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HPL/IMS/HSEF/R/4.3.2/08/ENV/E-06/MoEF&CC

November 30, 2023

Dr. Shahida Parvin Quazi
Scientist-E
Ministry of Environment, Forest and Climate Change
Regional Office, Bhubaneswar
Sub-Office, Kolkata
IB – 198, Sector-III, Salt Lake City,
Kolkata – 700 106

Sub: Half Yearly Report on the Status of Compliance against Conditions of Environmental Clearance for Expansion of Naphtha Cracking Facility and Petrochemical Products

Madam,

With reference to the above subject, please find enclosed herewith the following documents for your kind perusal.

- A. Compliance Status against conditions stipulated in "Environmental Clearance" for the period of April'23 to September'23.
Reference letter no. J-11011/194/2016-IA-11 (1) dated 20.03.2018.
- B. Half Yearly Environmental Data Generation Report (April'23 to September'23)

Trust the above will meet your requirements. In case, you need to have further information pertaining to these reports, please do write to us.

Thanking you,

Yours very truly,

Sundargopal Hazra

Sundargopal Hazra
VP-Corporate Projects & Dy Head Plant

30/11/2023

CC: The Regional Directorate
CPCB, Kolkata

CC: The Member Secretary
WBPCB, Kolkata

**HALF YEARLY COMPLIANCE
REPORT OF THE CONDITIONS OF THE
ENVIRONMENTAL CLEARANCE FOR
EXPANSION OF NAPHTHA CRACKING
FACILITY AND PETROCHEMICAL
PRODUCTS**

F. No. J-11011/194/2016-IA-II(I)



PERIOD: April 2023 to September 2023

**HALDIA PETROCHEMICALS LTD
P.B.NO. - 12
P.O - DURGACHAK, HALDIA
DIST - PURBA MEDINIPUR
PIN - 721602
WEST BENGAL**

Name of the Project: Expansion of Naphtha cracking facility and Petrochemical products

Clearance Letter No.: F. No. J-11011/194/2016-IA-11(1) dated 20.03.2018

Period of Compliance Report: April'23 to September'23

Specific Conditions

Sr. No.	Conditions	Compliance Status as on 30.09.2023
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.	Consent to Establish (NOC) was obtained from WBPCB vide NOC NO153414 dated 29.11.18 & 10.07.18 and 29.06.18. Consent to Operate was obtained from WBPCB vide Memo No: 215-403/WPB (HRO)-K/2001 (Pt-VI) dated 06.03.2019 & 01-hl-co-r/16/0054 dated 14.08.2019 with a validity till 30.11.2023. The online application for its Renewal was submitted to WBPCB on 31.10.2023. A separate Consent to Operate was obtained for captive power plant (3x120 TPH CFB & 1x35 MW CSTG) vide Memo No: 199-403/WPB(HRO)-K/2001 (Part-IX) dated 22.09.2021 with a validity till 31.03.2024. Complied
ii	Necessary clearance under the CRZ Notification, 2011, as applicable, shall be obtained from the State Coastal Zone Management Authority, prior to commencement of works for the proposed expansion.	CRZ Clearance was obtained for laying of pipeline from HPL to Haldia Oil Jetties of Haldia Dock Complex from MoEFCC vide F.No. 11-52/2020-IA III dated 19.05.2021. Subsequent Consent to Establish (NOC) was obtained from WBPCB vide Memo No. 200-403/WPB(HRO)-K/2001 (Pt-VIII) dated 22.09.2021. Complied
iii	The effluent of 8625 cum/day shall only be discharged into river/creek through greenbelt canal. The effluent discharge from the premises shall conform to the standards prescribed under the Environment (Protection) Rules, 1986. Prior permission in this regard shall be obtained from concerned regulatory authority/SPCB.	Total 6804 KL/day of the treated effluent discharged into green belt canal during April'23 to September'23. HPL monitors the quality of the effluent discharged outside premises and it is well within the prescribed standard. Complied
iv	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.	Renewal of Hazardous Waste Authorisation was obtained vide Memo no. 173/2S (HW)-294/99-2000 (Pt-I) on 31.12.2021 with a validity till 31.12.2025. Complied

