

**Compliance of Environmental Clearance conditions for the period 1<sup>st</sup> October, 2023 to 31<sup>st</sup> March, 2024**

**Project: Setting up a Grass Root 9 MMTPA Refinery cum Petrochemical Complex project at Tehsil Pachpadra, District Barmer (Rajasthan) by M/s Hindustan Petroleum Corporation Limited (HPCL)**

**Reference No.: F. No. J-11011/87/2013-IA-II(I) dated 13<sup>th</sup> September, 2017 and its amendment dated 31<sup>st</sup> January, 2020 by Ministry of Environment, Forests and Climate Change, Gol.**

**15. Compliance of terms and conditions (Specific Conditions)**

(i)	Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	Complied. CTE obtained on 8 <sup>th</sup> Jan 2018 from RSPCB (order no: 2017-2018/HDF/2618). Further, CTE extension obtained upto November, 2024 from RSPCB vide letter no. F5/(O&G-329)/RSPCB/OGM/584-586; dated: 10/08/2022.
(ii)	As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. The effluent discharge, if any, shall conform to the standards prescribed under the Environment (Protection) Rules, 1986.	Zero Liquid Discharge (ZLD) for the refinery is ensured and no waste/treated water shall be discharged outside the premises. All effluent discharge shall conform to the standards prescribed under the Environment (Protection) Rules, 1986.
(iii)	Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.	Shall be complied with. Authorizations for construction related Hazardous waste taken from RSPCB dated October 10th, 2023 vide authorization No. RPCB/HWM/2023-2024/Oil and Gas/HSW/1. Fresh application for Operation Phase Hazardous waste shall be taken.
(iv)	Environmental Standards for Petroleum Oil Refinery dated 18th March 2008 and Environmental Standards for Petrochemical (Basic and Intermediates) dated on 9 <sup>th</sup> November, 2012, and its amendments from time to time shall be followed.	Shall be complied with.
(v)	To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Multi-cyclone followed by bag filter shall be provided to the DCU coke based CFBC boiler to control particulate emissions within	Shall be complied with. Dust Extraction system is provided at outlet of Coke crusher within DCU and at bunker loading area of Captive Power Plant (CPP). All transfer point of conveyors is provided with dry fog type dust suppression system. Coke

	permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.	storage at coke yard is provided with Sprinkler Type dust suppression system. Adequate stack height is provided in all stacks as per CPCB/SPCB guidelines.
(vi)	Total water requirement shall not exceed 5300 cum/hr to be met from Indira Gandhi Canal. Necessary permission in this regard shall be obtained from the concerned regulatory authority. No ground water shall be used without prior permission from the CGWA.	Noted. Permission for withdrawal of water from Indira Gandhi Nahar Pariyojana (IGNP) is in place. No ground water shall be used without prior permission from the Central Ground Water Authority (CGWA).
(vii)	Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.	Shall be complied with.
(viii)	Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.	Shall be complied with.
(ix)	Process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.	Shall be complied with. During operation of CPP, efforts will be made to sell the fly ash produced from CFBC boilers to brick manufacturers/cement industry as advised in the EC letter granted by MoEFCC. ETP sludge will be routed to Delayed Coker Unit (DCU) for processing.
(x)	The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.	Shall be complied with.
(xi)	Fly ash should be stored separately. as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.	Noted. Fly ash collected from different locations of the boiler (including ESP, APH) shall be conveyed to Reinforced Cement Concrete (RCC) silo through dense phase system (closed conveying). RCC sump to collect floor wash at different location of fly ash handling shall be provided. Separate silos shall be provided for fly ash and bed ash. There shall be one common RCC silo for fly ash collection from two Circulating Fluidized Bed Combustion (CFBC) boilers in each power block with capacity of 5 days of operation of both CFBC boilers at MCR. Ash from all silos shall be directly unloaded into container trucks in dry form through unloading spout. There shall be two such unloading spout in each silo so that unloading can be done through

