

No. J-11011/176/2007- IA II (I)
Government of India
Ministry of Environment & Forests

E mail: plahujarai@yahoo.com
Tele fax: 24363973
Paryavaran Bhawan, C.G.O. Complex,
Lodi Road, New Delhi - 110 003
Dated the August 24, 2007

CORRIGENDUM

Sub: Expansion of Proposed Increase in Ethylene Production capacity from 5,20,000 TPA to 7,00,000 TPA at Haldia Petrochemicals Limited, Haldia, District Purba Medinapur West Bengal by M/s Haldia Petrochemicals Limited (HPL) - Environmental Clearance reg.

Sir,

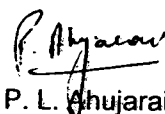
This is in continuation of this Ministry's earlier letter of even no. dated 28th June, 2007. Following may be read in stead of:

1. 1,32,000 TPA of Benzene instead of 1,01,000 TPA
2. 1,01,000 TPA of Butadiene instead of 1,32,000 TPA
3. 1,30,500 TPA of Py-Gas instead of 1,70,500 TPA
4. 5,200 TPA of Cyclopentane instead of 13,100 TPA
5. 1x301 m3 of Pentane of instead of 1x300 m3 of Pentane
6. 11 km of long Naptha Pipeline instead of 8 km
7. 350 m3/annum of Oily Waste instead of 300 m3/day
8. 425 m3/annum @20% solids of ETP Sludge instead of 300 m3/day
9. 150 MT of Catalyst in every 3-5 years instead of 100-105 MT in every 3-4 years
10. 125 MT of Molecular Sieves in every 3-5 years instead of 15-125 MT/3-5 years
11. 22 m3/year @ 100% solids of Incinerator Ash instead of 20m3/annum

Further following are included:

1. 1x2950 m3 of RPG Feed to PGHU
2. 1x1825 m3 of HPG
3. 25 MT /annum of Oil Impregnated Coke
4. 10-12 m3 in 2 years of Ion Exchange Resin
5. 10-15 nos./annum of Spent Lead Acid Batteries

Yours faithfully,


(Dr. P. L. Ahujarai)
Director

To

✓
Shri A K Ghosh
Dy. Head-Plant & Head -Manufacturing
M/s Haldia Petrochemicals Ltd.
1,Auckland Place,
Kolkata-700 017

Copy to:-

1. The Chairman, West Bengal Pollution Control Board, Parivesh Bhawan, 10A Block-LA Sector-III, Salt Lake, Calcutta- 700091.
2. The Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests A-3 Chandrashekharpur, Bhubaneswar – 751 023
3. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
4. Guard File.
5. Monitoring File.
6. Record File.

Original to ACC
Copy to: Shri A K Chatterjee
Shri Amitava Das

No. J-11011/176/2007- IA II (I)
Government of India
Ministry of Environment & Forests

Shri
21.07.07

E mail: plahujarai@yahoo.com
Tele fax: 24363973
Paryavaran Bhawan, C.G.O. Complex,
Lodi Road, New Delhi - 110 003
Dated the 28th June, 2007

To

Shri A K Ghosh
Dy. Head-Plant & Head -Manufacturing
M/s Haldia Petrochemicals Ltd.
1, Auckland Place,
Kolkata-700 017

Sub: Expansion of Proposed Increase in Ethylene Production capacity from 5,20,000 TPA to 7,00,000 TPA at Haldia Petrochemicals Limited, Haldia, District Purba Medinapur West Bengal by M/s Haldia Petrochemicals Limited (HPL) - Environmental Clearance reg.

Sir,

This has reference to your letter no. HPL/IMS/HSEF/R/8.2.3/05/E-15 dated 19th February, 2007 on the above mentioned project. The Ministry of Environment and Forests has examined your application. It is noted that the M/s Haldia Petrochemicals Limited (HPL) propose to increase production capacity of the plant by cracking more naphtha in the same unit to increase ethylene production capacity from 5,20,000 TPA to 7,00,000 TPA.

