

**Minutes of the 277<sup>th</sup> meeting of the State Level Expert Appraisal Committee held on 03/02/2016 at Committee Room, Gujarat Pollution Control Board, Gandhinagar.**

The 277<sup>th</sup> meeting of the State Level Expert Appraisal Committee (SEAC) was held on 3<sup>rd</sup> February, 2016 at Committee Room, Gujarat Pollution Control Board, Gandhinagar. Following members attended the meeting:

1. Shri V. C. Soni, Vice Chairman, SEAC.
2. Shri R. J. Shah, Member, SEAC.
3. Shri Natrajan Pratap, Member, SEAC.
4. Shri V.N. Patel, Member, SEAC.
5. Shri Hardik Shah, Secretary, SEAC.

The agenda of TOR/Scoping cases, Appraisal cases was taken up. Thirteen (13) cases of TOR/Scoping and Eleven (11) cases of Appraisal were taken up. The applicants made presentations on the activities to be carried out along with other details furnished in the Form-1, EIA report and other reports.

01	Dharma Nandan Fine Chem	Block no.15, S.no.1792 & 1794, Vill. Halvad, Morbi Cross Road, Ta.: Halvad, Dist.: Morbi	Appraisal
<p><b>Project / Activity No.:</b> 5(f)</p> <p><b>Project status:</b> New</p> <p><b>Chronology of EC Process:</b></p> <ul style="list-style-type: none"> <li>• This project proposed by M/s: Dharma nandan fine chem (herein after Project Proponent – PP) has submitted an application vide their letter dated 26/05/2015.</li> <li>• This project was considered in the meeting of the SEAC held on 30/07/2015.</li> <li>• The location of the unit is outside the notified area. As per amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014, small units are categorized as Category “B” projects. Small units are defined as with water consumption less than 25 M3/day; Fuel consumption less than 25 TPD; and not covered in the category of MAH units as per the Management, Storage, Import of Hazardous Chemical Rules (MSIHC Rules), 1989.</li> <li>• During presentation, PP informed that water requirement is 7.2 KL/day, Fuel consumption will be 2.3 MT/day and Chemicals to be used are not covered in MAH category. Hence, the proposed project falls under Category B of project activity 5(f) as per the EIA Notification 2006.</li> <li>• Looking to the small scale of the project, low pollution potential and the details presented during the meeting, after detailed discussion, the project was categorized as B2 and the additional information was sought for appraisal of the project.</li> <li>• The project proponent submitted the additional information vide their online proposal no.</li> </ul>			

SIA/GJ/IND2/35678/2015 dated 30/12/2015

**Project / Activity Details:**

This is a new project proposes the manufacturing of following Synthetic Organic Chemical.

Sr. no.	Products Name	Production Capacity (MT/Month)
1	Phenidone A (1-Phenyl -3-Pyrazolidone)	2.5
2	Phenidone B (4 Methyl -1- Phenyl -3-Pyrazolidone)	1.5
	Total	4.0
By-Products		
1	Sodium Sulfate	0.12
2	Ammonium Chloride	0.8

The project falls under project activity 5(f) as per the schedule of EIA Notification 2006.

Total plot area 584 sq. m. Unit has proposed 36 sq. m area for the green belt development/ Tree plantation. Expected project cost is Rs. 0.60 Crores. Nearest residential area of Vill. Halvad is @ 1.5 KM from the project site. Total water consumption for proposed project will be 7.2 KL/day (0.4 KL/Day for Domestic, 0.1 KL/Day for Gardening, 0.2 KL/Day for Washing, 2 KL/Day for Cooling, 2 KL/Day for Boiler and 2.5 KL/Day for Process) which will be sourced from the private water supply tankers. Total waste water generation will be 3.5 KL/Day (0.2 KL from Domestic & 3.3 KL from industrial activity). Domestic w/w will be disposed through soak pit system and Industrial waste water (0.2 KL from washing, 0.4 from utility & 2.7 KL from process) will be treated in ETP followed by Evaporator to achieve Zero discharge. It is proposed to install one Boiler (1TPH) and one D.G.Set (50 KVA). Briquettes of Bio-Coal (2.3 MT/day) will be used as fuel for Boiler & Diesel (20 Lit/hr) will be used as fuel for D.G. Set. Bag Filter is proposed as APC for flue gas emission control. Unit has proposed HCL scrubber for scrubbing of Ammonia gas which will be liberated from the manufacturing process. Generated by-product will be sold out to actual users. Unit has proposed water scrubber with dryer unit as APCM. The Hazardous waste to be generated from the manufacturing activity will be ETP sludge & Evaporation Residue (1 MT/Month), Process waste (0.06 MT/Month), Spent Solvent (3.6 MT/Month), Used/spent oil (0.05 MT/Month) and Discarded plastic bags (0.02 MT/Month). Process waste, ETP waste & evaporation residue will be disposed off at the nearby common TSDF. Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized recyclers after decontamination. Used oil will be sold only to the registered recyclers. Spent solvent will be sent to authorize re-processors.

**Observations & Discussions:**

Technical presentation made during the meeting by project proponent. While discussing about the location of the proposed site, PP informed that the proposed site is surrounded by other industries and the site is located within the industrial estate. Upon asking, PP informed that the Wild Ass sanctuary is @ 40 km from the site. While reviewing the point wise reply, Committee noted that the management of By-products, APCM and waste water management are not addressed properly. Safety aspects of Sodium metal was discussed in detail. Committee asked to provide strict engineering controls and personal protective equipments for the workers during handling of Sodium metal. After detailed deliberations the Committee sought following additional information for further consideration of the proposal:

1. Document showing site is located within the industrial estate.
2. Compliance of Point no 24 regarding management of By-products.

3. Clarification of discrepancy in reply of point no. 21 & 25 regarding spent solvent.
4. Stage wise qualitative and quantitative analysis of waste water (Effluent characteristics) to be generated from the manufacturing process of each product to be manufactured along with mass balance including parameters like COD, BOD, TDS, SS, Ammonical Nitrogen, pH etc. should be covered.
5. An Undertaking regarding commitment for Zero Liquid Discharge (ZLD) and use of Bio coal only as a fuel.
6. Technical details of Ammonia scrubbing system with mass balance including by-product management, Dryer unit & its APCM with line diagram.
7. Detailed safety measures for the handling, storage & use of Sodium Metal. Prepare SOP with provision of engineering controls as precautionary measures.
8. Generation and management of spent carbon.

02	Robin Dyes and Intermediates Private Limited	Plot no:810/2, GIDC- Sachin, Ta.: Chorasi, Dist.: Surat	Appraisal
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**Project / Activity No.:** 5(f)

**Project status:** Expansion

**Chronology of EC Process:**

- This project proposed by M/s: Robin dyes and intermediates private limited (herein after Project Proponent – PP) has submitted an application vide their letter dated 09/02/2015.
- The project proponent was called for brief presentation and discussion in the meeting of SEAC held on 19/05/2015. During the meeting held on 19/05/2015, certain additional TOR was prescribed for the EIA study to be done covering 5 Km of study area.
- EIA Report prepared by M/s: Aqua-Air Environmental Engineers Pvt. Ltd., Surat was submitted by project proponent vide online proposal no. SIA/GJ/IND2/5460/2015 dated 30/12/2015.

**Project / Activity Details:**

This is an existing unit engaged in Dyes intermediates and now proposes for expansion and addition of new products as below:

SR.	Name of the Products	Existing Capacity (MT/Month)	Total after expansion (MT/Month)
1	G-Salt	7.5	35
2	R-Salt	-	15
3	Amido G-Acid	-	35
4	K-Acid	-	30
5	Gamma Acid	-	30
	Total	7.5	145

The project falls under Category B of project activity 5(f) as per the EIA Notification 2006.

Total plot area is 5000 sq. m & unit has proposed 1000 sq m area for the green belt development/Tree plantation The total cost of the proposed expansion is 2 Crores. Total water consumption after proposed expansion will be 6.5 KL/day to 36.3 KL/day (28.3 KL Industrial + 4 KL Gardening + 4 KL Domestic). Fresh water will be sourced from GIDC water supply. Effluent – 2.5 KL/Day - Generated from the Process, Boiler

and washing, which is sent to CETP of M/s. GECL after primary treatment in existing ETP. Total industrial effluent generation will be increased from 2.5 KL/day to 16.8 KL/day. Unit has proposed ETP having Primary, Hydrodynamic cavitation base treatment (Advanced Oxidation- Chlorine). Effluent will be treated in proposed ETP and sent to CETP of GECL, Sachin for further treatment and final disposal or it will be subjected to MEE within the factory premises. Domestic waste water will be disposed off into septic tank/soak pit system. At present unit is a member of CETP of Sachin. At present wood (2 MT/Month) is used as fuel for one steam boiler and one TFH (2 Lac Kcal/hr). Unit has provided one DG set (125 KVA). Briquettes of Bio coal/ Agro waste (60 MT/Month) will be used as a fuel for proposed TFH (6 Lac Kcal/hr) and one HAG. Existing TFH will be removed after proposed expansion. MDC is proposed as APCM for Boiler and HAG. Two stage Alkali scrubber is provided for Sulphonator and Drawing vessels. Unit has proposed additional alkali scrubbing system for additional Sulphonator and Drawing vessels for control of SO<sub>2</sub> gas. Existing vents will be used for proposed expansion. Hence, there will be no additional process stacks for proposed expansion. Hazardous waste to be generated are ETP sludge (10 MT/Year), Gypsum (500 MT/Month), Dilute Sulphuric acid (285 MT/Month), Used Oil (0.250 MT/Year) and Discarded containers/Bags/Liners (5 MT/Year). ETP waste & MEE Salt will be disposed off at the nearby common TSDF. Gypsum sludge will be disposed off at the common TSDF site or sent to Cement manufacturing units for its reuse. Dilute sulphuric acid will be reused within premises. Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized recyclers after decontamination. Used oil will be sold only to the registered recyclers.

#### **Observations/Discussions:**

Technical presentation during the meeting included the Point wise ToR compliance. The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic. The baseline environmental study has been conducted for the study area of 5 km radial distance from project site for the period March 2015 to May 2015. Ambient Air Quality monitoring was carried out for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, VOC and NH<sub>3</sub> at eight locations, including the project site. Values conform to the prescribed standards for Ambient Air Quality. The incremental Ground Level Concentration (GLC) has been computed using ISCST – 3 model. The resultant concentrations are within the NAAQS. During the meeting, Committee was not convinced about the effluent concentration and its stage wise reduction. Unit has proposed ETP comprises of primary ETP followed by Advanced Oxidation (Hydrodynamic Cavitation). The treatment methodology was discussed in detail and PP was asked to submit details of treatment technology and its performance assurance. It was observed that the CETP certificate does not shows the type of effluent stream to be received by CETP. On asking about spent acid management, PP could not reply satisfactorily. As per EIA report diluted Sulphuric Acid generated from the manufacturing process will be reused in process again. Committee noted that the exact quantity of spent acid generation and its management is not properly addressed. Project proponent was asked to remove some products having high pollution potential and submit the revised proposal with sound environment management plan (EMP). After detailed deliberations the Committee sought following additional information for further consideration of the proposal:

1. Technical details of Hydro dynamic cavitation technology. Working principle, Process features and Chemistry of this technology. Stage wise removal of COD and other parameters for waste water to be treated for proposed project considering worst case scenario. Agreement and assurance from the technology supplier to ensure that the technology is suitable for waste water to be generated from the proposed project.
2. List of products to be removed from existing list of products with proper justification.
3. Product wise waste water generation in KL/day (Dilute stream, concentrated stream, spent acid generation etc.), its Characteristics and its disposal method.

4. Clarification regarding spent acid management. Whether the spent acid be treated in ETP or reuse in process.
5. Latest certificate from CETP with quantity and quality to be accepted by CETP.
6. An undertaking by the Project Proponent on the ownership of the EIA report as per the MoEF&CC OM dated 05/10/2011 and an undertaking by the Consultant regarding the prescribed TORs have been complied with and the data submitted is factually correct as per the MoEF&CC OM dated 04/08/2009.
7. Summary & Conclusion as per the generic structure given in Appendix III A of the EIA Notification 2006.
8. Latest status of stay order from Hon'ble Gujarat High Court against the implementation of the NABET accreditation or copy of Certificate of accreditation issued by the NABET, QCI to the environmental consultant.

03	R. K. Industries	Plot no.125/4, GIDC Nandesari, Dist.: Vadodara	Appraisal
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**Project / Activity No.:** 5(f)

**Project status:** New

**Chronology of EC Process:**

- This project proposed by M/s: R. K. Industries d (herein after Project Proponent – PP) has submitted an application vide their letter dated 15/05/2015.
- The project proponent was called for brief presentation and discussion in the meeting of SEAC held on 30/07/2015. During the meeting held on 30/07/2015, certain additional TOR was prescribed for the EIA study to be done covering 5 Km of study area.
- EIA Report prepared by M/s: Jyoti Om chemical research centre pvt. Ltd., Ankleshwar was submitted by project proponent vide online proposal no. SIA/GJ/IND2/5460/2015 dated 10/12/2015.

**Project / Activity Details:**

This is a new project proposes the manufacturing of following Synthetic Organic Chemicals.

Sr. no.	Products Name	Quantity MT/Month
1	Vat Green - 9	5
2	Vat Black - AC	2.2
3	Vat Red - 1	5
4	Various shades of synthetic organic dyes (Formulation)	15
5	Copper Sulphate	7

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. Total plot area 2051 sq. m. Unit has proposed 157 sq. m area for the green belt development/ Tree plantation. Expected project cost is Rs. 3 Crore. Total water consumption for proposed project will be 74.2 KL/day (2.5 KL for Domestic, 2 KL for Gardening, 57 KL for Process (52 KL Fresh + 5 KL Recovered), 0.7 KL for scrubbing system, 2 KL for Washing, 7.5 KL for Boiler and 2.5 KL for Cooling) & Fresh water (69.2 KL/day) will be sourced from GIDC water supply system. Total waste water generation will be 71.7 KL/Day (65 KL from process, 2 KL from washings, 4 KL from utilities & 0.7 KL from scrubbing system). The unit will

use fresh water of 69.2 KL/Day and 5 KL/Day recovered water for proposed new project. The effluent from stream 2 in Vat Red 1 is collected in an underground tank. Domestic waste (2 KL/Day) will be disposed off into soak pit. Industrial waste water will be treated in proposed ETP with hydrodynamic cavitation process and after achieving desired CETP inlet norms it will be send to CETP for further treatment through tankers. Unit has proposed spray dryer for treatment of effluent stream (@ 8 to 10 KL/day) to be generated from the manufacturing of VAT Red-1. It is proposed to install one Boiler (800 Kgs/hr), one Spray dryer (1000 Lit/hr) and one hot air generator (0.5 Lac Kcal/hr). Briquettes (35 MT/Month or 140 Kgs/hr for Boiler, 25 MT/Month or 160 Kg/hr for HAG of Spray dryer & 5 MT/Month or 30 Kg/hr for HAG) will be used as a fuel. Cyclone separator followed by wet scrubber for Boiler, Cyclone separator followed by venture scrubber for Spray dryer and Cyclone separator for HAG (for tray dryer) will be provided as APCM. Alkali scrubber will be provided as APCM with glass lined reactor for control of HCl & NOx. The Hazardous waste to be generated from the manufacturing activity will be ETP sludge (50 MT/Month), Process waste (11.5 MT/Month), Copper sludge (90 MT/Annum), Discarded containers/liners (1 MT/Month), used oil (5 Liters/Month) and Spray dried salts will be (6 MT/Month). ETP waste, Spray dryer salt & process waste will be disposed off at the nearby common TSDF. Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized vendors after decontamination. Used oil will be sold only to the registered recyclers. Ash/boiler ash generated will be sent to actual users.

#### **Observations/Discussion:**

Technical presentation made during the meeting by project proponent. The EIA report reveals that the baseline studies pertaining to air environment, water environment, noise level, land environment, meteorology, ecology, and socio-economic status in the study area were carried out. Ambient air quality was monitored during the period from December 2014 to February 2015 for PM10, PM2.5, SO2, NOx, HCl, CL2 and VOC at seven locations, including the project site. The baseline ambient air quality results show that the ambient air quality was meeting with the National Ambient Air Quality Standards except PM10. It As per EIA, Concentration of PM10 is higher side due to construction of new 6 lane highway and regular traffic of heavy trucks on the rough roads. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be well within the NAAQS. Quantitative risk assessment, risk prevention and mitigation measures have also been incorporated in the EIA Report. After detailed deliberations the Committee sought following additional information for further consideration of the proposal:

1. Technical details of Hydro dynamic cavitation technology. Working principle, Process features and Chemistry of this technology. Stage wise removal of COD and other parameters for waste water to be treated for proposed project considering worst case scenario.
2. Give feasibility about reuse of 5 KL/day recovered water from Vat Red 1. Give characteristics of recovered water.
3. Chemical name of VAT Black AC.
4. Latest status of stay order from Hon'ble Gujarat High Court against the implementation of the NABET accreditation or copy of Certificate of accreditation issued by the NABET, QCI to the environmental consultant.
5. An undertaking by the Project Proponent on the ownership of the EIA report as per the MoEF&CC OM dated 05/10/2011 and an undertaking by the Consultant regarding the prescribed TORs have been complied with and the data submitted is factually correct as per the MoEF&CC OM dated 04/08/2009.

04	Himalaya Chemicals	Plot no.25, Shed No.C-1/B-4, GIDC Estate, Pandesara, Choryasi, Dist.: Surat	Appraisal
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**Project / Activity No.:** 5(f)

**Project status:** Expansion

**Chronology of EC Process:**

- This project proposed by M/s: Robin dyes and intermediates private limited (herein after Project Proponent – PP) has submitted an application vide their letter dated 22/09/2014.
- The project proponent was called for brief presentation and discussion in the meeting of SEAC held on 29/04/2015. During the meeting held on 29/04/2015, certain additional TOR was prescribed for the EIA study to be done covering 5 Km of study area.
- EIA Report prepared by M/s: Aqua-Air Environmental Engineers Pvt. Ltd., Surat was submitted by project proponent vide dated 10/12/2015.

