

Half Yearly EC Compliance Report

Period: Jul-2021 to Dec-2021

BPCCL, 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 01.12.2021
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 conform 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. Similarly, all stacks in BPCL MR have been provided with analyzers for continuous online monitoring of SO _x , NO _x , CO & SPM.

		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 process cooling towers (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 2020-21, Form- IV was filled on 22 nd June-2021. 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

		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.
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.	Complied. 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.
xiv.	At least 2% of the total cost of the project shall be earmarked towards the Enterprises Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry Of Regional Office. Implementation of such program shall be ensured accordingly in a time bound manner.	Noted. Please refer Annexure-6 for Enterprises Social Commitment (ESC) expenditure details.
xv.	Zero liquid discharge to be ensured.	Noted. There is no additional requirement of fresh water and no additional generation of effluent from GTU project. ETP outlet water is 100% recycled to process cooling towers (ZLD). Transmission ETP Flow data and ETP camera images to CPCB / MPCB servers job has been completed on 19 th Aug-2019.

B.GENERAL CONDITIONS:

Sr. No.	Condition	Status as on 01.12.2021
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.	<p>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.</p> <p>Ambient air Quality report at BPCL is attached as Annexure-7.</p>
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. Monitoring carried out in the periphery of the refinery is attached. (Refer Annexure-7: Noise Monitoring Data).</p>

		Also, sign painting is done for High Noise area and instructions have been mentioned to use PPEs.
vi.	The company shall harvest rain water from roof tops of the buildings and storm water drains to recharge the ground water and use the same waste for the process activities to the project to conserve fresh water.	Complied. Rain water harvesting systems are provided at BPCL MR at 14 locations out of which RWH system at DHDS & DHT substation roof top were commissioned in June-2019. Details of total Rain water harvested are as below: 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
vii.	Training shall be imparted to all employees on safety & health aspects of chemicals handling. Pre – employment & routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	Complied. Safety trainings are carried out for BPCL employees as well as contractor employees which includes Hands on fire fighting, Behavior based safety training & safety in refining etc. Mandatory 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.
viii.	The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management and risk mitigation measures relating to the project shall be implemented.	Complied.
ix.	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.	Being implemented. CSR activities are conducted on regular basis for local villages which involves Cancer screening camp, Eye screening camp Blood donation camp, Public health center, Ambulance service during emergency, providing fish nets to local fishermen.
x.	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Complied. BPCL is providing scholarships to needy students through local schools. Also felicitates 10 th & 12 th std. students every year.

		Environment (HSSE) department carries out tree plantation and awareness functions in nearby schools as a part commitment towards sustainable environment.
xi.	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	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. List of recent Environment projects is attached as Annexure-8 .
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	Duly filled form V (Environment Statement) for every financial year is submitted to MPCB office before 30 th Sept of every assessment year.

	be sent to the respective Regional Office of MoEF&CC by e-mail.	For 2020-21 also, Form-V was submitted to MPCB on 30 th Sept-2021. Please refer Annexure- 9 .
xvi.	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of Ministry at 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.	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 & Maharashtra Times Marathi) on 7 th of April 2017. Annexure- 10 & 10a .
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 01.12.2021
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.	<p>Analyzers are installed at DHT stacks for continuous on-line monitoring of SO₂, NO_x CO and PM. Low NO_x burners are provided.</p> <p>Please Refer GTU compliance report as on 01.12.2021 for further details.</p>
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.	<p>The following features at DHTD process emissions to conform with the standards prescribed under EPA</p> <ul style="list-style-type: none"> • Fuel gas is fired in the furnaces. • Air pre-heater provided for improving efficiency • 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 SO_x, 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> <p>Ambient air quality as monitored at refinery is attached as Annexure-7.</p>
v.	Leak Detection and Repair program 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.	<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-11 for typical LDAR report and Annexure -11a for Note file for revision in LDAR monitoring frequency.</p>

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.	Complied. Tail Gas Treatment Units (TGTU) is commissioned in Nov-2017 for improving SRU efficiency to 99.9 %. Please refer Annexure-12 .
vii	As proposed, record of sulphur balance shall be maintained at the Refinery as part of the environmental data on regular basis. The basic component of sulphur balance include sulphur input through feed (sulphur content in crude oil), sulphur output from Refinery through products, byproduct (elemental sulphur), atmospheric emissions etc.	Typical Sulfur balance from the existing refinery attached as Annexure-12
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.	Three Ambient Air Quality Monitoring Stations are existing in the refinery. On-line monitoring of PM-10, PM-2.5, SO ₂ , NO _x , H ₂ S, CO, Methanic & non methanic hydrocarbons, benzene, Ammonia, Ozone and meteorological parameters of Wind speed, wind direction, temperature, & Relative humidity is being carried out as per National Ambient Air Quality Standards (NAAQS). Real time data is continuously sent to CPCB / MPCB site. Please refer Annexure-7 for environment monitoring reports.
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. Ambient air Quality at North west corner of Refinery is attached as Annexure-7
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)	<p>Treated effluent is fully recycled as make water to various raw water cooling towers in the Refinery.</p> <p>A new Sewage Treatment plant with a capacity of 250 CMD for administrative block has been commissioned in Dec 2014.</p> <p>Please refer Annexure-1 for Water Balance.</p> <p>BPCL has provided analyzers for COD, BOD, TSS, PH monitoring with direct connectivity to CPCB/ MPCB server.</p>
xiii	Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	<p>Complied.</p> <p>Oil catchers equipped with skimmers, weirs, drum skimmer, rope skimmer, hay filters etc have been provided.</p> <p>Please Refer GTU compliance report as on 01.12.2021 for further details.</p>
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.	<p>Complied.</p> <p>Treated effluent is fully recycled as make water to various raw water cooling towers in the Refinery. BPCL has provided analyzers for COD, BOD, TSS, PH monitoring with direct connectivity to CPCB/ MPCB server.</p> <p>Please refer 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	<p>Complied.</p> <p>BPCL has provided analyzers for COD, BOD, TSS, PH monitoring with direct connectivity to CPCB/ MPCB server.</p>
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.	<p>Not Applicable</p> <p>There is no coker installed at BPCL Mumbai Refinery.</p>
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	<p>Complied.</p> <p>Please Refer GTU compliance report as on 01.12.2021 for further details.</p>

