



No. SEIAA/GUJ/EC/5(f)/ 2146 /2022

Date: 20 SEP 2022

By R P A D
Time Limit

Sub: Environment Clearance to M/s. Grasim Industries Ltd. (Chemical Division) Epoxy Plant for setting up manufacturing plant of 'Synthetic Organic Chemicals' at Plot No.-1, GIDC-Vilayat, Taluka-Vagra, District: Bharuch, State: Gujarat. In Category 5(f) of Schedule annexed with EIA Notification dated 14/09/2006.

Ref: Your Proposal No. SIA/GJ/IND3/64574/2018.

Dear Sir,

This has reference to your application along with EIA report dated 31/12/2021 submitted to SEIAA, seeking Environmental Clearance under Environment Impact Assessment Notification, 2006.

The proposal is for Environmental Clearance to M/s. Grasim Industries Ltd. (Chemical Division) Epoxy Plant for setting up manufacturing plant of 'Synthetic Organic Chemicals' at Plot No.-1, GIDC-Vilayat, Taluka-Vagra, District: Bharuch, State: Gujarat. It is an existing unit for manufacturing following products, which falls in the category - 5(f) of the schedule of the EIA Notification-2006:

Sr. No.	Name of Products	Quantity (MT/Month)			CAS No.	End-use of the products
		Existing	Proposed	Total		
Proposed Products						
1.	Polyamide Resin	--	1666.67	1666.67	63428-84-2	clothing and carpets, fishing line, electrical connectors, gears, guitar picks and strings and medical implants
2.	Polyester Resin	--	2500	2500	113669-95-7	Homebuilding or construction materials, Used in aircraft, vehicles, and the marine industry, Packaging material, Used in appliances, In the manufacture of furniture, especially outdoor items, Composite materials, for example, fiberglass resin
Existing Products						
Epichlorohydrin (ECH)						
3.	Epichlorohydrin	8333.33	--	8333.33	78-93-3	Epoxy Resins, Synthetic Glycerine Water Treatment Chemicals, Pharmaceuticals
4.	Refined Glycerin (75%)	3333.33	--	3333.33	56-81-5	Glycerine is being used in Pharmaceuticals applications
Chlorinated Poly Vinyl Chloride (CPVC)						
5.	CPVC	8333.33	--	8333.33	68648-82-8	Hydronic piping and distribution (radiators, fan coils, etc.)
Epoxy Plant						
7.	Liquid Epoxy Resin	16812.25	--	16812.25	25068-38-6	High solids and solvent free coatings, Adhesives, Civil engineering and construction industry, Automotive coatings ,Intermediate for can & coil coatings,Marine and Industrial protective coatings,Tooling, potting, casting and mouldingcompounds,Compos
8.	Formulated Resin				25068-38-6	
9.	Power Coating				25036-25-3	
	Can Coating Resin				25036-25-3	
	Solution Cut Resins				1330-20-7	



						ites Stabilizer in PVC
11.	Hardeners	2000	--	2000	2855-13-2	High Chemical resistance flooring/grouting In adhesive, Laminations, Marine Coating, Patch repair, Off shore primers/top coatings. Chemical resistance mortar, Concrete Impregnation, Crack injection system
12.	Reactive diluents	1029.16	--	1029.16	2425-79-8	Filament winding, laminating, Vacuum pressure impregnation, Civil engineering Electronic encapsulations
TOTAL		39841.4	4166.67	44008.07	---	

The project activity is covered in 5(f) and is of 'B' Category. Since, the proposed project is located in 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 vide their letter dated 30/08/2022 had recommended to the SEIAA, Gujarat, to grant the Environment Clearance for the above-mentioned project based on its meeting held on 29/07/2022. The proposal was considered by SEIAA, Gujarat in its meeting held on 13/09/2022 at Gandhinagar. After careful consideration, 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.CONDITIONS :

A.1SPECIFIC CONDITION :

- Unit shall install CEMS [Continuous Emission Monitoring System] in line to CPCB directions to all SPCB vide letter no. B-29016/04/06PCI-1/5401 dated 05/02/2014 for effluent discharge and air emission as per pollutants discharge/emission from respective project and an arrangement shall also be done for reflecting the online monitoring results on the company's server, which can be assessable by the GPCB/CPCB on real time basis. [For Small/Large/Medium (Red Category) & Whichever (Air emission & Effluent discharge) is applicable].
- There shall be no use of solvents for the manufacturing of proposed products.
- Leak Detection and Repair (LDAR) program shall be prepared and implemented as per the CPCB guidelines. LDAR Logbooks shall be maintained.
- The National Ambient Air Quality Emission Standards issued by the Ministry vide G. S. R. No. 826 (E) dated 16th November, 2009 shall be complied with.
- National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G. S. R. 608 (E) dated 21/07/2010 and amended from time to time shall be followed.
- Unit shall have to adhere to the prevailing area specific policies of GPCB with respect to the discharge of pollutants, and shall carry out the project development in accordance & consistence with the same.
- All measures shall be taken to avoid soil and ground water contamination within premises.