**Project / Activity Details:**

This is an existing unit engaged in Dyes intermediates and now proposes for expansion and addition of new products as below:

Sr. No.	Name of Product	Existing Quantity (MT/Month)	Additional Quantity (MT/Month)	Total after Quantity (MT/Month)
1	Amido G – Salt	10	--	10
2	Aniline 2 : 5 Disulphonic Acid	20	--	20
3	Schaffer's Acid	1	--	1
4	G – Salt	--	9	9
5	Anthranilic Acid	--	50	50
6	5 – Sulpho Anthranilic Acid	--	20	20
	<b>Total</b>	<b>31</b>	<b>79</b>	<b>110</b>

Total plot area is 2060 sq. m. The total cost of the proposed expansion is 0.5 Crores. Total water consumption after proposed expansion will be 38.63 KL/day (Existing: 13.5 KL/day + Proposed: 25.13 KL/day). Fresh water will be sourced from GIDC water supply. Total industrial effluent generation will be 56.13 KL/day (Existing: 8 KL/day + Proposed: 48.13 KL/day) which will be treated in existing ETP. Dilute stream effluent ( 16.14 KL/day) generated from manufacturing of Amido G – Salt, Schaeffer's Acid and Aniline 2, 5 Disulphonic Acid, Boiler, cooling, scrubber and washing will be treated in primary ETP and effluent will be sent to CETP of M/s. Globe Enviro Care Limited for further treatment and final disposal. Concentrated effluent stream (39.89 KL/day) generated from the manufacturing of G – Salt, Anthranilic Acid and 5 – Sulfo Anthranilic Acid will be sent to their own MEE or Common MEE of MEPPL, Sachin. Domestic waste water (1 KL/day) will be disposed off into septic tank/soak pit system. At present Briquettes of Bio coal (200 Kg/day) is used as a fuel in one TFH (1 Lac Kcal/hr) and one HAG. Unit has provided one DG set (75 KVA). Diesel (8 Lit./hr) will be used as a fuel for DG set. Now unit has proposed one Boiler (0.6

TPH). Bio-coal (600 Kg/day) will be used as a fuel in proposed Boiler. Two Stage Alkali Scrubber is provided as an APCM with Isolation vessels to control SO<sub>2</sub>. There will be no addition in Existing process vent. Hazardous waste to be generated are ETP sludge (25 MT/Year), Process sludge (125 MT/Month), Used Oil (0.245 MT/Year) and Discarded containers/Bags/Liners (4.84 MT/Year). MEE salt (20 MT/Month) will be generated in case of industry will use captive MEE for the treatment of concentrated effluent. ETP waste & MEE Salt will be disposed off at the nearby common TSDF. Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized recyclers after decontamination. Used oil will be sold only to the registered recyclers.

**Observations/Discussions:**

Technical presentation during the meeting included the Point wise ToR compliance. The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic The baseline environmental study has been conducted for the study area of 5 km radial distance from project site for the period March 2015 to May 2015. Ambient Air

Quality monitoring was carried out for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, Pb, CO, NH<sub>3</sub>, C<sub>6</sub>H<sub>6</sub>, Benzo (a) Pyrene (BaP) particulate phase only, As, Ni, H, and VOCs at eight locations, including the project site. The maximum concentration of PM<sub>10</sub> (96.88 µg/m<sup>3</sup>), PM<sub>2.5</sub> (51.35 µg/m<sup>3</sup>), SO<sub>2</sub> (18.1 µg/m<sup>3</sup>), maximum concentration of NO<sub>x</sub> (17.4 µg/m<sup>3</sup>), maximum concentration of O<sub>3</sub> (14.2µg/m<sup>3</sup>) maximum concentration of VOC (1.2 ppm), was recorded at the Project Site. The PM<sub>10</sub> and PM<sub>2.5</sub> concentrations at all the AAQM locations were primarily caused by local phenomena including industrial & vehicular activities and natural dust getting air borne due to manmade activities and blowing wind. PM<sub>10</sub> and PM<sub>2.5</sub> concentrations were observed below stipulated standards of CPCB for Industrial, Residential, Rural and Other Area at all air quality monitoring locations during the monitoring period. The incremental Ground Level Concentration (GLC) has been computed using ISCST – 3 model. The resultant concentrations are within the NAAQS. During the meeting, Committee noted that mass balance presented is not adequate. PP was asked to submit precise data regarding manufacturing process and outcome of pollution load. While reviewing the EIA report, Committee observed that the ToR related to Material balance, management & adequacy of waste water treatment, Compliance of common facility etc. were not addressed properly. After detailed deliberations the Committee sought following additional information for further consideration of the proposal:

1. Justification for quantity of Hazardous waste to be generated Iron Sludge-125 MT/Month (Existing Scenario).
2. Compliance of TOR no. 4 (regarding Mass balance of existing as well as proposed products), 7, 9, 10, 11, 12, and 20 (Process gas, flue gas emission and Technical details of APCM for Boilers & TFH.) and 24 (regarding spent acid generation).
3. Certificate of membership certificate from MEPPL with inlet norms and quantity.
4. Compliance status of CETP-GECL Sachin and MEPPL, Sachin.
5. Details about transportation of waste water to the Common facility at Sachin GIDC through dedicated tankers. Details about Manifests system for tanker movement and GPS System to be installed for online tracking of tanker movements.
6. An undertaking by the Project Proponent on the ownership of the EIA report as per the MoEF&CC OM dated 05/10/2011 and an undertaking by the Consultant regarding the prescribed TORs have been complied with and the data submitted is factually correct as per the MoEF&CC OM dated 04/08/2009.
7. Summary & Conclusion as per the generic structure given in Appendix III A of the EIA Notification

2006.

8. Latest status of stay order from Hon'ble Gujarat High Court against the implementation of the NABET accreditation or copy of Certificate of accreditation issued by the NABET, QCI to the environmental consultant.

05	Mangalam Intermediates	Plot no: 8201/1, GIDC Estate, Sachin, Ta.:Choryasi, Dist.: Surat	Appraisal
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**Project / Activity No.:** 5(f)

**Project status:** Expansion

**Chronology of EC Process:**

- This project proposed by M/s: Mangalam intermediates (herein after Project Proponent – PP) has submitted an application vide their letter dated 19/01/2015.
- The project proponent was called for brief presentation and discussion in the meeting of SEAC held on 22/04/2015. During the meeting held on 22/04/2015, certain additional TOR was prescribed for the EIA study to be done covering 5 Km of study area.
- EIA Report prepared by M/s: Aqua-Air Environmental Engineers Pvt. Ltd., Surat was submitted by project proponent vide online proposal no. SIA/GJ/IND2/5040/2015 dated 10/12/2015.

**Project / Activity Details:**

This is an existing unit engaged in manufacturing of dyes and dyes intermediates and now PP has proposed for expansion as tabulated below:

Sr. no.	Name of Product	Existing Capacity (MT/Month)	Additional Capacity (MT/Month)	Total After Proposed Expansion (MT/Month)
1	Sulfo Tobias Acid	30	-	30
2	Schaffer's Acid			
<b>A.</b>	<b>Group 1</b>			
3	Aniline 2,5 DSA			
4	Aniline 2,4 DSA			
5	Sulpho tobias Acid			
6	D Acid			
7	2-Puridone	-	32.5	32.5
8	PCOSA			
9	Sulpho C Acid			
10	Schaefferr's Acid			
11	G Salt			
<b>B.</b>	<b>Group 2</b>			
12	1-Amino 7- Napthol			
13	Sulpho J Acid			
14	4-Carboxy Phenyl Gamma Acid	-	9.5	9.5
15	Ortho Amino Phenol Sulfonamide			
16	1,8 Napthasultan			
<b>C.</b>	<b>Group 3</b>			
17	Broenner's Acid			

18	Amido G salt		30.5	
19	N- Phenyl J Acid			
20	N-Methyl J Acid	-		30.5
21	Rheduline Acid			
22	4,4 - Diamino Benzanilide			
23	4-NAP3			
24	M-Sulfo Phenyl Gamma J Acid			
<b>D</b>	<b>Group 4</b>			
25	MAMAS Acid	-	6.0	6.0
<b>E</b>	<b>Group 5</b>			
26	Benzoyl J Acid	-	1.25	1.25
<b>F</b>	<b>Group 6</b>			
27	1-Benzaldehyde Di Sulfonic acid	-	38.0	38.0
Total		30	117.75	147.75

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. Plot area is approx. 1000 sq. m. Unit has proposed 65 sq. m area for green belt/tree plantation. Estimated cost of proposed expansion is Rs. 2 Crores. Fresh water requirement after proposed expansion will be increased from 7.9 KL/day to 28.24 KL/day (2 KL Domestic & 26.24 KL Industrial) which will be supplied by the GIDC. Wastewater generation after the expansion will be increased from 8.2 KL/day to 31.6 KL/day [29.6 KL/day industrial + 2 KL/day domestic]. Waste water generation will be mainly from Process, Washings, Cooling and scrubber. Total 20 KL/day of high COD stream effluent will be treated in their own MEE or sent to MEPL for further treatment and 9.6 KL of low COD stream effluent will be treated in their own ETP and then sent to CETP of GECL. Domestic waste water (2 KL/day) will be disposed off into septic tank/soak pit system. At present unit is a member of CETO of GECL and industrial effluent goes to CETP after primary treatment within the premises. At present unit has provided one TFH (6 Lac Kcal/hr) and one spray dryer. Now unit has proposed one TFH (6 Lac Kcal/hr), one spray dryer and one DG set (175 KVA). Industry has proposed to remove Existing D. G. Set having capacity of 125 KVA and will install new D. G. Set having capacity of 175 KVA. LDO (25 Lit./hr) will be used as a fuel for DG set. Agro wastes/Bio Coal/Imported Coal 7 MT/Day will be used as a fuel for two TFHs. Unit has proposed Separate Multi cyclone followed by Bag filter as APCM for each TFH. Alkali scrubber will be provided as APCM for process gaseous emission of SO<sub>2</sub> from Reactor & Drawing Vessel. Two stage scrubbers will be provided as APCM for process gaseous emission of SO<sub>2</sub> & HCL from Reactor & Drawing Vessel. Alkali scrubber will be provided as APCM for process gaseous emission of NH<sub>3</sub> (generated from Broenner's Acid) from Reactor & Drawing Vessel Ventury Scrubber will be provided as APCM for process gaseous emission of PM from Spray Dryer. All the distillation column vents are also connected to cooling water/ chilled brine condensers for maximum possible recovery of the solvents. Hazardous waste to be generated after proposed expansion will be ETP waste (42 MT/Month), Distillation residue (1 MT/Year), Discarded containers (500 no.s/Month), Used Oil (5 ltr/year), MEE salt (4.5 MT/Month), Spent carbon (1.7 MT/Month) and spent sulphuric acid. ETP waste, Spent carbon, Distillation residue & MEE salt will be disposed off at the nearby common TSDF. Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized vendors after decontamination. Used oil will be sold only to the registered recyclers. Spent sulphuric acid generated (36 MT/Month) during manufacturing process of D Acid and PCOSA will be reused in process. Unit is a member of TSDF site of BEIL, Ankleshwar.

#### Observations/Discussions:

Technical presentation during the meeting included the Point wise ToR compliance. The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic The baseline environmental study has been conducted for the study area of

5 km radial distance from project site for the period March 2015 to May 2015. Ambient Air Quality monitoring was carried out for PM10, PM2.5, SO2, NOx, O3, NH3, OZONE (O3), HBr, HCl and VOCs at eight locations, including the project site. The maximum concentration of PM10 (96.88 µg/m3), PM2.5 (51.35 µg/m3), SO2 (18.1 µg/m3), maximum concentration of NOx (17.4 µg/m3), maximum concentration of O3 (14.2µg/m3) maximum concentration of VOC (1.2 ppm), was recorded at the Project Site. The PM10 and PM2.5 concentrations at all the AAQM locations were primarily caused by local phenomena including industrial & vehicular activities and natural dust getting air borne due to manmade activities and blowing wind. PM10 and PM2.5 concentrations were observed below stipulated standards of CPCB for Industrial, Residential, Rural and Other Area at all air quality monitoring locations during the monitoring period. The incremental Ground Level Concentration (GLC) has been computed using ISCST – 3 model. The resultant concentrations are within the NAAQS. While discussing about the pollution potential of existing as well as proposed products, Committee felt that PP should remove some products to reduce the pollution potential to which PP was agreed upon and informed that they will remove the products like Sulpho Tobias Acid, D Acid, Sulpho C Acid, 1-Amino 7 Napthol, Sulpho J Acid, 4-Carboxy Phenyl Gamma Acid, 1,8 Napthasulfon, M-Sulfo Phenyl Gamma Acid etc. and they will submit the revised proposal with relevant details. During the meeting, Committee noted that mass balance presented is not adequate. PP was asked to submit precise data regarding manufacturing process and outcome of pollution load. While reviewing the EIA report, Committee observed that the ToR related to Material balance, management & adequacy of waste water treatment, Compliance of common facility etc. were not addressed properly. After detailed deliberations the Committee sought following additional information for further consideration of the proposal:

1. Revised proposal with sound environment management plan.
2. Compliance of TOR no. 1 (Plant lay out indicating storage area, plant area, greenbelt area, utilities etc., 4 (regarding Mass balance of existing as well as proposed products), 13 (MEE details), and 22 (Process gas emission details, Correct details of fuel consumption for different options etc.)
3. Compliance status of CETP-GECL Sachin and MEPPL, Sachin.
4. Details about transportation of waste water to the Common facilities through dedicated tankers. Details about Manifests system for tanker movement and GPS System to be installed for online tracking of tanker movements.
5. An undertaking by the Project Proponent on the ownership of the EIA report as per the MoEF&CC OM dated 05/10/2011 and an undertaking by the Consultant regarding the prescribed TORs have been complied with and the data submitted is factually correct as per the MoEF&CC OM dated 04/08/2009.
6. Summary & Conclusion as per the generic structure given in Appendix III A of the EIA Notification 2006.
7. Latest status of stay order from Hon'ble Gujarat High Court against the implementation of the NABET accreditation or copy of Certificate of accreditation issued by the NABET, QCI to the environmental consultant.

06	Sandhya plasticizers and chemicals	Plot no:1250, GIDC-Sarigam, Ta.: Umbergaon, Dist.: Valsad	Appraisal
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**Project / Activity No.:** 5(f)

**Project status:** New

**Chronology of EC Process:**

- This project proposed by M/s: Sandhya plasticizers and chemicals (herein after Project Proponent –

PP) has submitted an application vide their letter dated 07/01/2015.

- The project proponent was called for brief presentation and discussion in the meeting of SEAC held on 24/03/2015. During the meeting held on 24/03/2015, certain additional TOR was prescribed for the EIA study to be done covering 5 Km of study area.
- EIA Report prepared by M/s: Unistar Environment and Research Labs Pvt. Ltd., Vapi was submitted by project proponent vide online proposal no. SIA/GJ/IND2/4948/2015 dated 11/12/2015.

#### Project / Activity Details:

This is a new unit proposes to manufacture various types of Plastic & Paint additives, Organic Phosphates and PVC stabilizers & Stearates as tabulated below:

Sr. no.	Products/By-Products	Quantity MT/Month
1.	<b>Plastic and Paint Additives (Organic Phosphite)</b> Tri Phenyl Phosphite, Diphenylsodecylphoshite, Diphenyl 2-ethyl hexyl phosphite, Phenyl Di-IsodecylPhosphite, Tri – DecylPhosphite, Tri TrisdecylPhosphite, TrisNonyl Phenyl Phosphite, etc.,	300
2.	<b>Organic Phosphates</b> Tri aryl and Alkyl Phosphate (Triphenyl Phosphate, Tricrisyl Phosphate, Tributyl Phosphate, CresylDiphenyl Phosphate, etc.)	150
3.	<b>Plastic stabilizers and stearates</b> (Metallic Octoate, Metallic Stearate, PVC Stabilizers, Organo tin Stabilizers)	500
	<b>By products :</b>	
1.	Hydrochloric Acid( 30 % Solution)	414.90
2.	Phenol	146.50
		1511.40

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. Total plot area is 5040 sq. m and unit has proposed 1512 sq m area for the green belt development/Tree plantation. Expected project cost is Rs.3.5 Crores. Capital cost for EMP has been estimated around Rs. 25 lakhs and recurring cost provision for EPM has been estimated to be around Rs. 18 Lakhs /Year. Total water consumption for proposed project will be 39 KL/D (5: KL/day for Domestic, 5 KL/day for Gardening & 29 KL/day for Industrial) which will be sourced from GIDC water supply. Industrial waste water generation will be 6 KL/day (from washing and utility sections), which will be treated in proposed Primary, Secondary & Tertiary treatment plant and treated waste water will be discharged into GIDC underground drainage system for further treatment and disposal to Arabian Sea. Domestic waste water (4 KL/day) will be disposed off into soak pit system. Flue gas generation will be from one Steam Boiler (1 TPH), one TFH (6 Lac Kcal/hr) and one D.G. sets (200 KVA). Agro waste (Baggasse Briquettes) to the tune of 2 MT/day and 1 MT/day will be used as a fuel for Boiler and TFH respectively. HSD (50 Lit./hr) will be used as a fuel for

DG set. Unit has proposed separate Cyclone separator followed by common Bag filter as APCM & Common stack with Boiler and TFH. In the process of Tri Phenyl Phosphite & Organic Phosphite Phenol, Phenol emission will be recovered in process itself. Phenol will be distilled and will be reused in process or will be sold to actual user as by-product. Gaseous emission of HCl will be scrubbed in Water scrubbers attached to the reactors and generated HCL Solution (30 %) will be sold out as By-product. Hazardous waste generated from the manufacturing activity will be ETP sludge (10 MT/Year), Process residue (27 MT/Year), Discarded containers/Bags/Liners (3400 no.s/Year) and Used oil (100 Lit. /Year). ETP waste will be disposed off at the common TSDF. Process residue will be disposed off at the CHWIF. Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized recyclers after decontamination. Used oil will be sold only to the registered recyclers.