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 authorized 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 01.12.2021 for further details.
xx	Acoustic enclosure/silencer shall be installed wherever it is possible.	Please Refer GTU compliance report as on 01.12.2021 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-13 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 as per CPCB guidelines.	Please Refer GTU compliance report as on 01.12.2021 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. Please Refer GTU compliance report as on 01.12.2021 for further details.
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 01.12.2021
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. Please Refer GTU compliance report as on 01.12.2021 for further details.
v.	A separate environmental management cell equipped with full-fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.	BPCL refinery already has an Environment section to carry out environmental management and monitoring functions. The Refinery also has a full-fledged NABL approved Laboratory.
vi.	Adequate funds shall be earmarked towards capital cost and recurring cost for environment pollution control measures and shall be used to implement the conditions stipulated by MOEF as well as state government along with implementation schedule for all the conditions stipulated herein. Funds so provided should not be diverted for any other purpose.	Adequate funds are being provided for environment pollution control measures. Various Environment projects incurring capital expenditure are being carried out regularly. List of recent environmental projects is attached as Annexure-8 .
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 01.12.2021 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 sect oral of parameters, indicated for projects shall be monitored and displayed at the convenient location near main gate of the company in public domain.	Complied. Six monthly compliance statement of EC is being uploaded on PARIVESH portal of MoEF&CC and soft copy is being shared with CPCB and MPCB. The compliance report is also posted on the BPCL corporate website. Environmental display board has been provided at the main gate of the refinery, which continuously displays ambient air quality monitored at the north west corner of the refinery.
x.	The project proponent shall also submit six monthly reports on status of compliance of stipulated environmental conditions including results of monitored data (both in hard copies as well as by email) to the Regional office of MoEF, the respective Zonal Office of CPCB and SPCB. The Regional Office of Ministry/CPCBSPCB shall monitor the stipulated conditions.	Complied. Six monthly compliance statement of EC is being uploaded on PARIVESH portal of MoEF&CC and soft copy is being shared with CPCB and MPCB.
xi.	The Environmental Statement for each financial year ending 31 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 Please Refer GTU compliance report as on 01.12.2021 for further details.
xii.	The project proponent shall inform the public that the project has been accorded environmental clearance by the ministry and copies of the clearance are available with the SPCB and may also be seen at website of Ministry of Environment and Forests at 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
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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 01.12.2021
i.	Compliance to all the environmental conditions stipulated in the environmental clearance letter no. J-11011/180/2008-IA II(I) dated 28th April, 2008 , F.No.J-11011/140/2012-IA II I dated 12th June 2013 shall be satisfactorily implemented and compliance reports submitted to ministry's regional office at Bhopal.	Complied.
ii.	M/s BPCL shall comply with new standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules. 1986 vide G S R 186(E) dated 18th March,2008 and GSR 820(E) dated 9th November 2012.	Complied.
iii.	Continuous on-line stack monitoring for SO 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	Complied.

	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.	
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.	Typical Sulfur balance from the existing refinery attached as Annexure-12 .
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-13 for details of Corporate Responsibility for Environmental Protection (CREP).
xviii.	To prevent fire and explosion at oil and gas facility, potential ignition sources shall be kept to a minimum and adequate separation distance between potential ignition sources and flammable materials shall be in place.	Complied.
xix.	Green belt shall be developed at least in 45 acres area land around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Thin greenbelt with suitable plant species shall be developed around unit. Selection of plant species shall be as per the CPCB guidelines.	Tree plantation is done in and around Mumbai Region. Please refer Annexures-3/4/5 .
xx.	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	Please Refer GTU compliance report as on 01.12.2021 for further details.
xxi.	Company shall adopt Corporate Environment Policy as per the Ministry's OM No J-11013/41/2006-IA II(I) dated 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 01.12.2021
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. Please Refer GTU compliance report as on 01.12.2021 for further details.
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. List of recent Environmental projects is attached as Annexure-8 .
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	Complied.

	processing the proposal. The clearance letter shall 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 Six monthly compliance Report is being uploaded on PARIVESH portal of MoEF&CC and soft copy is being shared with CPCB and MPCB. Also, it is published on BPCL corporate website. Environmental display board has been provided at Refinery Main Gate which continuously displays ambient air quality monitored at the north west corner of the refinery.
x.	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional office of MoEF, the respective zonal office of CPCB, and the SPCB. The Regional office of this ministry, /CPCB/SPCB shall monitor the stipulated conditions.	Six monthly compliance Report is being uploaded on PARIVESH portal of MoEF&CC and soft copy is being shared with CPCB and MPCB. Also, it is published on BPCL corporate website.
xi.	The Environmental statement for each financial year ending 31st March in form V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986 as amended subsequently, shall also be put on the website of the company along with the status of compliance of Environmental conditions and shall also be sent to the respective Regional Offices of the MoEF by e-mail.	Please Refer GTU compliance report as on 01.12.2021 for further details.
xii.	The project proponent shall inform the public that the project has been accorded environmental clearance by the ministry and copies of the clearance are available with the SPCB and may also be seen at website of Ministry of Environment and Forests at 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 01.12.2021
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 March,2008 and GSR 820(E) dated 9 th November-2012	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. Please Refer GTU compliance report as on 01.12.2021 for further details.
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. Please Refer GTU compliance report as on 01.12.2021 for further details.
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	Complied.

	monitored. Sensors for detecting HC leakage shall be provided at strategic locations.	
vi.	SO2 emissions after expansion from the plant shall not exceed 10.44 TDP, Sulphur recovery units shall be installed for control of H2S emissions. The overall sulphur recovery efficiency of Sulphur recovery unit with tail gas treating shall not be less than 99.9 %.	Please Refer GTU compliance report as on 01.12.2021 for further details.
vii	As proposed, record of sulphur balance shall be maintained at the Refinery as part of the environmental data on regular basis. The basic component of sulphur balance include sulphur input through feed (sulphur content incude oil), sulphur output from Refinery through products, byproduct (elemental sulphur), atmospheric emissions etc.	Typical Sulfur balance from the existing refinery attached as Annexure-12
Viii	Ambient air quality monitoring stations,[PM10,PM2.5,SO2, NOx, 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.	Complied. Please Refer GTU compliance report as on 01.12.2021 for further details.
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.	Complied. Please Refer GTU compliance report as on 01.12.2021 for further details.
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 m3/hr and prior permission shall be obtained from the competent authority. Industrial effluent generation from new CDU/VDU project shall be 60 m3/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.

		Please Refer GTU compliance report as on 01.12.2021 for further details.
Xiii	Oily sludge shall be disposed off into Coker. Annual Oily sludge generation and disposal data shall be submitted to the Ministry's Regional Office and CPCB.	Not applicable Please Refer GTU compliance report as on 01.12.2021 for further details.
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-13 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. Please Refer GTU compliance report as on 01.12.2021 for further details.
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	Complied.

	expediously implemented, and report sent to regional office of ministry	
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 01.12.2021
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. Please Refer GTU compliance report as on 01.12.2021 for further details.

