



No. SEIAA/GUJ/EC/5(f)/372/2012

Date:

30 NOV 2012

Time Limit

Sub: Environment Clearance for the - M/s. Diamines and Chemicals Ltd. for expansion of existing chemical manufacturing unit located at Plot No:13, PCC Area, P.O. Petrochemicals, Dist : Vadodara..... in Category 5 (f) of Schedule annexed with EIA Notification dated 14/9/2006.

Dear Sir,

This has reference to your application along with Form-I vide letter dated 01/10/2009, Rapid EIA Report, Risk Assessment Study Report and On-site Emergency Plan vide their letter dated 21/08/2010, Additional information / documents vide their letter dated 16/07/2011, Letter dated 16/7/2011 regarding requirement for installation of additional new Boiler (18.5 TPH) and new Thermic Fluid Heater/Hot Oil Heater (25 Lac Kcal/Hr) for the proposed expansion, both using coal as a fuel, Additional information / documents vide letter dated 14/03/2012, submitted to the SEAC, seeking Environmental Clearance under Environment Impact Assessment Notification, 2006

The proposal is for Environmental Clearance for - M/s. Diamines and Chemicals Ltd. for expansion of existing chemical manufacturing unit located at Plot No:13, PCC Area, P.O. Petrochemicals, Dist : Vadodara. It is an existing unit proposing expansion in production capacity of existing products as well as addition of new products as shown in table below :

Sr. No.	Proposed Products	Capacity (MT/Month)		
		Existing	Additional	Total
PRODUCTS				
1.	Product Mix of Ethylene Amine & Piperazine (By EDC Route)	212*	288	500*** (Full capacity utilization of existing production capacity + proposed additional)
2.	Product Mix of Ethylene Amine & Piperazine (By CPA Route)	239*	91	330*** (Full capacity utilization of existing production capacity + proposed additional)
3.	N-Methyl Pyrrolidone	239*	91	330***
	OR N-Ethyl Pyrrolidone	-	91	
4.	EDA Phosphate	25	-	25**
SPECIALITY CHEMICALS				
5.	Acid Corrosion Inhibitor (ACI)	-	50	50***
6.	N-Methyl Piperazine And / Or N, N' Dimethyl Piperazine	-	100	100***

Note:

- * At present, at any point of time, the company operates the plant for making one product only at a time i.e. :
Product No. 1: Product Mix of Ethylene Amine & Piperazine (By EDC Route) or
Product No. 2: Product Mix of Ethylene Amine & Piperazine (By CPA Route) or
Product No. 3: N Methyl Pyrrolidone
- ** Total cumulative production of the above stated existing products no. 1 + product no. 2 + product no. 3 is a maximum of 239 MT/Month.
- *** After expansion with proposed addition, the company will operate the plant for making :
Product No. 1: Product Mix of Ethylene Amine & Piperazine (By EDC Route) maximum of 500 MT/Month **And**
Product No. 2: Product Mix of Ethylene Amine & Piperazine (By CPA Route) maximum of 330 MT/Month **And**
Product No. 3: N Methyl Pyrrolidone or N Ethyl Pyrrolidone maximum of 330 MT/Month **And**
EDA Phosphate maximum of 25 MT/Month **And**
Speciality Chemicals maximum of 150 MT/Month

Thus, total production would be 1335 MT/Monthly (500 + 330 + 330 + 25 + 50 + 100).

The proposal falls in the project / activity no. 5(f) in the schedule of the Environmental Impact Assessment Notification, 2006. As the unit is located in to the notified industrial area, it falls in category "B" of the schedule

The project activity is covered in 5(f) and is of B Category. Since, the proposed project is located in the notified industrial area, public consultation is not required as per paragraph 7(i) (iii) (i) (b) of the Environment Impact Assessment Notification-2006.

The SEAC, Gujarat had recommended to the SEIAA, Gujarat, to grant the Environment Clearance to this project for the above-mentioned project. The proposal was considered by SEIAA, Gujarat in its meeting held on 23.11.2012 at Gandhinagar. Since the public consultation is not required for the project, the SEIAA hereby accords Environmental Clearance to above project under the provisions of EIA Notification dated 14th September, 2006 subject to the compliance of the following conditions.