#### Observations/Discussions:

Technical presentation during the meeting included the Point wise ToR compliance. The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic. The baseline environmental study has been conducted for the study area of 5 km radial distance from project site for the period March 2015 to May 2015. Ambient Air Quality monitoring was carried out for PM10, PM2.5, SO2, NOx, and NH3 at six locations, including the project site. Values conform to the prescribed standards for Ambient Air Quality. The details of outcome of AAQ modeling in term of incremental GLC and predicted air quality have been described and it has been stated that the impacts of proposed project on air environment will be negligible & insignificant. The incremental Ground Level Concentration (GLC) has been computed using ISCST – 3 model. The Disaster & Onsite Emergency Management plan has also been prepared as a part of RA study assignment. The resultant concentrations are within the NAAQS. While reviewing the EIA report, Committee observed that some ToR's are not addressed properly. PP was asked to provide LDAR system for toxic gas detection and its mitigation measures. After detailed deliberations the Committee sought following additional information for further consideration of the proposal:

1. Compliance of TOR no. 16 with respect to project specific parameter HCl & VOC.
2. Compliance of ToR no. 22 with respect to management of By-products namely HCl and Phenol. Give qualitative and quantitative data with feasibility report for reuse of by-products in respective items.
3. Details of CETP performance (ToR no. 12) and CETP membership certificate with quantity (KL/day)
4. Give technical details about how the gaseous emission of Phenol will be recovered from Process.
5. Justify in detail that how the value of Phenolic compound 11 mg/L in raw effluent will be brought down to < 1 mg/L in final treated effluent.

07	Uniform synthetics, Unit-II	Plot no:1675, GIDC- Sarigam, Ta.: Umbergaon, Dist.: Valsad	Appraisal
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**Project / Activity No.:** 5(f)

**Project status:** New

#### Chronology of EC Process:

- This project proposed by M/s: Uniform synthetics, Unit-II (herein after Project Proponent – PP) has submitted an application vide their letter dated 07/01/2015.
- The project proponent was called for brief presentation and discussion in the meeting of SEAC held on

24/03/2015. During the meeting held on 24/03/2015, certain additional TOR was prescribed for the EIA study to be done covering 5 Km of study area.

- EIA Report prepared by M/s: Unistar environment and research labs pvt. Ltd., Vapi was submitted by project proponent vide online proposal no. SIA/GJ/IND2/5022/2015 dated 11/12/2015.

#### Project / Activity Details:

This is a new unit proposes the manufacturing of following Synthetic Organic Chemicals:

Sr. No.	Product Name	Quantity (MT/Month)
1.	Ketonic Resin	200
2.	Phenolic Resin	50
3.	Alkyd Resin	200
4.	Acrylic Resin	100
5.	Poly Urethane Resin	50
6.	Polyamide Resin	100
7.	Paints	100
8.	Liquid Gum Rosin of various grade (By mixing and blending)	100
	<b>TOTAL</b>	<b>900</b>

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. Total plot area is 1122.50 sq. m & unit has proposed 248 sq. m area for green belt development/Tree plantation. Expected project cost is Rs. 1.30 Crores. Capital cost for EMP has been estimated around Rs. 15 lakhs and recurring cost provision for EPM has been estimated to be around Rs. 2 Lakhs /Year. Total water consumption for proposed project will be 37.50 KL/D (5 KL/day for Domestic, 2 KL/day for Gardening & 30.5 KL/day for Industrial purpose) which will be sourced from GIDC water supply. Industrial waste water generation will be 24 KL/day (17 KL from process, 7 KL from utilities & 6 KL from washing section), which will be treated in proposed Primary, Secondary & Tertiary treatment plant (Capacity 30 KL/day) and treated waste water will be discharged into closed drainage line to CETP, GIDC, Sarigam. Domestic waste water (4 KL/day) will be disposed off into soak pit system. Flue gas generation will be from one TFH (4 Lac Kcal/hr) and one stand by DG set (125 KVA). Natural gas (265 SCM/day) or LDO (50 lit/hr) will be used as fuel for TFH and HSD (50 lit/hr) will be used as fuel for DG set. No process gas emission is envisaged. Hazardous waste generated from the manufacturing activity will be ETP sludge (15 MT/Year), Discarded containers (4800 no.s /Year) & Discarded bags/liners (1500 no.s/Year) and Used oil (100 lit./Year). ETP waste will be disposed off at the common TSDF. Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized recyclers after decontamination. Used oil will be sold only to the registered recyclers.

#### Observations/Discussions:

Technical presentation during the meeting included the Point wise ToR compliance. The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic. The baseline environmental study has been conducted for the study area of

5 km radial distance from project site for the period March 2015 to May 2015. Ambient Air Quality monitoring was carried out for PM10, PM2.5, SO2, NOx, and NH3 at six locations, including the project site. Values conform to the prescribed standards for Ambient Air Quality. The details of outcome of AAQ modeling in term of incremental GLC and predicted air quality have been described and it has been stated that the impacts of proposed project on air environment will be negligible & insignificant. The Disaster & Onsite Emergency Management plan has also been prepared as a part of RA study assignment. The resultant concentrations are within the NAAQS. While reviewing the EIA report, Committee observed that mass balance of the products, CETP performance data etc. have not been addressed properly. PP was asked to provide LDAR system for toxic gas detection and its mitigation measures. After detailed deliberations the Committee sought following additional information for further consideration of the proposal:

1. Compliance of TOR no. 4 with respect to Mass balance of each products and ensure that there is no w/w generation from the Phenol Formaldehyde Resin manufacturing process.
2. Details of CETP performance (ToR no. 12) and CETP membership certificate with quantity (KL/day)
3. Compliance of TOR no. 16 with respect to project specific parameter VOC.

08	Aeidan industries	Plot no.: 769/6, GIDC-Jhagadia, Jhagadia, Dist.: Bharuch	Appraisal
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**Project / Activity No.:** 5(f)

**Project status:** New

**Chronology of EC Process:**

- This project proposed by M/s: Aeidan industries (herein after Project Proponent – PP) has submitted an application vide their letter dated 23/07/2013.
- The project was considered for screening /scoping in the meeting of the SEAC held on 14/08/2014. The project site is located near the critically polluted area of Ankleshwar. Considering the applicability of the General Condition, It was decided to consider the project only after submission of the exact aerial distance of the proposed project site from the nearest boundary of the Ankleshwar Industrial Estate along with the Google image reflecting the same.
- Unit has submitted map indicating distance of site from nearest boundary of GIDC Ankleshwar. As per their submission, this distance is @ 7.40 KM.
- As per amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014, general conditions shall not be applicable as distance of the site from Ankleshwar GIDC is more than 5 KM.
- The project proponent was called for brief presentation and discussion in the meeting of SEAC held on 29/11/2014. During the meeting held on 29/11/2014, certain additional TOR was prescribed for the EIA study to be done covering 10 Km of study area.
- EIA Report prepared by M/s: Precitech Laboratories Pvt. Ltd., Vapi was submitted by project proponent vide online proposal no. SIA/GJ/IND2/4784/2013 dated 21/12/2015.

**Project / Activity Details:**

This is a new unit proposes manufacturing of Synthetic Organic Chemicals listed as below:

Sr. No.	Name of the product	Quantity (MT/m)
1.	Meta Phenoxy benzyl Alcohol	120
2.	Para Anisic Alcohol	60
3.	Cinnamic alcohol	30
4.	3 Amino 9 Ethyl Carbazole (AEC) solution.	62
5.	2,4 Dimethyl aniline (2,4 xylydine) solution	78
6.	Benzyl Acetone	30
7.	2,5 Dicholoro aniline	60
8.	Acetanilide	600
Total		1040
	Name of By-product	Quantity (MT/m)
1.	18 – 20% Acetic Acid Solution	90

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. Total plot area is 6200 m<sup>2</sup>. Total estimated project cost will be Rs. 6.5 Crores. Total fresh water requirement will be 42 KL/day (30 KL Industrial + 5 KL Domestic & 7 KL Gardening). Industrial waste water generation will be 6 KL/day ( 2 KL from Plant washings, 3.5 KL from utilities & 0.5 KL from Softener regeneration) which will be treated in ETP and treated waste water will be diverted to RO system. RO permeate will be used as cooling tower make up water & reject will be evaporated in evaporator to achieve zero discharge. Domestic waste water (3 KL/day) will be sent to ETP for treatment with industrial effluent followed by RO system (Capacity: 9 m<sup>3</sup>/day) and Evaporator (Capacity: 3 m<sup>3</sup>/day). RO permeate (6 KL/day) and Condensate recovery (1.5 KL/day) will be reused for cooling tower make-up. Hence, fresh water requirement will be 34.5 KL/day, which will be met through GIDC supply. Unit has proposed one steam Boiler (1 TPH) and one TFH (15 Lac Kcal/hr). Imported coal/Briquettes 12 MT/Month will be used as fuel. Multi Cyclone and Bag filters are proposed as APCM. Unit has proposed one stand-by DG set having capacity 200 KVA. There will be no process emissions from the proposed project. However, excess quantity of Hydrogen and nitrogen gas will be vented out through flam arrester. Hazardous waste to be generated are ETP & evaporator Sludge (30 MT/Year), Used/waste oil (50 lit/Year), Used Nickel Catalyst (15.18 MT/Month), Used 10% Palladium Catalyst (2.01 MT/Year), Used 1 % Platinum Catalyst (7.10 MT/Year) and Empty bags/barrels/containers (23093 no.s/Year). ETP & Evaporator waste will be disposed off at the common TSDF. Used catalyst will be send back to supplier for reactivation or sold out to the authorized re-processors. Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized recyclers after decontamination. Used oil will be sold only to the registered recyclers.

#### **Observations/Discussions:**

Technical presentation during the meeting included the Point wise ToR compliance. The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic. The baseline environmental study has been conducted for the study area of 10 km radial distance from project site for the period March 2015 to May 2015. Ambient Air Quality monitoring was carried out for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and VOC at six locations, including the project site. Values conform to the prescribed standards for Ambient Air Quality. The details of outcome of AAQ modeling in term of incremental GLC and predicted air quality have been described and it has been stated

that the impacts of proposed project on air environment will be negligible & insignificant. The resultant concentrations are within the NAAQS. The Disaster & Onsite Emergency Management plan has also been prepared as a part of RA study assignment. During the meeting, PP requested to allow them to discharge waste water in to CETP of NCTL-Jhaghadia, which was not accepted by the Committee and asked to go for complete ZLD as per the prescribed TOR. Committee observed that most of the reactions are Hydrogenation and exothermic in nature. Hence, PP was asked to strictly follow all the suggestions, recommendations and mitigation measures proposed in EIA report. Committee also asked to submit undertaking regarding ZLD and use of briquettes of Bio-Coal only as a fuel. After detailed deliberations the Committee sought following additional information for further consideration of the proposal:

1. Give action plan for complete Zero Liquid Discharge (ZLD) and undertaking in this regard.
2. Undertaking regarding use of fuel i.e. only briquettes of Bio-Coal shall be used as a fuel.
3. Technical details regarding venting out of excess amount of Nitrogen and Hydrogen from the system.

09	Parth laboratories Pvt Ltd.	CIB-270/269, Road-R, Aji Industrial Estate II, Dist. Rajkot	Appraisal
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**Project / Activity No.:** 5(f)

**Project status:** New

**Chronology of EC Process:**

- This project proposed by M/s: Parth laboratories Pvt. Ltd. (herein after Project Proponent – PP) has submitted an application vide their letter dated 27/11/2013.
- This project was considered in the meeting of the SEAC held on 29/11/2014.
- Looking to the low pollution potential of the proposed activity, after deliberation on various aspects, the request of categorizing the project as B2 and the additional information was sought for appraisal of the project.
- The project proponent submitted the additional information vide their online proposal no. SIA/GJ/IND2/33798/2015 dated 15/12/2015

**Project / Activity Details:**

This is an existing unit involved in the manufacturing of Bulk Drug and now proposes to increase the capacity as tabulated below:

Sr. no.	Name of Product	Existing Capacity	Proposed Capacity	Total Capacity
1	Valproic Acid & its Salts	4 MT/Month	8 MT/Month	12 MT/Month

The proposed expansion falls under the category 5(f) of the schedule of the EIA Notification-2006.

Unit has acquired adjacent plot no. 269 (New leased) in addition to existing plot area 703 sq. m. The total cost of this project will be 2.30 Crores. Water requirement will be increase from 1 KLD to 2.9 KLD due to this proposed activity. The incremental water requirement of 1.9 KL/day will be sourced from GIDC water supply. Industrial waste water generation will be increased from 0.1 KLD to 0.350 KLD. Industrial effluent will be treated in primary treatment and then evaporated in steam jacketed MS evaporator to achieve Zero

discharge. Domestic waste water will be disposed off into soak pit. PNG (50 SCM/day) will be used in existing TFH and agro based briquettes (500 Kg/Day) will be used as fuel in existing Boiler. Dust collector is proposed as APCM for Boiler. There will be no process gaseous emission from the manufacturing activity. Hazardous waste to be generated are ETP sludge & Evaporator residue (0.036 MT/Annum), Waste residue (0.036 MT/Annum), Used oil (0.03 KL/Annum), Date expired drugs (0.006 MT/Annum), & Spent Organic solvents (0.06 MT/Annum). ETP waste, evaporation residue & waste residue will be disposed off at the nearby common TSDF. Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized recyclers after decontamination. Used oil will be sold only to the registered recyclers. Date expired drugs and Spent organic solvents will be sent to CHWIF. Unit is a member of Integrated Common Hazardous Waste Facility of SEPPL.

#### Observations / Discussion:

Technical presentation during the meeting included the Point wise compliance. Committee felt that PP should provide effective evaporation system with necessary control measures to strip or absorb the VOCs and effective stack height to the evaporation system. While reviewing the point wise reply, Committee observed that reply regarding mass balance, qualitative analysis of waste streams, economical & technical viability of evaporator etc. is not addressed properly. After detailed deliberations the Committee sought following additional information for further consideration of the proposal:

1. Give characteristics of raw effluent, after treatment and before evaporation.
2. Compliance of point no. 5, 8,
3. Details of emissions from the stack attached to the evaporator and mitigation plan to ensure control of any of the pollutants (substances) within prescribed limit as mentioned in the GPCB norms (Whichever is applicable).
4. Characteristics of ML to be recycled with feasibility report.

10	Alcatraz chemicals	Plot.no.155/9-10, GIDC- Nandesari, Nandesari Dist.: Vadodara	Appraisal
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#### Project / Activity No.: 5(f)

**Project status:** Expansion

#### Chronology of EC Process:

- This project proposed by M/s: Alcatraz chemicals (herein after Project Proponent – PP) has submitted Application vide their letter dated 08/04/2015.
- The project was considered for TOR finalization in the meeting of the SEAC held on 16/07/2015.
- EIA Report prepared by M/s: RAAS Envirocare, Vadodara was submitted by project proponent vide online proposal no. SIA/GJ/IND2/4805/2015 dated 12/12/2015.

#### Project / Activity Details:

This is an existing unit engaged in manufacturing of Synthetic Organic Chemicals and now proposes for expansion as tabulated below:

Sr. no.	Product	Existing MT/ Month	Proposed MT/ Month	Total after proposed expansion MT/Month

1	Methane di sulfonic acid	2	10	12
2	MDSA – Sodium salt	1	5	6
3	MDSA – Potassium salt	0.5	1.5	2
4	PPSOH Solid	10	0	10
5	PPSOH Liquid	5	0	5
6	Propargyl Chloride	2	0	2
7	Sodium Propane Sulfonate	4	0	4
8	Carboxyethyl Thiurium	0.5	0	0
9	Racemic Bis-Beta Naphthol (BNA)	--	--	4
10	S-Bis-Beta Naphthol	--	--	1.5
11	R-Bis-Beta Naphthol	--	--	1
12	Pyridine-3-sulfonic Acid	--	--	5
13	Alkane/Aryl sulfonic acid & It's salts	--	--	10
14	Alkane/Aryl di sulfonic acid & It's salts	--	--	10
15	Alkane/Aryl tri sulfonic acid & It's salts	--	--	5
16	Methane di sulphonic acid, Pyridine salt	--	--	12
17	Pyridine-3-sulfonyl chloride HCl	--	--	2
18	Sodium Alkane/Aryl Sulfinate	--	--	10
19	3-(1-Pyridino)-1-propane Sulfonate (PPS)	--	--	1
20	3-Mercapto-propane Sulfonate (MPS)	--	--	1
21	Bis-(sodium sulfo propyl)-di sulfide (SPS)	--	--	1
22	3-(Amidinothio)-1-propane sulfonic acid (UPS)	--	--	1
23	3-[N,N-di methyl thio carbomoyl]-thio propane sulfonic acid (DPS)	--	--	1
24	Sodium-3-(benzo thiazol-2-yl thio)-1-propane Sulfonate (ZPS)	--	--	1
25	3-Morpholino propane sulfonic acid (MOPS)	--	--	1
26	S – 1 – Phenyl ethyl amine	--	--	1.5
27	R – 1 – Phenyl ethyl amine	--	--	1
28	2,6-Dimethoxy phenol	--	--	2
29	3-Hydroxy-1-propane sulfonic acid	--	--	4
30	Methylene methane disulfonate	--	--	1
31	Methane disulfonic acid-1,1-dimethyl ester	--	--	1