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. Various Environmental projects incurring capital expenditure are being carried out regularly. List of recent Environmental projects is attached as Annexure-8 .
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	Complied.

	office of this ministry,/CPCB/SPCB shall monitor the stipulated conditions.	
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. Please Refer GTU compliance report as on 01.12.2021 for further details.
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 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 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 authorities and the date of commencing the land development work.	Noted.

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

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

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

Status of the CCR Project

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

Sr. No.	SPECIFIC CONDITIONS	STATUS as on 01.12.2021

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 Please Refer GTU compliance report as on 01.12.2021 for further details.
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 Please Refer GTU compliance report as on 01.12.2021 for further details.
v.	Leak detection and Repair program shall be prepared and implemented to control HC/VOC emissions. Focus shall be given to prevent fugitive emissions for which preventive maintenance of pumps, valves, pipelines are required. Proper maintenance of mechanical seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to. Fugitive emissions of storage tank yards etc must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations.	Complied Please Refer GTU compliance report as on 01.12.2021 for further details.
vi.	SO ₂ emissions after expansion from the plant shall not exceed 12 TPD. Sulfur recovery units shall be installed for control of H ₂ S emissions. The overall sulfur recovery efficiency of Sulfur recovery units with tail gas treating shall not be less than 99.9%.	Amine treated refinery fuel gas is being used as fuel in the CCR & NHT furnaces. Efficiency of existing Sulfur Recovery Units (SRU) is 99%. In Nov-2017, Tail Gas Treatment Unit (TGTU) has been commissioned which has improved sulfur recovery efficiency to 99.99 %. As cited in Environment Clearance received for CDU-4 project (commissioned in Dec-2015), SO ₂

		emissions from refinery are well below 10.44 MT/D. Please refer Annexure- 12 for further details.
vii.	As proposed, record of sulfur balance shall be maintained at the refinery as a part of the environmental data on regular basis. The basic component of sulfur balance include sulfur input through feed (sulfur content in the crude oil), sulfur output from refinery through products, by products, atmospheric emissions etc.	Typical Sulfur balance from the existing refinery attached as Annexure-12 .
viii.	Ambient Air quality monitoring stations {PM10, PM 2.5, SO2, NOx, 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.	Complied. Please Refer GTU compliance report as on 01.12.2021 for further details.
ix.	Ambient air quality data shall be collected as per N AAQES standards notified by the ministry on 16 th November 2009 and trend analysis wrt past monitoring results shall be also carried out. Adequate measures based on the trend analysis shall be taken to improve the ambient air quality in the project area.	Complied. Please Refer GTU compliance report as on 01.12.2021 for further details.
x.	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Besides acoustic enclosure/silencer shall be installed where ever noise pollution exceeds the limit.	Noted Power is being provided to CCR unit from Captive Power Plant existing at the refinery or is being imported from Tata Electric Company. Additional DG set is not required for CCR unit.
xi.	Total raw water requirement for the proposed project shall not exceed 4995 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. Please Refer GTU compliance report as on 01.12.2021 for further details.

xii.	Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.	Complied. Please Refer GTU compliance report as on 01.12.2021 for further details.
xiii.	Oily sludge shall be disposed off into Coker. Annual oily sludge generation and disposal data shall be submitted to the ministry's Regional office and CPCB.	Not Applicable There is no coker installed at BPCL Mumbai Refinery. There is no oily sludge generation from CCR complex. Other Oily sludge generated in the refinery is subject to mechanical/chemical treatments for oil recovery and the residual sludge is bio-remediated through M/s MIEBRS bacteria to reduce oil content below 0.5 wt% before it can be disposed off as per Hazardous waste Rule 2016.
xiv.	The company should strictly comply with the rules and guidelines under manufacture, storage and import of hazardous chemicals Rules 1989 as amended in October 1994 and January 2000. Hazardous waste should be disposed off as per Hazardous waste (Management, Handling and Trans-boundary movement) rules 2008 and amended time to time.	Complied.
xv.	The membership of common TSDF should be obtained for the disposal of hazardous waste. Copy of authorization or membership of TSDF should be submitted to Ministry's regional office at Bhopal. Chemical/inorganic sludge shall be sent to Treatment storage disposal facility (TSDF) for hazardous waste. Spent catalyst shall be sent to authorized recyclers/re-processors.	Complied.
xvi.	Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.	Complied. Closed sampling system has been provided to avoid spillage/leakage of oil. Gully Suckers are available to take care of any spillage. Close Blow down system is operational for close draining of hydrocarbons during maintenance activity. Oil catchers are provided for removing oil from water going out of refinery.

xvii.	The company shall strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP)	Complied. Please refer Annexure-13 .
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 01.12.2021.
xx.	All the recommendations mentioned in the rapid risk assessment report, disaster management plan, and safety guidelines shall be implemented.	Complied. Please refer GTU compliance report as on 01.12.2021.
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 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.

