

Sr. VP(P)	VP(P)	GM(P)	GM/AGM (A&A)	
REGD. ON	12 OCT 2010			
Hindusthan Chemicals Company - Olpad				

F. No. J-11011/466/2009- IA II (I)  
**Government of India**  
**Ministry of Environment and Forests**  
**(I.A. Division)**

**Paryavaran Bhawan**  
**CGO Complex, Lodhi Road**  
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**Dated 5<sup>th</sup> October, 2010**

To, ✓  
 Shri A.K.Singh  
 Sr.Vice President (Paint)  
 M/s Hindusthan Chemicals Company  
 GIDC Industrial Estate, OPLAD- 394 540  
 District Surat, Gujarat.

**E-mail : [cyanide@satyam.net.in](mailto:cyanide@satyam.net.in) : Fax No.: 02621 - 221235**

**Subject: Expansion of Pesticide Unit and Co-generation Power Plant (2 MW) at GIDC Industrial Estate, OLPAD, District Surat, Gujarat by M/s Hindusthan Chemicals Company (Formerly known as Cyanides and Chemicals Company) – Environmental Clearance reg.**

**Ref. : Your letter no. F:HCC:TECH:69:AKS/78: dated 16<sup>th</sup> January, 2010.**

Sir,

This has reference to your letter no. F:HCC:TECH:69:AKS/78: dated 6<sup>th</sup> May, 2010 alongwith Form-1, prefeasibility report, draft Terms of References and EIA/EEMP report and further communications vide letter dated 6<sup>th</sup> May, 2010 the above mentioned subject seeking environmental clearance under the Environmental Impact Assessment Notification, 2006.

2. The Ministry of Environment and Forests has examined the application. It is noted that the proposal is for the expansion of Pesticide Unit and Co-generation Power Plant (2 MW) at GIDC Industrial Estate, OLPAD, District Surat, Gujarat by M/s Hindusthan Chemicals Company (Formerly known as Cyanides and Chemicals Company). 'Consolidate Consent & Authorization' is accorded by the GPCB vide letter dated 9<sup>th</sup> June, 2009. Production increase of HCN will be from 3,675 to 5,100. Expansion will be carried out in the existing 19 ha. premises without installation of any reactor or facility, equipments or system. Additional products based on HCN are being added to have diversified market. Total cost of the project is Rs. 7.00 Crores following are the details of the existing and proposed products:

S. N.	Products	Existing Capacity (MTPM)	After expansion Capacity (MTPA)
<b>A) Cyanohydrins</b>			
1	Meta Phenoxy Benzaldehyde Cyanohydrin (MPBAD Cyanohydrin)	nil	5000
2	Formaldehyde Cyanohydrin (Glycolonitrile)		
3	Acetone Cyanohydrin		
4	Methyl Ethyl Ketone Cyanohydrin		
5	Acetaldehyde Cyanohydrin (Lactonitrile)		

6	Para Anisaldehyde Cyanohydrin		
7	Cyclohexanone Cyanohydrin		
8	Methyl Propyl Ketone Cyanohydrin		
9	Methyl Mercapto Butyronitrile (Methyl Mercapto Proponaldehyde Cyanohydrin)		
<b>B) Nitriles</b>			
10	Isophoron Nitrile	nil	3000
11	Imino Diacetoneitrile		
12	Succinonitrile		
13	3-Hydroxy Propionitrile		
14	Methyl Amino Acetonitrile Hydrochloride		
<b>C) Cyanide Based Products</b>			
15	Sodium Cyano Acetate	nil	3500
16	Cyanamide (Crystals & Aqueous Solution)		
17	Para Anisidine		
18	Di Ortho Tolly Guanidine		
<b>D) Capacity Enhancement</b>			
19	Hydrogen Cyanide	3656	5100
20	Mandelonitrile	540	2500
<b>E) CPP</b>			
21	Natural gas based power plant	-	2 MW

3.0 All the waste gases from the process containing HCN will be incinerated in the existing waste gas incinerator provided with bag filter and stack (40 m) to control of gaseous emissions. Bag filter, water scrubber and stack to heat treatment salt plant; Ammonia absorption column to Ammonium Sulphate Recovery plant and Cyclone separator is also provided to control emissions. Captive power plant will be based on natural gas. Double walled pipelines to HCN plant will be provided to transfer hazardous/toxic substances. After expansion, total water requirement from Kakarapar canal and wastewater generation will be 615 m<sup>3</sup>/day and 258 m<sup>3</sup>/day respectively. All the effluent will be recovered/detoxified/recycled and treated in effluent treatment plant (ETP) for Cyanide and high solid contents and disposed off in nearby Masma Khadi through pipeline. ETP sludge, process waste and residue from ETP will be sent to TSDF site. Membership for Common Incineration Facility by M/s Nandesari Environment Control and common solid waste disposal facility is obtained. Used oil will be sold to authorized recyclers.