2.0 The company is in acquisition of land area of 449.0 ha. The proposed expansion is within the existing plant premises. No additional land is required. The project does not involve forest land and displacement of people. No National park/wildlife sanctuary/biosphere reserves etc located within 10 km distance of the project. Product-wise increase in capacity is shown in table given below:

<u>Sl No.</u>	<u>Unit</u>	<u>Existing Capacity in TPA (Pre-Revamp)</u>	<u>Proposed Capacity in TPA (Post-Revamp)</u>
1	Overall Plant Capacity	5,20,000	7,00,000
2	Main Products		
	High Density Poly-ethylene	2,52,000	3,34,000
	Linear Low Density Polyethylene	2,72,000	3,86,000
	Polypropylene	2,84,000	3,41,000
	Benzene	71,000	1,01,000
	Butadiene	98,000	1,32,000
3	Co-Products/By-products		
	C ₆ Raffinate	60,000	36,600
	Py-Gas	1,02,000	1,70,500

C ₄ LPG	1,32,000	1,13,000
CBFS	35,000	89,300
Cyclo-pentane	5,000	13,100
Motor-spirit	77,000	2,50,600
Hexane	-	8,300

To achieve the above production capacity, various process equipments in different production units are being replaced by higher capacity equipment, or, modified to accommodate higher production, or, addition of new equipment to ensure higher production capacity. Besides this, there are additional changes in utilities requirements and storage requirements of hydrocarbons and products. The major additions are:

- Additional storage tanks for Naphtha (1 x 42,735 m³); Motor Spirit (2 x 4,000 m³); FGN (1 x 800 m³); Multi-purpose tank (1 x 4,000 m³); (& Pentane (1 x 300 m³)
- Additional storage spheres for Ethylene (1 x 2,500 m³); Propylene (1 x 2,400 m³); Butene (1 x 1,880 m³) & Butadiene (1 x 2,050 m³)
- Additional bullet for propane storage (1 x 180 m³)
- 8 km. long Naphtha pipeline (24" diameter.) from oil jetty to HPL
- Additional warehouse for product storage
- Additional DM Water Tank, additional cells in CWS, instrument air compressor and dryer units

3.0 Water requirement of 7.73 MGD will be met from Haldia Development Authority. For which contract has been signed by the Company and HAD. 4.1.8. Oil sludge of 300m³/d will be generated. Saleable oil will be sold to authorized processors; non saleable will be incinerated. The ETP sludge of 300 M³/d will be incinerated. Catalyst of 100 -105 MT, generated in 3-4 years will be sent to authorized processor. Molecular sieves (15-125 MT/ 3-5years) and Fly ash from the incinerator (20 m³) will be disposed off in the secured land fill. An agreement has been signed with West Bengal Waste Management Limited, for hazardous waste handling. The facility is created by HDA and Ramky group. Public hearing panel has considered the project in the meeting held on 27.10.2006. Cost of the project is Rs.880 Crores.

4.0 The project was considered as per Sub-para 2.2 of the Interim Operational Guidelines dated 13th October, 2006 issued by the Ministry of Environment and Forests under Para 12 of the EIA Notification, 2006.

5.0 Based on the information submitted by you, the Ministry of Environment and hereby accords environmental clearance for the above project under the provisions of the EIA Notification dated 14th September, 2006 subject to implementation of the following conditions/safeguards

SPECIFIC CONDITIONS:

- The gaseous emissions (SO₂, NO_x, HC, NMHC and Benzene) from the various process units shall conform to the standards prescribed under Environment (Protection) Rules, 1986 or norms stipulated by the SPCB whichever is more stringent. At no time, the emission level should go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.