8. Safety & Health:

- PP shall obtain PESO permission for the storage and handling of hazardous chemicals.
- PP shall provide Occupational Health Centre (OHC) as per the provisions under the Gujarat Factories Rule 68-U.
- PP shall obtain fire safety certificate / Fire No-Objection certificate (NOC) from the concern authority as per the prevailing Rules / Gujarat Fire Prevention and Life Safety Measures Act, 2016.
- Unit shall adopt functional operations/process automation system including emergency response to eliminate risk associated with the hazardous processes.
- PP shall carry out mock drill within the premises as per the prevailing guidelines of safety and display proper evacuation plan in the manufacturing area in case of any emergency or accident.
- PP shall install adequate fire hydrant system with foam trolley attachment within premises and separate storage of water for the same shall be ensured by PP.
- PP shall take all the necessary steps for control of storage hazards within premises ensuring incompatibility of storage raw material and ensure the storage keeping safe distance as per the prevailing guidelines of the concerned authority.
- PP shall take all the necessary steps for human safety within premises to ensure that no any harm is caused to any worker/employee or labour within premises.
- Flame proof electrical fittings shall be provided in the plant premises, wherever applicable.
- Unit shall never store drum/barrels/carboys of incompatible material/chemical together.
- Unit shall provide effective fire hydrants, water monitors & foam application system at solvent storage area and unit shall provide adequate safety system such as water sprinklers, water curtains, foam pouring system etc. to restrict

cascade fire emergency in solvent storage area.

- I. Unit shall provide effective Isolation for Process area and storage of hazardous chemicals.

A. 2 WATER :

9. Total water requirement for the project shall not exceed 5759.05 KLD. Unit shall reuse 1714 KLD of treated industrial effluent within premises. Hence, fresh water requirement shall not exceed 4045.05 KLD and it shall be met through GIDC water supply only. Prior permission from concerned authority for withdrawal of water shall be obtained.
10. The industrial effluent generation from the project shall not exceed 2099.3 KLD.
11. Management of Industrial effluent shall be as under:
 - Industrial Effluent from Epoxy plant, 1192 KLD (1087 KLD Ind.+ 195 KLD Dom).
 - Low concentration effluent 872 KLD (767 KLD Ind. and 105 KLD Domestic sewage) shall be treated in adequate ETP- 1 consists of primary, secondary and tertiary treatment units along with 220 KLD waste water from MEE of epoxy plant. 1002 KLD treated effluent shall be discharged into Vilayat -Dahej underground Pipeline leading to deep sea. 90 KLD treated effluent from ETP shall be reused back in process for pump, valves and etc,
 - 320 KLD high concentration effluent generated from process shall be evaporated in MEE cum pusher type centrifuge. 100 KLD MEE condensate shall be reused back in cooling Purpose.
 - Industrial Effluent from Epichlorohydrin and cPVC Plant (990 KLD). 640 KLD industrial effluent shall be passed through RO plant. 325 KLD RO permeate shall be reused back in
 - Process while 315 KLD RO reject shall be evaporated in in-house MEE cum ATFD. 285 KLD MEE condensate shall be reused back in process.
 - 200 KLD effluent from Epichlorohydrin plant shall be incinerated in own in-house incinerator and: incinerator shall be operated as per CPCB guidelines and printed logbook maintained for record of the same.
 - 150 KLD effluent mainly brine solution from. Epichlorohydrin plant shall be recovered and directly reuse in Caustic plant.
 - After proposed expansion, 22.3 kl/day generated from the manufacturing process shall be sent to the existing Effluent Treatment Plant, after treatment the said effluent shall be disposed off in deep sea through GIDC pipeline.
 - Treated waste water shall be discharge to into Vilayat -Dahej underground Pipeline leading to deep Sea, Jhagadia pipeline only after complying with the inlet norms of common facilities prescribed by GPCB to ensure no adverse impact on Human Health and Environment.
12. Domestic wastewater generation shall not exceed 109.36 KL/day for proposed project and it shall be treated in STP .It shall not be disposed off into soak pit. Treated sewage shall be utilized for gardening and plantation purpose within premises after achieving on-land discharge norms prescribed by the GPCB.
13. During monsoon season when treated sewage may not be required for the plantation / Gardening / Green belt purpose, it shall be stored within premises. There shall be no discharge of waste water outside the premises in any case.
14. Unit shall provide buffer water storage tank of adequate capacity for storage of treated waste water during rainy days.
15. The unit shall provide metering facility at the inlet and outlet of ETP and maintain records for the same.
16. Proper logbooks of ETP; reuse/ recycle of treated/ untreated effluent; chemical consumption in effluent treatment; quantity & quality of treated effluent; power consumption etc. shall be maintained and shall be furnished to the GPCB from time to time.

