



भारत सरकार  
पर्यावरण एवं वन मंत्रालय  
Government of India  
Ministry of Environment & Forests  
(IA Division)

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F. No. J-11011/429/2008- IA ■ (I)

Dated October 21, 2008

To,

The Executive Director  
M/s Bhagiradha Chemicals & Industries Limited  
8-2-248/A/B, Road No. 3, Banjara Hills,  
Hyderabad - 500 034  
Andhra Pradesh

Email: [info@bhagirad.com](mailto:info@bhagirad.com)

**Subject:** Expansion of Pesticide unit located at Survey no. 191, 213-217 and 220, Cheruvukommupalem Village, Ongole Mandal, Prakasam District Andhra Pradesh by M/s Bhagiradha Chemicals & Industries Limited - Environmental clearance regd.

Sir,

This has reference to your letter no. Nil dated 24<sup>th</sup> May, 2008 along with form 1, pre-feasibility report and EIA/EMP report on the above mentioned subject seeking environmental clearance under the Environment Impact Assessment Notification, 2006.

2. The Ministry of Environment and Forests has examined your proposal. It is noted that M/s. Bhagiradha Chemicals and Industries Ltd have submitted a proposal for expansion of technical grade pesticide manufacturing unit from 3200 TPA to 3250 TPA by inclusion of 2 new products and by reduction of manufacturing capacity of 3 products. The unit obtained environmental clearance in December, 2006 for manufacture of Chlorpyrifos, chlorpyrifos-methyl, Imidacloprid, Triclorir and Fluoroxypir with an annual capacity of 3200 Tons. The industry is proposing to introduce 2 products, viz Clodinafop-propargyl and Fipronil. The capacity would be 100 TPA for Clodinafop-propargyl and 200 TPA for Fipronil. It is proposed to reduce the manufacturing capacity of chlorpyrifos, chlorpyrifos - methyl, fluoroxypir, while increasing the annual capacity by a 50 TPA to achieve 3250 TPA. The unit is located in Prakasam District in Andhra Pradesh. Area available for the project is 35.76 acres and 11.8 acres is earmarked for green belt development. There are no notified sanctuaries, national parks or ecologically sensitive areas within 10 km of the site. The Project does not involve any R & R. The capital cost of the expansion project is Rs. 7.66 Crores.



3. The total water requirement for the existing and proposed unit would be met from the ground water sources. The present water requirement for project is 274 m<sup>3</sup>/d and after expansion, water requirement would be 316 m<sup>3</sup>/d. The maximum quantity of waste water generated at present is 60.514 m<sup>3</sup>/day, while the proposed expansion would generate 82.72 m<sup>3</sup>/day. The unit is having an effluent treatment plant with a capacity of 100 KLD. The waste streams would be segregated into high TDS, low TDS, inorganic effluent and organic effluent and will be treated in Multiple Effect Evaporator, ETP and incineration system. The inorganic effluent would be neutralized before sent to ETP. The condensate from the evaporator will be treated in ETP. The existing 12 TPH coal fired boiler is provided with a bag filter to control the particulate emissions. No new utilities except 2 nos. of 500 KVA DG sets are proposed. The process vents would be connected to scrubber. To control the process emissions in the form of HCL, NH<sub>3</sub> and SO<sub>2</sub> Caustic scrubber and water scrubber would be provided.

4. Solid wastes would be generated from rotary kiln (15.8 MTPA), ash from coal fired boiler and ETP sludge (25 kg/day). Temporary waste storage facility is provided in the plant premises for the storage of hazardous wastes. The hazardous wastes from Rotary kiln, ash from incinerator, and the sludge from ETP would be packed in HDPE bags and sent to TSDF Dundigal in Ranga Reddy district. The recyclable wastes of used batteries and waste oil (1.4 l/d) will be sent to authorized recyclers. The coal ash from the boiler (13500 kg/d) will be sold to brick manufacturers.

5. All the pesticide manufacturing units are listed at serial no. 5(b) of schedule of EIA Notification, 2006 and categorized under "A" category. The Expert Appraisal Committee(I) considered the project in its 85<sup>th</sup> meeting held during 23<sup>rd</sup> -25<sup>th</sup> September, 2008. The Committee recommended the project for environmental clearance as per para 7(ii) of EIA Notification, 2006 exempting it from public hearing.

6. 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 effluent shall be segregated into high COD, high TDS, Low TDS, Inorganic effluent and organic effluent streams. The high TDS effluent shall be treated in Multiple effect evaporator. The distillate from the multiple effect evaporator system and condensate from the ejectors shall be treated in ETP. The inorganic effluent shall be neutralized before sending it to ETP. The treated effluent shall conform to the prescribed standards. The organic waste stream shall be incinerated in the incinerator.
- (ii) The gaseous emissions (SO<sub>2</sub>, NO<sub>x</sub>, VOC, NH<sub>3</sub> and HCl) along with SPM and RSPM from various process units 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.