32	R-1-(1-Naphthyl) ethylamine	--	--	1.5
33	S-1-(1-Naphthyl) ethylamine	--	--	1
34	R-(1,2-Diamino cyclohexane)	--	--	1.5
35	S-(1,2-Diamino cyclohexane)	--	--	1
36	R-1-Aminoindane	--	--	1.5
37	S-1-Aminoindane	--	--	1
38	R-1,2,3,4-Tetrahydro naphthalene-1-amine	--	--	1.5
39	S-1,2,3,4-Tetrahydro naphthalene-1-amine	--	--	1
40	S-1-Amino-2-propanol	--	--	1.5
41	R-1-Amino-2-propanol	--	--	1
42	R-2-Chloromandelic acid	--	--	1.5
43	S-2-Chloromandelic acid	--	--	1
44	R-(1,2-Diphenylethylenediamine)	--	--	1.5
45	S-(1,2-Diphenylethylenediamine)	--	--	1
46	S-3-Methyl-1-(2-piperidine-1-yl-phenyl)-butylamine	--	--	1.5
47	R-3-Methyl-1-(2-piperidine-1-yl-phenyl)-butylamine	--	--	1
48	S-3-Amino-1,2-propanediol	--	--	1.5
49	R-3-Amino-1,2-propanediol	--	--	1
50	D-Malic acid	--	--	1.5
51	L-Malic acid	--	--	1
52	R-3-Ethyl nipecotate	--	--	1.5
53	S-3-Ethyl nipecotate	--	--	1
54	R-3-Amino piperidine dihydrochloride (R-APIP)	--	--	2
	<b>Total</b>	<b>25</b>	<b>16.5</b>	<b>148.5</b>
<b>By-Products</b>				
1	HCl 25-30% Solution	4.0	----	4.00
2	Sodium bisulfite solution	11.0	----	11.00
3	Sodium bromide solution	----	45.00	45.00
4	Phosphorus oxychloride	----	3.00	3.00
	<b>TOTAL</b>	<b>15.0</b>	<b>48.00</b>	<b>63.00</b>

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. Total plot area is 3070 sq. m. Expected project cost is Rs.3 Crores. Capital cost for EMP has been estimated around Rs. 71.5 lakhs and recurring cost provision for EPM has been estimated to be around Rs. 82.2 Lakhs /Year. Fresh water requirement after proposed expansion will be increased from 3.5 KL/day to 110 KL/day (2 KL Domestic, 106.5 KL for process & washing, 1 KL cooling & 0.5 KL Gardening) which will be supplied by the GIDC. Wastewater generation after the expansion will be increased from 1.1 KL/day to 61.5 KL/day [60.5 KL/day industrial + 1 KL/day domestic]. Industrial waste water will be treated in Primary ETP followed hydrodynamic cavitation process and treated waste water will be sent to CETP of NIA,

Nandesari. Unit has obtained membership certificate from the CETP of NIA, Nandesari for acceptance of the effluent quantity 60.5 KL/day vide letter no. NIA/CETP/AC/2014-2015/022 dated 29/01/2015. At present Natural gas (450 SCM/day) is used in one Boiler (2 TPH). Unit has proposed one steam boiler in which Natural gas (550 SCM/day) will be used as fuel. Process gaseous emission (HCl & SO<sub>2</sub>) will be scrubbed in 3 stage scrubber for recovery. Recovered HCl (25%) and Sodium Bisulfite (25%) will be reused in process. Unit has proposed one stand by DG set having capacity 125 KVA and HSD (14 Lit./hr) will be used as a fuel. Hazardous waste to be generated are ETP waste (84 MT/Year), Discarded containers (1.5 MT/Year), Used Oil (25 Lit./Year), Organic Waste Residue/Distillation residue (30 MT/Year), Spent HCl - 25% (108 MT/Year) and Sodium Bi-sulfite – 25% (132 MT/Year). For the proposed expansion scenario the unit will install additional distillation units to recover the solvents in-house instead of giving it to 3rd party for recovery. ETP waste will be disposed off at the common TSDF. Waste residue will be disposed off at the CHWIF. Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized recyclers after decontamination. Used oil will be sold only to the registered recyclers. Spent HCL and Sodium Bisulfite will be reused back in process. Unit has obtained membership of NECL, Nandesari for TSDF site and CHWIF.

#### **Observations/Discussions:**

Technical presentation during the meeting included the Point wise ToR compliance. The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic. The baseline environmental study has been conducted for the study area of 5 km radial distance from project site for the period March 2015 to May 2015. Ambient Air Quality monitoring was carried out for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, VOC, NH<sub>3</sub> and CL<sub>2</sub> at ten locations, including the project site. Results indicate that the existing concentration in the ambient air is lower than that specified for industrial area. The details of outcome of AAQ modeling in term of incremental GLC and predicted air quality have been described and it has been stated that the incremental increase in concentration considering the maximum permissible is very low to have any major impact on the surrounding environment. The maximum concentrations occurs at the inside the GIDC Estate. So the emissions from the stack will not have any major impact on the air environment in the downwind direction. The resultant concentrations are within the NAAQS. The Disaster & Onsite Emergency Management plan has also been prepared as a part of RA study assignment. While discussing about the variety of products, Committee asked to submit production list as per the different groups so that it can be decided to manufacture particular group products at a time and resultant pollution potential can be considered properly. Solvent recovery system will be installed in-house and recovered Solvents will be recycled back to the process. Committee emphasized on SOP for storage and handling of Solvents, Oleum and other hazardous chemicals and asked to provide a proper LDAR system. After detailed deliberations the Committee sought following additional information for further consideration of the proposal:

1. Compliance of TOR no. 4 with respect to Mass balance of each product. (Give input = Output in tabular form)
2. Compliance of ToR no. 22, 23, 27.
3. Technical details of Hydro dynamic cavitation technology. Working principle, Process features and Chemistry of this technology. Stage wise removal of COD and other important parameters for waste water to be treated for proposed project considering worst case scenario. Agreement and assurance from the technology supplier to ensure that the technology is suitable for waste water to be generated from the proposed project.

4. List of odor causing chemicals and action plan for odor control as per CPCB guidelines.
5. Details about how many products will be manufactured at a time. List of products in a possible group of products.
8. An undertaking by the Project Proponent on the ownership of the EIA report as per the MoEF&CC OM dated 05/10/2011 and an undertaking by the Consultant regarding the prescribed TORs have been complied with and the data submitted is factually correct as per the MoEF&CC OM dated 04/08/2009.
9. Summary & Conclusion as per the generic structure given in Appendix III A of the EIA Notification 2006.
10. Latest status of stay order from Hon'ble Gujarat High Court against the implementation of the NABET accreditation or copy of Certificate of accreditation issued by the NABET, QCI to the environmental consultant.

11	Philoden Agrochem Pvt. Ltd	Plot no. 145,GIDC-Nandesari, Dist.: Vadodara	Appraisal
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**Project / Activity No.:** 5(f)

**Project status:** Expansion

**Chronology of EC Process:**

- This project proposed by M/s: Philoden Agrochem Pvt. Ltd. (herein after Project Proponent – PP) has submitted Application vide their letter dated 22/06/2014.
- The project was considered for TOR finalization in the meeting of the SEAC held on 11/09/2014.
- EIA Report prepared by M/s: RAAS Envirocare, Vadodara was submitted by project proponent vide online proposal no. SIA/GJ/IND2/4819/2014 dated 12/12/2015.

**Project / Activity Details:**

This is an existing unit engaged in manufacturing of Reactive dyes and now unit has applied to introduce manufacture of Solvent dyes and Pigments as tabulated below.

Sr. No.	Name of Product	Quantity (MT/Month)		
		Existing	Proposed	Total
<b><u>Existing</u></b>				
1	Reactive Orange- H2R/M2R	0.50	--	0.50
2	Reactive Yellow-MGR	0.25	--	0.25
3	Reactive Blue-MR	0.25	--	0.25
4	Reactive Black-HN	2.00	--	2.00
<b><u>Proposed</u></b>				
5	Solvent Red 89/122/127/132/135/160/168/207	-	80	80
6	Solvent Yellow 21/62/79/82/157/163/167	-		
7	Solvent Orange 58/60/86/99	-		
8	Solvent Violet 13/14/49	-		
9	Solvent Blue 45/48/67	-		
10	Solvent Black 27/29	-		
11	Pigment Yellow 139/147	-		
12	Pigment Orange 70	-		
13	Pigment Brown 53	-		
14	Pigment Blue 60	-		
15	Pigment Red 179/212	-		

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. Total plot area is 774 sq. m including 115 sq. m of green belt/tree plantation area. The estimated cost of the proposed project is Rs .8.0 Crores. Capital cost for EMP has been estimated around Rs. 116 lakhs and recurring cost provision for EPM has been estimated to be around Rs. 41.5 Lakhs /Year. After proposed expansion total water consumption will be increased from 5.4 KL/day to 153 KL/day (138 KL/day Industrial and 15 KL/day – Domestic & Gardening). Additional requirement of fresh water will be 147.6 KL/day. Source of the fresh water is GIDC water supply. After proposed expansion, Industrial waste water generation will be increased from 5 KL/day to 83 KL/day. (75 KL/day-Industrial and 8 KL/day Domestic). Industrial waste water will be treated in Primary ETP followed hydrodynamic cavitation process and treated waste water will be sent to CETP of NIA, Nandesari. Unit has obtained membership certificate from the CETP of NIA, Nandesari for acceptance of the effluent quantity 75 KL/day vide letter no. NIA/CETP/PC/2015-2016/047 dated 28/10/2015. Domestic waste water will be disposed off in Soak pit system. Natural gas (5 SCM/hr) is used in existing 0.6 TPH steam Boiler. Unit has proposed two steam boilers (Capacity 2.5 TPH each) and Agro waste (2.5 MT/day) or Fire wood (2.2 MT/day) or Coal (1.1 MT/day) will be used as a fuel for each Boiler. Cyclone separator followed by Bag filter will be provided for proposed Boilers. Separate Stacks of adequate height will be provided. 125 KVA DG set is proposed in which HSD-15 Ltrs/hr will be used as fuel. No process gas emission is envisaged. Hazardous waste to be generated are Used /Spent oil, 0.5 MT/Yr, Discarded containers/ barrels /liners (33.3) – 20 MT/Yr, ETP Sludge(34.3)- 960 MT/Yr, Spent Solvents -60 MT/Yr & Distillation Residue for incineration -60 MT/Yr. PP presented that no By-products and spent acids are not generated from the proposed project. ETP waste will be disposed off at the common TSDF. Distillation residue will be sent to the CHWIF. Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized recyclers after decontamination. Used oil will be sold only to the registered recyclers or will be sent to the CHWIF. Spent solvent will be sent to authorize recyclers. Unit has obtained membership of NECL, Nandesari for TSDF site and CHWIF.

#### **Observations/Discussions:**

Technical presentation during the meeting included the Point wise ToR compliance. The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic. The baseline environmental study has been conducted for the study area of 5 km radial distance from project site for the period November 2014 to January 2015. Ambient Air Quality monitoring was carried out for PM10, PM2.5, SO2, VOC, NH3 and CL2 at ten locations, including the project site. Results indicate that the existing concentrations in the ambient air are lower than that specified for industrial area. The details of outcome of AAQ modeling in term of incremental GLC and predicted air quality have been described and it has been stated that the incremental increase in concentration considering the maximum permissible is very low to have any major impact on the surrounding environment. The maximum concentrations occurs at the inside the GIDC Estate. So the emissions from the stack will not have any major impact on the air environment in the downwind direction. The resultant concentrations are within the NAAQS. The Disaster & Onsite Emergency Management plan has also been prepared as a part of RA study assignment. Committee asked to not use fire wood as a fuel for Boilers which was agreed to by the project proponent. While reviewing EIA report, it was observed that there is a discrepancy in hazardous waste generation quantity and its management. After detailed deliberations the

Committee sought following additional information for further consideration of the proposal:

1. Compliance of TOR no. 4 with respect to Mass balance of each product. (Give input = Output in tabular form)
2. Justification with technical details for quantity to be generated of Hazardous waste i.e. ETP Sludge - 960 MT/Yr, Spent Solvents -60 MT/Yr & Distillation Residue -60 MT/Yr.
3. Name and address of nearby authorised Solvent Recovery unit with capacity of the unit and permission letter with quantity. Copy of agreement / MoU / letter of intent from them, showing their willingness to purchase said spent solvent from the proposed project.
4. Technical details of Hydro dynamic cavitation technology. Working principle, Process features and Chemistry of this technology. Stage wise removal of COD and other parameters for waste water to be treated for proposed project considering worst case scenario. Agreement and assurance from the technology supplier to ensure that the technology is suitable for waste water to be generated from the proposed project.
5. Certificate of accreditation issued by the NABET, QCI to the environmental consultant or latest status of stay order from Gujarat High Court, against the implementation of the NABET accreditation.
6. An undertaking by the Project Proponent on the ownership of the EIA report as per the MoEF&CC OM dated 05/10/2011 and an undertaking by the Consultant regarding the prescribed TORs have been complied with and the data submitted is factually correct as per the MoEF&CC OM dated 04/08/2009.
7. Summary & Conclusion as per the generic structure given in Appendix III A of the EIA Notification 2006.
8. Latest status of stay order from Hon'ble Gujarat High Court against the implementation of the NABET accreditation or copy of Certificate of accreditation issued by the NABET, QCI to the environmental consultant.

12	Gokul Agro Resources Ltd.	Survey no. 76/1, 80, 89 & 91, Near Sharma Resort, Meghpar-Borichi, Tal. Anjar, Dist. Kutch,	Screening & Scoping
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**Project / Activity No.:** 5(f)

- M/s: Gokul Agro Resources Ltd. (herein after Project Proponent – PP) has submitted application vide their proposal no. SIA/GJ/IND2/4064/2015 dated 18/11/2015.

**Project status:** Expansion

**Project / Activity Details:**

This is an existing unit and now proposes for expansion of manufacturing of Synthetic Organic Chemicals as tabulated below:

Sr. No.	Name of Products & By-Products	Quantity, MT/Month		
		Existing	Proposed	Total after proposed Expansion
	<b>Name of Products</b>			
1.	Refined Oil : A. Crude Palmolein (Physical) B. Crude Palm Oil (Physical)	30,000.00	Nil	30,000.00
2.	Refined Oil (Conventional): Degummed Soya Oil	12,000.00	Nil	12,000.00
3.	Hydrogenated Vanaspati Oil	7,000.00	Nil	7,000.00

	Hydrogenated Palm Fatty Acid Bakery Shortenings			
4.	Crude Soya Bean Oil	8,500.00	Nil	8,500.00
5.	Solvent Extracted Meal	36,000.00	Nil	36,000.00
6.	Crude Rapeseed Oil	8,500.00	Nil	8,500.00
7.	Lecithin	250.00	Nil	250.00
8.	Soya Bean Gums	250.00	Nil	250.00
9.	Soya Flour	6,750.00	Nil	6,750.00
10.	Soya Vadi	3,500.00	Nil	3,500.00
11.	Castor Commercial and its different grades	25,000.00	Nil	25,000.00
12.	Castor Cake	32,400.00	Nil	32,400.00
13.	Rapeseed / Mustard Seed / Canola Seed Cake	9,540.00	Nil	9,540.00
14.	Rapeseed / Mustard Seed / Canola Seed Extraction Meal	25,000.00	Nil	25,000.00
15.	Castor Extraction Meal	25,000.00	Nil	25,000.00
16.	Captive Power Plant	1.3 MW	Nil	1.3 MW
17.	Filling Plant for Consumer Packing			
17.1	Soft Oil Pouch Filling: 200 ML to 1 Liter (Unit I)	2,500.00	Nil	2,500.00
17.2	Soft Oil Pouch Filling: 200 ML to 1 Liter (Unit II)	5,000.00	Nil	5,000.00
17.3	Soft Oil PET Bottle Filling: 500 ML, 1 Liter & 5 Liters – 2 Lines (Unit I)	3,500.00	Nil	3,500.00
17.4	Soft Oil HDPE Jar Filling: 2 Liters to 15 Liters (Unit I)	3,500.00	Nil	3,500.00
17.5	Soft Oil Tin Filling: 15 Liters & 15 Kg. (Unit II)	10,500.00	Nil	10,500.00
17.6	Vanaspati Pouch Filling: 200 ML to 1 Liter (Unit I)	3,000.00	Nil	3,000.00
17.7	Vanaspati Jar Filling: 2 Liters to 15 Liters / KG (Unit I)	10,500.00	Nil	10,500.00
17.8	Vanaspati Tin Filling: 15 Liter and 15 Kg (Unit I)	10,500.00	Nil	10,500.00
17.9	Bakery Shortening Filling: 15 Kg. Poly Bag	500.00	Nil	500.00
18.	Empty Tin Container: 15 Liters	6,00,000.00	Nil	6,00,000.00
19.	HDPE Jar: 2 Liters and 5 Liters	90,000.00	Nil	90,000.00
20.	HDPE Jar: 15 Liters and 15 Kg.	60,000.00	Nil	60,000.00
21.	PET Bottles: 200 ML to 1 Liter	7,50,000.00	Nil	7,50,000.00
22	a. Hydrogenated Castor Oil b. Hydrogenated Palm Strarine	Nil	3,000.00	3,000.00
23	a. 12 Hydroxy Stearic Acid (HSA) b. Ricinoleic Acid (RA) c. Hydrogenated Methyl	Nil	2,000.00	2,000.00

	Ricinoleate			
24	a. Polymerized RA b. Blown Castor Oil c. Bisamide	Nil	500.00	500.00
25	a. De-Hydrated Castor Oil (DCO) b. DCO Fatty Acid	Nil	500.00	500.00
26	Undecylenic Acid (UDA)	Nil	30.00	30.00
27	Zinc UDA	Nil	30.00	30.00
28	Sebacic Acid	Nil	240.00	240.00
29	Sebacodiamine (C-10 Diamine)	Nil	240.00	240.00
30	Polyol 115	Nil	240.00	240.00
31	Ethoxylated Castor oil	Nil	240.00	240.00
32	Glycerol Monostearate	Nil	240.00	240.00
33	Zinc Ricinoleate	Nil	150.00	150.00
34	DCO Stand Oil	Nil	360.00	360.00
35	Sulphonated Castor Oil	Nil	240.00	240.00
36	Distilled Fatty Acid	Nil	2,250.00	2,250.00
37	Dimer Acid	Nil	750.00	750.00
38	Iso Stearic Acid	Nil	300.00	300.00
39	Euracic Acid	Nil	450.00	450.00
40	Glycerine	Nil	240.00	240.00
	<u>Name of by-products</u>			
1	Acid Oil	225.00	Nil	225.00
2	Deodistillate	1,200.00	Nil	1200.00
3	Palm Fatty Acid Distillate			
4	Spent Earth	650.00	Nil	650.00
5	C18,C24,C18	Nil	270.00	270.00
6	Distilled Monomer	Nil	615.00	615.00
7	Glycerin	Nil	800.00	800.00
8	Heptaldehyde	Nil	24.00	24.00
9	Light Fatty Acid	Nil	25.00	25.00
10	Mixed Fatty Acid	Nil	95.00	95.00
11	2-Octanol (85%)	Nil	155.00	155.00
12	Pitch (C-10 diamine/sebeconitrile)	Nil	28.00	28.00
13	Pyroletic Mass of Methyl Ricinoleate	Nil	3.00	3.00
14	Sodium Sulphate	Nil	985.00	985.00
15	Ammonium Sulphate	Nil	15.00	15.00

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. Existing plot area is 212362.12 sq. m and unit has proposed additional plot area of 153288.88 sq. m. Existing green belt area 8466 sq. m will be increased up to 110679.46 sq. m. Existing project cost is Rs.