A. SPECIFIC CONDITIONS:

A.1 WATER:

1. The fresh water requirement shall not exceed 431.15 KL/day after the proposed expansion and it shall be met through two no. of existing bore wells until getting surface water supply from Nandesari Industries Association [NIA]. Metering of water shall be done and records of monthly water consumption shall be maintained.
2. Prior permission from the CGWA shall be obtained for the increased quantity of ground water abstraction. No ground water shall be used and existing two bore wells shall be sealed upon getting surface water supply from the NIA.
3. Domestic wastewater generation shall be 5.8 KL/day after the proposed expansion and it shall be disposed off through septic tank – soak pit.
4. Industrial effluent generation shall not exceed 240 KL/day after the proposed expansion.
5. The unit shall upgrade its ETP so as to make it adequate to treat increased quantum of industrial effluent due to the proposed expansion. The ETP shall be operated regularly and efficiently to achieve the GPCB norms at the final outlet.
6. The treated industrial effluent conforming to the GPCB norms shall be discharged into the ECP channel.
7. The unit shall provide overhead treated effluent storage tank of 10 KL capacity for holding treated industrial effluent before its discharge into the ECP channel.
8. The unit shall provide metering facility at the inlet and outlet of the ETP and maintain records for the same.
9. The unit shall provide online monitoring system for monitoring of pH, TOC & flow of treated effluent with an arrangement to reflect the monitored data on the company's server, which can be accessed by the GPCB on real time basis.
10. A proper logbook of the ETP operation, effluent discharge quality and quantity, power consumption, chemical consumption etc. shall be maintained and shall be furnished to the GPCB from time to time.
11. The unit shall join and participate financially and technically for any common environmental facility / infrastructure as and when the same is taken up either by the GIDC or GPCB or any such authority created for this purpose by the Govt. / GIDC.

A.2 AIR:

12. Process emission of Ammonia shall be controlled with the air pollution control systems as mentioned below:
(1) Ventury Water Scrubber to Crystallizer of E. A. Plant (EDC route).
(2) Water Scrubber to Flaker of Piperazine (CPA route).
13. The air pollution control systems shall be operated efficiently and effectively to achieve the norms prescribed by the GPCB at process vent outlets.
14. Online ammonia sensors shall be installed on process vents with digital indication and recording facilities. An arrangement shall be made to reflect the monitored data on the company's server, which can be accessed by the GPCB on real time basis.
15. Imported Coal to the tune of 66.5 MT/day and Lignite to the tune of 28.5 MT/day shall be used as fuel in new Steam Boiler [18.5 TPH capacity] and new Thermic Fluid Heater [25 Lac Kcal/Hr capacity].
16. ESP shall be provided to the new Boiler [18.5 TPH capacity] whereas Bag Filter shall be provided to the new Thermic Fluid Heater [25 Lac Kcal/Hr capacity] for control of particulate matter concentration in flue gas emission.
17. The existing Steam Boilers [6 TPH & 7 TPH capacities] using Coal - 16.8 MT/day shall be retained as standby after the proposed expansion. The existing Hot Oil Unit [15 Lac Kcal/Hr capacity] using FO - 3.5 MT/day shall also be retained as standby after the proposed expansion.
18. HSD to the tune of 3.5 MT/day shall be used as a fuel in only in standby D/G Sets [2 no. × 500 KVA].
19. Stacks of adequate height as per the GPCB norms shall be provided for the process and flue gas emissions.
20. Regular performance evaluation of the air pollution control systems shall be undertaken every year to check its adequacy, through credible institutes like NPC, IIT, College of Engineering or such other institutes of similar repute, and its records shall be maintained.
21. Measures shall be taken to reduce the process vapors emissions as far as possible. Use of toxic solvents shall be minimum. All venting equipment shall have vapour recovery system.
22. All the vessels used in the manufacturing process shall be close to reduce the fugitive emission. Adequate ventilation system shall be provided in work areas.
23. The unit shall undertake adequate measures for solvent recovery. Chilled Brine Secondary Condensers shall be provided for

control of evaporation of Methanol and solvent recovery shall not be less than 95 percent in any case.

24. The fugitive emission in the work place environment shall be monitored. Adequate number of online ammonia sensors shall be provided in work place. The emission shall conform to the standards prescribed by the concerned authorities from time to time (e.g. Directors of Industrial Safety & Health).
25. Regular monitoring of ground level concentrations of SO₂, NO_x, NH₃, PM₁₀ and PM_{2.5} shall be carried out in the impact zone and its records shall be maintained. Ambient air quality levels shall not exceed the standards stipulated by the GPCB. If at any stage these levels are found to exceed the prescribed limits, necessary additional control measures shall be taken immediately. The location of the stations and frequency of monitoring shall be decided in consultation with the GPCB.