17. Unit shall not exceed fuel consumption for Thermic Fluid Heater and D G Set as mentioned below.

Sr. No.	Stack Attached to	Stack Height (Meter)	Type & Quantity of Fuel	Air Pollution Control Measure	Pollutant
Existing					
1	D.G. Set (2000 kVA)	30	HSD 20 KI/Year	Not Applicable	PM SO ₂ NO _x
2	Incinerator	36	Hydrogen-200Nm ³ /hr	As per CPCB guidelines	PM SO ₂ NO _x HCl
Proposed					
1	D.G. Set (2000 kVA)	30	HSD 20 KI/Year	Not Applicable	PM SO ₂ NO _x
2	Thermic Fluid Heater (Capacity - 25 Lakh Kcal)	30	Natural Gas/ HSD NG - 9600 Nm ³ /day HSD - 6.6 KI/day	Not Applicable	PM SO ₂ NO _x
TOTAL AFTER PROPOSED EXPANSION					
1	D.G. Set (2000 kVA)	30	HSD 20 KI/Year	Not Applicable	PM SO ₂

					NOx
2	Incinerator	36	Hydrogen-200Nm3/hr	As per CPCB guidelines	PM SO ₂ NOx HCl
3	D.G. Set (2000 kVA)	30	HSD 20 KI/Year	Not Applicable	PM SO ₂ NOx
4	Thermic Fluid Heater (Capacity - 25 Lakh Kcal)	30	Natural Gas/ HSD NG - 9600 Nm3/day HSD - 6.6 KI/day	Not Applicable	PM SO ₂ NOx

18. Unit shall provide adequate APCM with flue gas generation sources to achieve the norms prescribed by GPCB.

19. Unit shall provide adequate APCM with process gas generation sources as mentioned below.

Sr. No.	Stack / Vent attached to	Height of the Vent (m)	Diameter of the Vent (m)	Expected Emission	Air Pollution Control Measures (APCM)	Remarks
Proposed Process Gas Stacks						
No new process gas stacks are proposed.						
EXISTING						
Epoxy Plant						
1.	ISBL ECH Tank	30	0.15	VOC	Guard Condenser, Scrubber, PRV, Flame Arrestor	Liquid Epoxy Resin Plant (ECH Vent)
2.	ISBL Toluene Tank	30	0.15	VOC	Guard Condenser, PVRV, (Integrated Flame Arrestor)	Liquid Epoxy Resin Plant (Toluene Vent)
3.	OSBL ECH Tank	10	0.05	VOC	Scrubber, PRV, Flame Arrestor	Liquid Epoxy Resin tank (ECH Vent)
4.	PESO Toluene Tank	10	0.05	VOC	Underground tank, PVRV (Integrated flame arrestor)	Liquid EPOXY Resin Tank (Toluene Vent)
5.	Toluene Tank	30	0.05	VOC	Guard Condenser, PVRV, (Integrated Flame Arrestor)	Reactive Diluents Plant (Toluene)
6.	Reactor	30	0.05	VOC	Guard Condenser, PVRV, (Integrated Flame Arrestor)	Solution Cut Plant (Xylene)
7.	Solution Cut Tank	10	0.05	VOC	PVRV, (Integrated Flame Arrestor)	Solution Cut Tank Farm (Xylene)
8.	PESO Xylene Tank	10	0.05	VOC	Underground tank, PVRV (Integrated flame arrestor)	Xylene Tank (PESO Tank Farm)
ECH Plant						
1.	HCl Vent Scrubber	14	0.15	HCl	Scrubber	Emergency Vent Scrubber
CPVC Plant						
1.	HCl synthesis	30	0.15	HCl	Absorption tower using water as an absorption media	--
2.	CPVC Reactor and Degassing Vessel	12	--	Cl ₂	Alkaline scrubber	--
3.	PVC Conveying to Silo	25	--	PM	Bag filter	--
4.	PVC Conveying to Oxygen	10	--	PM	Bag filter	--
5.	Degassing	35	--	PM	Bag filter	--
6.	Conveying- Degassing Vessel to Hopper	25	--	PM	Bag filter	--
7.	Evacuation of air	10	--	PM	Bag filter	--
8.	Conveying CPVC from PVC Reactor	25	--	PM	Bag filter	--

20. PP shall use approved fuels only as fuel in boilers.

21. The fugitive emission in the workzone 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). Following

indicative guidelines shall also be followed to reduce the fugitive emission.