v	<p>Environmental Standards for Petroleum Oil Refinery dated 18th March 2008 and Environmental Standards for Petrochemical (Basic and Intermediates) dated on 9th November, 2012, and its amendments from time to time shall be followed.</p>	<p>Since HPL complex does not have petroleum oil refinery, Environmental Standards for Petroleum Oil Refinery dated 18th March 2008 may not be applicable for us. However, Environmental Standards for Petrochemical (Basic & Intermediates) dated 09th November, 2012 was adhered with full compliance.</p> <p>Complied</p>
vi	<p>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 permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines</p>	<p>Suitable pollution control device was installed to meet the prescribed norms and/or NAAQS. Bag filters & ESP were provided to the CFBC boiler to control particulate emissions within permissible limit. The limestone dosing system was also introduced to control the SO_x emission. It will not be a DCU (Delayed Coker Unit) coke-based boiler.</p> <p>A stack of height 140 m was constructed to disperse the gaseous emissions as per CPCB/SPCB guidelines.</p> <p>Complied</p>
vii	<p>The total freshwater requirement shall not exceed 10 MGD after expansion from Geonkhali Water Supply System operated by Haldia Development Authority (HDA). Necessary permission in this regard shall be obtained from the concerned regulatory authority.</p>	<p>An agreement was made with Haldia Development Authority (HDA) for supply of 43594 KL fresh/filtered water (9.6 MGD). Total 9.05 MGD fresh water was consumed during April'23 to September'23 from HDA. HPL will ensure that total freshwater consumption does not exceed 10 MGD.</p> <p>Complied</p>
viii	<p>Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.</p>	<p>Our Plant was commissioned in the year 2000 and started commercial production since 2001. It is to be noted that previous three ECs of the Plant for 420 KTA, 520 KTA & 700 KTA of Ethylene capacity, duly granted by MoEF&CC, did not have such condition of passing storm water drain through guard pond.</p> <p>Process Effluent reaches our Wastewater Treatment Plant (WWTP) through underground / above ground network of channels / pipelines. After physical, chemical & biological treatment, the treated effluent (Clarifier outlet) is stored in two Guard Ponds (Capacity: 4,000 cu.m. each) and is subsequently discharged after being mixed with the Cooling Tower Blowdown (CTBD) & DM Plant Regeneration Effluent into the outside Green Belt Canal (GBC) through pipeline. Hydrocarbon handling & storage areas in the Plant have been provided with dyke walls with two valve drain pits as per standard engineering practices. Storm water accumulated from within the dyke walls can be sent to WWTP through the under ground Oily Water System (OWS).</p>

		<p>In non-hydrocarbon handling areas, the storm water drains are open channel and have a wide network depending on the available slopes in the entire Complex. The storm water drains on the eastern side of the Complex is connected to the natural ponds wherein rain water is harvested.</p> <p>As per the initial design / layout of the Plant, duly approved by the statutory authorities, there is no provision of rerouting the entire storm water drain network through the guard ponds of our WWTP.</p> <p>As an additional safety measure, six sluice gates were installed in the storm water channel at different locations in the Complex to handle any emergency situation.</p> <p>Regular monitoring of the quality of various effluents, treated effluent & storm water is carried out by a third-party laboratory, duly accredited by MoEF&CC, WBPCB and NABL.</p> <p>Over the past 22 years of commercial operations of our Complex no major incident has occurred regarding non-conformance of quality of treated effluent or storm water with respect to the statutory limits.</p> <p>Complied</p>
ix	<p>Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc.</p> <p>Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.</p>	<p>All the hazardous chemicals were stored in properly designed tanks, drums, carboys etc.</p> <p>Necessary fire water spray system/hydrant/monitors/foam chambers have been provided in the tank farm.</p> <p>Solvent was transferred through pump only.</p> <p>Complied</p>
x	<p>Process organic residue and spent carbon, if any, 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.</p>	<p>The ash from the boilers was used for internal landfilling purpose.</p> <p>[Ref. MoEF&CC Notification No. S.O. 5481 (E) dated 31.12.2021 for utilization of ash from thermal power plant.]</p> <p>Complied</p>
xi	<p>The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSI HC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.</p>	<p>HPL will comply with all the rules and guidelines under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time.</p> <p>Most of the hazardous chemicals (inbound/outbound) were directly unloaded from ship/tank or sphere through u/g pipelines. The road</p>

