



**No. SEIAA/GUJ/EC/5(f) & 1(d)/**

**/2013**

**Date:**

**Time Limit**

**Sub: Environment Clearance for - M/s. Panoli Intermediates (I) Pvt. Ltd. (Unit - II) for expansion of existing chemical manufacturing unit located at Plot No. 159/5A, GIDC, Nandesari, Dist. Vadodara..... in Category 5 (f) & 1(d) 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 30/12/2009, EIA Report, Risk Assessment Study Report and On-site Emergency Plan vide letter dated 20/10/2010, Additional information / documents vide letter dated 04/01/2012, Additional information / documents vide letter dated 25/03/2013, submitted to the SEAC, seeking Environmental Clearance under Environment Impact Assessment Notification, 2006.

The proposal is for Environmental Clearance for - **M/s. Panoli Intermediates (I) Pvt. Ltd. (Unit - II) for expansion of existing chemical manufacturing unit located at Plot No. 159/5A, GIDC, Nandesari, Dist. Vadodara.** It is an existing unit manufacturing Ortho Anisidine / Para Anisidine, Nitro Derivatives of Hydrocarbon & DNCB. The unit has applied for expansion. The list of existing and proposed products along with production capacities is tabulated below:

Sr. No.	Product	Existing Quantity (MT/Month)	Additional Quantity (MT/Month)	Total Quantity after Expansion (MT/Month)
1	Di Nitro Chloro Benzene	300	1,000	1,300
2	Mix Nitro Derivatives of Hydrocarbon [NCB, NT, NC, NX, EHX, EHN]	2,400	0	2,400
3	Nitro Derivative of Hydro Carbon [NCB]	0	2,600	2,600
4	Ortho Anisidine / Para Anisidine	300	0	300
5	Power Plant	1 MWH	1.4 MWH	2.4 MWH
6	Di Chloro Nitro Benzene	-	300	300
7	Meta Nitrochloro Benzene / Meta Dichloro Benzene (from NB)	-	500	500
8	o-Amino Phenol / p-Amino Phenol	-	300	300
	<b>By-products</b>			
9	Sodium Thiosulphate (40% solution)	1,500	0	1500 (no change)
10	Spent Sulphuric Acid (75%)	1,240	2,000	3,240
11	Hydrochloric Acid (32%)	-	365	365

The proposed project falls in the project no. 5(f) & 1(d) in the schedule of the EIA Notification-2006. As the project is located in notified industrial estate, it falls in Category B.

The project activity is covered in 5(f) & 1(d) 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 29.06.2013 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 14<sup>th</sup> September, 2006 subject to the compliance of the following conditions.

#### **SPECIFIC CONDITIONS:**

##### **A.1 WATER:**

1. The fresh water requirement shall not exceed 330 KL/day after the proposed expansion and it shall be met through Nandesari Industries Association water supply system. No ground water shall be used for the project in any case. The water meter shall be installed and records of monthly fresh water consumption shall be maintained.
2. Domestic wastewater generation shall not exceed of 6 KL/day respectively after the expansion and it shall be disposed off through septic tank – soak pit.
3. Industrial effluent generation from shall not exceed of 200 KL/day after the expansion.
4. The industrial effluent shall be treated in the Effluent Treatment Plant (ETP) consisting of primary, secondary and tertiary treatment facilities and treated effluent conforming to the CETP inlet norms shall be conveyed to the CETP of Nandesari Industries Association [NIA], Nandesari for further treatment and disposal.
5. The existing ETP shall be upgraded and secondary treatment facility shall be incorporated in the ETP to take care of the increased quantity of industrial effluent due to the proposed expansion.
6. In case, the CETP of Nandesari does not meet with the norms, the unit shall treat the effluent to conform to the GPCB norms and not the CETP inlet norms and in such case the unit shall install appropriate additional treatment facilities as required.
7. 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.
8. 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 :**

9. Natural gas to the tune of 28000 Nm<sup>3</sup>/day shall be used as a fuel in new Boiler (20 TPH) whereas natural gas to the tune of 6000 Nm<sup>3</sup>/day shall be used as a fuel in new Power Plant (1.4 MW).
10. Water scrubbers shall be provided as Air Pollution Control Systems (APCS) for control of process emission of HCl from the MNCB Plant. The water scrubbers shall be operated efficiently and effectively to achieve the norms prescribed by the GPCB at stack outlets.
11. Stacks of adequate height as per the GPCB norms shall be provided for flue gas and process emissions.
12. The unit shall provide online monitoring system on process vent for monitoring of HCl with an arrangement to reflect the monitored data on the company's server, which can be accessed by the GPCB on real time basis.
13. 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.
14. The unit shall undertake measures for solvent recovery and Chilled Brine Secondary Condensers shall be provided for control of evaporation of low boiling solvents.
15. Spent solvent recovery shall not be less than 95 percent.
16. 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.
17. The fugitive emission in the work zone environment shall be monitored. The emission shall conform to the standards prescribed by the concerned authorities from time to time (e.g. Directors of Industrial Safety & Health).
18. Regular monitoring of ground level concentrations of SO<sub>2</sub>, NO<sub>x</sub>, HCl, PM<sub>10</sub> and PM<sub>2.5</sub> 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 :**