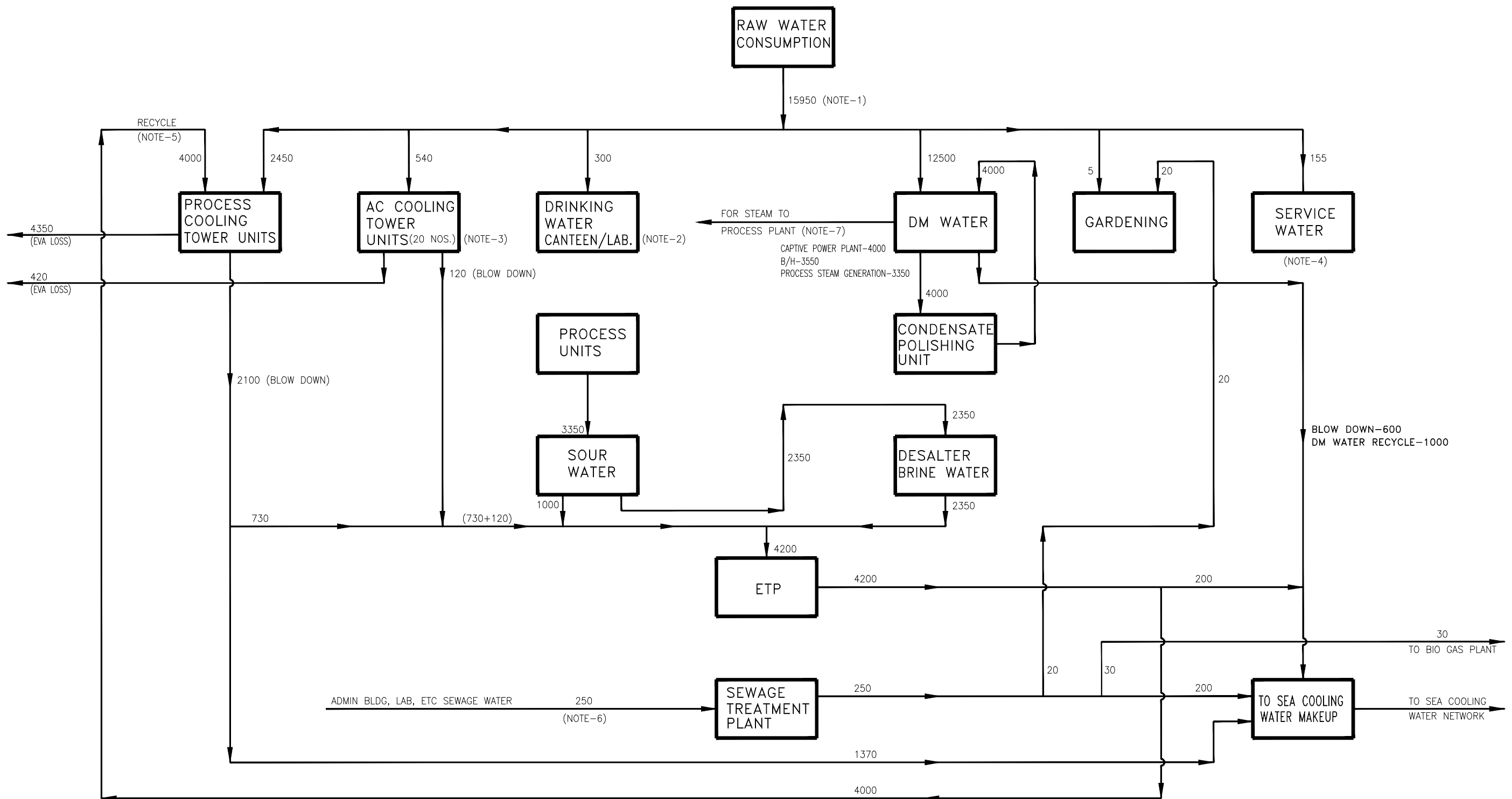
SR. NO.	GENERAL CONDITIONS	STATUS as on 01.06.2021
i.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), state government and any other statutory authority.	Complied

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. Please refer GTU compliance report as on 01.12.2021.
v.	A separate environment management cell equipped with full-fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.	Complied.
vi.	Adequate funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures and shall be used to implement the conditions stipulated Ministry of Environment and Forests as well as state government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	Please refer Annexure-8 .
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 Environmental conditions and shall also be sent to the respective Regional Offices of the MoEF by e-mail.	Complied.
xii.	The project proponent shall inform the public that the project has been accorded environmental clearance by the ministry and copies of the clearance are available with the SPCB and may also be seen at website o Ministry of Environment and Forests at 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	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.

	circulated in the region of which one shall be in vernacular language of the locality concerned, and a copy of same shall be forwarded to the Regional Office.	
xiii.	Project authorities shall inform the Regional office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Noted.

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 2022.....

Onkar A. Kulkarni
Manager - MBD

Somnath Malgar
Director



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-0000020836

Submitted On:

22-06-2021

Submitted for Year:

April 2020 to March 2021

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/BO/CAC-Cell/ UAN No. 0000071817/ 5TH CAC/ 1909000323

Date of issue

Sep 13, 2019

Date of validity of consent

Aug 31,
2021

2. Name of the authorised person

SUPRIYA SAPRE, CHIEF MANAGER, ENERGY & ENVIRONMENT

Full address of authorised person

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

Telephone

02225533192

Fax

NA

Email

sapres@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	1487	MT/Day
Oil Refinery (Mineral Oil or Petro Refineries)	BENZENE & TOLUENE	350.0000	130	
Oil Refinery (Mineral Oil or Petro Refineries)	SBP, HEXANE, MS, MTBE, NAPHTHA	8269.0000	6939	
Oil Refinery (Mineral Oil or Petro Refineries)	SKO, MTO, ATF	5217.0000	1254	
Oil Refinery (Mineral Oil or Petro Refineries)	HSD, LDO	15723.0000	17189	
Oil Refinery (Mineral Oil or Petro Refineries)	FO, LSHS, BITUMEN, SULFUR	6140.0000	3690	
Oil Refinery (Mineral Oil or Petro Refineries)	LUBE OIL BASE STOCK (LOBS)	680.0000	852	
Oil Refinery (Mineral Oil or Petro Refineries)	HYDROTREATED GASOLINE	2692.8000	2650	

PART A: To be filled by hazardous waste generators

1. Total Quantity of waste generated category wise

Type of hazardous waste	Wate Name	Consented Quantity	Quantity	UOM
4.2 Spent catalyst	CCU Spent Catalyst	2538.750	89.27	MTA
4.2 Spent catalyst	ARU Spent Alumina	2538.750	3.7	MTA
4.2 Spent catalyst	Spent Clay	2538.750	37.92	MTA
4.2 Spent catalyst	Bryorb 508 Chemical media	2538.750	5.09	MTA
4.2 Spent catalyst	Bryorb 515 Chemical media	2538.750	5.23	MTA

4.2 Spent catalyst	Spent Charcoal	2538.750	18.02	MTA
4.2 Spent catalyst	Spent Coke	2538.750	40.268	MTA
4.2 Spent catalyst	Spent Resin	2538.750	11.29	MTA
4.2 Spent catalyst	Spent Catalyst from LOBS & CCR	2538.750	33.25	MTA
4.2 Spent catalyst	HCU Spent Alumina	2538.750	12.049	MTA

2. Quantity dispatched category wise.

Type of Waste	Quantity of waste	UOM	Dispatched to	Facility Name
4.2 Spent catalyst	89.27	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	3.7	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	37.92	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	5.09	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	5.23	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	18.02	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	40.268	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	11.29	MTA	Disposal Facility	MUMBAI WASTE MANAGEMENT LTD. PLOT NO P-32, MIDC TALOJA, PANVEL. RAIGAD. NAVI MUMBAI-410208
4.2 Spent catalyst	33.25	MTA	Recycler or Actual user	RAVINDRA HERAEUS
4.2 Spent catalyst	12.049	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 bt 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

NA

UOM

KL/Anum

Landfill after treatment

NA

UOM

KL/Anum

5. Quantity incinerated (if applicable)

NA

UOM

KL/Anum

6. Quantity processed other than specified above

NA

UOM

KL/Anum

7. Quantity in storage at the end of the year.

NA

UOM

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
MUMBAI	2021-06-22	CHIEF MANAGER ENERGY & ENVIRONMENT



Mumbai Agricultural Produce¹²¹ 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.