14.5 Crores. Estimated cost of proposed expansion is Rs. 39.50 Crores. Total water consumption after proposed expansion will be increased from 994 KL/day to 1234 KL/day. Unit has proposed to reuse 174 K/day after proposed expansion. Fresh water requirement after proposed expansion will be increased from 951 KL/day to 1105 KL/day. 208 KLD treated effluent will be reused for Gardening purpose. 103 KLD process effluent will be treated in proposed MEE and condensate from MEE @103 KLD will be sent to ETP. After treatment in ETP effluent @ 103 KLD will be reused in Process. Condensate from process @ 14 KLD and treated effluent @ 57 KLD is reused for Cooling. Wastewater from Domestic activities @ 24.8 KLD will be disposed in soak pit through septic tank. At present, total industrial wastewater of 257 KLD is generated from process, boiler, cooling blow down and washing. After treatment in ETP, treated water is reused for Cooling @ 57 KLD and remaining for Gardening @ 200 KLD purpose. Domestic sewage @23.9 KLD is discharged into soak pit through septic tank. After proposed expansion, there will be increase in wastewater generation from 257 KLD to 368 KLD from Industrial activities. Therefore, wastewater generation from proposed expansion will be 111 KLD. Effluent generated from process @ 103 KLD will be treated in Multi Effect Evaporator (MEE). Condensate from MEE @ 103 KLD along with other waste streams @ 8 KLD from boiler, cooling & washing will be taken into ETP for further treatment. After treatment in ETP additional treated effluent of 111 KLD will be reused for process @103 KLD and Gardening @ 8 KLD. Hence, upgraded ETP followed by MEE will be adequate to treat and handle the total pollution load. Domestic waste water (0.9 KL/day) will be disposed off into septic tank/soak pit system. Details of fuel used for existing as well as proposed Boilers/TFH/DG sets is as tabulated below:

Sr. No.	Stack Attach to	Status	Stack Height (m)	Type of Fuel	APC Measure
1.	GLV Boiler (2 Nos.) 15 TPH each	Existing	40.00	Coal	Multi Cyclone Separator with Bag Filter
2.	Geeka Boiler (2 Nos.) 1200 U Each	Existing	23.80	FO	Adequate Stack height
3.	FBC Type Boiler (2 Nos.) 27.5 TPH	Existing	55.00	Coal	Multi Cyclone Separator followed by Bag Filter
4.	Thermo Pack (2 Nos.) 400 U Each	Existing	18.00	FO	Adequate Stack height
5.	Thermo Pack -1000 U	Existing	30.00	Coal	Multi Cyclone Separator followed by Bag Filter
6.	DG SET (3 Nos.): 500 KVA	Existing	7.00	HSD	Adequate Stack Height
7.	DG SET (1 No.): 125 KVA	Existing	5.00	HSD	

8.	Thermo Syphone (2 Nos.): 1000 U Each	Existing	30.50	Coal	Teema Cyclone with Bag filter
9.	Thermo Pack 4 Lac Kcal/Hr	Proposed	18.0	FO	Adequate Stack height

It was presented that there is no any process gas emission from the existing manufacturing activity. However, there will be process gas generation in the form of NH<sub>3</sub> gas from the manufacturing of Sebacadiamine. Two stage acidic scrubbers will be provided to control Process Gas emission.

Details of hazardous waste generation for existing as well as proposed project is as tabulated below:

Source	Type of waste	Quantity Generation (per Annum)			Mode of Disposal
		E	P	T	
ETP	Dry ETP Sludge	120.20 MT	10 MT	130.20 MT	TSDF site
Process	Spent Catalyst	18.00 MT	120.00 MT	138.00 MT	Registered recyclers
	Hexane	3000 MT	--	3000 MT	Re-utilized in Process
	Spent Carbon	--	60 MT	60 MT	TSDF site
	Waste Resin (RO Plant)	1300 Kgs.	--	1300 Kgs.	Registered recyclers
	Distillated Residue	36000 MT	13400 MT	49400 MT	Registered recyclers
	Discarded Asbestos Sheet (Plant Roofing)	1400 Kgs.	--	1400 Kgs.	Registered recyclers
Raw Material Storage	Discarded containers/ barrels/ Bottles (Pump House / Tank Farm, Packing Section)	221.04 MT	(250. NOS) 5.5 MT	226.54 MT	Registered recyclers
Plants & Machineries	Used/Spent Oil (DG Room)	0.672 KL	0.300 KL	0.972 KL	Registered recyclers

Ammonium Sulfate generated from the scrubbing system will be sold out as by-product.

**Observations/Discussions:**

Technical presentation made during the meeting by project proponent. On asking about the environmental

clearance of existing products, PP informed that their industry was running since long before EIA Notification 2006. While discussing about the compliance of the existing activities, PP informed that they have obtained CC&A of GPCB for existing activities and they are complying the environmental conditions mentioned in CC&A. PP requested to exempt public hearing since the Gandhidham Development Authority is a notified area and project site is located within the GDA which was agreed to by the committee. After detailed discussion, the following additional Terms of Reference were prescribed for the EIA study to be done covering 10 Km radial distance from the project boundary.

1. Demarcation of proposed expansion activities in layout of the existing premises.
2. Exact details about additional infrastructural facilities, plant machineries etc. required for the proposed expansion.
3. Technical details of all the plants along with details of manufacturing process / operations of each product. Details on strategy for the implementation of cleaner production activities.
4. Chemical name of each product and raw materials. Detailed manufacturing process of each product along with chemical reactions and mass balance (including reuse-recycle, if any). Details on end use of each product.
5. Water consumption and consumption of each raw material per MT of each product.
6. Assessment of source of the water supply with adequacy of the same to meet with the requirements for the project expansion. Permission obtained for supply of increased quantity of raw water. Undertaking stating that no bore well shall be drilled within the premises.
7. Water balance diagram (including reuse-recycle, if any) along with qualitative and quantitative analysis of the each waste stream to be generated. A detailed treat ability study vis-à-vis the adequacy and efficacy of the treatment facilities proposed for the wastewater to be generated. Give stage wise reduction in important parameters.
8. Adequacy of open land area available for utilizing entire quantity of treated effluent for plantation / gardening. Suitability of use of treated sewage on the land with respect to the soil characteristic etc. shall be studied and a report in this regard shall be submitted. Ensure that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.
9. Treated effluent management plan during monsoon season when utilization of treated effluent for gardening & plantation purpose is not feasible. Detailed study report considering Percolation rate of the land available for gardening & plantation. Ensure that land is suitable for utilization of treated sewage for plantation & gardening.
10. Detailed effluent treatment scheme and disposal method. Technical details of the ETP including size of each unit, retention time etc. including modifications / up gradation to be done in existing ETP to take care of increased effluent quantity along with its adequacy report.
11. Plans for management and disposal of waste streams to be generated from spillage or leakage of tanks, occasional tank washing etc.
12. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of methods to be adopted for the water conservation.
13. One season Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be incorporated.
14. Anticipated environmental impacts due to the proposed project/production may be evaluated for significance and based on corresponding likely impacts VECs (Valued Environmental Components) may be identified. Baseline studies may be conducted within the study area of 10 km for all the concerned/identified VECs and likely impacts will have to be assessed for their magnitude in order to identify mitigation measures.
15. One complete season base line ambient air quality data (except monsoon) to be given along with the

- dates of monitoring. The parameters to be covered shall be in accordance with the revised National Ambient Air Quality Standards as well as project specific parameters. Locations of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone and sensitive receptors. There should be at least one monitoring station in the upwind direction. There should be at least one monitoring station in the pre dominant downwind direction at a location where maximum ground level concentration is likely to occur.
16. Modelling indicating the likely impact on ambient air quality due to proposed activities. The details of model used and input parameters used for modelling should be provided. The air quality contours may be shown on location map clearly indicating the location of sensitive receptors, if any, and the habitation. The wind rose showing pre-dominant wind direction should also be indicated on the map. Impact due to vehicular movement shall also be included into the prediction using suitable model. Results of Air dispersion modelling should be superimposed on satellite image / geographical area map.
  17. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate emission from each utility (vii) Air Pollution Control Measures proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it.
  18. Action plan for odour control to be submitted.
  19. Details of management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling, its utilization and disposal etc. How the manual handling of the hazardous wastes will be minimized.
  20. Management plan for by product/s to be generated. Name and address of units to whom the by-product/s will be sold. Copies of agreement / MoU / letter of intent obtained from them showing their willingness for purchasing the said by-product/s, including sodium bromide solution.
  21. Methodology of de-contamination and disposal of discarded containers and its record keeping.
  22. Membership of Common Environmental Infrastructure including the TSDF / Common Hazardous Waste Incineration facility along with an assessment to accommodate the additional quantity of wastes to be generated.
  23. Data on air emissions, wastewater generation and solid / hazardous waste generation and management for the existing plant should also be incorporated in the EIA Report.
  24. Details of measures proposed for the noise pollution abatement and its monitoring.
  25. A detailed EMP including the protection and mitigation measures for impact on human health and environment as well as detailed monitoring plan and environmental management cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/annum earmarked for environment pollution control measures.
  26. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impact.
  27. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment to be provided to the workers. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical check up of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.

28. Details of quantity of each hazardous chemical to be stored, material of construction of major hazardous chemical storage tanks, threshold storage quantity as per schedules of Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals. Details of methanol storage tanks.
29. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the map clearly showing which of the facilities and surrounding units would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency Plan should be provided.
30. Details of fire fighting system including provision for flame detectors, temperature actuated heat detectors with alarms, automatic sprinkler system, location of fire water tanks & capacity, separate power system for fire fighting, details of qualified and trained fire personnel & their job specifications, nearest fire station & time required to reach the proposed site. Submit line diagram of the fire hydrant network.
31. Provision of qualified industrial hygienist, safety officer, factory medical officer employed for hazardous processes and monitoring of the occupational injury to workers as well as impact on the workers.
32. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, manufacturing utility staff for safety related measures.
33. Detailed five year greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map], budgetary outlay; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby areas and elsewhere.
34. Proposal for socio-economic development activities including community welfare program most useful in the project area for the overall improvement of the environment. Submit a detailed plan for social corporate responsibilities, with appropriate budgetary provisions for the next five years and activities proposed to be carried out; specific to the current demographic status of the area.
35. Copies of Consent to Establish, Consent to Operate orders obtained in past along with point wise compliance status of all the conditions stipulated therein.
36. Records of any legal breach of Environmental laws i.e. details of show- cause notices, closure notices etc. served by the GPCB to the existing unit in last five years and actions taken then after for prevention of pollution.
37. Details of fatal / non-fatal accidents, loss of life or man hours, if any, occurred in the existing unit in last three years and measures proposed to be taken for avoiding reoccurrence of such accidents in future.
38. (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.(b). Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions ? If so, it may be detailed in the EIA.
39. What is the hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions? Details of this system may be given.
40. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA Report.
41. Compliance of the MoEF's OM dated 04/08/2009 and 05/10/2011 regarding compliance of TOR prescribed & factual correctness of the data submitted in the EIA report, the names of experts associated with / involved in the preparation of the EIA report and the ownership of the EIA report by the Project proponent.

42. Certificate of accreditation issued by the NABET, QCI to the environmental consultant should be incorporated in the EIA Report.

43. A tabular chart with index for point-wise compliance of above TORs.

The above mentioned project specific TORs/additional TORs and the model TORs available on the MoEF&CC's website for Synthetic Organic Chemical industry shall be considered as generic TORs for preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006. The project shall be appraised on receipt of the final EIA report.

13	Merino Industries Limited	Plot no. D2 CH36, GIDC-Dahej, Phase II, Ta.: Vagra, Dist.: Bharuch.	Screening & Scoping
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**Project / Activity No.:** 5(f)

- M/s: Merino Industries Limited (herein after Project Proponent – PP) has submitted application vide their proposal no. SIA/GJ/IND2/4257/2015 dated 18/11/2015.

**Project status:** New

**Project / Activity Details:**

This is a new unit proposes the manufacturing of Synthetic Organic Chemicals as tabulated below:

Sr. no.	Name of Products	Quantity
1	Phenol Formaldehyde Resin	321.5 MT/Month
2	Melamine Formaldehyde Resin	77.5 MT/Month
3	High Pressure Decorative Laminated Sheets	1062.5 MT/Month (2.5 Lacs Sheets /Month)
4	Laminated Particle Board and MDF Board	833.33 MT/Month (2000 Boards/Month)

The manufacturing of Phenol Formaldehyde resin and Melamine Formaldehyde resin falls under the project activity 5(f) as per the schedule of EIA Notification 2006. Unit has obtained CTE of GPCB for manufacturing of High Pressure Decorative Laminated Sheets and Laminated Particle Board and MDF Board. The project proponent has applied for manufacturing of Resins within the existing plot having area @ 10047.62 sq. m. Expected project cost is Rs. 6.25 Crores. Fresh water will be sourced from GIDC water supply. Domestic waste water will be disposed off into soak pit system. Industrial effluent will be evaporated to achieve Zero Liquid Discharge (ZLD). No process gas emission is envisaged.

**Observations & Discussions:**

Technical presentation made during the meeting by project proponent. During the meeting, Committee observed that there are discrepancies observed between details submitted in Form-1, PFR and details presented during meeting regarding water consumption, waste water generation, fuel consumption, hazardous waste management details etc. Committee felt that PP shall submit the revised proposal with correct data. After deliberation, It was unanimously decided to consider the project for TOR/Scoping only after submission of the following:

- Revised Form-1 & PFR with relevant details.

14	Nuchem Dyestuff Pvt Ltd	Plot No. C-284,285,299 & 300,GIDC-Saykha, Ta. Vagra, Dist. Bharuch.	Screening & Scoping
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**Project / Activity No.:** 5(f)

- M/s: Nuchem dyestuff Pvt Ltd (herein after Project Proponent – PP) has submitted application vide their proposal no. SIA/GJ/IND2/4850/2015 dated 04/12/2015.

**Project status:** New

**Project / Activity Details:**

This is a new unit proposes the manufacturing Dyes, Dye Intermediates and Pigments as tabulated below:

Sr. No.	Name of Product	Proposed Capacity (MT/Month)
<b>ACID DYES</b>		
1	Acid Black 210	100 MT/Month
2	Acid Black 194	
3	Acid Black 235	
4	Acid Brown 75	
5	Acid Brown 165	
6	Acid Brown 161	
7	Acid Brown 282	
8	Acid Brown 355	
9	Acid Brown 432	
10	Acid Brown 434	
11	Acid Brown 425	
12	Acid Green 68	
13	Acid Blue 113	
14	Acid Blue 193	
15	Acid Red 119	
16	Acid Red 97	
17	Acid Red 357	
18	Acid Violet 90	
19	Acid Yellow 42	
20	Acid Orange 142	
<b>REACTIVE DYES</b>		
1	Reactive Black B and Black Mixes	1000 MT/Month
2	Reactive Orange M2R	
3	Reactive Red M8B/H8B	
4	Reactive Red ME6BL	
5	Reactive Orange ME2RL (Orange - 122)	
6	Reactive Red ME4BL (Red-195)	
7	Reactive Golden Yellow ME4RL (Yellow 145)	
8	Reactive Golden Yellow HER	
9	Reactive Orange H2R	
<b>REACTIVE BLUE</b>		
1	Blue 3R	1000 MT/Month
2	Blue F4R	
3	Blue HERD	
4	Blue 221	
5	Blue HEGN	
6	Blue Ifng	
7	Blue bf	
8	Blue bfn	
9	Blue 2b	
<b>REACTIVE RED</b>		

1	Red mixes		
2	Red BS		
3	Red RB		
4	Red HE3B		
5	Red 5B		
6	Red F3G		
7	Red H7B		
8	Red DS4B		
9	Red F2B		
10	Crimson XLE		
11	Red DSGD conc.		
12	Blue Mixes		
13	Red SGR		
REACTIVE GOLDEN YELLOW			
1	Golden Yellow RNL		
2	Golden Yellow R		
REACTIVE NAVY BLUE			
1	NAVY BLUE 2G		
2	NAVY RGB		
3	NAVY XLE		
DIRECT DYES		100 MT/Month	
1	Direct Orange 26		
2	Direct Red 31		
3	Direct Black 22		
4	DIRECT BLUE 71		
5	DIRECT BLUE 281		
6	DIRECT BLUE 218		
7	DIRECT RED 239		
8	DIRECT BLUE 80		
9	DIRECT BLACK 170		
10	DIRECT BLACK 168		
11	DIRECT BLACK 179		
12	DIRECT BLACK 80		
13	DIRECT BLACK 22		
14	DIRECT ORANGE 39		
CPC BASE DYES		150 MT/Month	
1	Reactive Blue 21		
2	Reactive Blue 25		
3	DIRECT BLUE 199		
4	Reactive blue 72		
5	Direct Blue 86		
ACRYLIC DYES		100 MT/Month	
1	Basic Yellow 28		
2	Basic Yellow 13 ( Yellow 8 GL)		
3	Basic Blue 54. ( Blue GL).		
4	Basic Blue 41( Blue GRL)		
5	Basic Blue 3. ( Blue BG).		
6	Basic Violate 16. ( Red 2B).		
7	Basic Red 18. ( Red GTL).		
8	Basic Red 13. ( Pink FG).		
9	BASIC RED 14		
PIGMENTS		200 MT/Month	

1	Azo Pigments				
2	Quinacridone Pigment				
3	Carbazole Dioxane Violet Pigment				
4	CPC Base Pigments				
5	Pigment Emulsions				
DYES INTERMEDIATES		900 MT/Month			
NAPHTHANLENE BASE DERIVATIVES					
1	H-Acid				
2	Vinyl Sulphone				
BETA BASE DERIVATIVES					
1	K-acid				
2	Sulfo Tobia Acid				
3	Gamma Acid				
4	Tobias Acid (SCHAEFFER'S ACID)				
5	N Methyl J Acid				
CPC BASE DERIVATIVES					
1	Amine Base				
2	Phthalimide Based				
BLUE BASE					
1	Tripheno Dioxazine				
Total				2550 MT/Month	
By- product					
1	Sodium Sulfitte salt			130	
2	Rec. Acetic Acid			45	

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. Total plot area is 79603.62 sq. m & unit has proposed 23873.62 sq mtr area for the green belt development/Tree plantation. Expected project cost is Rs.140 Crores. Total water consumption for proposed project will be 2295 KL/day which will be sourced from GIDC water supply. Industrial waste water generation will be 835 KL/day. Low concentrated stream (584 KL/day) will be treated in ETP consists primary, secondary and tertiary treatment and then it will be sent to CETP. High Concentrated stream (251 KL/day) will be subjected to MEE. Unit has proposed to reuse 590 KL/day of treated effluent. Domestic waste water (28 KL/day) will be disposed off into soak pit system. It is proposed to install one Boiler, one TFH and one Incinerator. Natural Gas (2200 SCM/Hr) will be used as a fuel for Boiler. LDO / FO : 560 Lit/Hr will be used as a fuel for TFH. F.O. : 40 Liter / Hr will be used as a fuel for incinerator. Adequate scrubbing system will be provided for control of gaseous emission of HCl, SO<sub>2</sub>, Cl<sub>2</sub>. Unit has proposed one DG set (2500 KVA) in which HSD (40 ltrs/hr) will be used as fuel. Hazardous waste generated from the manufacturing activity will be ETP sludge (50 MT/Month), Iron sludge (300 MT/Month), Gypsum (650 KL/day), Distillation residue (55 MT/Month), MEE Salt (315 MT/Month), Dilute sulphuric acid (880 MT/Month), Sodium Sulfitte Salt (130 MT/Month), Recovered Acetic Acid (45 MT/Month), Dilute HCl (1200 MT/Month), Discarded containers/Bags/Liners (5 MT/Month) and used oil (0.2 MT /Month).