- (iii) The process emissions in the form of HCl shall be scrubbed with caustic scrubber and NH<sub>3</sub> shall be scrubbed with water scrubber followed by caustic scrubber. The spent scrubber solution shall be sent to multiple effect evaporator.
- (iv) The flue gases from the rotary kiln and the incinerator after cooling in a gas cooler shall be scrubbed through a caustic scrubber. The scrubbed solution shall be sent to MEE system. The particulate emissions from the 12 TPH Fluidized Bed Coal fired boiler shall be controlled by bag filter to meet the emissions standards less than 50 ng/Nm<sup>3</sup>. The gaseous emissions from the DG sets shall be dispersed through stack height as per CPCB standards. Acoustic enclosures shall be provided to mitigate the noise pollution.
- (v) Standards notified for pesticides unit under the Environment (Protection) Act, 1986 and amended time to time shall be followed by the Unit.
- (vi) The unit shall carry out monitoring of VOC in the ambient air and data submitted to the Ministry, State Pollution Control Board.
- (vii) Chilled brine for the secondary condenser shall be installed for recovery of solvents.
- (viii) The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management and Handling) Rules, 2003 for management of Hazardous wastes and prior permission from APPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire fighting facilities in case of emergency.
- (ix) Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits imposed by APPCB.
- (x) All the storage tanks shall be under negative pressure to avoid any leakages. Breathers, N<sub>2</sub> blanketing and condensers will be provided for all the storage tanks. Closed handling systems for chemicals and solvents will be provided. Magnetic seals will be provided for pumps/agitators for reactors for reduction of fugitive emissions. Chilled Brine based condensers shall be used to prevent VOC emissions. Solvent traps shall be installed wherever necessary.
- (xi) All venting equipment shall have vapour recovery system. All the pumps and other equipment's where there is a likelihood of HC leakages shall be provided with Leak Detection and Repair (LDAR) system and LEL indicators and Hydrocarbon detectors. Provision for immediate isolation of such equipment, in case of a leakage will also be made. The company shall provide a well defined Leak Detection and Repair (LDAR) programme for quantification and control of fugitive emissions. The detectors sensitivity will be in ppm levels.
- (xii) During transfer of materials, spillages shall be avoided and gulland drains be constructed to avoid mixing of accidental spillages with domestic waste and storm drains



- (xiii) The company shall make adequate arrangement for control of odour nuisance from the plant premises.
- (xiv) The adequate financial provisions shall be made in the budget of the project for implementation of the above suggested environmental safeguards. Fund so earmarked shall not be diverted for any other purposes.
- (xv) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- (xvi) The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.
- (xvii) 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.
- (xviii) Usage of PPEs by all employees/workers shall be ensured.
- (xix) The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).
- (xx) The company shall adopt waste minimization /cleaner production techniques to reduce the pollution load and action plan in this regard submitted to the Ministry.
- (xxi) The company shall undertake rainwater harvesting measures to recharge the ground water as well as reduced consumption of water.
- (xxii) 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 of the SPCB/state government or any statutory body.
- 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. The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended. Authorization from the SPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes.
- iv. Ambient air quality monitoring stations shall be set up in the downwind direction as well as where maximum ground level concentration are anticipated in consultation with the State Pollution Control Board.
- v. For control of process emissions, stacks of appropriate height as per the Central Pollution Control Board guidelines shall be provided. The scrubbed water shall be sent to ETF for further treatment.
- vi. The company shall undertake following Waste Minimization measures :-
  - Metering 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.
  - Maximizing recoveries
  - Use of automated material transfer system to minimize spillage.
  - Use of "Closed Feed" system into batch reactors.
- vii) 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 SPCB shall be obtained for collections/treatment/ storage/disposal of hazardous wastes.
- viii) The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) 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).
- ix) A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the environmental management and monitoring functions.
- x) The project authorities shall develop greenbelt in 33% of project area as per the guidelines of CPCB to mitigate the effect of fugitive emission.
- xi) The implementation of the project vis-a-vis environmental action plans shall be monitored by Ministry's Regional Office /SPCB / CPCB. A six monthly compliance status report shall be submitted to monitoring agencies.



xii) 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 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 shall be forwarded to the Ministry's Regional Office.

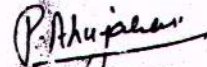
xiii) The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.

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

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


9. 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 Authority Act, 1997.

10. The above conditions will be enforced, inter-alia under the provisions of the Water (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.

  
(Dr. P. L. Ahujarai)  
Director

**Copy to:**

1. The Secretary, State Dept. of Environment, Government of Andhra Pradesh, Mantralaya, Hyderabad.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office, Complex, East Arjun Nagar, Delhi-110032.
3. The Chairman, Andhra Pradesh State Pollution Control Board, 2<sup>nd</sup> Floor, HUDA Complex, Maitrivaram, S.R.Nagar, Hyderabad- 500 038.
4. The Chief Conservator of Forests (Central), Regional Office (SZ), Kendriya Sadan, IV<sup>th</sup> Floor, E&F Wing, 17<sup>th</sup> Main Road, Koramangala, Bangalore-560034.
5. Monitoring Cell, Ministry of Environment and Forests, Parivaran Bhavan, CGO Complex, New Delhi- 110003.
6. Guard file.
7. Record file
8. Monitoring file.

  
(Dr. P. L. Ahujarai)  
Director