		two trucks simultaneously. Provision shall also be made at each fly ash silo to moisture the ash and unload it in the open truck for further disposal outside the refinery complex.
(xii)	<p>The company shall undertake waste minimization measures as below: -</p> <p>(a) Metering and control of quantities of active ingredients to minimize waste.</p> <p>(b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.</p> <p>(c) Use of automated filling to minimize spillage.</p> <p>(d) Use of Close Feed system into batch reactors.</p> <p>(e) Venting equipment through vapour recovery system.</p> <p>(f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.</p>	<p>Noted.</p> <p>(a) – (e) Shall be complied with, as applicable.</p> <p>(f) Shall be complied with during the operation and maintenance phase of the project.</p>
(xiii)	<p>The green belt of at least 10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. As many as 25000 trees to be planted per year during first five years. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.</p>	<p>HRRL has acquired 4380.71 acres land from Government of Rajasthan. Total plot area of refinery and petrochemical (including Marketing Terminal) is 4126.95 acres. Total plot area of refinery and petrochemical (excluding Marketing Terminal) is 3876.95 acres. The allocated greenbelt of refinery area is 1279.38 acres and Marketing Terminal is 82.5 acres which is 33% of the total plot area within the Boundary line of Refinery Complex.</p> <p>AFRI has completed the Green Belt Study and released Detail Project Report (DPR) to HRRL. The DPR which has been prepared with the details of Green Belt development Plan was submitted to DFO, Barmer (Rajasthan) for necessary action. The Forest department replied that the proposed green belt area is saline water-logged area, due to which the survival potential of plants is very less. Forest department mentioned that the advanced soil work/plantation work mentioned in DPR prepared by AFRI Jodhpur is very technical in nature and it is not practical to get the work done.</p> <p>Later on, Forest and Environment Ministry, Rajasthan has suggested that HRRL should develop the green belt area as per the guidelines given in AFRI report.</p>

		<p>HRRL has planned to develop tree plantation in a phased manner considering the difficulties expressed by Forest Department. In 1st phase 5000 demo tree plantation is planned in 11.25 acres. A public tender for tree plantation has been floated and the order placed.</p> <p>In addition to above, HRRL has planned to develop a Nursery for supporting the tree plantation in green belt area where in 50000 plant saplings per year are planned. A PO in this regard is placed for development of nursery at HRRL site for development of green belt in a phased manner.</p>
(xiv)	All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 30 <sup>th</sup> May, 2014 shall be satisfactorily implemented.	Noted and will be implemented.
(xv)	At least 2.5% of the total project cost shall be allocated for Enterprise Social Commitment based on Public Hearing and item-wise details along with the time bound action plan shall be prepared and submitted to the Ministry's Regional Office.	<p>MoEFCC has accorded amendment in the EC vide letter no. F. No. J-11011/87/2013-IA-II(I) dated 31<sup>st</sup> January, 2020. The revised EC Condition is stated below:</p> <p>“At least Rs. 107.82 Crores (0.25% of the total project cost) shall be allocated for Corporate Environmental responsibility based on Public Hearing issues.”</p> <p>CER proposals have been finalized in consultation with Government of Rajasthan (GOR):</p> <ul style="list-style-type: none"> <li>➤ Construction of alternate route from NH-025 km 92/800 to A/R Sajiyali Km 0/0 to 12/500 - Construction works of Sajiyali road are in progress by PWD on deposit work mode.</li> <li>➤ Construction of BT road from NH-025 Km. 87/500 to A/R Sambhra Km 0/0 to 3/0. - Purchase Order for the construction of roads was placed on 24.12.2020. Sambhra - Jerla Road works completed and handed over to PWD in August 2022.</li> <li>➤ Construction of Hospital of 50 bed capacity - Layouts and detailed Engineering completed for the Hospital building. Construction works are in progress.</li> </ul>

