच



मूळची काश्मिरची बारामुल्ला जिल्ह्यातील आहे. आईबरोबर श्रीनगरला जाताना आयेशा नेहमी विमानाने जायची व त्याचवेळी आकाशभरारीचे स्वप्न पाहायची. ती शाळेत असतानाच तिचे वैमानिक प्रशिक्षण सुरू झाले. १६व्या वर्षीच विद्यार्थी उड्डाण परवाना मिळविणारी ती सर्वात तरुण महिला ठरली. बॉम्बे फ्लाईंग क्लबमधून तिने वैमानिक उड्डाण प्रशिक्षण घेतले.

कमर्शियल वैमानिकाचा परवाना हाती पडला असून, आता अंतराळयानांच्या तयारीसाठी रशियाच्या सोकल हवाई तळावरून लडाख जेट विमान उडविण्यासाठी ती प्रयत्नशील आहे. आयेशाचे वडील अब्दुल अजीझ हे वरळीस्थित व्यावसायिक असून, तिची आई

२०१२मध्ये ती नासामध्ये अंतराळवीराचे प्रशिक्षण घेण्यासाठीही गेली होती. गेल्या आठवड्यात तिच्या हाती व्यापारी वैमानिक परवाना (सीपीएल) आला आणि आता तिला मिग २९ विमानाचे सारथ्य करण्याचे वेध लागले आहेत. त्यासाठी रशियन एजन्सीशी तिची

बोलणी सुरू आहेत. बॉम्बे फ्लाईंग क्लबचे कॅप्टन मिहिर भगवती यांनी सांगितले की, ती आमची विद्यार्थिनी राहिली आहे. आम्हांलाही ती यशस्वीरीत्या पेलेल, असा मला विश्वास वाटतो.

होती. आम्हांलात्मक भरारी घेण्याचे गुण तिच्यात नेहमीच होते व मिग २९चे आम्हांलाही ती यशस्वीरीत्या पेलेल, असा मला विश्वास वाटतो.

मुंबई : गेल्या अनेक महिन्यांपासून प्रसिद्ध असलेल्या पत्रकार हल्लाविरोधी विधेयकाच्या मसुद्यास गुजराती राज्य मंत्रिमंडळाच्या बैठकीत मंजुरी देण्यात आली. आज, शुक्रवारी विधिमंडळ

पत्रकार हल्लाविरोधी विधेयक आज विधिमंडळात संरक्षण मिळावे, यासाठी पत्रकार हल्लाविरोधी कायदा करण्याची मागणी मुख्यमंत्री देवेंद्र फडणवीस यांच्याकडे केली होती. मुख्यमंत्र्यांनी ही मागणी मान्य करताना हे विधेयक या अधिवेशनात मांडण्याचे आश्वासन दिले होते.

हे गृहकर्ज, तुमच्या हिताचे

ADVERTORIAL

मुंबई : संभाय घर खरेदीदारांवर हाती घेण्यात आलेल्या एका अलिकडच्या अभ्यासातून काही विस्मयजनक गोष्टी कळून आल्या. गृह कर्जादारांचा एक मोठा गट, लागू असलेले शुल्क आणि देण्यात येणाऱ्या पूर्ण सवलती यांची कसून तपासणी न करताच गृहकर्जासाठी बँकेची निवड करतात. ५ पैकी ३ कर्जदार, कोण जास्तीत जास्त सवलती देतो ते पाहण्याकरिता अनेक धनकॉकडे जाण्याऐवजी एकाच बँकेत गृहकर्जासाठी अर्ज करतात. ह्या अभ्यासात समावेश असलेल्या बहुतेक संभावित खरेदीदारांनी सांगितले की, गृहकर्जाबाबत माहिती देणारे त्यांचे प्रमुख स्रोत कर्ज देणारी बँक स्वतःच होती किंवा ते ज्यांच्याकडून घर खरेदी करायचे ते बिल्डर तरी होते. "विकिस ठेवलेल्या घर मिल्कतीची जागा निवडण्यासाठी ग्राहक खूप वेळ खर्च करतात, विविध धनकॉकडून गृह कर्जाची निवड करताना तसाच उत्साह दिसला पाहिजे. ह्या बाबत केलेले हे थोडेसे संशोधन कर्जदारांकरिता दीर्घ कालावधीत खूपच फायदेशीर ठरू शकते कारण, गृहकर्जाची निवड करताना विचारपूर्वक घेतलेला निर्णय, येणाऱ्या काळात मोठी बचत करू शकतो" श्रीमती मनिशा रावदेव, ग्रेटर बँकेच्या चीफ एक्झिक्युटिव्ह ऑफिसर यांनी एका निवेदनात असे म्हटले आहे.