19. 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.
20. 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.
21. ETP sludge shall be sent to the nearest TSDF.
22. Used oil shall be sold only to the registered recyclers / re-refiners.
23. Spent Acids shall be sold only to the actual consumers having valid permission from the GPCB. Spent Acids shall be transported only through dedicated tankers having tracing facilities with the help of GPS. Records of monthly sell of Spent Acids shall be maintained and furnished to the GPCB at monthly intervals.
24. Other wastes / co-products shall be sold to the actual consumers having valid permission from the GPCB.
25. Discarded barrels / containers / bags / liners shall be either reused or returned back to suppliers or sold only to the authorized vendors after decontamination.

### **A.4 SAFETY:**

26. 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.
27. Necessary permissions from various statutory authorities like PESO, Nagpur, Factory Inspectorate and others shall be obtained prior to commissioning of the project.
28. Fire hydrant system shall be installed as per the TCA/NFPA norms in each plant and building.
29. 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 chlorine and solvents.
30. Only flame proof electrical fittings shall be provided in the production plants.
31. Proper ventilation shall be provided in the work areas.
32. 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.
33. Hazardous materials storage shall be at an isolated designated location, bund/dyke walls shall be provided for storage tanks for Hazardous Chemicals.
34. Storage of hazardous chemicals shall be in multiple small capacity tanks / containers instead of one single large capacity tank to reduce the risk.
35. All the storage tanks shall be fitted with appropriate controls to avoid any leakages. Close handling system for chemicals shall be provided.
36. Personal Protective Equipment shall be provided to workers and its usage shall be ensured and supervised.
37. 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.
38. 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.
39. Training shall be given to all workers on safety and health aspects of handling chemicals.
40. 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.
41. Transportation of Hazardous Chemicals shall be as per the provisions of the Motor Vehicle Act & Rules.
42. All transporting routes within the factory premise shall have paved roads to minimize splashes and spillages.

### **A.5 NOISE:**

43. 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:**

44. 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:**

- 45. 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 GIDC estate or any other open areas in consultation with the GIDC / NIA / GPCB and submit an action plan of plantation for next three years to the GPCB.
- 46. The unit shall become a member of the society constituted / to be constituted in Nandesari for greening of the estate and shall participate financially & contribute appropriately for this cause.

#### **B. OTHER CONDITIONS:**

- 47. 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.
- 48. The project management shall ensure that unit complies with all the environment protection measures, risk mitigation measures and safeguards recommended in the EIA Report of the project.
- 49. 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.
- 50. 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.
- 51. The company shall carry out socio-economic developmental / community welfare activities in consultation with the District Development Officer / District Collector.
- 52. Pucca flooring / impervious layer shall be provided in the work areas, chemical storage areas and chemical handling areas to minimize soil contamination.
- 53. Leakages from the pipes, pumps etc. shall be minimal and if occurs, shall be arrested promptly.
- 54. During material transfer, spillages shall be avoided and garland drain be constructed to avoid mixing of accidental spillages with domestic wastewater or storm water.
- 55. 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.
- 56. 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.
- 57. 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.
- 58. 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 GPCB 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.
- 59. 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.
- 60. The project authorities shall also adhere to the stipulations made by the Gujarat Pollution Control Board.
- 61. 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.
- 62. The SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not found satisfactory.
- 63. 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.
- 64. This environmental clearance is valid for five years from the date of issue.

65. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

With regards,  
Yours sincerely,

**(A.A.DOLTI)**  
**Member Secretary**

*Issued to:*

**Mr. R. V. Dabgar, General Manager,  
M/s. Panoli Intermediates (I) Pvt. Ltd. (Unit - II),  
20-21, Sara Niwas, Harinagar Society,  
Vadodara – 390 007.**

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
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**(A.A.DOLTI)**  
**Member Secretary**



No. SEIAA/GUJ/EC/5(f)&1(d)/1718/2015

Date: 20-05-2015

BY R.P.A.D

**Amendment to Environment Clearance Order No:-**

(Under the provision of Environmental Impact Assessment (EIA) Notification, 2006)

In exercise of the power conferred under the provision of Environmental Impact Assessment (EIA) Notification, 2006 under sub-rule (3) of Rule 5 of the Environment (Protection) Rules, 1986, the Environment Clearance granted to **M/s: Panoli Intermediates (India) Pvt. Ltd. for Chemical manufacturing unit located at Plot no:159/5A,GIDC-Nandesari, Dist: Vadodara** with a condition to use Natural gas to the tune of 28,000 Nm<sup>3</sup>/day as a fuel in a Boiler (20 TPH) whereas natural gas to the tune of 6,000 Nm<sup>3</sup>/day shall be used as a fuel in new Power Plant (1.4 MW)

And whereas SEIAA has granted Environment Clearance vide office order letter no. **SEIAA/GUJ/EC/5(f)&1(d) /147 /2013 dated 15/07/2013** under the provisions of the aforesaid Notification.