		<ul style="list-style-type: none"> <li>➤ Construction of Senior Secondary School - Construction works are in final stage for the School building.</li> <li>➤ Avenue Plantation for 90 KM distance has been finalized in consultation with DC, Barmer. AFRI have conducted site survey and sample collection and released a DPR for the same. DPR handed over to Forest department for carrying out the Avenue plantation with funding by HRRL.</li> <li>➤ Avenue tree plantation is being handled by Forest department as advised by DC-Balotra during recent review meeting. Forest dept to carry out the work on deposit work based on DPR.</li> </ul> <table border="1" data-bbox="1227 584 2067 1294"> <thead> <tr> <th>S. No.</th> <th>Name of the Road</th> <th>Distance KM</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Highway to Sambhra</td> <td>4</td> </tr> <tr> <td>2.</td> <td>Highway to Ashapura Mandir</td> <td>1</td> </tr> <tr> <td>3.</td> <td>Bagundi to Malwa</td> <td>10</td> </tr> <tr> <td>4.</td> <td>Pachpadra to Patodi</td> <td>25</td> </tr> <tr> <td>5.</td> <td>Pachpadra to Khed</td> <td>10</td> </tr> <tr> <td>6.</td> <td>Jerla to Sambhra</td> <td>10</td> </tr> <tr> <td>7.</td> <td>Highway to Mungra</td> <td>10</td> </tr> <tr> <td>8.</td> <td>Refinery to Champabery</td> <td>5</td> </tr> <tr> <td>9.</td> <td>Lakhe ki Beri to Sajiyali</td> <td>9</td> </tr> <tr> <td>10.</td> <td>Highway to Karni Mata Mandir</td> <td>5</td> </tr> <tr> <td>11.</td> <td>Highway to Chirdhani Mandir</td> <td>1</td> </tr> </tbody> </table>	S. No.	Name of the Road	Distance KM	1.	Highway to Sambhra	4	2.	Highway to Ashapura Mandir	1	3.	Bagundi to Malwa	10	4.	Pachpadra to Patodi	25	5.	Pachpadra to Khed	10	6.	Jerla to Sambhra	10	7.	Highway to Mungra	10	8.	Refinery to Champabery	5	9.	Lakhe ki Beri to Sajiyali	9	10.	Highway to Karni Mata Mandir	5	11.	Highway to Chirdhani Mandir	1
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(xvi)	For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic	Shall be complied with.																																				

	enclosure shall be provided to DG set for controlling the noise pollution.	
(xvii)	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.	Shall be complied with.
(xviii)	Continuous online (24x7) monitoring system. Both for emissions and the effluent shall be installed within the plant site for measurement of discharge and pollutants concentration. Data shall be uploaded on the company's website and provided to the respective RO's of MoEFCC, CPCB and SPCB.	Shall be complied with.
(xix)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Shall be complied with during the operation phase of the project.
(xx)	Wetland habitat shall be provided for migratory bird namely, Demoiselle Crane, at the reservoir and green belt areas.	<p>Shall be complied with.</p> <p>The Pachpadra lake is a rain water lake formed mostly during rainy seasons and it has created a natural wetland habitation which attracts migratory bird like demoiselle cranes. This natural habitation is not affected and no impact on migratory birds has been noticed during a site visit and survey carried out in the vicinity of the project site and in and around Pachpadra lake by Biological expert from EIA Consultant M/s EIL. This action on the natural wetland can be further enhanced or developed by taking guidance from subject matter expert agency in future as we progress.</p> <p>In this regard a Site survey &amp; study was conducted by Jai Narain Vyas University (JNVU), Jodhpur &amp; the same has been completed and PO for execution works has been placed. Permission for development of site near Township complex in Sambhra is awaited from the District Authorities.</p>
(xxi)	At least 10 natural surface water bodies shall be rejuvenated and developed as complete eco-system with the tree plantation development and growth using satellite imageries.	<p>Shall be complied with.</p> <p>A comprehensive list of 15 more water bodies is identified and obtained</p>