बहुतांश घर खरेदीदार 'सुयोग्य घर' शोधण्यात बराच वेळ घालवतात, परंतु त्यातले बहुतेक सर्वच सुयोग्य गृहकर्ज निवडण्याकडे दुर्लक्ष करतात. कर्जदाराला ही चुक नंतरच्या काळात लक्षावधी रुपयांनी महागात पडते.



श्रीमती मनिशा रावदेव, चीफ एक्झिक्युटिव्ह ऑफिसर, ग्रेटर बँकेचे को-ऑपरेटिव्ह बँक लिमिटेड (रोझवुड बँक)

२० वर्षे कालावधीसाठी रु. १० लाखांच्या कर्जासाठी कर्जदाराने १०.५% व्याजदराने पैसे भरल्यास ग्रेटर बँक देऊ करत असलेल्या ८.५% व्याजदराने तो रु. ३,९३,४४०/- जास्त रक्कम प्रदान करतो. आताच किंवा कधीच नाही : एप्रिल २०१६ पासून, कर्जाचे दर आधीच जवळपास एक टक्क्याने घसरले आहेत, जागतिक आणि भारतीय आर्थिक स्थिती पाहता, नजिकच्या काळात व्याज दराची पुढील कपातीची अपेक्षा नाही. तेव्हा गृह कर्ज घेण्यासाठी हीच सुवर्णसंधी आहे.

जास्तीत जास्त २० वर्षांच्या कालावधीसाठी ८.५० टक्केच्या सर्वात कमी आणि फिक्स व्याजदराने ग्रेटर बँक तिचे गृह कर्ज देऊ करत आहे. महिला कर्जदारांसाठी ८.४० टक्क्यांचा विशेष व्याजदर ठरविण्यात आला आहे. हा बदल घडवून आणणे : जेव्हा बँकांनी त्यांचे दर कमी केलेले आहेत तेव्हा जुने कर्जदार अजूनही उच्च व्याजदरानेच प्रदान करत आहेत. ह्या कर्जदारांसाठी "स्वीच ओव्हर" केल्याने खरोखर मोठा फरक पडतो. उदा.- २० वर्षांच्या

कालावधीच्या (ज्यापैकी ३ वर्षे पूर्ण झाली आहेत) १०.५% दराने रु. १० लाखांच्या कर्जासाठी, ८.५% व्याजदराने ग्रेटर बँकेच्या गृह कर्जात केलेल्या स्वीच ओव्हरमुळे कर्जदाराला त्याचे रु. ३,७९,३९२/- वाचता येतात. ह्या मर्यादित कालावधीच्या प्रस्तावासाठी सर्व गृह कर्ज हस्तांतरणावरील प्रक्रिया शुल्क देखील ग्रेटर बँकेने माफ केले आहे. परंतु बदल करण्याचे ठरविण्यापूर्वी प्रत्येक बँक देऊ करत असलेल्या बदल पर्यायांची नोंद घ्या. लक्षात ठेवा, कर्ज कबाकी आणि कालावधी जेवढा जास्त तेवढा फायदा जास्त.

टीप : ग्रेटर बँकेने सर्व गृह कर्ज हस्तांतरणावरील प्रक्रिया शुल्क माफ केले आहे. मर्यादित कालावधीची सवलत.

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(भारत सरकारचा उपक्रम)

मुंबई रिफायनरी, माहूल, चेंबूर, मुंबई ४०००७४, महाराष्ट्र

भारत पेट्रोलियम कॉर्पोरेशन लिमिटेड, मुंबई रिफायनरी येथे १००% बीएस-६ प्रतीचे पेट्रोल बनविण्याकरिता गॅसोलीन हायड्रो ट्रीटमेंट संयंत्र (जीटीयु) व संलग्न यंत्रणा (क्षमता ०.९ एमएमटीपीए) उभारणीकरिता पर्यावरणात्मक मंजूरी.