A.3 HAZARDOUS / SOLID WASTES:

26. The company must strictly comply with the rules and regulations with regards to handling and disposal of Hazardous waste in accordance with the Hazardous Waste (Management, Handling and Transboundary Movement) Rules 2008, as may be amended from time to time. Authorization from the GPCB must be obtained for collection / treatment / storage / disposal of hazardous wastes.
27. Hazardous wastes shall be dried, packed and stored in separate designated hazardous waste storage facility with pucca bottom and leachate collection facility, before its disposal.
28. ETP Sludge, Spent Ion Exchange Resins and Sodium Chloride salt shall be sent to common TSDF of NECL, Nandesari.
29. Distillation Bottom shall be converted into useful product i.e. Diamine Dia Bond and sold off to actual consumers.
30. Spent Catalysts shall be sent back to suppliers.
31. Used Oil shall be either reused in machinery lubrication or sold to the registered recyclers / re-refiners.
32. Discarded drums / MS cylinders / bags / liners shall be either reused or returned back to suppliers or sold only to the authorized vendors after its decontamination.
33. Fly ash shall be sold off to the manufacturers of ash based products such as cement, concrete blocks, bricks, panels, etc. so as to achieve 100% ash utilization.

A.4 SAFETY:

34. The project management shall strictly comply with the provisions made in the Factories Act, 1948 as well as Manufacture, Storage and Impact of Hazardous Chemicals Rules 1989 as amended in 2000 for handling of hazardous chemicals.
35. Necessary permissions from various statutory authorities like PESO, Nagpur, Factory Inspectorate and others shall be obtained prior to commissioning of the project.
36. Fire hydrant system shall be installed as per the TCA/NFPA norms for each plant and building.
37. All necessary precautionary measures shall be taken to avoid any kind of accident during storage and handling of toxic, explosive, flammable and combustible chemicals, especially Hydrogen.
38. Only flame proof electrical fittings shall be provided in the production plants.
39. Proper ventilation shall be provided in the work areas.
40. Storage and use of hazardous chemicals shall be minimized to the extent possible and all necessary precautions shall be taken to mitigate the risk generated out of it.
41. Hazardous materials storage shall be at an isolated designated location. bund/dyke walls shall be provided for storage tanks for Hazardous Chemicals.
42. Storage of hazardous chemicals shall be in multiple small capacity tanks / containers instead of one single large capacity tank to reduce the risk.
43. All the storage tanks shall be fitted with appropriate controls to avoid any leakages. Close handling system for chemicals shall be provided.
44. Personal Protective Equipment shall be provided to workers and its usage shall be ensured and supervised.
45. First Aid Box and required Antidotes for the chemicals used in the unit shall be made readily available in adequate quantity at all the times.
46. Necessary tie up with the nearby doctor qualified for occupational health shall be made to ensure that the medical treatment is given within the shortest possible time in case of any adverse condition.
47. Training shall be given to all workers on safety and health aspects of handling chemicals.
48. Occupational health surveillance of the workers shall be carried out on a regular basis and records shall be maintained as per the Factories Act and Rules.
49. Transportation of Hazardous Chemicals shall be as per the provisions of the Motor Vehicle Act & Rules.
50. All transporting routes within the factory premise shall have paved roads to minimize splashes and spillages.

A.5 NOISE:

51. The overall noise level in and around the plant area shall be kept well within the standards by providing noise control measures including engineering control like acoustic insulations, hoods, silencers, enclosures etc. on all source of noise generation. The ambient noise level shall conform to the standards prescribed under The Environment (Protection) Act, 1986 & Rules.

A.6 CLEANER PRODUCTION AND WASTE MINIMISATION:

52. The unit shall undertake the Cleaner Production Assessment study through a reputed institute / organization and shall form a CP team in the company. The recommendations thereof along with the compliance shall be furnished to the GPCB.
53. The unit shall also undertake following waste minimization measures:
 - a. Metering and control of quantities of active ingredients to minimize waste.
 - b. Use of automated and enclosed filling to minimize spillage
 - c. Reuse of by-products from the process as raw materials or raw materials substitutes in other process.
 - d. Venting equipment through vapour recovery system
 - e. Use of close feed system into batch reactors
 - f. Use of high pressure hoses for equipment cleaning to reduce wastewater generation
 - g. Dry cleaning / mopping of floor instead of floor washing
 - h. Regular preventive maintenance to avoid leakage, spillage etc.