		<p>concurrence from DC Barmer. The following water bodies (10 Nos) have been identified by DC Barmer for rejuvenation: Sarla Nada, Kasaiyon Ki Nadi, Kher ka Talav, Bhaibahan Ka Nada, Gulab Sagar, Tejori Nadi, Kola Nada, Khari Nadi, Ram Ghat Talav, Navoda Talav.</p> <p>Rejuvenation works are in progress by state watershed department for 5 waterbodies under deposit work mode.</p>
(xxii)	The international boundary is reportedly at a distance of 100 -150 km from the project site. In view of the security apprehensions, necessary permission required, if any, shall be obtained from the Ministry of Defense and/or Ministry of Home Affairs.	NOC has been renewed by the IAF HQ SWAC vide letter SWAC/2564/8/5949/ ATS (BM) dated 16th October, 2023.
<b>15.1</b>	<b>Compliance of other general conditions</b>	
(i)	The project authorities must strictly adhere to the stipulations made by the State Government, Central Pollution Control Board, State Pollution Control Board and any other statutory authority.	Noted and shall be complied with. Stipulations of RSPCB vide CTE dated January 8, 2018 shall be complied with.
(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 proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Noted and shall be complied with.
(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 each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	The locations of ambient air quality monitoring stations have been decided in consultation with the Rajasthan State Pollution Control Board (RSPCB). Three (03) nos. of continuous ambient air quality monitoring stations will be installed. One no. station each will be installed in the upwind, downwind direction and where maximum ground level concentrations are anticipated.
(iv)	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 <sup>th</sup> November, 2009 shall be followed.	Shall be complied with.
(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 shall, conform to the standards	Necessary specification details shall be included in all the Engineering, Procurement & Construction (EPC) Contracts for implementation.

	prescribed. Under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	
(vi)	The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.	All water will be collected through storm water system in Guard Pond. Recharging the ground water is not envisaged due to High salinity of Ground water.
(vii)	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	Shall be complied with. During the project phase, EPC Contractors are providing training to concerned workers and engineers who are involved in chemical handling. Pre-employment medical examination is being carried out for all workers and staff.
(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.	Shall be complied with.
(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.	Shall be complied with.
(x)	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Shall be complied with.
(xi)	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.	Fund provision has been envisaged for capital /recurring cost towards environment pollution control measures.
(xii)	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 NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal.	Complied. EC letter sent to following agencies: BDO - Panchayat Samiti – Balotra, CEO, Zilla Parishad – Barmer, Sarpanch - Sambhra Village, Sarpanch - SRK Village, RSPCB RO-Jodhpur, vide our letter dated October 5 and 9, 2017.



(xiii)	The project proponent shall also submit six monthly reports on the 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 respective Regional Office of MoEFCC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status reports shall be posted on the website of the company.	The last compliance report for the period April 2023 to September 2023 was submitted to all statutory authorities on December 1st, 2023 and the same has been uploaded on the HRRL website with following link.  <a href="https://www.hrri.in/ec_compliance_report">https://www.hrri.in/ec_compliance_report</a>
(xiv)	The environmental statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated shall be submitted 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 clearance conditions and shall also be sent to the respective Regional Offices of MoEFCC by e-mail.	Shall be complied. Form-V, Environmental statement shall be submitted to Rajasthan State Pollution Control Board after the Consent to Operate (CTO) is obtained before commissioning of the Project.
(xv)	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 the Ministry at <a href="http://moef.nic.in">http://moef.nic.in</a> . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.	Complied.  Environmental Clearance has been advertised on September 27, 2017 in Times of India (English) and Rajasthan Patrika (Hindi) Newspapers. A copy of the same has been sent to MoEF&CC Regional Office at Lucknow vide HPCL letter dated October 5, 2017.
(xvi)	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 start of the project.	Final approval of the project from MoPNG has been obtained on 9th October 2017. Financial closure was completed on 28th January 2019. Detail Engineering Design has been completed & construction work is in progress.
16	The Ministry may revoke or suspend the clearance, at subsequent stages, if implementation of any of the above conditions is not satisfactory.	Noted
17	The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.	Noted
18	The above conditions will be enforced, inter alia under the provisions of	Noted

	<p>the Water (Prevention &amp; Control of Pollution) Act, 1974, Air (Prevention &amp; Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and rules.</p>	
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