पर्यावरण, वने आणि हवामान बदल मंत्रालयाचे पत्र क्रमांक. जे-११०११/१८/२०१६-१३-२(१) दि. २० मार्च २०१७ अंतर्गत भारत पेट्रोलियम कॉर्पोरेशन लिमिटेड, मुंबई रिफायनरी येथे १००% बीएस-६ प्रतीचे पेट्रोल बनविण्याकरिता गॅसोलीन हायड्रो ट्रीटमेंट संयंत्र (जीटीयु) व संलग्न यंत्रणा (क्षमता ०.९ एमएमटीपीए) उभारणीकरिता पर्यावरणात्मक मंजूरी दिली आहे.

पर्यावरण, वने आणि हवामान बदल मंत्रालयाद्वारे वितरित मंजूरी पत्राची प्रत महाराष्ट्र राज्य प्रदूषण नियंत्रण मंडळाकडे उपलब्ध असून त्या पर्यावरण, वने आणि हवामान बदल मंत्रालयाची वेबसाइट <http://www.envfor.nic.in> वरही उपलब्ध आहेत. सर्व संबंधितांसाठी सदर माहिती जारी करण्यात येत आहे.

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- सौम्य रंगाचे, सैल व कॉटनचे कपडे वापरा.
- अशक्तपणा जाणवत असेल तर त्वरीत डॉक्टरांचा सल्ला घ्या.
- प्रवास करताना पाण्याची बाटली सोबत ठेवा.
- ओआरएस, घरी बनविलेली लस्सी, लिंबूपाणी, ताक इ. प्यावे.
- रात्रीच्या वेळेस घराच्या खिडक्या उघड्या ठेवा.
- आपले घर थंड ठेवण्यासाठी पडदे व सनशेड बसवा.
- पंख्याचा वापर करा तसेच थंड पाण्याने आंघोळ करा.

हे करू नका

- दुपारी १२ ते ३ शक्यतो बाहेर जाणे अथवा फिरणे टाळा.
- मद्यसेवन, चहा, कॉफी व शीतपेय पिणे टाळा. त्यामुळे डिहायड्रेट होते.

उष्माघाताची लक्षणे

- शरीराचे तापमान ४० अंशाच्या पुढे जाणे.
- डोकेदुखी व धडधड जाणवणे.
- चक्कर, मळमळ व उलट्या होणे.
- उष्णता असूनही घाम न येणे.
- स्नायू दुखणे व गोळे येणे.
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IR17-ENGG-2-18633	Indian Institute of Technology Bombay	Mumbai	Maharashtra	87.87	2
IR17-ENGG-2-18630	Indian Institute of Technology Kharagpur	Kharagpur	West Bengal	81.93	3
IR17-ENGG-2-1-79	Indian Institute of Technology Delhi	New Delhi	Delhi	81.08	4
IR17-ENGG-2-18248	Indian Institute of Technology Kanpur	Kanpur	Uttar Pradesh	76.83	5
IR17-ENGG-2-18677	Technology Roorkee	Roorkee	Uttarakhand	73.10	6
IR17-ENGG-2-1-251	Indian Institute of Technology Guwahati	Guwahati	Assam	72.30	7
IR17-ENGG-2-18292	Anna University	Chennai	Tamil Nadu	63.97	8
IR17-ENGG-2-10326	Jadavpur University	Kolkata	West Bengal	62.59	9
IR17-ENGG-2-1-345	Indian Institute of Technology Hyderabad	Hyderabad	Telangana	60.24	10
IR17-ENGG-1-1-370	National Institute of Technology Tiruchirappalli	Tiruchirappalli	Tamil Nadu	59.44	11
IR17-ENGG-2-1-140	National Institute of Technology Rourkela	Rourkela	Odisha	58.78	12
IR17-ENGG-2-18572	Vellore Institute of Technology	Vellore	Tamil Nadu	58.16	13
IR17-ENGG-2-18261	Institute of Chemical Technology	Mumbai	Maharashtra	57.97	14
IR17-ENGG-2-1-346	Indian Institute of Technology Indore	Indore	Madhya Pradesh	57.70	15
IR17-ENGG-2-18599	Birla Institute of Technology & Science - Pilani	Pilani	Rajasthan	55.43	16
IR17-ENGG-2-18690	Indian Institute of Engineering Science & Technology, Shibpur	Howrah	West Bengal	54.42	17
IR17-ENGG-1-18627	Indian Institute of Technology Bhubaneswar	Bhubaneswar	Odisha	54.32	18
IR17-ENGG-2-1-344	Indian Institute of Technology Patna	Patna	Bihar	54.02	19
IR17-ENGG-1-10356	Jamia Millia Islamia	New Delhi	Delhi	53.70	20

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Congestion on port road eliminated: JNPT

Jams, days-long wait had resulted in truck drivers turning violent in 2015

EXPRESS NEWS SERVICE
MUMBAI APRIL 6

THE JAWAHARLAL Nehru Port Trust (JNPT) has claimed to have eliminated traffic congestion on roads leading to its three terminals.