		<p>transportation of few hazardous chemicals/catalyst were in accordance with the Motor Vehicles Act (MVA), 1989.</p> <p>Complied</p>
xii	<p>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.</p>	<p>For storage, two silos for fly ash and one silo for bed ash of capacity 500 m³ each was constructed. As the ash was stored in silos there was no adverse effect on air and water. Water sprinkling arrangement was made for suppression of dust during loading of the dumper. The loading area has been covered up by tin shed to prevent the dispersion of fly ash during loading.</p> <p>Complied</p>
xiii	<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>HPL will adopt necessary measures for minimization of the wastes as applicable viz.</p> <p>(a) Resue of by-products like Ethylene, Propylene, C6 Raffinate, Py-Gas, C4-LPG as raw materials in different manufacturing processes of olefins/polymers.</p> <p>(b) Few chemicals manufactured by us are also used as raw materials in other industries.</p> <p>(c) Automated filling and loading system exists for continuous process reactors.</p> <p>(d) All process vents are connected with the flare stack of 120 m high. Benzene vapour is recovered in Benzene Recovery Unit during occasional tanker loading.</p> <p>(e) Hydro jetting techniques at a very high pressure (350-400 kg/cm²) are adopted for cleaning of process equipment.</p> <p>Complied</p>
xiv	<p>The green belt of at least 5-10 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 roadsides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department</p>	<p>The plant is surrounded by a vast greenbelt (103 ha) of width 50-100 m. The proposed projects would come up in the land which is available within the plant boundary. Around 1.25 lacs of tress are present inside greenbelt surrounding HPL as of July'23.</p> <p>Partially Complied</p>
xv	<p>At least 2.5% of the total project cost shall be allocated for Enterprise Social Commitment based on public hearing issues. Item-wise details along with time bound action plan shall be</p>	<p>In Public Hearing (PH) no specific issues were raised towards protection of the environment in local community except for giving priority to the development aspects of the local villages and possible creation of local employment. The CSR policy of the</p>

	prepared and submitted to the Ministry's Regional Office.	<p>company had been a continuous support to the local community w.r.t upgradation of local infrastructure, medical facilities, aid to local schools and skill development programme as mentioned in the MoM of the PH. HPL made a budget provision of Rs. 216 Lacs (FY 2023-24) towards 25 nos. of identified projects for local schools, medical centers/hospitals, women empowerment, environmental & social welfare & in the field of sports.</p> <p>In addition, the Solar Power Project (1 MWp) was installed and commissioned in our residential colony (HREL) on 14.12.2021 (through Capex model). The total project cost was Rs. 5.5 Crore. Estimated energy savings was 607330 KWHr during April'23 to September'23.</p> <p>Complied</p>
xvi	For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.	<p>No additional DG sets were proposed.</p> <p>Complied</p>
xvii	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.	<p>All the required fire protection system has been installed as per appropriate OISD guidelines along with gas and smoke detectors during setting up of the new plants (Butene-1 & PGDS) to control the fire hazards during manufacturing process.</p> <p>Complied</p>
xviii	Continuous online (24x7) monitoring system for stack emissions (for measurement of flue gas discharge and the pollutants concentration) and effluent discharge shall be installed, and the data to be transmitted to the CPCB and SPCB server.	<p>A continuous online emission monitoring system was installed in the common stack of the CFBC boilers. Online data was being sent to CPCB server since 17th Aug'23 after due commissioning & validation of data of the SO_x, NO_x & PM analysers.</p> <p>Online Effluent Monitoring system was already installed in the existing WWTP wherein additional effluent from the proposed plant will be treated. Real time data from the online effluent analysers is sent to the servers of CPCB & WBPCB from 2016 onwards.</p> <p>Complied</p>
xix	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	<p>The periodic medical examination (PME) was conducted for 2199 nos. of Contractor's Employees from April'23 to September'23 as per the Factories Act. The records are maintained in our Occupational Health Center (OHC).</p> <p>Complied</p>