- Internal roads shall be either concreted or asphalted or paved properly to reduce the fugitive emission during vehicular movement.
 - Air borne dust shall be controlled with water sprinklers at suitable locations in the plant.
 - A green belt shall be developed all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission.
22. Regular monitoring of Volatile Organic Compounds (VOCs) shall be carried out in the work zone area and ambient air.
23. For control of fugitive emission, VOCs, following steps shall be followed :
- ✓ Closed handling and charging system shall be provided for chemicals.
 - ✓ Reflux condenser shall be provided over Reactors / Vessels.
 - ✓ Pumps shall be provided with mechanical seals to prevent leakages.
 - ✓ Air borne dust at all transfers operations/ points shall be controlled either by spraying water or providing enclosures.
24. Solvent management shall be carried out as follows:
- ✓ 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
 - ✓ Reactor shall be connected to adequate chilling system to condensate solvent vapors and reduce solvent losses.
 - ✓ 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 maximum solvent 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.
 - ✓ Solvent storage and handling area shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
25. Regular monitoring of ground level concentration of PM10, PM2.5, SO2, NOx, and VOCs 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.4 SOLID / HAZARDOUS WASTE:

26. All the hazardous/ solid waste management shall be taken care as mentioned below.

Sr. no.	Type/Name of Hazardous waste	Source	Category	Quantity (MT/Annum)			Disposal Method
				Existing	Proposed (additional)	Total	
1	Waste Residues (Not made with animal or vegetable material)	From Manufacturing Process	I-23.1	1,971	0	1,971	Collection, storage, transportation, disposal at Ambuja Cement Ltd. for pre-processing, co-processing/ incineration
2	Chemical Sludge from wastewater treatment	ETP	I-35.3	2,742	2	2,744	Collection, storage, transportation, disposal of landfill waste at TSDF and incinerable waste by pre-processing, co-processing/ incineration
3	Discarded containers/ bags/ liners contaminated with hazardous waste/chemicals	From Manufacturing	I-33.1	1,250	5	1,255	Collection, storage, transportation, disposal by selling to authorized vendors.
4	Used or Spent Oil	From Lubrication or D.G. Set	I-5.1	12	0	12	Collection, storage, transportation, disposal by selling to registered recycler
5	Waste residue/ Filter (containing oil)	From lubrication or D.G. Set	I-5.2	2	0.049	2.049	Collection, storage, transportation, disposal by selling to registered recycler
6	Incinerator waste/ residue	Incinerator	I-37.3	8,000	0	8,000	Collection, storage, transportation, disposal of landfill waste at TSDF
7	MEE residue	MEE operation	I-37.3	2,190	0	2,190	Collection, storage, transportation, disposal of landfill waste at TSDF

8.	Hydrochloric Acid(20% Technical grade) as 20%	B-15 of Sch-II [From ECH & Epoxy]	B-15 of Sch-II	1,32,000	0	1,32,000	Collection, storage and utilization within premises.
	Hydrochloric Acid	(From CPVC)		2,76,048	0	2,76,048	Collection, storage and utilization within premises.

27. Authorized end-users shall have permissions from the concerned authorities under the Rule 9 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.
28. Unit shall explore the possibilities for environment friendly methods like co-processing of hazardous waste for disposal of Incinerable & land fillable wastes before sending to CHWIF & TSDF sites respectively.
29. The project proponent has to obtain membership of TSDF site & CHWIF before obtaining CTO of GPCB.
30. The unit shall submit the list of authorized end users of hazardous wastes along with MoU signed with them at least two months in advance prior to the commencement of production. In the absence of potential buyers of these items, the unit shall restrict the production of the respective items.

A. 50THER:

31. The project proponent shall carry out the activities (Provision of roof top solar panel system in the nearby villages. Provision of Organic waste composter in the nearby villages. Promotion of education; including special education and employment enhancing vocation skills especially among children, woman, elderly and the differently abled and livelihood enhancement projects, Protection of national heritage, art and culture including restoration of buildings and sites of historical importance and works of art; setting up of public libraries; promotion and development of traditional arts and handicrafts, Training to promote rural sports, nationally recognized sports, Paralympic sports and Olympic sports, Tree plantation in the nearby villages.) Proposed under CER and it shall be part of the Environment Management Plan (EMP) as per the MoEF&CC's OM no. F. No. 22-65/2017-IA.III dated 30.09.2020. This shall be monitored and the monitoring report shall be submitted to the regional office of MoEF&CC as a part of half-yearly compliance report and to the District Collector. The monitoring report shall be posted on the website of the project proponent.
32. All the recommendations, mitigation measures, environmental protection measures and safeguards proposed in the EIA report of the project prepared by M/s. Anand Environmental Consultants Pvt. Ltd. and submitted by the project proponent and commitments made during presentation before SEAC and proposed in the EIA report shall be strictly adhered to in letter and spirit.

