

F. No. J-11011/194/2016-IA-II(I)  
Government of India  
Ministry of Environment, Forest and Climate Change  
(IA- II Section)

Indira Paryavaran Bhawan  
Jorbagh Road, New Delhi - 3

Dated: 20<sup>th</sup> March, 2018

To

M/s Haldia Petrochemicals Limited  
Tehsil Sutahata-I, Haldia  
District **East Medinipur** (West Bengal)

**Sub: Expansion of Naphtha cracking facility and Petrochemical products at Tehsil Sutahata-I, Haldia, District East Medinipur (West Bengal) by M/s Haldia Petrochemicals Limited - Environmental Clearance - reg.**

Sir,

This has reference to your proposal No. IA/WB/IND2/67219/2016 dated 4<sup>th</sup> August, 2017, submitting the EIA/EMP report with public hearing details on the above subject matter.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project for expansion of Naphtha cracking facility and Petrochemical products by M/s Haldia Petrochemicals Limited at Tehsil Sutahata-I, Haldia, District East Medinipur (West Bengal).

3. The existing land area is 453 ha, and no additional land is required for the expansion. Industry has already developed greenbelt in an area of 103 ha out of the total area of the project. The estimated project cost is Rs. 4,310 crores. Total project cost after expansion will be Rs. 11935 crores including existing investment. Total capital cost earmarked towards environmental pollution control measures is Rs. 234.26 crores and the recurring cost (operation and maintenance) will be about Rs.15.21 crore per annum. Total employment will be for 40-50 skilled persons as direct and about 100-150 as indirect after expansion.

4. There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves/Tiger/Elephant Reserves, Wildlife Corridors, etc. within 10 km from the project site. River Hooghly is flowing at a distance of 1.9km in East direction.

5. The details of products are as under:-

S. No	Product	Existing (KTA)	Proposed (KTA)	Total (KTA)
1.	Ethylene	700	70	770
2.	Propylene	350	35	385
3.	Polypropylene	341	0	341
4.	High Density Poly Ethylene (HDPE)	334	160	494
5.	Linear Low Density Poly Ethylene (LLDPE)	386	0	386



6.	Butadiene	101	10	111
7.	Benzene	132	43	175
8.	Butene-1	0	30.2	30.2
9.	MTBE	0	98.6	98.6
10.	Vinyl Acetate Ethylene (VAE)	0	60	60
11.	Mixed Butane	113	13	126
12.	Cyclo Pentane	5.2	3	8.2
13.	Pyrolysis Gasoline	130.5	69.5	200
14.	Motor Spirit (MS) Euro IV	250.6	49.4	300
15.	Phenol	0	200	200
16.	Acetone	0	123	123
17.	Carbon Black Feedstock (CBFS)	89	11	100
18.	Poly Butylene Terephthalate (PBT)	0	70	70
19.	Tetrahydrofuran (THF)	0	16	16
20.	C6 Raffinate	36.6	27.4	64

6. Coal based Captive Power Plant of 3X120TPH and 1x35 MW Condensing Steam Turbine Generator (CSTG) will also be established to augment the existing and future power and steam requirement. It is also proposed to built storage facilities and associated pipelines for providing adequate support. The details of additional Hazardous Chemical Storage are as below: is provided below:

S.No	Chemical Name	Number of Unit	Working Volume (m <sup>3</sup> )	Storage Quantity (MT)
1	Naphtha	1	42,735	28,632
2	MS	1	4,000	3,080
3	Hydrogenated Py-Gas	1	4,000	3,560
4	MS Blending Tank	1	1,210	932
5	Butadiene	1	2,050	1,271
6	FGN	1	14,000	9,380
7	LPG	1		10,000
8	Methanol	2	4,500	3,564
9	MTBE	2	5,000	3,700
10	MTBE	1	2,800	2,072
11	Phenol	3	5,000	16,050
12	Acetone	2	5,000	3,955
13	Butanediol	2	3,100	3,162
14	THF	2	2,000	1,778
15	VAM	2	5,500	5,137
16	VAE	2	4,000	3,760
17	NaOH 50% (Caustic Soda)	2	530	795
18	H <sub>2</sub> SO <sub>4</sub> 98%	1	260	478

7. Present water requirement is 7.73 MGD, which will be increased to 10 MGD after the proposed expansion. It is further agreed to reduce the consumption of proposed fresh

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water requirement of 10.30 MGD to 10 MGD, to be met from Geonkhali Water Supply System operated by Haldia Development Authority (HDA).