A.7 GREEN BELT AND OTHER PLANTATION:

54. The unit shall develop green belt within premises as per the CPCB guidelines. However, if the adequate land is not available within the premises, the unit shall take up adequate plantation on road sides and suitable open areas in P.C.C. area, Gram Panchayat area or any other open areas in consultation with the GPCB and submit an action plan of plantation for next three years to the GPCB.

B. OTHER CONDITIONS:

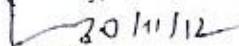
55. In the event of failure of any pollution control system adopted by the unit, the unit shall be safely closed down and shall not be restarted until the desired efficiency of the control equipment has been achieved.
56. The company shall ensure that unit complies with all the environment protection measures, risk mitigation measures and safeguards recommended in the Rapid EIA Report, Risk Assessment Study Report and On-site Emergency Plan of the project.
57. A separate Environment Management Cell equipped with full fledged laboratory facilities and qualified personnel shall be set up to carry out the Environment Management and Monitoring functions and a separate budget shall be allocated for this purpose.
58. The funds earmarked for environment protection measures shall be maintained in a separate account and there shall not be any diversion of these funds for any other purpose. A year-wise expenditure on environmental safeguards shall be reported.
59. The company shall carry out socio-economic developmental / community welfare activities in consultation with the District Development Officer / District Collector.
60. Pucca flooring / impervious layer shall be provided in the work areas, chemical storage areas and chemical handling areas to minimize soil contamination.
61. Leakages from the pipes, pumps etc. shall be minimal and if occurs, shall be arrested promptly.
62. During material transfer, spillages shall be avoided and gulland drain be constructed to avoid mixing of accidental spillages with domestic wastewater or storm water.
63. No further expansion or modifications in the plant likely to cause environmental impacts shall be carried out without obtaining prior Environment Clearance from the concerned authority.
64. The project proponent shall also comply with any additional condition that may be imposed by the SEAC or the SEIAA or any other competent authority for the purpose of the environmental protection and management.
65. The project authorities shall earmark adequate funds to implement the conditions stipulated by SEIAA as well as GPCB along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.
66. The applicant shall inform the public that the project has been accorded environmental clearance by the SEIAA and that the copies of the clearance letter are available with the SEIAA and may also be seen at the Website of SEIAA/ SEAC/ GPCB. This shall be advertised within seven days from the date of the clearance letter, in at least two local newspapers that are widely circulated in the region, one of which shall be in the Gujarati language and the other in English. A copy each of the same shall be forwarded to the concerned Regional Office of the Ministry.
67. It shall be mandatory for the project management to submit half-yearly compliance report in respect of the stipulated prior environmental clearance terms and conditions in hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year.
68. The project authorities shall also adhere to the stipulations made by the Gujarat Pollution Control Board.
69. The project authorities shall inform the GPCB, Regional Office of MoEF and SEIAA about the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.
70. The SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not found satisfactory.
71. The company in a time bound manner shall implement these conditions. The SEIAA reserves the right to stipulate additional conditions, if the same is found necessary. The above conditions will be enforced, inter-alia under the provisions of the Water

(Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules

72. This environmental clearance is valid for five years from the date of issue


With regards,

Yours sincerely,


(R.G.SHAH)

Member Secretary

Issued to:


Mr. Girish Satarkar, CEO,
M/s. Diamines and Chemicals Ltd.
Plot No. 13, PCC Area, P.O. Petrochemicals,
Dist : Vadodara – 391 346.

Copy to:-

1. The Secretary, SEAC, C/O. G.P.C.B. Gandhinagar - 382010
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD -cum-Office Complex, East Arjun Nagar, New Delhi-110032
3. The Chief Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office (WZ), E-5, Arera Colony, Link Road-3, Bhopal-462016, MP
4. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi-110003
5. The Member Secretary, Gujarat Pollution Control Board, Paryavaran Bhavan, Sector-10 A, Gandhinagar-382010
6. Select File


(R.G.SHAH)

Member Secretary