#### Observations / Discussion:

Technical presentation made during the meeting by project proponent.

Looking to the product profile, while concerning about the problems of treatability of concentrated effluent &

its disposal issues being faced in present scenario as well as in absence of any common infrastructure facility in Dahej Industrial estate, the committee was of the view that manufacturing of such proposals should be considered with Zero Liquid Discharge (ZLD) only. Committee emphasized on sound management of by-products and hazardous waste to be generated from the proposed activities and asked to reuse or consume entire quantity of Spent HCl and Spent sulphuric acid within premises to convert into valuable products instead of sending such spent acids to outside premises. After deliberation on various aspects, the committee unanimously decided to consider the case for TOR/Scoping only after submission of revised proposal with complete Zero Liquid Discharge.

15	Panoli Intermediates India Pvt. Ltd. - Unit III	Plot No. 156-A & B, 157, Vill. Nandesari GIDC, Vadodara	Screening & Scoping
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**Project / Activity No.:** 5(f)

- M/s: Panoli Intermediates India Pvt. Ltd. - Unit III (herein after Project Proponent – PP) has submitted application vide their proposal no. SIA/GJ/IND2/4858/2015 dated 18/11/2015.

**Project status:** Expansion

**Project / Activity Details:**

This is a new unit proposes the manufacturing of following items.

Sr. No.	Product Name	Existing Quantity (MT/Month)	Proposed Quantity (MT/Month)	Total (MT/Month)
1	DNCB plant Isomers & DNCB such as 2:4 DNCB,2:6 DCNB,2:5 DNCB	200	2000	2200
2	Ortho Anisidine/Para Anisidine	100	1000	1100
3	Ortho Nitro Aniline/Para Nitro Aniline	300	2000	2300
4	DCA Isomers of DCA such as 2:3 DCA,2:5 DCA,3:4 DCA 3,3 DCB	80	1000	1080
5	DCNB plant Isomers & DCNB such as 2:3 DCNB, 2:5 DCNB. Isomers of DCNB such as 2:3 DCNB,2:5 DCNB,3:4 DCNB	200	2000	2200
6	H-Acid	50	450	500
7	Derivatives of Nitro Phenol	-	1500	1500
<b>Proposed Power plant</b>		--	1	1
1	Power Plant	0	10 MW-coal Based	10 MW-coal Based
<b>Total</b>		<b>930</b>	<b>9950</b>	<b>10880</b>

List of by- Products

By- products	Existing Quantity (MT/Month)	Proposed Quantity (MT/Month)	Total (MT/Month)
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1	CaCl <sub>2</sub>	0	500	500
2	Sodium Thio Sulphate (40%)	160	1450	1610
3	Sodium Sulfite	0	80	80
4	Sodium Sulphate	0	900	900

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. Total plot area is 15480 sq. m & unit has proposed 4000 sq m area for the green belt development/Tree plantation. Expected project cost is Rs.10 Crores. Total water consumption after proposed expansion will be 795 KL/day (15 KL for Domestic, 10 KL for Gardening, 770 KL for Industrial) which will be sourced from GIDC water supply. Industrial waste water generation will be 242 KL/day, which will be treated in ETP, and then neutralized effluent will be sent to MEE & Spray Dryer. Unit has proposed to reuse 190 KL/day of treated effluent. Domestic waste water (12 KL/day) will be disposed off into soak pit system. Flue gas & Process gas stack/vent details is as under

Sr. No.	Stack Attached to	Stack Height(m)	Air Pollution Control measures
<b>Existing Flue gas stacks</b>			
1.	Thermic Fluid Heater-1	20	--
2.	Thermic Fluid Heater-2	20	--
3.	Steam Boiler	30	ESP with Scrubber
<b>Proposed Flue gas stacks</b>			
1	Steam Boiler (15 TPH) For CPP	45	ESP with Scrubber
<b>Existing process gas stacks</b>			
1.	Nitration(NOx Recovery System)	20	Scrubber
2.	Neutralizer – 2 Nos.	20	Ventury Scrubber
3.	Neutralizer – 2 Nos.	20	Ventury Scrubber
4.	Isolators - 5 Nos.	12	Ventury Scrubber
5.	Spray Dryer	26	Scrubber 2 Nos. + Cyclone
<b>Proposed process gas stacks</b>			
1.	Nitration (NOx Recovery system)	20	Scrubber
2.	Process Vent	12	Water + Alkali Scrubber

Hazardous waste generated from the manufacturing activity will be as tabulated below:

Sr. no.	Type of Waste	Existing Quantity	Total proposed Quantity	Method of Disposal
1.	ETP Sludge	7 MT/Month	70 MT/Month	TSDf site
2.	Used Oil	37.5 Ltr/Month	100 Ltr/Month	Authorized recycler
3.	Discarded Containers/ Drums	0.015 MT/Month	10 MT/Month Or 500 Nos./Month	Sold to GPCB authorized dealer after decontamination.
4.	Spray Dryer solid salt	1020 MT/Month	2000 MT/Month	Sell to end user or disposal at TSDf site
5.	Gypsum Sludge	32 MT/Month	800	Sell to end user or disposal at

			MT/Month	TSDf site or sent to Cement Industry.
6.	Distillation Residue	--	80 MT/Month	Disposal at CHWIF or Co-processing in Cement Ind.
7.	Iron Waste	13 MT/Month	1840 MT/Month	Disposal at TSDf site
8.	Liquor Ammonia (25%)	--	1025 MT/Month	Reuse in process within factory premises.
10.	Spent H <sub>2</sub> SO <sub>4</sub>	13 MT/Month	1920 MT/Month	Reuse in mfg process of H-Acid within factory premises

#### Observations/Discussions:

Technical presentation made during the meeting by project proponent. While discussing about the compliance of existing activities, PP replied that unit is achieving zero liquid discharge. Unit is engaged in manufacturing of H-acid. Committee noted that the presence of toxic naphthalene-based dye intermediates in the wastewater made it non-biodegradable and the combined wastewater stream is contaminated with high chloride and sulphate content. Effluents from H-acid can contaminate the groundwater in a huge area around the plant if not treated properly. Committee felt that it is required to know the status of compliance of existing manufacturing activities. Considering the above facts, it was unanimously decided to consider the project for TOR/Scoping only after submission of the following:

1. Records of any legal breach of Environmental laws i.e. details of show- cause notices, closure notices etc. served by the GPCB to the existing unit in last five years and actions taken then after for prevention of pollution.
2. Copies of Environmental Clearances obtained for the existing plant, its point wise compliance report.
3. Environmental audit reports for last 3 years and compliance of its recommendations/Suggestions. (Include latest audit report and its compliance.)
4. Copy of Consent to Operate (CC&A) obtained along with point wise compliance status of all the conditions stipulated therein.

16	Vishal Laboratories	Plot no. 148, Kuvadva GIDC, Dist.: Rajkot	Screening & Scoping
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#### Project / Activity No.: 5(f)

- M/s: Vishal Laboratories (herein after Project Proponent – PP) has submitted application vide their proposal no. SIA/GJ/IND2/49842015 dated 08/12/2015.

**Project status:** New

#### Project / Activity Details:

This is a new unit proposes the manufacturing of following Synthetic Organic Chemicals (Bulk Drugs) items.

Sr. No.	Name of Product/Activity	Quantity MT/Month
Organic Products		
1.	Piperazine Citrate	20
	Pipearzine Hexahydrate	
	Pipearzine Adipate	
	PiperazineDihydrochloride	
	Piperazine Phosphate	

2.	Povidone Iodine	10
3.	Potassium Citrate	10
	Sodium Citrate	
Inorganic Products Drug Intermediates		
1.	Potassium Iodide	5
	Sodium Iodide	

The manufacturing of Synthetic organic chemicals falls under the project activity 5(f) as per the schedule of EIA Notification 2006.

Total plot area is 500 sq. m & unit has proposed 150 sq mtr area for the green belt development/Tree plantation. Expected project cost is Rs. 0.45 Crores. Total water consumption for proposed project will be 2.3 KL/day (1 KL for Domestic, 0.6 KL for Gardening, 0.7 KL for Industrial) which will be sourced from GIDC water supply. Industrial waste water generation will be 0.93 KL/day Boiler 0.03 KL & Washing 0.1 KL), which will be collected in equalization tank and evaporated. Domestic waste water (0.8 KL/day) will be disposed off into soak pit system. It is proposed to install one small Boiler (0.15 TPH). Agro waste (0.5 MT/day) will be used as fuel for Boiler. Cyclone dust collector is proposed as APCM. No process gas emission is envisaged. Hazardous waste generated from the manufacturing activity will be ETP/Evaporation salt (25 Kg/Month), Discarded containers/Bags/Liners (250 no.s/Month). ETP/Evaporation salt will be disposed off at the common TSDF. Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized recyclers.

#### **Observations & Discussions:**

Technical presentation made during the meeting by project proponent. On asking about the purpose of the plot allotted by GIDC, PP informed that they have been allotted the said plot of GIDC-Kuvarada for Bulk drugs manufacturing. PP has also submitted the allotment letter in this regard. While discussing about the waste water generation from the manufacturing process, PP informed that the ML (Mother Liquor) generated from the process will be reused again and there will be no generation of waste water from manufacturing process. Committee asked to submit feasibility report to reuse of ML completely into process again. Project proponent has requested to consider the project as B2 category project. The request was considered by the committee looking to the location of the project, low pollution potential in terms of air & water and the following additional information was sought for appraisal of the project.

1. Copy of plot holding certificate obtained from GIDC Kuvarada.
2. Documents showing GIDC-Sojitra was established before 14/09/2006.
3. Details of surrounding industrial with details like Name and address of the unit, type and nature of industrial activity etc.
4. Legal Undertaking stating that unit is complying the three conditions [i.e. water consumption less than 25 M<sup>3</sup>/day; Fuel consumption less than 25 TPD; and not covered in the category of MAH units as per the Management, Storage, Import of Hazardous Chemical Rules (MSIHC Rules), 1989] as per the amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014.
5. Demarcation of proposed activities in lay out plan. Exact details about infrastructural facilities, plant machineries etc. required for the proposed project.
6. Detailed manufacturing process along with chemical reactions and mass balance (including reuse-recycle, if any) for each product to be manufactured. Details on end use of each product. Give full name and chemical formula of all the raw materials and products.
7. Copy of permission obtained from concern authority for water supply.
8. Water consumption and consumption of each raw material per MT of each product.
9. Water balance diagram (including reuse-recycle, if any) along with qualitative and quantitative analysis

- of the each waste stream to be generated. A detailed treatability study vis-à-vis the adequacy and efficacy of the treatment facilities proposed for the wastewater to be generated.
10. Technical details of the ETP/Evaporator including size of each unit, retention time etc.
  11. Action plan for 'Zero' discharge of effluent shall be included. Give qualitative and quantitative data with feasibility report for reuse of Mother Liquor in process again. Submit an undertaking in this regard.
  12. Plan for management and disposal of waste streams to be generated from spillage, leakages, occasional reactor washing and exhausted media from Scrubber etc.
  13. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of methods to be adopted for the water conservation.
  14. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate emission from each utility (vii) Air Pollution Control Measures proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it.
  15. Details on management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling, its utilization and disposal etc. How the manual handling of the hazardous wastes will be minimized. Explore the possibilities for co-processing of the Hazardous waste/Solid waste prior to disposal into TSDF/CHWIF. Methodology of de-contamination and disposal of discarded containers and its record keeping.
  16. Membership of Common Environmental Infrastructure including TSDF, Common Hazardous Waste Incineration Facility (CHWIF) along with an assessment to accommodate the additional quantity of wastes to be generated.
  17. Complete Management plan for By-products/spent acid to be generated, (if any) from the project including their quantity, quality, characteristics, end use etc. along with the name and address of end consumers to whom the by-product will be sold. Copies of agreement / MoU / letter of intent from them, showing their willingness to purchase said by-products/spent acids from the proposed project.
  18. Name and quantity of each type of solvents to be used for proposed production. Details of solvent recovery system including mass balance, solvent loss, recovery efficiency feasibility of reusing the recovered solvents etc. for each type of solvent.
  19. Data on air emissions, wastewater generation and solid / hazardous waste generation and management for the existing plant should also be incorporated. (Comparative data in tabular format).
  20. Details of measures proposed for the noise pollution abatement and its monitoring.
  21. A detailed EMP including the protection and mitigation measures for impact on human health and environment as well as detailed monitoring plan and environmental management cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/annum earmarked for environment pollution control measures.
  22. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment (PPE) to be provided to the workers. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical check up of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.
  23. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impact. MSDS of all the

products and raw materials to be used. Permission from PESO, Nagpur for storage of solvents, other toxic chemicals, if any.

24. Details of quantity of each hazardous chemical to be stored, material of construction of major hazardous chemical storage tanks, threshold storage quantity as per schedules of Manufacture, Storage & Import of Hazardous Chemicals (MSIHC) Rules of major hazardous chemicals.
25. Details of the separate isolated storage area for flammable chemicals. Details of flame proof electrical fittings, DCP extinguishers and other safety measures proposed. Detailed fire control plan for flammable substances and processes showing hydrant pipeline network, provision of DG Sets, fire pumps, jockey pump, toxic gas detectors etc.
26. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the map clearly showing which of the facilities and surrounding units would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency Plan should be provided.
27. Details of fire fighting system including provision for flame detectors, temperature actuated heat detectors with alarms, automatic sprinkler system, location of fire water tanks & capacity, separate power system for fire fighting, details of qualified and trained fire personnel & their job specifications, nearest fire station & time required to reach the proposed site. Submit line diagram of the fire hydrant network.
28. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, manufacturing utility staff for safety related measures.
29. Detailed five year greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map], budgetary outlay; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby areas and elsewhere.
30. A tabular chart with index for point-wise compliance of above.

The project shall be appraised on satisfactory submission of the above.

17	Hercules pigments Pvt. Ltd	Plot. No. 1704, GIDC-Sarigam, Ta: Umbergaon, Di: Valsad	Screening & Scoping
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**Project / Activity No.:** 5(f)

- M/s: Hercules pigments Pvt. Ltd (herein after Project Proponent – PP) has submitted application vide their proposal no. SIA/GJ/IND2/5227/2015 dated 18/12/2015.

**Project status:** New

**Project / Activity Details:**

This is a new unit proposes the manufacturing of Synthetic Organic chemicals as tabulated below:

Sr. no.	Name of Products	Quantity
	Organic Azo Pigments (Orange/Yellow/Red)	150 MT/Month

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. Total plot area is 4306 sq. m. Expected project cost is Rs. 7 Crores. Total water consumption for proposed

project will be 260 KL/day (5 KL for Domestic, 1 KL for Gardening, 254 KL for Industrial) which will be sourced from GIDC water supply. Industrial waste water generation will be 250.2 KL/day, which will be treated in proposed Primary & Secondary treatment plant and treated waste water will be sent to CETP of Sarigam. Domestic waste water (4 KL/day) will be disposed off into soak pit system. It is proposed to install one steam Boiler (5TPH) and one Hot Air Dryer. Natural gas (1700 SCM/day for Boiler and 800 SCM/day for HAG) will be used as a fuel. Drying of pigments will be carried out in tray dryers. Pulverization of pigments will be carried out in a closed circuit grinding equipment. Unit has proposed one DG set (200 KVA) in which HSD (40 ltrs/hr) will be used as fuel. No process gas emission is envisaged. Hazardous waste generated from the manufacturing activity will be ETP sludge (50 MT/Year), Discarded containers/Bags/Liners (1 MT/Year) and used oil (0.005 MT /Year). ETP waste will be disposed off at the nearby common TSDF. Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized recyclers/vendors after decontamination. Used oil will be sold only to the registered recyclers.