9/11/14
Addl. Commissioner & Secretary
Mumbai APMC, Mumbai.



Mumbai Waste Management Ltd.

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

Date: 26/10/2016To,

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 Taloja.

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, 13, Ramky Tower Complex,
Gachibowli Hyderabad - 500 032.

Tel.: 040-2301 5000 (40 Lines) • Fax: 040-2330 2353 • 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,
बेलार्ड 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,

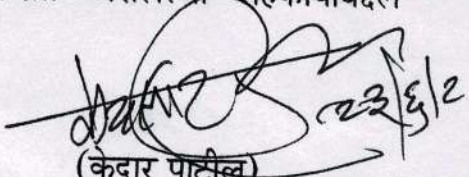
संदर्भ क्र. २ च्या पत्रान्वये आपणास ५ लक्ष वृक्षलागवड योजनेचा शुभारंभ जागतिक पर्यावरण दिनी ५ जून २०१७ रोजी करण्यात आला असून आपणामार्फत आपल्या स्वःखर्चाने या योजनेमध्ये ५००० वृक्षांचा पुरवठा करण्याबाबत कळविले आहे.

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
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
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:	
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%

- (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.

AI Ambient Air monitoring stations:• **AMS-1:**

Parameter	Unit	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
PM ₁₀	(µg/m ³)	63.63	67.81	68.20	74.1	74.3	59.23	59.53	55.00	66.75	58.76
PM _{2.5}	(µg/m ³)	40.16	40.91	36.64	28.6	28.8	29.28	30.04	17.80	33.65	29.40
SO ₂	(µg/m ³)	11.76	11.21	11.13	10.6	12.2	11.66	10.71	9.44	11.06	10.01
NO ₂	(µg/m ³)	29.28	27.71	26.68	24.1	29.4	26.71	25.79	22.81	27.11	23.58
Lead	(µg/m ³)	0.10	0.14	0.11	0.1	0.1	0.105	0.09	0.12	0.10	0.10
CO	(mg/m ³)	0.31	0.36	0.31	0.4	0.3	0.32	0.33	0.34	0.35	0.33
NH ₃	(µg/m ³)	22.88	22.80	22.81	23.1	22.3	17.6	22.84	29.89	23.25	22.16
Ni	(ng/m ³)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
As	(ng/m ³)	< 1.0	< 1.0	< 1.0	<0.1	< 0.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
O ₃	(µg/m ³)	3.66	4.33	3.99	4.5	4.4	4.1	3.70	3.76	4.14	3.41
Benzene	(µg/m ³)	4.16	4.29	4.29	4.1	4.2	4.1	4.16	3.63	4.30	4.01
Benzo (a) pyrene	(ng/m ³)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HC	(ppm)	1.82	1.85	1.79	1.8	1.8	1.7925	1.83	1.61	1.86	1.87

- AMS-2:

Parameter	Unit	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
PM ₁₀	(µg/m ³)	70.90	71.55	71.25	80.2	76.9	61.10	60.40	61.20	70.60	61.20
PM _{2.5}	(µg/m ³)	41.05	41.45	38.65	31.7	30.0	32.80	30.60	23.00	34.95	32.80
SO ₂	(µg/m ³)	12.75	12.90	9.70	10.5	11.3	12.20	11.20	11.45	10.35	10.90
NO ₂	(µg/m ³)	36.20	35.35	22.35	23.6	26.1	23.40	24.00	19.55	24.70	28.05
Lead	(µg/m ³)	0.12	<0.1	0.11	0.1	0.1	0.09	0.12	0.12	0.11	0.11
CO	(mg/m ³)	0.34	0.40	0.33	0.4	0.3	0.25	0.33	0.36	0.40	0.32
NH ₃	(µg/m ³)	18.85	20.80	23.70	25.3	18.5	21.20	30.90	22.60	28.40	25.35
Ni	(ng/m ³)	<0.1	<0.1	<0.1	<0.1	<0.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
As	(ng/m ³)	< 1.0	< 1.0	< 1.0	<0.1	< 0.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
O ₃	(µg/m ³)	4.72	3.76	3.86	3.5	3.1	5.05	3.65	3.40	3.25	4.40
Benzene	(µg/m ³)	4.40	4.59	4.28	4.3	4.0	4.20	4.00	3.50	4.50	4.20
Benzo (a) pyrene	(ng/m ³)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HC	(ppm)	1.92	1.77	1.86	1.9	1.8	1.79	1.74	1.68	1.90	1.73

AMS-3:

Parameter	Unit	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
PM ₁₀	(µg/m ³)	67.60	71.10	71.70	76.1	73.2	57.70	57.25	52.45	66.05	58.25
PM _{2.5}	(µg/m ³)	39.30	38.65	40.35	29.7	29.1	28.00	26.45	15.20	32.55	27.60
SO ₂	(µg/m ³)	12.50	11.40	8.90	10.3	11.1	9.85	10.00	10.10	8.85	8.95
NO ₂	(µg/m ³)	27.50	28.20	23.05	24.5	26.4	25.05	22.95	20.35	19.85	23.30
Lead	(µg/m ³)	0.13	<0.1	0.12	0.1	0.1	0.12	0.05	0.08	0.15	0.10
CO	(mg/m ³)	0.34	0.32	0.29	0.2	0.4	0.45	0.27	0.40	0.32	0.28
NH ₃	(µg/m ³)	26.70	18.85	24.65	25.1	23.0	25.60	24.25	23.50	22.90	23.25
Ni	(ng/m ³)	<0.1	<0.1	<0.1	<0.1	<0.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
As	(ng/m ³)	< 1.0	< 1.0	< 1.0	<0.1	<0.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
O ₃	(µg/m ³)	2.57	3.02	4.07	5.0	4.1	3.60	3.60	3.95	3.60	3.60
Benzene	(µg/m ³)	4.13	3.65	3.89	4.1	4.3	3.70	4.45	3.80	3.95	4.05
Benzo (a) pyrene	(ng/m ³)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05
HC	(ppm)	1.94	1.71	1.72	1.8	1.7	1.85	1.73	1.96	1.70	1.81

B) Effluent Treatment Plant (ETP):