B. GENERAL CONDITIONS:

B.1 CONSTRUCTION PHASE:

33. Water demand during construction shall be reduced by use of curing agents, super plasticizers and other best construction practices.
34. Project proponent shall ensure that surrounding environment shall not be affected due to construction activity. Construction materials shall be covered during transportation and regular water sprinkling shall be done in vulnerable areas for controlling fugitive emission.
35. All required sanitary and hygienic measures shall be provided before starting the construction activities and to be maintained throughout the construction phase.
36. First Aid Box shall be made readily available in adequate quantity at all the times.
37. The project proponent shall strictly comply with the Building and other Construction Workers' (Regulation of Employment & Conditions of Service) Act 1996 and Gujarat rules made there under and their subsequent amendments. Local bye-laws of concern authority shall be complied in letter and spirit.
38. Ambient noise levels shall conform to residential standards both during day and night. Incremental pollution load on the ambient air and noise quality shall be closely monitored during construction phase.
39. Use of Diesel Generator (DG) sets during construction phase shall be strictly equipped with acoustic enclosure and shall conform to the EPA Rules for air and noise emission standards.
40. Safe disposal of waste water and municipal solid wastes generated during the construction phase shall be ensured.
41. All topsoil excavated during construction activity shall be used in horticultural / landscape development within the project site.
42. Excavated earth to be generated during the construction phase shall be utilized within the premises to the maximum extent possible and balance quantity of excavated earth shall be disposed off with the approval of the competent authority after taking the necessary precautions for general safety and health aspects. Disposal of the excavated earth during construction phase shall not create adverse effect on neighbouring communities.
43. Project proponent shall ensure use of eco-friendly building materials including fly ash bricks, fly ash paver blocks, Ready Mix Concrete [RMC] and lead free paints in the project.
44. Fly ash shall be used in construction wherever applicable as per provisions of Fly Ash Notification under the E.P. Act, 1986 and its subsequent amendments from time to time.
45. "Wind - breaker of appropriate height i.e. 1/3rd of the building height and maximum up to 10 meters shall be provided. Individual building within the project site shall also be provided with barricades.

46. "No uncovered vehicles carrying construction material and waste shall be permitted."
47. "No loose soil or sand or construction & demolition waste or any other construction material that cause dust shall be left uncovered. Uniform piling and proper storage of sand to avoid fugitive emissions shall be ensured."
48. Roads leading to or at construction site must be paved and blacktopped (i.e. – metallic roads).
49. No excavation of soil shall be carried out without adequate dust mitigation measures in place.
50. Dust mitigation measure shall be displayed prominently at the construction site for easy public viewing.
51. Grinding and cutting of building materials in open area shall be prohibited.
52. Construction material and waste should be stored only within earmarked area and road side storage of construction material and waste shall be prohibited.
53. Construction and demolition waste processing and disposal site shall be identified and required dust mitigation measures be notified at the site. (If applicable).

B.2 OPERATION PHASE:

B.2.1 WATER:

54. The water meter shall be installed and records of daily and monthly water consumption shall be maintained.
55. All efforts shall be made to optimize water consumption by exploring Best Available Technology (BAT). The unit shall continuously strive to reduce, recycle and reuse the treated effluent.

B.2.2 AIR:

56. In case of use of spray dryer, the unit shall provide the adequate & efficient APCMs with spray dryer so that there should not be any adverse impact on human health & environment. Unit shall carry out third party monitoring of the proposed Spray dryer & it's APCM through the credible institutes and study report for impacts on Environment and Human Health shall be submitted to GPCB every year along with half yearly compliance report.
57. Acoustic enclosure shall be provided to the DG sets (If applicable) to mitigate the noise pollution and shall conform to the EPA Rules for air and noise emission standards.
58. Stack/Vents (Whichever is applicable) of adequate height shall be provided as per the prevailing norms for flue gas emission/Process gas emission.
59. Flue gas emission & Process gas emission (If any) shall conform to the standards prescribed by the GPCB/CPCB/MoEF&CC. At no time, emission level should go beyond the stipulated standards.
60. All the reactors / vessels used in the manufacturing process shall be closed to reduce the fugitive emission.