**Observations/Discussion:**

Technical presentation made during the meeting by project proponent. Committee observed that the effluent after treatment can be reuse within the manufacturing plant and thus they can conserve the water. Upon asking PP informed that they will explore the possibilities for maximum reuse of treated effluent and they will submit revised water balance. Committee suggested reuse/recycle of treated waste water to the maximum extent and to minimize the effluent discharge to the CETP. On asking about the permission from CETP authority, PP informed that obtaining permission for membership from the CETP authority is under process and they will submit the same. After detailed discussion, the following additional Terms of Reference were prescribed for the EIA study to be done covering 5 Km radial distance from the project boundary.

1. Copy of plot holding certificate obtained from GIDC Sarigam.
2. Exact aerial distance from the CEPI area of Vapi and Inter state boundary from the project premises.
3. Present land use pattern of the study area shall be given based on satellite imagery.
4. Layout plan of the factory premises. Provision of separate entry & exit and adequate margin all round the periphery for unobstructed easy movement of the emergency vehicle / fire tenders without reversing back. Mark the same in the plant layout.
5. Technical details of the plant/s along with details on best available technologies (BAT), proposed technology and reasons for selecting the same.
6. Details of manufacturing process / operations of each product along with chemical reactions, mass balance, consumption of raw materials etc. Details on strategy for the implementation of cleaner production activities. (Give specific details about source of effluent generation).
7. Chemical name of each proposed products to be manufactured. Details on end use of each products.
8. Detailed mass balance and water balance (including reuse-recycle, if any) along with qualitative and quantitative analysis of the each waste stream from the processes.
9. Assessment of source of the water supply with adequacy of the same to meet with the requirements for the project. Permission obtained from the GIDC for supply of raw water. Undertaking stating that no bore well shall be dug within the premises.
10. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of methods to be adopted for the water conservation.
11. Quality and quantity of waste water to be generated from the manufacturing process of each product to be manufactured along with mass balance.
12. Stream wise qualitative & quantitative analysis of each waste stream (including process water, cooling tower blow down, boiler blow down, washing effluent etc.) to be generated. Give segregation scheme at source. Characteristics of untreated and treated wastewater. A detailed effluent treat ability study

vis-à-vis the adequacy and efficacy of the treatment facilities proposed for the wastewater to be generated. The characteristic on which treatability is based shall also be stated.

13. Details of the ETP units including its capacity, size of each unit, retention time and other technical parameters. Details regarding provision of online continuous pH meter, TOC analyser and flow meter at the final outlet of the ETP.
14. Details of CETP- Sarigam including (1) Total capacity of the CETP (2) Actual load at present (Qualitative and Quantitative – per day) (3) CETP Up gradation scheme, if any (4) Last 6 analysis Reports of GPCB for Inlet and outlet of CETP (5) Spare capacity of CETP with treatability and feasibility report. (6) Recommendations and suggestions of the last two Environment Audit reports of CETP- Sarigam and its compliance report.
15. Plans for management, collection and disposal of waste streams to be generated from spillage, leakages, vessel washing, used container washing etc. Measures proposed for preventing effluent discharge during unforeseen circumstances.
16. One season Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be incorporated.
17. Anticipated environmental impacts due to the proposed project/production may be evaluated for significance and based on corresponding likely impacts VECs (Valued Environmental Components) may be identified. Baseline studies may be conducted within the study area of 5 km for all the concerned/identified VECs and likely impacts will have to be assessed for their magnitude in order to identify mitigation measures.
18. One complete season base line ambient air quality data (except monsoon) to be given along with the dates of monitoring. The parameters to be covered shall be in accordance with the revised National Ambient Air Quality Standards as well as project specific parameters. Locations of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone and sensitive receptors. There should be at least one monitoring station in the upwind direction. There should be at least one monitoring station in the pre dominant downwind direction at a location where maximum ground level concentration is likely to occur.
19. Modelling indicating the likely impact on ambient air quality due to proposed activities. The details of model used and input parameters used for modelling should be provided. The air quality contours may be shown on location map clearly indicating the location of sensitive receptors, if any, and the habitation. The wind rose showing pre-dominant wind direction should also be indicated on the map. Impact due to vehicular movement shall also be included into the prediction using suitable model. Results of Air dispersion modelling should be superimposed on satellite image / geographical area map.
20. Base line status of the noise environment, impact of noise on present environment due to the project and proposed measures for noise reduction including engineering controls.
21. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission, measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate from each utility (vii) Air Pollution Control Measures proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it.
22. Details on management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling, its utilization and disposal etc. How the manual handling of the hazardous wastes will be minimized. Methodology of de-contamination and disposal of discarded containers and its record keeping.

23. Membership of Common Environmental Infrastructure including the CETP, TSDF / Common Hazardous Waste Incineration Facility (CHWIF), Common MEE (Whichever is applicable) along with an assessment to accommodate the additional quantity of wastes to be generated. Explore the possibilities for co-processing of the Hazardous waste prior to disposal into TSDF/CHWIF.
24. Complete Management plan for By-products/Spent acids to be generated, (if any) from the project including their quantity, quality, characteristics, end use etc. along with the name and address of end consumers to whom the by-product will be sold. Copies of agreement / MoU / letter of intent from them, showing their willingness to purchase said by-product from the proposed project. Also give characteristics of the by products and feasibility of their actual use in respective products as a raw material.
25. Name and quantity of each type of solvents to be used for proposed production. Details of solvent recovery system including mass balance, solvent loss, recovery efficiency feasibility of reusing the recovered solvents etc. for each type of solvent.
26. A detailed EMP including the protection and mitigation measures for impact on human health and environment as well as detailed monitoring plan and environmental management cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/Year earmarked for environment pollution control measures.
27. Permission from PESO, Nagpur for storage of solvents, other toxic chemicals, if any.
28. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment to be provided. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical checkup of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.
29. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the facilities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency Plan should be provided.
30. MSDS of all the products and raw materials.
31. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impacts. This shall include the details of Antidotes also.
32. Details of quantity of each hazardous chemical (including solvents) to be stored, Material of Construction of major hazardous chemical storage tanks, dyke details, threshold storage quantity as per schedules of the Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals, size of the biggest storage tank to be provided for each raw material & product etc. How the manual handling of the hazardous chemicals will be minimized?
33. Details of the separate isolated storage area for flammable chemicals. Details of flame proof electrical fittings, DCP extinguishers and other safety measures proposed. Detailed fire control plan for flammable substances and processes showing hydrant pipeline network, provision of DG Sets, fire pumps, jockey pump, toxic gas detectors etc.
34. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, manufacturing utility staff for safety related measures.
35. Detailed five year greenbelt development program including annual budget, types & number of trees to

be planted, area under green belt development [with map], budgetary outlay; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby areas and elsewhere.

36. Detailed socio-economic development measures including community welfare program most useful in the project area for the overall improvement of the environment. Submit a detailed plan for social corporate responsibilities, with appropriate budgetary provisions for the next five years and activities proposed to be carried out; specific to the current demographic status of the area.
37. (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.(b). Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions ? If so, it may be detailed in the EIA.
38. What is the hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions? Details of this system may be given.
39. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA Report.
40. Compliance of the MoEF's OM dated 04/08/2009 and 05/10/2011 regarding compliance of TOR prescribed & factual correctness of the data submitted in the EIA report, the names of experts associated with / involved in the preparation of the EIA report and the ownership of the EIA report by the Project proponent.
41. Certificate of accreditation issued by the NABET, QCI to the environmental consultant should be incorporated in the EIA Report.
42. A tabular chart with index for point-wise compliance of above TORs.

The above mentioned project specific TORs/additional TORs and the model TORs available in the MoEF's sector specific EIA Manual for Synthetic Organic Chemical industry shall be considered as generic TORs for preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006. The project shall be appraised on receipt of the final EIA report.

18	Dain Colour Chem	Plot no.5, Nilkanth estate, nr. Ravi industrial estate, b/h. Gaytri Dairy, Chhatral, Ta - Kalol, Dist - Gandhinagar	Screening & Scoping
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**Project / Activity No.:** 5(f)

- M/s: Dain Colour Chem (herein after Project Proponent – PP) has submitted application vide their proposal no. SIA/GJ/IND2/5262/2015 dated 19/12/2015.

**Project status:** Expansion

**Project / Activity Details:**

This is an existing unit and now proposes for the manufacturing of the Synthetic Organic chemicals as tabulated below:

Sr. no.	Name of Products	Quantity MT/Month		
		Existing	Proposed	Total
1	Ferrous Sulphate	70	0	70

2	Tatrazine	0	15	15
3	Sunset Yellow FCF	0	15	15
4	Chocolate Brown HT	0	10	10
5	Allura Red	0	8	8
6	Ponceau 4R	0	7	7
7	Carmoisine	0	5	5
8	Amrenth	0	5	5
9	Reactive Black B	0	1	1
10	Reactive Black WNN	0	1	1
11	Super Black G	0	1	1
12	Super Black R	0	1	1
13	Reactive Red ME4BL	0	1	1
14	Reactive Red 195	0	1	1
15	Reactive Red BS	0	1	1
16	Reactive Blue 220	0	1	1
17	Reactive Blue 222	0	1	1
18	Reactive Orange 78	0	1	1
19	Reactive Orange 122	0	1	1
20	Golden Yellow – MERL	0	1	1

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. Plot area is approx. 6179.5 sq. m. Unit has proposed 1900 sq. m area for green belt/tree plantation. Estimated cost of proposed expansion is Rs. 0.5 Crores. Fresh water requirement after proposed expansion will be 23.5 KL/day which will be supplied by the tanker supply. At present there is no industrial waste water generation from the manufacturing activity. Wastewater generation after the expansion will be 6.5 KL/day. Unit has proposed primary ETP followed by Spray dryer to achieve zero liquid discharge. There is no flue gas emission from Existing manufacturing activity. Unit has proposed one Boiler (1 TPH), one TFH (2 Lac KCAL/hr) and one HAG (6.5 Lac Kcal/hr). Bio Coal (2.5 MT/day) will be used as a fuel for Boiler, TFH and HAG. Multi Cyclone separator followed by bag filter is proposed as a fuel. Alkali scrubber is provided as APCM with reaction vessel for control of SO<sub>2</sub>. There will be no process emission from the proposed manufacturing activity. Multi cyclone dust collector followed by wet scrubber is proposed as APCM with spray dryer. Hazardous waste to be generated are ETP waste (9 MT/Year), Discarded containers (1.5 MT/Year), Used Oil (0.05 KL/Year), Process waste (106 MT/Month). ETP waste & process waste will be disposed off at the nearby common TSDF. Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized re-processors. Used oil will be sold only to the registered recyclers.

#### **Discussions/Observations:**

Technical presentation included project details, details of raw materials and its quantity properties of the products etc. Committee observed that the proposed project is located outside the notified area and it is required to comply three conditions for small unit [i.e. water consumption less than 25 M<sup>3</sup>/day; Fuel consumption less than 25 TPD; and not covered in the category of MAH units as per the Management, Storage, Import of Hazardous Chemical Rules (MSIHC Rules), 1989] as per the amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014. PP presented that they are complying these conditions as per said amendment to EIA Notification 2006. However, Committee felt that product wise exact quantity of water consumption per day, copy of CC&A and its compliance and sound management of waste water treatment is required to be submitted. After detailed deliberations, It was decided to reconsider the project for screening / scoping in one of the upcoming meetings only after submission of the following:

277<sup>th</sup> meeting of SEAC-Gujarat, Dated 03.02.2016

1. Satellite image and map showing nearest residential area/habitats from the outer periphery of the proposed site. Distance of the project site from the nearest (1) Anganwadi, School, College, Institute etc. (2) Water Body: Creek / Nallah / Lake / Pond / Reservoir / Canal (3) National Highway (4) State Highway (5) Railway line (6) Heritage site (7) Eco Sensitive zone, National Park / Wild Life Sanctuary etc. and impact of proposed project.
2. Legal Undertaking stating that unit is complying the three conditions for small unit [i.e. water consumption less than 25 M<sup>3</sup>/day; Fuel consumption less than 25 TPD; and not covered in the category of MAH units as per the Management, Storage, Import of Hazardous Chemical Rules (MSIHC Rules), 1989] as per the amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014. Give detailed justification for Non-MAH unit.
3. Water consumption per MT of each product and per day consumption per product.
4. Status of the existing Consent to Operate and Authorization accorded by the SPCB. Compliance status of the existing unit with respect to various conditions of CC&A order obtained from the Gujarat Pollution Control Board (GPCB).
5. Records of any legal breach of Environmental laws i.e. details of show- cause notices, closure notices etc. served by the GPCB to the existing unit in last five years and actions taken then after for prevention of pollution.

19	Yashashvi Rasayan Pvt. Ltd	Plot no.765,Jhagadia Industrial Estate, Jhagadia, Dist.Bharuch	Screening & Scoping
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**Project / Activity No.:** 5(f)

- M/s: Yashashvi Rasayan Pvt. Ltd (herein after Project Proponent – **PP**) has submitted application vide their proposal no. SIA/GJ/IND2/5427/2015 dated 26/12/2015.

**Project status:** Expansion

**Project / Activity Details:**

This is an existing unit and proposed for expansion for manufacturing Synthetic Organic Chemicals as tabulated below:

No	Product Name	Category	Existing MT/M	Proposed MT/M	Total MT/M
Existing Product list					
01	Group A				
	2,6/2,4 Xylidine OR		300	Either or all total not to exceed 300 MT/M	Either or all total not to exceed 300 MT/M
	OTBCHA OR	Aroma chemical	300		
	Phenyl ethyl acetate OR	Aroma chemical	100		
	Fruity woody compound AG1	Aroma composition	15		
02	Group B				
	Dimethyl Octanol	Aroma chemical	55	Either or all total not to exceed 55 MT/M	Either or all total not to exceed 55 MT/M
	COL Crude	Aroma chemical	55		
	Rose compound AG-1	Aroma composition	45		
	Rose compound AG-2	Aroma composition	45		
03	Group B2				

	2,4,5 Tri chloro Aniline OR		30	Either or all total not to exceed 300 MT/M	Either or all total not to exceed 300 MT/M
	PTBCHA OR	Aroma chemical	300		
	Fruity Rose Wood compound AG 1	Aroma composition	50		
04	Group C				
	PEA OR	Aroma chemical	0	Either or all total not to exceed 225 MT/M	Either or all total not to exceed 225MT/M
	Cis-Pinane	Aroma chemical	225		
	Para-Tertiary Butyl cyclohexanol(PTBCH) OR	Aroma chemical	200		
	Ortho-Tertiary Butyl cyclohexanol (OTBCH)	Aroma chemical	200		
	Total		880	00	880
	Proposed Product List				
05	Menthone & Intermediates & Its Derivatives				
	Menthone OR	Aroma Chemical	0	200	200
	Menthol OR				
	Menthyl acetate OR				
	Menthyl Lactate				
06	Phenyl ethyl alcohol & Intermediates & Its derivatives				
	Styrene Oxide/Styrene Epoxide OR	Aroma Chemical	0	400	400
	Phenyl ethyl alcohol OR				
	Phenyl ethyl phenyl acetate (PEPA) OR				
	Phenyl Ethyl Methyl Ether(PEME) OR				
	Phenyl Acetaldehyde OR				
	Phenyl Acetyl Dimethyl Acetal (PADMA)				
07	Hydrogenation of Intermediates				
	Aroma & Aromatic chemicals hydrogenation	Intermediates	0	200	200
	Tetrahydromyrcenol, Nimberol & Others				
08	Alcohols & Intermediates & its derivatives				
	Terpin-4-ol OR	Aroma Chemical	0	400	400
	Terpinolenes various grades (10 to 99) OR				
	Carvacrol OR				
	Isobornyl Cyclohexanol (IBCH) OR				
	Thymol				
09	Aroma chemicals & Intermediates & Its derivatives				

	Terpinyl Methyl ether (TME) OR	Aroma Chemical	0	300	300
	Herbather OR				
	Cedarnol OR				
	Ethyl Fruitate OR				
	Ambarnol OR				
	Maltol OR				
	Ethyl Maltol OR				
	Citronellal (CAL) OR				
	Citronellol (COL)				
	<b>Total</b>		<b>880</b>	<b>1500</b>	<b>2380</b>

## List of By-Product and their capacity

## Existing Byproducts:-

Sr. No.	Byproducts	Existing MT/ Month
01	Sodium Acetate	63
02	Acetic acid	35

## Proposed Byproducts:-

No	Products	Byproducts	Existing MT/ M	Proposed MT/ M	Utilization
<b>Menthone &amp; Intermediates &amp; Its Derivatives</b>					
1	MENTHONE	Terpenes	0	197.01	Sale to PCB registered party
		Menthone Column Bottom mass	0	52.79	Sale to PCB registered party
		Menthone Column Tops	0	50.39	Sale to PCB registered party
		Recovered Cyclohexane	0	513.91	Reuse or Sale to PCB registered party
2	MENTHOL	Menthol Column Tops	0	21.35	Reuse or Sale to PCB registered party
		Menthol Column Bottom mass	0	10.90	Sale to PCB registered party
3	Menthyl Acetate	Acetic acid solution OR	0	465.84	Sale to PCB registered party
		Sodium Acetate			
		Menthyl Acetate Column Tops	0	15.72	Sale to PCB registered party
		Menthyl Column Bottom mass	0	7.78	Sale to PCB registered party
4	Menthyl Lactate	Recovered Cyclohexane	0	80.40	Reuse or Sale to PCB registered party
		Menthyl lactate Column Tops	0	14.01	Sale to PCB registered party
		Menthyl lactate Column Bottom mass	0	29.36	Sale to PCB registered party
<b>Phenyl ethyl alcohol &amp; Intermediates &amp; Its derivatives</b>					
5	STO by	EDC recovered	0	671.09	Reuse or Sale to PCB