General Conditions		
Sr. No.	Conditions	Compliance Status
i	The project authorities shall adhere to the stipulations made by the State Pollution Control Board, Central Pollution Control Board, State Government and any other statutory authority.	HPL is committed to adhere to all the stipulations made by the State Pollution Control Board, Central Pollution Control Board, 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 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.	We applied for bifurcation/amendment of EC for transferring of Butene-1 plant along with storage and associated pipelines from HPL to Advanced Performance Materials Limited (AdPerMa), wholly owned subsidiary of HPL to MoEF&CC. Two separate ECs, after due bifurcation and amendment, were issued by MOEF & CC in the name of AdPerMA & HPL vide letter No. J-11011/194/2016-IA-II (I) dated 27.08.2020 with same terms and conditions with special mention of the following. <i>"As committed HPL shall be responsible for environmental safeguards and overall compliance of the conditions of the said EC".</i> Complied
iii	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one station each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	Ambient air quality monitoring stations were already placed in 05 locations inside the plant and in 06 nos. of locations outside the plant within the radius of 10 km considering the upwind & downwind direction and in consultation with WBPCB. In addition, one online ambient air quality monitoring station is also operational inside the plant. Complied
iv	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.	HPL has been measuring all the parameters of ambient air as per the National Ambient Air Quality Standards. Full Compliance
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 prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	The overall ambient noise level was maintained as per the prescribed standards by adopting adequate noise control measures in the work zone area for the new plants. Complied
vi	The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to	Rooftop rainwater harvesting was done in Main Fire Station (MFS) Building.

	recharge the ground water and use the same water for the process activities of the project to conserve fresh water.	The rainwater run-off was channelized through the eastern side drains to the East Ponds wherefrom it was being transferred to the North Pond and subsequently utilized to meet up the process requirement after subsequent treatment. We have utilized 620545 KL rainwater during April'23 to September'23 Complied
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.	Periodical training was given to the employees (Own & Contractual) on various modules/aspects of fire, safety, health & environment. Specialized training on transportation of hazardous chemicals/hazardous area classification/E-permit/Workplace safety/ Emergency Response/Oily Waste Management/Biomedical waste handling was conducted periodically for the identified group of employees. Pre-employment & routine periodical medical examinations were carried out for all the employees. Complied
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	HPL will 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 was implemented in various stages of construction as well as operation. Complied
ix	The company shall undertake all relevant measures for improving the socio-- economic conditions of the surrounding area. ESC activities shall be undertaken by involving local villages and administration.	Ref. Specific Condition Sl. No. (XV)
x	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Ref. Specific Condition Sl. No. (XV)
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.	Separate Environmental Management Cell has been functional since inception. Two full-fledged laboratory facilities (Water & Air) were set up inside the complex through a 3 rd party (Scientific Research Laboratory), duly recognized by MoEF&CC and WBPCB and accredited by NABL. Complied
xii	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to	The budgeted funds for environmental activities will be solely utilized for meeting and implementing the conditions stipulated by

	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.	MoEF&CC/WBPCB. These funds will not be diverted to any other job or activities. Complied
xiii	A copy of the clearance letter shall be sent by the project proponent to concern Panchayat, ZillaParishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.	The copy of the Environmental Clearance letter was sent to Haldia Municipality as well as Haldia Development Authority. Complied
xiv	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 MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six-monthly compliance status report shall be posted on the website of the company.	Six monthly compliance reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data was sent by email to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB and the same was uploaded in the website of HPL. https://www.haldiapetrochemicals.com/ . Complied
xv	The environmental statement for each financial year ending 31st 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 MoEF&CC by e-mail.	The Environmental Statement in Form-V was submitted to WBPCB on 20.09.2023. Updated Environment Statement and Environmental Clearance Compliance Report was uploaded on the company website. Complied
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 the 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	Advertisement published in two local newspapers in English (The Telegraph) and in Bengali (AnandabazarPatrika) on 13.04.2018. A copy of the same was sent earlier as a proof of compliance. Complied

	in the vernacular language of the locality concerned and the copy of the same shall be forwarded to the concerned regional office of the Ministry.	
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 start of the project	<p>The projects were being implemented phase-wise. Consent to Operate was obtained from WBPCB vide Memo NO: 215-403/WPB (HRO)-K/2001 (Pt-VI) dated 06.03.19 and 01-hl-co-r/16/0054 dated 14.08.2019 for Butene-1, Pygas Desulfurisation Unit, Hydrocarbon Storage Tanks (Naphtha, Methanol, Methyl Tertiary Butyl Ether, Hydrogenated Py-Gas & Motor Spirit Blending Tank) in 1st Phase.</p> <p>Consent to Operate was obtained from WBPCB vide Memo no. 199-403/WPB (HRO)-K/2001 (Part-IX) dated 22.09.2021 for CFBC Boiler project in 2nd Phase.</p> <p>HPL will continue to update the Regional Office about the financial closure and approval of other projects.</p> <p>Complied</p>