Parameter	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
pH	7.62	7.75	7.05	7.63	7.80	7.28	7.88	7.05	7.23	7.84
Oil & grease	2.75	1.75	1.60	3	3.00	2.00	3.25	2.20	1.33	2.75
BOD	12.00	10.50	11.60	8	9.75	10.75	9.50	10.40	9.50	10.50
COD	108.75	106.25	113.60	102	101.50	96.00	96.00	87.20	116.25	102.25
TSS	14.25	13.00	15.00	11	14.00	10.25	8.32	57.68	12.75	13.50
Phenolic compound	0.27	0.15	0.23	0.2	0.13	0.13	0.18	0.17	0.15	0.16
Sulphide	0.36	0.29	0.36	0.13	0.20	0.16	0.19	0.21	0.17	0.16
Cyanide as CN	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ammonical Nitrogen	12.53	12.75	11.78	13	11.13	11.98	9.05	11.82	12.18	12.53
Total Kjeldhal Nitrogen (TKN)	27.70	21.98	24.56	37	20.95	23.93	21.53	33.26	23.95	18.85
Total Phosphate	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexavalent Chromium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead (Pb)	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury (Hg)	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc (Zn)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel (Ni)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Vanadium (V)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzene	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo (a) pyrene	<0.1	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1

C1 Noise Monitoring:

Noise Monitoring Survey from Jan-2021 to Oct-2021		
Jan to Nov-2021	Plant	Points covered
Jan	CCR and ARU Complex	65
Feb	DHDS Complex/FCCU/GTU/Flare/PH-1 & 5	97
Mar	CCU, MOT, LAB, All Gates	76
Apr	BH/ CPP/DM Plant/MINAS/SWPH/LPG/Workshop	89
May	BBU/TDU/CDU4/	50
Jun	CDU3, HCU, LOBS, NHGU	54
Jul	ARU,RFU,NITROGEN,MTBE,CCR,CCR NHT,CDU VDU 3	67
Aug	FCCU,DHDS,RMP SRU,TGTU-1,DHT,GTU	79
Sep	CCU,LAB,ALL GATE	72
Oct	MINAS,SWPH, CPP,BOILER HOUSE, DM PLANT,LPG	85
Cumulative	Total	734

ENVIRONMENTAL PROJECTS COMMISSIONED

Major environmental projects implemented are listed below:

Sr. No.	Projects	Year	Environment Improvement	Capex in Rs. Crores
1	RMP	2005	BS-III HSD	1621
2	CRU Revamp	2005	BS-III MS	108
3	LOBS	2006	Group-II&III LOBS	349
4	RLNG Facilities	2009	Use of Clean Fuel	4.8
5	FCC Gasoline Splitter, DHDS & HCU revamp	2010	BS-III MS & HSD maximization BS IV MS/HSD	233
6	De-mountable flare	2013	Better dispersion of emissions due to increased height, ease of maintenance	54.54
7	Rain Water Harvesting at Sports Club	2014	Raw water conservation	1.46
8	Continuous Catalytic Regeneration Reformer	Mar-14	Enhanced production of BS-IV MS, and capacity building for Euro-V MS production	1827
9	LPG pumping facilities from Refinery to Uran	Oct-14	Reduce congestion, pollution in Mumbai and improve safety. Eliminating rail and reducing road transportation of bulk LPG from BPCL & HPCL MR. 10" pipeline, 28 Kms long (12 off shore), design capacity of 1200 MT/day, Bulk lorries from BPCL will reduce by 425 MT/D (25 lorries), and 4-5 rakes	246
10	Flare gas recovery	Nov-14	Emission reduction (Lower flaring) and energy	13.61

			conservation	
11	Decantation valve for Slop tanks	Sep-15	To facilitate draining of only water from storage tanks, and to prevent hydrocarbons from escaping.	0.9
12	Aluminum Floating Roof (IFR) for HSD Fixed Roof HSD Storage Tanks Tk-432, Tk-514, Tk-516 and Tk-517	Sep-15	To reduce hydrocarbon Storage losses from fixed roof storage tank. Reduction in emission of VOCs	3.15
13	Replacement of AMS 1 & AMS 3 Analyzers	Dec-15	To be able to monitor ambient air quality as per National standards at MPCB and CPCB.	2.88
14	Provision of disc type oil skimmer at OC-2 middle bay for effective removal of heavy oil	Dec-15	For removal of heavy oil from OC-2 middle bay and preventing oil from going into HP Nallah outlet.	1
15	CDU-4 unit	Dec-15	Enhanced safety, Energy conservation, environment improvement. Sulfur emission reduction from 12 to 10.44 TPD.	1419
16	ISOMERIZATION Unit	Jan-17	Euro-V MS production. Euro-IV production increase from 0.9MMT to 2.3MMTPA	725
17	Diesel Hydro treatment Unit	Jun-17	For making BS VI grade diesel	2368
18	All stack analyzers indication to be put to MPCB/CPCB server. New PM analyzers / SOx, Nox and CO to be installed. For stack analyzers, we are in the process of finalizing the system / hardware to collect real time data from IP21 system and updating CPCB/MPCB server on real time basis by end Oct.'2017. Online ETP analyzers	Oct-17	Statutory requirement by CPCB/ MPCB	11.38

	installed and its connectivity provided to CPCB server with real time data.			
19	Installation of Tail Gas Treatment Unit (TGTU)	Nov-17	To improve sulfur recovery efficiency, Tail Gas Treatment Units (TGTU) were commissioned on 25th Nov-2017 which has improved sulfur recovery from 99% to 99.9 %.	112
20	Installation of Benzene Analyzers in ARU	Mar-18	For identifying and checking any leaks as well as continuous monitoring of Benzene levels.	115
21	Implementation of Dynamic limit for mixed fuel fired furnace	Sep-18	Statutory requirement by CPCB	0.7
22	Install Closed loop sampling system for balance units	Sep-19	For reduction of sampling loss and VOC reduction	2.4
23	10000 no -Tree Plantation around BPCL refinery and other parts of Mumbai / Thane	Sep-19	For CO2 sequestration	0.56
24	Cover Tilted Plate Interceptor (TPI), Corrugated Plate Interceptor (CPI), TPI Sump, Neutralization Tanks, Neutralization Tank feed sump, Slop Oil Sump, Flash Mixing Tanks, Flocculation Tanks and Dissolved Air Floatation (DAF) sub-units of ETP. Covering of these sub-units of ETP along with installation of VOC removal system.	Sep-19	For up-gradation of existing ETP unit and VOC emission reduction	1.7
25	Piping for receiving sewage treated water from RCF	Oct-19	For water conservation	0.038
26	Installation of Gasoline Treatment	Oct-19	As a part of Auto fuel policy	544