And whereas **M/s: Panoli Intermediates (India) Pvt. Ltd** has applied for amendment in the environmental clearance vide their letter dated 20/10/2014 vide their letter REFERENCE nil to SEAC

And whereas SEIAA has received recommendation from SEAC, for the amendment of Environment Clearance under the provision of the aforesaid Notification. The proposal was considered by SEIAA, Gujarat in its meeting held on 08.05.2015 at Gandhinagar. After careful consideration, Environment Clearance order dated 15.07.2013 is hereby amended as under, subject to amendment with respect to change the following condition only.

**Condition no. 09 on Page 2 is here by amended and shall be now read as follows**

**Condition no. 9:** Imported Coal to the tune of 60 MT/day shall be used as a fuel in new Boiler (20 TPH) whereas natural gas to the tune of 6000 Nm<sup>3</sup>/day shall be used as a fuel in new Power Plant (1.4 MW).

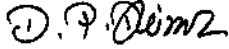
- A flue gas stack of 40 m height shall be provided with online monitoring system to 20 TPH steam boiler.
- High efficiency Electro Static Precipitator (ESP) with efficiency not less than 99.9% followed by wet scrubber shall be installed and operated to ensure that particulate matter emission does not exceed the norms prescribed by the GPCB.
- Third party monitoring of the functioning of the ESP & Scrubber along with its efficiency shall be carried out once in a year through a reputed institute / organization.
- Lime stone injection technology shall be adopted to control SO<sub>2</sub> and it shall be ensured that SO<sub>2</sub> levels in the ambient air do not exceed the prescribed standards.
- The DCS system shall be suitably programmed to ensure that as & when the SPM emission from the flue gas stack exceeds 150 ppm the steam Boiler shall shut down automatically and an interlocking system shall be adopted for ensuring this purpose.
- Online monitoring system shall be installed to monitor the SO<sub>x</sub>, NO<sub>x</sub> and SPM in the flue gas stack.
- The ambient air quality shall be monitored in and around the project area, and the location of ambient air quality monitoring stations shall be reviewed in consultation with the GPCB and additional stations shall be installed, if required in the downwind directions as well as where maximum ground level concentrations are anticipated.
- Adequate storage facility for the fly ash in terms of closed silos shall be provided at site. No ash pond shall be constructed.
- Handling of the fly ash shall be through a closed pneumatic system.
- Ash shall be handled only in dry state.
- The unit shall strictly comply with the Fly Ash Notification under the EPA and it shall be ensured that there is 100% utilization of fly ash to be generated from the unit.

- I. The fugitive emission in the work zone environment shall be monitored. The emission shall conform to the standards prescribed by the concerned authorities from time to time (e.g. Directorate of Industrial Safety & Health). Following guidelines shall be followed to reduce the fugitive emission:
- Enclosure shall be provided at all loading and unloading operations.
  - Adequate dust extraction system such as bag filter, water spray system in the dusty area like fly ash handling area and other vulnerable areas shall be provided.
  - All transfer points shall be fully enclosed.
  - Accumulated coal dust /fly ash on the ground and other surfaces shall be removed / swept regularly and water the area after sweeping.
  - Internal road shall be either paved properly to reduce the fugitive emission during vehicular movement
  - Air borne dust shall be controlled with water sprinklers at suitable interval in the plant.

Rest of all the conditions of the Environment Clearance order no. **SEIAA/GUJ/EC/5(f)&1(d) /147/2013** dated **15/07/2013** shall remain unchanged.

With regards,

Yours sincerely,



**(DARPANA DHIMMAR)**

**Member Secretary**

**Issued to:**

**Shri R.V. Dabar**

**Panoli Intermediates (I) P. Ltd.(Unit-II)**

**20-21, Sara Niwas, Harinagar Society,**

**Dist:Vadodara-390007**

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5. The Member Secretary, Gujarat Pollution Control Board, Paryavaran Bhavan, Sector-10 A, Gandhinagar-382010
6. Select File.



**(DARPANA DHIMMAR)**  
**Member Secretary**

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