A source of constant frustration for drivers of trucks delivering cargo to the terminals, who have had to spend hours in queues waiting for their documents to be verified by port officers, the JNPT administration has said a number of measures have resulted in zero traffic congestion in the past nine months.

Massive traffic jams and days-long waiting period had resulted in truck drivers turning violent in November 2015, attacking port officers and policemen, and ransacking buildings.

Identifying long queues as a focus area, JNPT chairman Anil Diggikar said the submission of hard copies of documents at the entry gate has been stopped. "We have introduced e-forms and RFID tags, so now truck drivers submit their forms online. Each truck saves at least five minutes," he said.

The port has also created a traffic management team to reg-

ulate traffic, as the local police were not able to do it on their own.

The port also introduced what is called the inter-terminal movement, allowing trucks to return to processing areas without having to travel 7.5 km on the port road to exit.

Diggikar said this has led to a 8 per cent drop in congestion on the road and fuel savings of Rs 125 crore.

On Thursday, JNPT also published its figures for financial year 2016-17, recording a marginal increase in its operating income.

Its income was Rs 1,677.90 crore in the just-concluded year, compared to Rs 1,665.10 crore in

the previous year.

Owing to an increase in fuel prices, its expenditure rose to Rs 788.49 crore, up 13 per cent from Rs 693.12 crore in 2015-16, said Neeraj Bansal, Deputy Chairman, JNPT.

In 2016-17, the port handled 4.50 million tonne equivalent units (TEUs) of container traffic, the highest since its inception. The port's own cargo terminal, the JNPT, also logged a significant rise in cargo traffic the previous year, handling 1.53 million

TEUs over 1.43 million TEUs in 2015-16.

Bansal said the first phase of the port's fourth terminal, which is being built in partnership with the Port of Singapore Authority, would be completed by December 2017, while the second phase is expected to be completed by 2023.

Each phase will increase the length of the berth by one km and is expected to add 2.4 million TEUs to the port's capacity.

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NOTICE OF RECORD DATE
NOTICE is hereby given pursuant to Section 91 of the Companies Act, 2013 that Monday, 24th April 2017 has been fixed as the Record Date for the purpose of payment of interest to the holders of 11.48% Unsecured Subordinated Perpetual Rated Listed Securities in the form of Non-Convertible Debentures (ISIN:INE245A00034) aggregating ₹ 1,500 crore due on 26th April 2017.
For The Tata Power Company Limited
H. M. Mishra
Company Secretary

Place: Mumbai
Date: 6th April 2017

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Employees Provident Fund Organisation, Regional Office, Kandivali is organising a programme "Nidhi Aapke Nikat" in its office premises on 10th April, 2017 as scheduled below:

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2. Employers / Worker Representatives : 3:00 Pm to 5:00 Pm

Exempted Establishments
All the employers/ members/ worker union representatives/pensioners of RO, Kandivali are invited to participate in the programme.
It is organisations endeavor to become more accessible to all its stakeholders by providing platform to approach the office for redressal of grievance/ resolving the difficulties and to educate them on IT related new innovations pertaining to online customer services/ compliance reporting.
Member/ claimants/ pensioners having grievances/ issues related to customer service may approach on this day with the relevant documents for speedy redressal. Additionally the programme will provide support/ practical demonstration on technical/ operational matters as mentioned below:

1. Uploading and approval of KYC data seeded to UAN and member's activation of UAN.
2. Organising Aadhar Camp in the premises of employers.
3. Deposit of EPF dues through Internet Banking.
4. Registration and uploading of digital signature for approval of KYC data online transfer applications.
5. UAN activation.
6. Registration of Digital Life Certificate.

Regional Provident Fund Commissioner
Regional Office, Kandivali

Bharat Petroleum Corporation Limited
(A Govt. of India Enterprise)

Mumbai Refinery, Mahul, Chembur, Mumbai 400074, Maharashtra

Environmental Clearance for Installation of Gasoline Hydro Treatment Unit (GTU) 0.9 MMTPA and associated facilities to produce 100% BS VI MS at Bharat Petroleum Corporation Limited, Mumbai Refinery.