	Unit (GTU)		i.e. for making BS-VI grade MS	
27	Installation of Benzene & Toluene analysers at TDU gantry bay no. 1, 2, 3, 4 and BVRU vent	Oct-19	With the help of these analysers, Benzene & Toluene concentration in the gantry area will be monitored on real time basis to strengthen environment monitoring.	1.37
28	N2 blanketing facility for Benzene and Toluene tanks with double seal ex single seal	Jan-21	Statutory requirement	2.5
29	Bottom loading facility provision for Benzene and Toluene product dispatch	Jan-21	Statutory requirement	1.4

Other Environmental Projects Implemented

Sr.No.	Projects	Year	Environmental Improvement	Capex in Rs. Crores
1	WWTP	1990	Treatment of effluents	15.6
2	HEB 1, 2 & 3	1997 to 2001	94% efficiency of ABB/ABL Ltd. Boilers as against 78-82%	46
3	Biogas plant	2001	Solid waste management	0.6
4	BVRU	2004	Reducing benzene content in ambient air	1
5	WWTP revamp	2005	H2O2 system, TPI, DAF, two chambers of aeration basin	8
6	Rain Water Harvesting	2008	Resource conservation	1.2
7	Ambient Air/Stack Monitoring stations	2009	Monitoring	1.62
8	WWTP zero discharge	2009	Recycle of treated water to raw water CT	0.1
9	Oil catchers fixed roof cover	2011	Fugitive emission reduction	0.45

10	Secondary seals/guide pole sleeves for crude & Hexane tanks	2012	VOC reduction	2.64
11	Additional analyzers at AMS-1	Dec-13	Monitoring of additional parameters like Benzene, NH3, O3, PM 2.5 and Hydrocarbons.	0.54
12	Internal Aluminum floating re\ SBP tank 904/905	May-14	To reduce fugitive emission from storage tanks	0.41
13	40 KWp solar power plant at Admin south block rooftop.	Aug-14	Renewable source of energy. Fossil fuel conservation, & reduction in GHG emissions	0.38
14	OC-2 & OC-3 rotating disc skimmers	Oct-14	Skimming of oil from oil catchers.	0.73
15	Condensate Recovery system at Boiler house	Oct-14	Resource conservation, flash steam recovery	0.88
16	STP at Admin	Dec-14	Treatment of sewage, and re-use for gardening.	0.86
17	Stack analyzers (In-Situ)	Jun-15	Monitoring stack emission parameters	0.54
18	Energy saving by replacing conventional lighting	Mar-18	Energy conservation	0.6
19	Installation of 604 Kw roof top solar panels at Admin and Colony	Mar-18	Energy conservation and utilization of solar power	3.27
20	Revamp of oil catcher	May-18	Environment Protection	3.2
21	RWH at CCR/ DHDS	Jun-18	Resource conservation	0.9
22	Bioremediation of around 800 m3 of sludge including MOT area	Jan-19	As a part of Hazardous waste management	0.26
23	Installation of 348 Kw roof top solar panels at ANIK Nallah	Mar-19	Energy conservation and utilization of solar power	2.33
24	Appointing Environment champion team in Blending/PD/DHDS	Jun-19	To increase awareness & sensitivity	-

	complexes/ARU complex/ETP areas			
25	Establish connectivity with CPCB/ MPCB servers for transmission of ETP outlet flow reading as well as images of PTZ camera on real time basis	Aug-19	As a part of GTU CTO condition	0.3
26	Green global benchmarking/gap analysis/action plan for BPCL MR through M/s CII	Oct-19	To define and assess “ How Green is our company ” and highlight the ways forward to facilitate world class competitiveness through Green strategies.	0.05
27	Installation of 506 KWp roof top solar panels at CDU4 SRR, RMP Control Room, DHDS Control Room, DHT SRR, ARU SRR, Transformer Substation, and HTPL substation	Jan-20	Energy conservation and utilization of solar power	2.98
28	27 pumps in ARU having single mechanical seal to be converted to double mechanical seal as per latest	Aug-21	As per latest OISD-125 guidelines	24.77

New Project in progress:

S.N.	FUTURE PROJECTS	EXPECTED TIMELINE	ENVIRONMENT IMPROVEMENT
1	Comprehensive Environment audit from MoEF&CC approved agency, M/s NEERI	Jul-21	For detailed Environmental Audit & Environmental Emission Monitoring Study at BPCL MR
2	Installation and commissioning of Kerosene Hydro-treatment Unit (KHT)	Dec-22	Auto fuel policy i.e. for production of low sulphur BS VI grade ATF and KHT product stream blending in BS VI grade HSD

3	Dispersion Modelling study at BPCL MR for source emission	Jan-22	Statutory compliance
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Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2021

Unique Application Number

MPCB-ENVIRONMENT_STATEMENT-0000038706

Submitted Date

30-09-2021

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)

1082800

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

BO/CAC-Cell/UAN No
0000071817/5th CAC/190900323

Consent Issue Date

13/09/2019

Consent Valid Upto

31/08/2021

Establishment Year

1955

Date of last environment statement submitted

Sep 25 2020 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

542850

UOM

MT/A

Benzene, Toulene

127750

47540

MT/A

SBP, Hexane, Motor spirit, MTBE, Naphtha

3018185

2519540

MT/A

SKO, Mineral Turpentine Oil, Aviation Turbine Fuel

1904205

457650

MT/A

High Speed Diesel, Light Diesel oil

5738895

6274010

MT/A

Furnace oil, Low sulfur Heavy stock, Bitumen, Sulfur

2241100

1346900

MT/A

Lube product	248200	310850	MT/A
Hydrotreated Gasoline (MS VI)	985564.8	985000	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	71126.00
Domestic	1408.00	949.00
All others	0.00	0.00
Total	175603.00	84836.00

2) Effluent Generation in CMD / MLD

Particulars	Consent Quantity	Actual Quantity	UOM
Effluent from Plants	5760	2611	CMD
Sea water blowdown	146319	67570	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	15016676	13053149	MT/A