B.2.3 HAZARDOUS/SOLID WASTE:

61. The company shall strictly comply with the rules and regulations with regards to handling and disposal of Hazardous waste in accordance with the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016, as may be amended from time to time. Authorization of the GPCB shall be obtained for collection / treatment / storage / disposal of hazardous wastes.
62. 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.
63. The unit shall obtain necessary permission from the nearby TSDF site and CHWIF. (Whichever is applicable)
64. Trucks/Tankers used for transportation of hazardous waste shall be in accordance with the provisions under the Motor Vehicle Act, 1988, and rules made there under.
65. The design of the Trucks/tankers shall be such that there is no spillage during transportation
66. All possible efforts shall be made for Co-Processing of the Hazardous waste prior to disposal into TSDF/CHWIF.
67. Management of fly ash (If any) shall be as per the Fly ash Notification 2009 & its amendment time to time and it shall be ensured that there is 100% utilization of fly ash to be generated from the unit.

B.2.4 SAFETY:

68. The occupier/manager shall strictly comply the provisions under the Factories Act 1948 and the Gujarat Factories Rules 1963
69. The project authorities shall strictly comply with the provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules (MSIHC) 1989, as amended time to time and the Public Liability Insurance Act for handling of hazardous chemicals etc. Necessary approvals from the Chief Controller of Explosives and concerned Govt. Authorities shall be obtained before commissioning of the project. Requisite On-site and Off-site Disaster Management Plans have to be prepared and implemented.
70. Main entry and exit shall be separate and clearly marked in the facility.
71. Sufficient peripheral open passage shall be kept in the margin area for free movement of fire tender/ emergency vehicle around the premises.
72. Storage of flammable chemicals shall be sufficiently away from the production area.
73. Sufficient number of fire extinguishers shall be provided near the plant and storage area.
74. All necessary precautionary measures shall be taken to avoid any kind of accident during storage and handling of toxic / hazardous chemicals.
75. All the toxic/hazardous chemicals shall be stored in optimum quantity and all necessary permissions in this regard shall be



obtained before commencing the expansion activities.

76. The project management shall ensure to comply with all the environment protection measures, risk mitigation measures and safeguards mentioned in the Risk Assessment report.
77. Only flame proof electrical fittings shall be provided in the plant premises.
78. Storage of hazardous chemicals shall be minimized and it shall be in multiple small capacity tanks / containers instead of one single large capacity tank / containers.
79. All the storage tanks shall be fitted with appropriate controls to avoid any leakages. Bund/dyke walls shall be provided for storage tanks for Hazardous Chemicals.
80. Handling and charging of the chemicals shall be done in closed manner by pumping or by vacuum transfer so that minimal human exposure occurs.
81. Tie up shall be done with nearby health care unit / doctor for seeking immediate medical attention in the case of emergency.
82. Personal Protective Equipments (PPEs) shall be provided to workers and its usage shall be ensured and supervised.
83. First Aid Box and required Antidotes for the chemicals used in the unit shall be made readily available in adequate quantity.
84. Training shall be imparted to all the workers on safety and health aspects of chemicals handling.
85. Occupational health surveillance of the workers shall be done and its records shall be maintained. Pre-employment and periodical medical examination for all the workers shall be undertaken as per the Factories Act & Rules.
86. Transportation of hazardous chemicals shall be done as per the provisions of the Motor Vehicle Act & Rules.
87. The company shall implement all preventive and mitigation measures suggested in the Risk Assessment Report.
88. Necessary permissions from various statutory authorities like PESO, Factory Inspectorate and others shall be obtained prior to commissioning of the project.

B.2.5 NOISE:

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

B.2.6 CLEANER PRODUCTION AND WASTE MINIMISATION:

90. 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.
91. The company shall undertake various waste minimization measures such as :
 - a. Metering and control of quantities of active ingredients to minimize waste.
 - b. Reuse of by-products from the process as raw materials or as raw materials substitutes.
 - c. Use of automated and close filling to minimize spillages.
 - d. Use of close feed system into batch reactors.
 - e. Venting equipment through vapour recovery system.
 - f. Use of high pressure hoses for cleaning to reduce wastewater generation.
 - g. Recycling of washes to subsequent batches.
 - h. Recycling of steam condensate.
 - i. Sweeping / mopping of floor instead of floor washing to avoid effluent generation.
 - j. Regular preventive maintenance for avoiding leakage, spillage etc.

B.2.7 GREEN BELT AND OTHER PLANTATION:

92. 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 / GPCB and submit an action plan of plantation for next three years to the GPCB.
93. Drip irrigation / low-volume, low-angle sprinkler system shall be used for the green belt development within the premises.
94. The PP shall develop green belt within premises (58908.63 Sq. m i.e. 33 % of the total plot area) as per the undertaking submitted before SEAC. Green belt shall be developed with native plant species that are significant and used for the pollution abatement as per the CPCB guidelines. It shall be implemented within 3 years of operation phase in consultation with GPCB.