Ministry of Environment, Forest & Climate Change has accorded environment clearance for installation of Gasoline Hydro Treatment Unit (GTU) 0.9 MMTPA and associated facilities to produce 100% BS VI MS at Bharat Petroleum Corporation Limited, Mumbai Refinery vide letter number J-11011/06/2016-IA-II(i) dated 20th March 2017.

Copy of the clearance letter issued by MoEF&CC is available with the Maharashtra State Pollution Control Board and may also be seen at website of the Ministry of Environment, Forest & Climate Change at <http://www.emvfor.nic.in>

This is for the information of all concerned.

Emerging Lives. Emerging Business



**LEAK DETECTION AND REPAIR (LDAR) PROGRAM
REPORT FOR THE MONTH OF OCTOBER, 2021.
TOTAL VOC EMISSION SUMMARY**

Sr.No.	Name of the Unit	Date of Monitoring	Total No of Points Monitored	No. of Points Where leaks found beyond standard limits	Total Leak before attending (kg/day)	Total Leak after attending (kg/day)
1	CCR	18/10/2021	3740	1	0.078	0
Total				1	0.078	0

Verified by

Surekha Janddar
Dy. Technical Manager



Checked by

Shradha Kere
Technical Manager

LDAR VOC MONITORING REPORT FOR BPCL MAHUL.



LEAK DETECTION AND REPAIR (LDAR) PROGRAM
REPORT FOR THE MONTH OF OCTOBER, 2021

PLANT LEAK SUMMARY

Sr.No	Name of the Unit	Description	Component	Line Size	Location	Leak Type	Hydrocarbon Readings while Monitoring-Date 18/10/2021		Hydrocarbon Readings after attending leak Attended on Date 22/10/2021	
							ppm	kg/day	ppm	kg/day
1	CCR	141A-FV-204 D/5 IPV	valve	6"	Control valve	Gland	1230	0.078	0	0

Verified by

Surekha Jamdar

Surekha Jamdar
Dy. Technical Manager

Checked by

Shraddha Kere

Shraddha Kere
Technical Manager



Date: 30th Jan-2020

Note to : File
Through : DGM, Technology, E & E, MR
Subject : Revision of LDAR monitoring schedule to half yearly basis from quarterly basis

Background

At BPCL MR, Fugitive Emission / Leak Detection and Repair (LDAR) monitoring program was being followed on yearly basis for each plant which is a function of preventive maintenance. Leaks as and when detected was attended and checked again through post repair schedule. The components that are covered under the LDAR monitoring program include block/control valves, pump/compressor seals, flanges of heat exchanges & piping, pressure relief valves, sampling points etc. BPCL MR uses the GMI Leak Surveyor 500 series equipment for LDAR monitoring and LDAR monitoring program is carried out through third party i.e. M/s Netel India Ltd.

For enabling further reductions of Volatile Organic Compound (VOC) emissions, the frequency of LDAR monitoring was revised to maximum i.e. quarterly basis ex yearly basis for refinery's all process units since April-2019. As per GSR-186 (E), a total of 37310 component wise points were checked under LDAR monitoring program in first two quarters for FY 2019-20. Leaks as and when detected were attended and checked again through post repair schedule.

As per GSR-186 (E), if the component wise leaks are less than 2% for two consecutive quarterly LDAR monitoring reports then the frequency of LDAR program can be revised to semiannual / half yearly basis. As per the quarterly LDAR monitoring reports of Jun-2019 & Oct-2019, the component wise leaks are less than 2% (**Refer Annexure-1**). Hence, next LDAR monitoring program for all refinery units will be carried out on half yearly basis i.e. in the month of Apr-2020 and onwards.

Prepared by


Raju Thakare

Sr. Manager, Technology, E & E, MR

Encl: Annexure-1: Netel's LDAR component wise summary Report of quarter-1 & 2.