4) Fuel Consumption

Fuel Name	Consent quantity	Actual Quantity	UOM
GAS	338501	153225	MT/A
LSHS	232542	118963	MT/A
COKE	109500	92225	MT/A
RLNG	335727	274674	MT/A
BHAG	21900	77	MT/A
NAPHTHA	9271	1089	MT/A
PSA OFF GAS	94900	82626	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	7.52	0	6 to 8.5	NA
Oil & Grease	0	2.45	0	5	NA
BOD (3 days 27°C)	0	10.73	0	15	NA
COD	0	101.53	0	125	NA
Suspended Solids	0	14.84	0	20	NA
Phenols	0	0.18	0	0.35	NA
Sulphides	0	0.28	0	0.5	NA
CN	0	0.0005	0	0.2	NA
Ammonia as N	0	10.85	0	15	NA
TKN	0	24.65	0	40	NA
Phosphate	0	0.9	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	5210	90.72	0	1700	NA
NOx	7975	123.47	0	450	NA
CO	920	44.51	0	200	NA
Ni & V	5.1	0.09	0	5	NA
SPM	505	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	484.39	256.087	MT/A
4.1 Oil sludge or emulsion	6127	441	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	5335	2845.1	MT/A
WOOD SCRAP	198	40	MT/A
DRUMS & TINS	2085	3760	Nos./Y
NON FERROUS SCRAP	134	66.99	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	256.087	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	441	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)
Nitrogen (N2) blanketing of Benzene tanks 806, 807 & 912 and Toluene tanks 904 & 905 with closed blown down (CBD) system connected to flare.	0	0	0	0	252	0

Provision for dual filing i.e. Bottom filling facility along with existing top filing at white oil gantry & tanker	0	0	0	0	149	0
Condensate recovery system in CCR unit and CDU4	22.3	0	0	0	214	0
Corro coating of the CCR Cooling water pump 143-P-401A for power saving	0	0	0	1617.6	10	0
Replacement of existing Cooling water Supply pump P1 in CPP by new low life cycle cost (LLC) pump	0	0	0	576	8.3	0
Use of Nitrogen in flare purge instead of FG for fuel saving under RPIP	0	1.7	0	0	0	0
Procurement of Energy efficient RUA (Rotating unit assembly) for crude pump P1 in PH1	0	0	0	369.6	22	0
Corro-coating of FCCU cooling water pump 12-P-08	0	0	0	120	10	0
Tree Plantation of 1000 no of trees by Miyawaki Method	0	0	0	506	6	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

Detail of measures for Environmental Protection

<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	32.36
Monitoring of stacks, Noise levels, Fugitive emissions, effluent quality, Ambient Air by Approved Laboratory	Routine Environmental monitoring	21.67
Nitrogen (N2) blanketing of Benzene tanks 806, 807 & 912 and Toluene tanks 904 & 905 with closed blown down (CBD) system connected to flare	For Environment Protection	252
Tree Plantation of 1000 trees by Miyawaki Method	For CO2 Sequestration	6
Provision for dual filing i.e. Bottom filling facility along with existing top filing at white oil gantry & tanker.	For Environment Protection	149

[B] Investment Proposed for next Year

Detail of measures for Environmental Protection

<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 Canteen and Trombay Club of BPCL MR for production of Biodiesel	For CO2 Sequestration	0
Zero Waste to Landfill Certification of BPCL MR	System Improvement and Sustainable development	2.25
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-0000038706

Submitted On:

30-09-2021

servatories across the state have already recorded temperature above 40 degrees Celsius.

ing and then build a robot to provide solution.
"We received a total of 331

cultural farms and an electronic money transfer system that uses fingerprint for transactions.

named about copyrights and intellectual property laws. They will also be mentioned in entrepreneurship," said Arya.

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

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.

TATA
TATA POWER
The Tata Power Company Limited
Registered Office:
Bombay House, 24, Hornby Road, Mumbai 400 001.
Tel: 91 22 6885 8283 Fax: 91 22 6885 8301
CIN: L28920MH1918PLC000567
Email: tatapower@tatapower.com Website: www.tatapower.com

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 11.40% Unsecured Subordinated Perpetual Rated Listed Securities in the form of Non-Convertible Debentures (ISIN:INE245A08034) aggregating ₹ 1,500 crore due on 28th April 2017.
For The Tata Power Company Limited
H. M. Mistry
Company Secretary
Place : Mumbai
Dated : 6th April 2017

EX-SERVICEMEN CONTRIBUTORY HEALTH SCHEME (ECHS)

EMPLOYMENT NOTICE

ECHS invites application for engagement of Staff as Medical Officer at ECHS Polyclinic Mumbai Upnagar, on contractual basis for a period of one year, renewable for additional period. For details visit www.echs.gov.in or call 022-25075448 before 24th April 2017.

Tel: 28692604 / 28695275 Fax: 28695297

EMPLOYEES' PROVIDENT FUND ORGANISATION
(Ministry of Labour and Employment, Govt. of India)
REGIONAL OFFICE MUMBAI-III, KANDIVALI
Plot No. 222, BHAVISHYA NIDHI BHAVAN,
Charkop, Kandivali (West), Mumbai - 400067.

ATTENTION EMPLOYERS/EMPLOYEES/EMPLOYER REPRESENTATIVES/ EMPLOYEE REPRESENTATIVES "NIDHI AAPKE NIKAT"

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:

1. For Members/ claimant/ Pensioners : 10:30 Am to 12:30 Pm
2. Employers / Worker Representative/ Exempted Establishments : 3.00 Pm to 5:00 Pm

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-11011/98/2016-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.envfor.nic.in>

This is for the information of all concerned.



Energising Lives; Energising Business

LDAR VOC MONITORING REPORT FOR BPCL MAHUL.



LEAK DETECTION AND REPAIR (LDAR) PROGRAM
 REPORT FOR THE MONTH OF APRIL, 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-NHT	27/04/2021	1198	0	0.000	0
Total				0	0.000	0

Verified by

Surekha Jamdar
 Dy. Technical Manager



Checked by

Shradha 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.

Sulfur Balance:

TYPICAL SO2 STACK EMISSION FROM REFINERY Components	SO2 in T/Day
Low Sulfur Heavy Stock (Liquid Fuel)	6.5
Gaseous Fuel	0.1
Coke from Catalytic Cracking units	2.2
From Sulfur Recovery Units	1.4
	*10.2

*This typical SO2 emission and contribution from individual elements would vary very marginally depending upon the unit operating levels, crude mix, etc.

TYPICAL SULFUR BALANCE OF THE EXISTING REFINERY		
INPUT	Sulfur (MT/D)	%
Crude Oil	357.45	99.6
R LNG	0	0
External Feed Stock	0	0
Intermediate Stock Depletion	1.60	0.4
	359.05	100.0
OUTPUT		
Products Light Ends	13.45	3.7
Products Heavy Ends	155.32	43.3
Elemental Sulfur	183.39	51.1
Refiner Fuel+ Loss	6.89	1.9
	359.05	100.0

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>