B.3 OTHER CONDITION:

95. The projects covered under category 5(f) shall undergo the safety and environment audit regularly as per the standards laid down by the GPCB and CPCB.
96. PP shall carry out the safety audit and Risk Assessment Report as per the prevailing guidelines of safety.
97. Management of Fly Ash shall be as per the Fly Ash Notification 2009 & its amendment from time to time and it shall be ensured that there is 100 % utilization of fly ash to be generated from the unit.



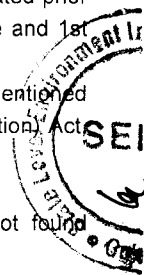
98. EMP should invariably include provisions for environmental Monitoring and measures for noise pollution control measures.
99. In EMP proponent should separately indicate majors of occupational health, fire and safety measures.
100. Prior EC is granted is subject to the proponent receiving all statutory permission / clearances / certificates and membership of respective agencies / authorities which ever applicable. Proponent shall inform progress from time to time, in six monthly compliance report to MOEFCC / SEIAA / SEAC/ GPCB failing to which this provisional EC will stand withdrawn.
101. Wherever waste water or chemical water to be collected by tankers and transported to CETP etc. any diversion and disposal in open drainage (nallah) etc. causing human and environmental damage or loss will make it liable for action under the law.
102. All transport movement by tankers etc has to be done with maintenance of gate pass and logbook it should be verified by the inspecting authorities.
103. Non-hazardous waste data shall be informed to GPCB time to time so as to make an assessment and tie-up with industry for generating sustainable power from the waste.
104. All chemical pharma industry etc. should ensure predictive and preventive maintenance of factory / boiler and reactive show as to avoid incident of fire and safety hazards.
105. EMP should include STP and detail cost including maintenance, transportation of waste water to CETP / CMEE etc as well as transportation cost or transit cost.
106. In LDAR preventive and predictive maintenance plan.
107. In LDAR leakage component, source of equipment leak, detention method should be given in table form.
108. In storage component should be shown separately in terms whether inflammable, toxic, corrosive, reactive etc.
109. In case of Fly Ash generation its management and disposal should be as per Government of India Notification and 100 % utilization should be ensured.
110. Project proponent shall install all environment management systems as per the CPCB/GPCB directives regarding the effluent discharge and air emission in working condition.
111. Project proponent shall display the copy of Environment Clearance at the site prominently.
112. Project proponent shall prepare and follow regular and preventive maintenance plan. The copy of same shall be submitted to SEIAA.
113. Project Proponent will have to display the safety procedure in working area.
114. The project proponent shall obtain all required permissions for safety, health and fire from competent authorities like PESO/Fire Authority etc. and intimate SEIAA.
115. Project Proponent will intimate SEIAA/SEAC/GPCB after obtaining the membership of common facilities like CETP / TSDF / CHWIF / CMEE / Common Spray Dryer as the case may be.
116. Extra care will be taken by PP to avoid any accidental blast in boiler, reactor or any machinery in the plant.
117. Environment monitoring, training and disaster management plan should be undertaken and complied at regular interval.
118. Integrated Regional Office of MoEF&CC, Gandhinagar and GPCB will monitor all environment, safety & health norms as per the prevailing rules.
119. The PP has to maintain the logsheets / registers / manifest / gate pass for discharge through tankers and SCADA system for pipeline discharge for the waste water generation and its disposal data and submit to the GPCB every quarter. GPCB shall verify the same on regular basis and inform SEIAA and take legal action in the cases of non compliance.
120. Unit shall comply all the applicable standard conditions prescribed in Office Memorandum (OM) published by MoEF&CC vide no. F. No. 22-34/2018-IA.III dated 09/08/2018 for Pharmaceutical and Chemical industries mentioned at (Sr. no. XX).
121. The project proponent shall allocate the separate fund for Corporate Environment Responsibility (CER) in accordance to the MoEFCC's Office Memorandum No. F.No.22-65/2017-IA.III dated 01/05/2018 to carry out the activities under CER in affected area around the project. The entire activities proposed under CER shall be monitored and the monitoring report shall be submitted to the regional office of MoEFCC as a part of half-yearly compliance report and to district collector. The monitoring report shall be posted on the website of the project proponent.
122. Rain water harvesting of surface as well as rooftop runoff shall be undertaken and the same water shall be used for the various activities of the project to conserve fresh water as well as to recharge ground water. Before recharging the surface run off, pre-treatment must be done to remove suspended matter.
123. 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 Industrial Association or GIDC or GPCB or any such authority created for this purpose by the Govt. / GIDC.
124. Application of solar energy shall be incorporated for illumination of common areas, lighting for gardens and street lighting in addition the provision for solar water heating system shall also be provided.
125. The area earmarked as green area shall be used only for plantation and shall not be altered for any other purpose.
126. All the commitments / undertakings given to the SEAC during the appraisal process for the purpose of environmental protection and management shall be strictly adhered to.
127. The project proponent shall also comply with any additional condition that may be imposed by the SEAC or the SEIAA or