CREP action points for oil refineries:

CREP Point	BPCL reply
A) Air Pollution Management	
<p>All refineries located in the critically pollution areas, identified by CPCB, will submit an action plan for phase wise reduction of SO₂ emissions. Future Refineries will have SRU with minimum 99 % efficiency. To enhance the efficiency of SRUs in the existing refineries, an expert committee will be constituted to look into the various aspects and suggest a road map.</p>	<p>BPCL Mumbai Refinery has installed Sulfur Recovery Units for recovering sulfur from sour gases. In 2017, Tail Gas Treatment Units have been commissioned which has improved sulfur recovery efficiency to 99.99 %.</p>
<p>With regard to NO_x emission, the new refinery/ process units will be installed to low NO_x burners. For retrofitting of low NO_x burners in existing units, the expert committee will suggest the strategies and action plan including NO_x std.</p>	<p>All process units in BPCL MR have been equipped with Low NO_x burners.</p>
<p>The flare losses will be minimized and monitored regularly.</p>	<p>BPCL Mumbai Refinery has provided Flare recovery system where flare gases are recovered and treated in Fuel Gas treatment unit. After removing H₂S, treated flare gases are diverted to fuel gas system for burning into furnace.</p>
<p>Refineries shall install CEMS for SO_x, NO_x in major stacks with proper calibration facilities</p>	<p>As per CPCB guideline, all refinery stacks have been provided with Sox, NO_x, CO and SPM analyzers with proper calibration facilities. Stack analyzer details are continuously transmitted to CPCB/ MPCB server on real time basis. Also as per recent CPCB direction, dynamic limits have been incorporated for mixed fuel fired furnace.</p>
<p>Refineries will also monitor total HC and benzene in the premises (particularly at Loading-Unloading operations and ETP).</p>	<p>Ambient air quality monitoring is carried out on regular basis through MOEF approved and NABL accredited third party M/s Netel India Ltd. AMS are connected to MPCB/CPCB servers and data is transmitted on real time basis. Benzene/Toluene/Hexane vapour recovery system has been provided at product dispatch unit. N₂ blanketing facility has been provided for Benzene and Toluene Storage tanks. Bottom loading facility has been provided for Benzene and Toluene product dispatch. ETP sub units have been covered with VOC removal system. LDAR survey is carried out as per GSR 186 (E) in TDU and ARU complex on half yearly basis.</p>
B) Waste water management	
<p>Refineries will prepare action plan for conservation of water resources and maximize reuse recycling of treated effluent. The treated effluent discharge (excluding once through cooling tower) will be limited to 0.4 m³/ tone (for 90 % of time) except for the season.</p>	<p>BPCL Mumbai Refinery is “Zero Liquid discharge” refinery and process water is treated in Effluent Treatment Plant (ETP). Treated water is reused in process cooling towers. Analyzers for monitoring BOD, COD, TSS & PH at ETP outlet have been provided with provision of continuous data transmission to CPCB/ MPCB. ETP subunits have been covered and VOC removal system has been installed.</p>

<p>Oil spill response facilities at coastal refineries will be in position. To facilitate this MoEF will coordinate with Coast Guards, Port Trust and departments.</p>	<p>Agreement between MbPT / JNPT and participating oil companies for providing Tier – 1 Oil Spill Response (OSR) facilities at Mumbai port, has been signed on 31.10.2018. The renewed agreement is valid till 17.02.2023. However, the contract for providing Tier -1 OSR facilities has been given to M/s Sadhav Shipping. Also, BPCL MR participates regularly in OSR mock drills conducted by MbPT. Risk assessment has been carried out by MbPT through third party for OSR. Meeting is arranged by MBPT with participating oil companies to liquidate the recommendations arising out the risk assessment. MbPT has also initiated action for new OSR contracts at Mumbai Port area.</p>
<p>Solid waste management</p>	
<p>Refineries will explore new technologies for reduction in the generation of oils sludge strategy.</p>	<p>At BPCL MR, oily sludge is processed for oil recovery with the help of third party contract and processed sludge after oil recovery, is treated with bioremediation process using bioremediation agent/ Bacteria. For carrying out bioremediation process, BPCL has an agreement with M/s MIEBRS.</p>
<p>The petroleum coke having high sulfur content will be sold to/ reused by organized industries (having consent from SPCB) which have system to control SO2 emissions.</p>	<p>Not Applicable</p>

CREP action points for oil refineries:

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With regard to NOX emission, the new refinery/ process units will be installed to low NOx burners. For retrofitting of low NOx burners in existing units, the expert committee will suggest the strategies and action plan including NOx std.	All process units in BPCL MR have been equipped with Low NOx burners.
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<p>The petroleum coke having high sulfur content will be sold to/ reused by organized industries (having consent from SPCB) which have system to control SO2 emissions.</p>	<p>Not Applicable</p>