4.0 All the 'Pesticide Industries and Pesticide Specific intermediates (excluding formulation)' are listed at S. N. 5(b) of schedule of EIA Notification, 2006 under 'A' Category and accordingly appraised at central level

5.0 Public hearing is exempted as the unit is located in the notified GIDC industrial area as per per Para 7(i), Stage (iii), Section (i)(b) of EIA Notification, 2006.

6.0 The proposal was considered by the Expert Appraisal Committee (Industry-2) for 'TORs' in 3<sup>rd</sup> EAC (I-2) Meeting in August, 2009 and for environmental clearance in 9<sup>th</sup> & 13<sup>th</sup> EAC (Industry-2) Meeting held during 18<sup>th</sup>-19<sup>th</sup> March, 2010 & 19<sup>th</sup>-20<sup>th</sup> August, 2010 and recommended the project for grant of environmental clearance.

7.0 Based on the information submitted by the project authorities, the Ministry of Environment and Forests hereby accords environmental clearance to above project under the provisions of EIA Notification, dated 14<sup>th</sup> September, 2006 subject to the compliance of the following Specific and General Conditions:


**A. SPECIFIC CONDITIONS:**

- i) The gaseous emissions ( $\text{SO}_2$ ,  $\text{NO}_x$ , HC, HCl & HCN) and particulate matter from various process units including captive power plant shall conform to the standards prescribed by the concerned authorities from time to time. 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 respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Dust collectors and venturi scrubbers shall be provided to control the particulate emissions.
- ii) All the gases from the process containing HCN shall be incinerated in the existing waste gas incinerator. The company shall monitor the HCN, Dioxine and Furan and data submitted to the Ministry's Regional Office at Bhopal. Bag filter and stack of adequate height shall be provided to the incinerator to control gaseous emissions. Bag filter, water scrubber and stack to heat treatment salt plant; Ammonia absorption column to Ammonium Sulphate Recovery Plant and Cyclone separator to control particulate emissions. Double walled pipelines to HCN plants as well as other pipelines shall be provided for transferring hazardous/toxic substances. Such pipelines shall be made of anti-corrosive material with inner core-primary pipe and outer cover-secondary pipelines.
- iii) Project proponents shall monitor  $\text{PM}_{10}$ ,  $\text{PM}_{2.5}$ ,  $\text{SO}_2$ ,  $\text{NO}_x$ , HCl, HCN in ambient air. Adequate pollution control measures shall be provided to control gaseous emissions. Scrubbers of more than 90 % efficiency shall be installed. Vents from scrubbers and condensers shall be periodically monitored and maintained as per the best practicable technology.
- iv) Cyanide content in the incinerator, flue gas and treated effluent shall be monitored regularly to meet the stipulations laid down by Gujarat Pollution Control Board (GPCB). HCN detectors should be provided in HCN, NaCN and Diphenyl Guanidire, (DPG) plant.
- v) All the storage tanks shall be under negative pressure to avoid any leakages. Closed handling systems for chemicals and solvents shall be provided. Magnetic seals shall be provided for pumps/agitators for reactors for reduction of fugitive emissions. Chilled brine based condensers shall be used to prevent emissions. Solvent traps shall be installed wherever necessary.
- vi) During transfer of materials, spillages shall be avoided and garland drains be constructed to avoid mixing of accidental spillages with domestic waste and storm drains.
- vii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored with instruments of proper range. The fugitive emissions shall conform to the standards prescribed by the GPCB.
- viii) 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.
- ix) The company shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on its 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 State Pollution Control Board. The levels of SPM, RSPM,  $\text{SO}_2$ ,  $\text{NO}_x$  and VOC (ambient levels) and HCl emissions from the stacks shall be monitored and displayed at a convenient location near the main gate of the company and at important public places 