- ii. Requisite numbers of ambient air quality monitoring stations, [SPM, SO₂, NO_x HC , NMHC and Benzene] shall be set up in the Petrochemicals in consultation with SPCB, based on occurrence of maximum ground level concentration and down-wind direction of wind i.e. maximum impact zone. The monitoring network must be decided based on modeling exercise to represent short-term GLCs. Continuous on-line stack monitoring equipment shall be installed for measurement of SO₂ and NO_x. Data on VOC shall be monitored and submitted to the SPCB / Ministry.
- iii. Measures for fugitive emissions control shall be taken by installation of internal floating tanks for storage of light liquid HCs and provision of double mechanical seals to all pumps handling high vapour pressure materials, sensors for detecting HC/ toxic gas leakages at strategic locations, regular inspection of floating roof seals, maintenance of valves and other equipments and regular skimming of separators/equalization basin.
- iv. The Company shall install vapor collection system for all pressurized hydrocarbon loading and benzene recovery unit for collection of benzene vapor during loading and extraction of benzene. Further, company shall lay dedicated pipeline for ship loading of benzene and butadiene.
- v. All new standards/norms that are being proposed by the CPCB for petrochemical plants shall be applicable for the proposed naphtha cracker and downstream polymer units. The company shall conform to the proposed process vent standards for organic chemicals including non-VOCs and all possible VOCs i.e. TOCs standard and process vent standards for top priority chemicals. The company shall install online monitors for VOC measurements. Action on the above should be taken during the detailed design stage of the NCU. The project authorities shall take necessary measures to comply with the above proposed emission norms including monitoring facilities and intimate the same to this Ministry.
- vi. M/s HPL shall adopt Leak Detection And Repair (LDAR) programme for quantification and control of fugitive emissions.
- vii. To mitigate NO_x emissions, the company shall install low NO_x burners.
- viii. The waste water effluent shall not exceed 3070 m³/d. The wastewater shall be segregated in different streams at the source. The treated effluent after primary, secondary and tertiary treatment shall comply with the standards stipulated by WBPCB/Central Pollution Control Board. The plant regenerate, cooling tower blow tower and DM plant regenerate shall also be treated in ETP. The treated effluent shall be discharged into the river Hooghly after conforming effluents to the prescribed standards. Domestic effluent generation shall not exceed 300 m³/d. Which shall be treated in the integrated waste water treatment plant.
- ix. The company shall install incinerator for incineration of ETP sludge, Oily sludge and waste oil. The gaseous pollutants in the flue gas from the incinerator shall be scrubbed with caustic scrubber. The spent effluent from the scrubber shall be routed through waste water treatment plant for further treatment.
- x. Green belt shall be provided to mitigate the effects of fugitive emissions all around the plant in an area of 103 ha. in consultation with DFO as per CPCB guidelines.

- xi. Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

B GENERAL CONDITIONS:

- i. No further expansion or modernization in the plant should be carried out without prior approval of the Ministry of Environment and Forests.
- ii. At no time, the emissions should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the units, the respective unit should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved.
- iii. All the recommendations made in the EIA /EMP report and risk assessment report should be implemented.
- iv. The overall noise levels in and around the plant area should 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 EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- v. The project authorities must strictly comply with the provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules 1989 as amended in 2000 for handling of hazardous chemicals etc. Necessary approvals from Chief Controller of Explosives must be obtained before commission of the project.
- vi. The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules, 2003. Authorization from the State Pollution Control Board must be obtained for collections/treatment/storage/disposal of hazardous wastes.
- vii. The project authorities will provide adequate funds both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.
- viii. The stipulated conditions will be monitored by the Regional of this Ministry at Bhubaneswar/Central Pollution Control Board/State Pollution Control Board. A six monthly compliance report and the monitored data should be submitted to them regularly.
- ix. The Project Proponent should inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at <http://www.envfor.nic.in>. This should 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 should be forwarded to the Regional office.

- x. The Project Authorities should 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.
- 6.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- 7.0 The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner will implement these conditions.
- 8.0 The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules.

P. Ahujara
(Dr. P. L. Ahujara)
Director

Copy to:-

1. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
2. The Chairman, West Bengal Pollution Control Board, Parivesh Bhawan, 10A Block-LA Sector-III, Salt Lake, Calcutta- 700091.
3. The Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests A-3 Chandrashekharpur, Bhubaneswar – 751 023
4. The Secretary, State Department of Environment, Govt. of West Bengal, Kolkata.
5. JS(CCU-I), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
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(Dr. P. L. Ahujara)
Director