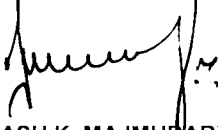
- any other competent authority for the purpose for the environmental protection and management.
128. In the event of failure of any pollution control system adopted by the unit, the unit shall be safely closed down and shall not be restarted until the desired efficiency of the control equipment has been achieved.
 129. The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board (GPCB), State Government and any statutory authority.
 130. During material transfer there shall be no spillages and garland drain shall be constructed to avoid mixing of accidental spillages with domestic wastewater or storm water.
 131. Pucca flooring / impervious layer shall be provided in the work areas, chemical storage areas and chemical handling areas to minimize soil contamination.
 132. Leakages from pipes, pumps shall be minimal and if occurs, shall be arrested promptly.
 133. 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.
 134. 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.
 135. The project proponent shall comply all the conditions mentioned in "The Companies (Corporate Social Responsibility Policy) Rules, 2014" and its amendments from time to time in a letter and spirit.
 136. The project management shall ensure that unit complies with all the environment protection measures, risk mitigation measures and safeguards recommended in the EMP report and Risk Assessment study report as well as proposed by project proponent.
 137. 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.
 138. 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.
 139. 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 soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year.
 140. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
 141. The project authorities shall also adhere to the stipulations made by the Gujarat Pollution Control Board.
 142. The SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not found satisfactory.
 143. 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.
 144. 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.
 145. This environmental clearance is valid for Ten years from the date of issue.
 146. 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.
 147. Submission of any false or misleading information or data which is material to screening or scoping or appraisal or decision on the application makes this environment clearance cancelled.

B.4 COMPLIANCE OF ENVIRONMENT CLEARANCE/REPORTING/ADMINISTRATION/APPEAL:

148. Project proponent shall inform to all the concerned authorities including Municipal Corporation and District Collector and shall also give wide publicity through advertisement in minimum two local newspapers within seven days, about the Environment Clearance order accorded.
149. Project proponent shall appoint a key person in the organization who shall be responsible for compliance of above condition fully on behalf of the proponent. It will not mean that appointing a key person will exempt the project proponent from the responsibility of compliance. Any change in key person shall immediately be informed to SEIAA and all concerned authorities.
150. Designated key person shall submit six monthly compliance report to SEIAA/SEAC, MOEF&CC, GPCB and Nodal Department of the Government.



151. The Nodal Department or any authority or officer authorized by MOEF&CC/SEIAA can inspect the site of the project and all the facilities, for verification of compliances of environment clearance conditions.
152. In case of violation reported upon, the project proponent shall be responsible for all the legal actions as per Environment Protection Act, 1986 including SEIAA may cancel, withdraw or keep in abeyance, the Environment Clearance accorded.
153. Any person including the project proponent affected by this Environment Clearance order may file appeal to Honorable National Green Tribunal West Zone branch, Pune, preferably within a period of thirty days from the date of issue of Environment Clearance as prescribe under section 16 of National Green Tribunal Act 2010.
154. All complains and public grievance or representations may be addressed to SEIAA/SEAC in the email addresses (a) msseiaagj@gmail.com & (b) seacgujarat@gmail.com



(PRAKASH K. MAJMUDAR)
Member Secretary

Issued to:

**M/s. Grasim Industries Ltd. (Chemical Division) Epoxy Plant
Plot No.-1, GIDC-Vilayat, Taluka-Vagra,
District: Bharuch, State: Gujarat**

Copy to:-

1. The Secretary, SEAC, C/O. G.P.C.B. Gandhinagar - 382010.
2. The Additional Chief Secretary, Forests & Environment Department, Govt. of Gujarat, Block-14, 8th floor, Sachivalaya, Gandhinagar-382010.
3. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD -cum-Office Complex, East Arjun Nagar, New Delhi-110032
4. Scientist C, Integrated Regional Office, Ministry of Environment and Forests, Aranya Bhavan, Sector-10, Gandhinagar - 382010.
5. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi-110003.
6. The Member Secretary, Gujarat Pollution Control Board, Paryavaran Bhavan, Sector-10 A, Gandhinagar-382010
7. Select File