- x) Total water requirement after expansion shall not exceed 615 m<sup>3</sup>/day. Total wastewater generation after expansion shall not exceed 258 m<sup>3</sup>/day. The level of Cyanide in the treated effluent shall not exceed 0.2 mg/l. The industrial effluent generation shall not exceed 258 m<sup>3</sup>/day.
- xi) All the effluent from all the sourced shall be processed for recovery/detoxification/ recycling and then treated in the effluent treatment plant (ETP). The effluent containing Cyanide shall be treated properly. The treated effluent shall be disposed off in nearby Masma Khadi through pipeline only after meeting the norms prescribed under E (P) Rules or prescribed by the GPCB whichever is more stringent.
- xii) The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 for management of Hazardous wastes and prior permission from GPCB shall be obtained for disposal of solid / hazardous waste in the TSDF.
- xiii) The project authorities shall 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. All Transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act, 1989.
- xiv) The company shall undertake following Waste Minimization measures :-
- Metering and control of quantities of active ingredients to minimize waste.
  - Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
  - Use of automated filling to minimize spillage.
  - Use of 'Close Feed' system into batch reactors.
  - Venting equipment through vapour recovery system.
  - Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- xv) Solvent management shall be as follows :
- Reactor shall be connected to chilled brine condenser system
  - Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
  - The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
  - Solvents shall be stored in a separate space specified with all safety measures.
  - Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
  - Entire plant where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- xvi) Hazardous waste like ETP sludge, incinerator ash and spent activated carbon etc. shall be sent to TSDF site of M/s Nandesari Environment Control Ltd. (NECL). Authorization and Membership to TSDF shall be obtained from the concerned department and submitted to Ministry's Regional Office at Bhopal. Used oil shall be sold to authorized reprocessors/recyclers only.
- xvii) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. ✓

- xviii) 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. Usage of personnel protective equipments (PPEs) by all employees/workers shall be ensured.
- xix) Detailed Risk assessment study shall be carried out and recommended mitigation measure shall be implemented. The company shall make the arrangement for protection of possible fire hazards in case of emergency.
- xx) Standards notified for the pesticides and cyanide units under the Environment (Protection) Act, 1986 and amended time to time shall be followed by the Unit.
- xxi) The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).
- xxii) Green belt developed in about 25 acres (45%) out of 56 acres total land shall be properly maintained in and around the plant site as per the CPCB guidelines.
- xxiii) Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile sewage treatment plant, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.

#### B. GENERAL CONDITIONS

- i. The project authorities shall strictly adhere to the stipulations made by the Gujarat (GPCB) Pollution Control Board.
- ii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. 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. At no time, the emissions shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.
- iv. 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 stations is installed in the up wind and downwind direction as well as where maximum ground level concentrations are anticipated.
- 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 project proponent shall also comply with all the environmental protection measures and safeguards proposed in the project report submitted to the Ministry. All the recommendations made in respect of environmental management and risk mitigation measures relating to the project shall be implemented. 

- vii. The company shall undertake rainwater harvesting measures to recharge the ground water as well as reduced consumption of water.
- viii. The company will undertake all relevant measures for improving the Socio-economic conditions of the surrounding area. CSR activities will be undertaken by involving local villages and administration.
- ix. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- x. A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- xi. The project authorities shall earmark adequate funds 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 shall not be diverted for any other purpose.
- xii. 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.
- xiii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO<sub>2</sub>, NO<sub>x</sub> (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.
- xiv. 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.
- xv. The environmental statement for each financial year ending 31<sup>st</sup> 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 alongwith the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF 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 and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.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 should be forwarded to the Regional office.

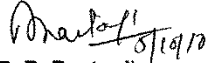
- xvii. Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

8.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

9.0 The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.


10.0 Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.

11.0 The above conditions shall 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 (Insurance) Liability Act, 1991 along with their amendments and rules.

  
(Dr. P. B. Rastogi)  
Scientist 'F'

Copy to :

1. The Secretary, Department of environment and forests, Govt. of Gujarat, Gandhi Nagar, Gujarat.
2. The Chief Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office (West), Link Road No. 3, E - 5, Arera Colony, Bhopal - 462 016, M. P.
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman Gujarat Pollution Control Board, Paryavaran Bhawan, Sector 10-A, Gandhi Nagar - 382 010, Gujarat.
5. Scientist 'G' (IA), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, New Delhi.
7. Guard File.
8. Monitoring File.
9. Record File.

  
(Dr. P. B. Rastogi)  
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