Total effluent after expansion will be 8625 cum/day, of which process effluent will be treated in Integrated Wastewater Treatment Plant. Treated effluent will be discharged into river/creek through green belt canal.

Additional steam and power requirement will be 172.25 TPH and 19 MW respectively. The additional power requirement will be met through proposed Captive Power Plant (CPP) having 3 X 120 TPH steam generation capacity and 1X35 MW power generation capacity. Existing Unit has one emergency DG set of 800KVA capacity and no additional DG sets are proposed.

Existing unit has installed capacity of 116 MW Power and 480 TPH SHP Steam (2 x 34.5 MW GTs, 2 x 120 TPH (SHP Steam) HRSGs, 2 x 120 TPH Aux Boilers, 1 x 33 MW CSTG, 1 x 14 MW BPSTG) using a mix of fuels like fuel grade naphtha, in-house generated residual fuel gas and Carbon Black Feedstock. An electrostatic precipitator with a stack height of 140 m will be installed for controlling the particulate matter emissions within the statutory limits for the proposed 3X120 TPH coal fired boiler.

8. The project/activity is covered under category A of item 5(c) 'Petro-chemical complexes' and 5 (e) 'Petrochemical products and petrochemical based processing' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

9. The terms of reference (ToR) for the project was granted on 30<sup>th</sup> November, 2016. Public hearing was conducted by the West Bengal Pollution Control Board on 25<sup>th</sup> May, 2017.

10. The proposal for environmental clearance (EC) was placed before the EAC (Industry-2) in its meetings held on 18-20 September, 2017 and 22-24 January, 2018 in the Ministry. The project proponent and their consultant M/s ERM India Pvt Ltd have presented the EIA/EMP report as per the ToR. The committee found the EIA/EMP report satisfactory and in consonance with the ToR, and recommended the proposal for environmental clearance with certain conditions.

11. Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), the Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to the project '**Expansion of Naphtha cracking facility and Petrochemical products**' by M/s Haldia Petrochemicals Limited at Tehsil Sutahata-I, Haldia, District East Medinipur (West Bengal), under the provisions of EIA Notification, 2006 and the amendments made therein, subject to the compliance of terms and conditions, as under:-

- (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.
- (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.
- (iii) The effluent of 8625 cum/day shall only be discharged into river/creek through green belt 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.

- (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.
- (v) Environmental Standards for Petroleum Oil Refinery dated 18<sup>th</sup> 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.
- (vi) 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.
- (vii) The total fresh water 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.
- (viii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- (ix) 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.
- (x) 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.
- (xi) 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.
- (xii) 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.
- (xiii) The company shall undertake waste minimization measures as below:-
  - (a) Metering and control of quantities of active ingredients to minimize waste.
  - (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
  - (c) Use of automated filling to minimize spillage.
  - (d) Use of close feed system into batch reactors.
  - (e) Venting equipment through vapour recovery system.
  - (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

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- (xiv) 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 road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xv) 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 prepared and submitted to the Ministry's Regional Office.
- (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.
- (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.
- (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.
- (xix) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

**11.1.** The grant of environmental clearance is subject to compliance of other general conditions, as under:-

- (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.
- (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.
- (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.
- (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.
- (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).
- (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.
- (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.

- (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.
- (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.
- (x) The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the 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.
- (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.
- (xiii) A copy of the 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.
- (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.
- (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.
- (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 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.

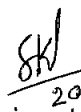
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(xvii) The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.

12. The Ministry may revoke or suspend the clearance, at subsequent stages, if implementation of any of the above conditions is not satisfactory.


13. The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.

14. The above conditions will be enforced, inter alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and rules.

  
20/3/2018  
(S. K. Srivastava)  
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**Copy to:-**

1. The Additional PCCF (C), MoEF&CC Regional Office (EZ), A/3, Chandrasekharpur, Bhubaneswar - 23 (Odisha)
2. The Secretary, Department of Environment, Government of West Bengal, Pura Bhavan, 4<sup>th</sup> Floor, FD-415/A, Sector-III, Bidhannagar, Kolkata - 106 (WB)
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
4. The Member Secretary, West Bengal Pollution Control Board, Paribesh Bhavan, 10A, Block-L.A., Sector 3, Salt Lake City, Kolkata - 98 (WB)
5. Guard File/Monitoring File/Website/Record File

  
20/3/2018  
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