	Chlorohydrin				registered party
		STO Column Tops	0	42.06	Sale to PCB registered party
		STO Bottom mass	0	84.57	Sale to PCB registered party
6	STO BY DMF	DMF Aqueous layer (40-55 % )	0	996.27	Sent for recovery or Reuse or Sale to PCB registered party
		DMF recovered			
		EDC recovered	0	421.51	Reuse or Sale to PCB registered party
		STO Column Tops	0	22.83	Sale to PCB registered party
		STO Column Bottom mass	0	80.79	Sale to PCB registered party
7	Phenyl ethyl alcohol	PEA Column Tops	0	21.39	Sale to PCB registered party
		PEA Column Bottom mass	0	7.19	Sale to PCB registered party
8	PEPA	Toluene recovered	0	534.60	Reuse or Sale to PCB registered party
		PEPA Column Tops	0	18.17	Sale to PCB registered party
		PEPA Column Bottom mass	0	23.61	Sale to PCB registered party
9	PEME	Methanol recovered	0	1001.27	Reuse or Sale to PCB registered party
		PEME Column Tops	0	38.90	Sale to PCB registered party
		PEME Column Bottom mass	0	26.22	Sale to PCB registered party
10	Phenyl acetaldehyde	Toluene recovered	0	531.89	Reuse or Sale to PCB registered party
		Phenyl acetaldehyde Column Tops	0	53.19	Sale to PCB registered party
		Phenyl Acetaldehyde Column Bottom mass	0	83.04	Sale to PCB registered party
11	PADMA	Methanol recovered	0	459.96	Reuse or Sale to PCB registered party
		PADMA Column Tops	0	39.14	Sale to PCB registered party
		PADMA Column Bottom mass	0	52.06	Sale to PCB registered party
Alcohols & Intermediates & its derivatives					
12	Terpin-4-ol	Terpin-4-ol Column Tops	0	144.39	Reuse or Sale to PCB registered party
		Terpin-4-ol Column Bottom mass	0	118.37	Sale to PCB registered party
		Saturated alcohol	0	43.25	Sale to PCB registered party
13	Terpinolenes	Dipentene	0	79.14	Sale to PCB registered party
		Terpinolene Bottom mass	0	13.01	Sale to PCB registered party

14	Carvacrol	Carvacrol Column Tops	0	228.47	Sale to PCB registered party
		Carvacrol Column Bottom mass	0	174.49	Sale to PCB registered party
		Sodium Acetate solution	0	723.84	Sale to PCB registered party
15	ISO BORNEOL CYCLOHEXANOL (IBCH)	Fluoroboric acid solution	0	347.29	Sale to PCB registered party
		Sodium Tetra fluoroborate OR	0	72.87	Sale to PCB registered party
		Potassium Tetra fluoroborate	0	82.17	Sale to PCB registered party
		Toluene recovered	0	1063.57	Reuse or Sale to PCB registered party
		Recovered IPA	0	182.95	Reuse or Sale to PCB registered party
		Recovered Methanol	0	52.71	Reuse or Sale to PCB registered party
		IBCH Column Tops	0	266.67	Sale to PCB registered party
		IBCH Column Bottom mass	0	303.88	Sale to PCB registered party
16	THYMOL	Thymol Column Tops	0	185.20	Sale to PCB registered party
		Thymol Column Bottom mass	0	88.40	Sale to PCB registered party

## Aroma chemicals &amp; Intermediates &amp; Its derivatives

17	Terpinyl Methyl Ether (TME)	Recovered Methanol	0	406.78	Reuse or Sale to PCB registered party
		Dipentene	0	216.10	Reuse or Sale to PCB registered party
		TME Column Bottom mass	0	73.73	Sale to PCB registered party
18	Herbather	Herbather Column Tops	0	32.17	Sale to PCB registered party
		Herbather Column Bottom mass	0	106.27	Sale to PCB registered party
19	Cedarnol	Recovered Ethylene glycol	0	27.72	Reuse or Sale to PCB registered party
		Recovered Camphene	0	15.74	Reuse or Sale to PCB registered party
		Cedranol Column Tops	0	8.21	Sale to PCB registered party
		Cedranol Column Bottom mass	0	47.92	Sale to PCB registered party
20	Ethyl Fruitate	Recovered Formic acid	0	98.56	Reuse or Sale to PCB registered party
		EDC recovered	0	426.47	Reuse or Sale to PCB registered party
		Recovered ethanol	0	131.06	Reuse or Sale to PCB registered party
		Ethyl Fruitate Column Tops	0	28.44	Sale to PCB registered party
		Ethyl Fruitate Column Bottom mass	0	92.53	Sale to PCB registered party
21	AMBRENOL	Recovered IPA	0	114.88	Reuse or Sale to PCB

					registered party
		Column Tops	0	24.88	Sale to PCB registered party
		Column Bottom mass	0	48.29	Sale to PCB registered party
22	MALTOL	Magnesium salts solution OR Magnesium Salts	0	895.52	Sale to PCB registered party
		Recovered methanol			
		Sodium hydroxide solution	0	868.66	Reuse or Sale to PCB registered party
		Recovered IPA	0	1285.07	Reuse or Sale to PCB registered party
23	ETHYL MALTOL	Magnesium salt solution OR Magnesium salts	0	798.70	Sale to PCB registered party
		Recovered methanol			
		Recovered formic acid	0	2536.36	Reuse or Sale to PCB registered party
		Sodium hydroxide solution	0	837.66	Reuse or Sale to PCB registered party
		Recovered IPA	0	1242.86	Reuse or Sale to PCB registered party
24	CITRONELLOL	Methanol recovered	0	29.80	Reuse or Sale to PCB registered party
		COL Column Tops	0	22.46	Sale to PCB registered party
		COL Column Bottom mass	0	8.88	Sale to PCB registered party
25	CITRONELLAL	Methanol recovered	0	0.66	Reuse or Sale to PCB registered party
		CAL Column Bottom mass	0	5.43	Sale to PCB registered party

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. Plot area is approx. 35681.08 sq. m. Unit has proposed 5078.58 sq. m area for green belt/tree plantation. Unit will also develop 4014 sq. m for green belt outside the factory. Estimated cost of proposed expansion is Rs. 112 Crores.

Water consumption (KL/day)	Industrial: (Process, Boiler, Cooling, Washing, Scrubber): Existing: 92.86 KL/Day + Proposed: 516.14 KL/Day = 609 KL/Day Domestic: Existing: 3 KL/Day + Proposed: 25 KL/Day = 28 KL/Day and Gardening: Existing: 7.5 KL/Day = 7.5 KL/Day Total Water consumption: Existing: 4.8 KL/Day, Total Proposed: 73 KL/Day
Waste water generation (KL/day)	Industrial: (Process, Boiler, Cooling, Washing, Scrubber): Existing: 15 KL/Day + Proposed: 267.88 KL/Day = 283.28 KL/Day Domestic: Existing: 0 KL/Day + Proposed: 22 KL/Day = 22 KL/Day

Unit has proposed ETP having Primary Treatment, Secondary Treatment and tertiary treatment, RO & MEE Facility. Total 283.28 m<sup>3</sup>/day effluent will be generated out of which 35.9 m<sup>3</sup>/day will be fed to RO & RO – Reject will be sent to MEE. Finally 250 m<sup>3</sup>/day treated effluent will be discharged to NCTL. Domestic effluent (22 KL/Day) will be treated in ETP. 35.9 KL/Day Treated effluent from ETP will be reused in to plant premises.

Details of fuel and APCM is tabulated as below:

Sr. No.	Detail	Capacity		Stack Ht.		Fuel/Fuel consumption		Stack Dia (mm)		Stack gas temp (°C)	
		Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed

1.	Boiler	4 TPH	20 TPH	30 Mtr	40 Mtr	COAL 16: TPD	COAL: 80 TPD	600	2000	150	160
2.	TFH	--	2 Lac Kcal	--	30 Mtr	--	COAL: 1.1 TPD	--	600	--	170
3.	DG set	300 & 125 KVA	1500 KVA	11 Mtr	11 Mtr	LDO: 60 LPH & 30 LPH	LDO: 400 LPH	150	200	80	80

Hazardous waste to be generated are Chemical Sludge from Waste Water Treatment (ETP Waste), Used oil /Spent oil, Discarded Containers MS / HDPE Drums IBC's Carboys, Spent Catalyst, Process waste & Tarry waste, Sludge from Concentration Techniques (MEE), Discarded Asbestos, Waste or residue containing oil (Oil soaked gaskets and cotton waste, filter pads), Spent Resin, Dilute Sulphuric Acid, Mixed salts, Column Tops, Column Bottom mass. Non-hazardous waste will be Insulation, MS Scrap, Other Waste (Wooden waste, paper & Decontaminated plastic) and Fly Ash.

### Observations / Discussion:

Technical presentation by the PP included general information, details of products and raw materials, Waste generation, hazards & control, analysis of pollution parameters before and after treatment, resource consumption and conservation, Risk estimation etc. Issues related to spent acid management, segregation of effluent stream, safety and occupational health and infrastructure by GIDC etc. were discussed. While discussing about the segregation of waste streams, PP informed that they will segregate each waste streams at source and will adopt state of the art technology to achieve GPCB norms. Committee emphasized on complete management of by-products and hazardous waste to be generated from the proposed activities. Upon asking about spent acid management, PP informed that entire quantity of spent acid will be concentrated within plant premises for further utilization. After deliberation on various aspects, following additional TOR was prescribed for the EIA study covering 10 km radius of the project boundary.

1. Copy of plot holding certificate obtained from GIDC Jhaghadia.
2. Need for the proposed expansion should be justified in detail.
3. Demarcation of proposed expansion activities in lay out of the existing premises.
4. Exact details about additional infrastructural facilities, plant machineries etc. required for the proposed expansion
5. Present land use pattern of the study area shall be given based on satellite imagery.
6. Layout plan of the factory premises. Provision of separate entry & exit and adequate margin all round the periphery for unobstructed easy movement of the emergency vehicle / fire tenders without reversing back. Mark the same in the plant layout.
7. Technical details of the plant/s along with details on best available technologies (BAT), proposed technology and reasons for selecting the same.
8. Details of manufacturing process / operations of each product along with chemical reactions, mass balance, consumption of raw materials etc. Details on strategy for the implementation of cleaner production activities.
9. Chemical name of each proposed product to be manufactured. Details on end use of each product.
10. Detailed mass balance and water balance (including reuse-recycle, if any) along with qualitative and quantitative analysis of the each waste stream from the processes.
11. Assessment of source of the water supply with adequacy of the same to meet with the requirements for the project. Permission obtained from the GIDC for supply of raw water. Undertaking stating that no bore well shall be dug within the premises.

12. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of methods to be adopted for the water conservation.
13. Qualitative and quantitative analysis of waste water to be generated from the manufacturing process of each product to be manufactured along with mass balance.
14. Segregation of waste streams and details on specific treatment and disposal of each stream.
15. Details of ETP including dimensions of each unit along with schematic flow diagram. Inlet, transitional and treated effluent qualities with specific efficiency of each treatment unit in reduction in respect of all concerned/regulated environmental parameters. Inlet effluent quality should be based on worst case scenario considering production of most polluting products that can be manufactured in the plant concurrently.
16. Technical details of MEE including evaporation capacity, steam required for evaporation, adequacy of the proposed boiler to supply steam for evaporation in addition to the steam required for the process etc. Techno-economical viability of the evaporation system. Control measures proposed for the evaporation system in order to avoid/reduce gaseous emission/VOC from evaporation of industrial effluent containing solvents & other chemicals.
17. Technical details of proposed Incinerator/Spray dryer including capacity, fuel to be used, adequacy etc. Techno-economical viability of the proposed Incinerator. Control measures proposed for the Incinerator in order to avoid/reduce gaseous emission/VOC from incineration of industrial effluent containing solvents & other chemicals.
18. Technical details of RO/NF system.
19. Undertaking stating that a separate electric meter will be provided for the ETP, RO, Incinerator/Spray Dryer & MEE.
20. Proposal to provide and maintain separate electric meter, operational logbook for effluent treatment systems, online meters for monitoring of flow, pH, TOC/COD, etc.
21. Copy of permission letter with quantity from the authority regarding confirmation for spare capacity available to take additional effluent load in NCTL pipeline.
22. Application wise break-up of effluent quantity to be recycled / reused in various applications like sprinkling for dust control and green belt development etc. In case of land application, details on availability of sufficient open land for utilizing effluent for plantation / gardening. How it will be ensured that treated effluent won't flow outside the premises linked with storm water during high rainy days.
23. Plans for management, collection and disposal of waste streams to be generated from spillage, leakages, vessel washing, used container washing etc. Measures proposed for preventing effluent discharge during unforeseen circumstances.
24. One season Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be incorporated.
25. Anticipated environmental impacts due to the proposed project/production may be evaluated for significance and based on corresponding likely impacts VECs (Valued Environmental Components) may be identified. Baseline studies may be conducted within the study area of 10 km for all the concerned/identified VECs and likely impacts will have to be assessed for their magnitude in order to identify mitigation measures.
26. One complete season base line ambient air quality data (except monsoon) to be given along with the dates of monitoring. The parameters to be covered shall be in accordance with the revised National Ambient Air Quality Standards as well as project specific parameters. Locations of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone and sensitive receptors. There should be at least one monitoring station in the upwind direction. There should be at least one monitoring station in the pre dominant downwind direction at a location where maximum ground level concentration is likely to occur.

27. Modeling indicating the likely impact on ambient air quality due to proposed activities. The details of model used and input parameters used for modeling should be provided. The air quality contours may be shown on location map clearly indicating the location of sensitive receptors, if any, and the habitation. The wind rose showing pre-dominant wind direction should also be indicated on the map. Impact due to vehicular movement shall also be included into the prediction using suitable model. Results of Air dispersion modeling should be superimposed on satellite Image / geographical area map.
28. Base line status of the noise environment, impact of noise on present environment due to the project and proposed measures for noise reduction including engineering controls.
29. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission, measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate from each utility (vii) Air Pollution Control Measures proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it.
30. Action plan for odour control to be submitted.
31. Details on management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling, its utilization and disposal etc. How the manual handling of the hazardous wastes will be minimized. Methodology of de-contamination and disposal of discarded containers and its record keeping.
32. Membership of Common Environmental Infrastructure including the TSDF / Common Incineration Facility, if any.
33. Complete management plan for By-products/Spent acids to be generated, along with the name and address of end consumers to whom the by-product/s will be sold. Copies of agreement / MoU / letter of intent from them, showing their willingness to purchase said by-products/Spent acids from the proposed project.
34. Name and quantity of each type of solvents to be used for proposed production. Details of solvent recovery system including mass balance, solvent loss, recovery efficiency feasibility of reusing the recovered solvents etc. for each type of solvent.
35. A detailed EMP including the protection and mitigation measures for impact on human health and environment as well as detailed monitoring plan and environmental management cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/annum earmarked for environment pollution control measures.
36. Permission from PESO, Nagpur for storage of solvents, other toxic chemicals, if any.
37. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment to be provided. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical checkup of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.
38. Details on volatile organic compounds (VOCs) from the plant operations and occupational safety and health protection measures.
39. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the facilities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency

Plan should be provided.

40. MSDS of all the products and raw materials.
41. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impacts. This shall include the details of Antidotes also.
42. Details of quantity of each hazardous chemical (including solvents) to be stored, Material of Construction of major hazardous chemical storage tanks, dyke details, threshold storage quantity as per schedules of the Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals, size of the biggest storage tank to be provided for each raw material & product etc. How the manual handling of the hazardous chemicals will be minimized?
43. Details of the separate isolated storage area for flammable chemicals. Details of flame proof electrical fittings, DCP extinguishers and other safety measures proposed. Detailed fire control plan for flammable substances and processes showing hydrant pipeline network, provision of DG Sets, fire pumps, jockey pump, toxic gas detectors etc.
44. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, manufacturing utility staff for safety related measures.
45. Detailed five year greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map], budgetary outlay; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby areas and elsewhere.
46. Detailed socio-economic development measures including community welfare program most useful in the project area for the overall improvement of the environment. Submit a detailed plan for social corporate responsibilities, with appropriate budgetary provisions for the next five years and activities proposed to be carried out; specific to the current demographic status of the area.
47. (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report. (b). Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions ? If so, it may be detailed in the EIA.
48. Copies of Consent to Establish, Consent to Operate orders obtained in past along with point wise compliance status of all the conditions stipulated therein.
49. Copy of Environmental Clearance obtained for the existing project and a certified report of the status of compliance of the conditions stipulated in the environmental clearance for the existing operation of the project by the Regional Office of the MoEF.
50. Records of any legal breach of Environmental laws i.e. details of show- cause notices, closure notices etc. served by the GPCB to the existing unit in last five years and actions taken then after for prevention of pollution.
51. Details of fatal / non-fatal accidents, loss of life or man hours, if any, occurred in the existing unit in last three years and measures proposed to be taken for avoiding reoccurrence of such accidents in future.
52. What is the hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
53. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA Report.
54. Phase wise project implementation schedule with bar chart and time frame, in terms of site development, infrastructure provision, EMS implementation etc.

55. Certificate of accreditation issued by the NABET, QCI to the environmental consultant should be incorporated in the EIA Report.

56. A tabular chart with index for point-wise compliance of above TORs.

The above mentioned project specific TORs/additional TORs and the model TORs available in the MoEF's sector specific EIA Manual for **Synthetic Organic Chemical** industry shall be considered as generic TORs for preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006. The project shall be appraised on receipt of the final EIA report.

20	Aadi Drugs	Plot. No. CH/138, GIDC, Dahej-II, Tal. Vagra, Dist. Bharuch	Screening & Scoping
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**Project / Activity No.:** 5(f)

- M/s: Aadi Drugs (herein after Project Proponent – PP) has submitted application vide their proposal no. SIA/GJ/IND2/5648/2015 dated 26/12/2015.

**Project status:** New

**Project / Activity Details:**

This is a new unit proposes the manufacturing of following items.

Sr. no.	Name of Products	Quantity MT/Month
<b>Bulk Drugs</b>		
1.	Metoclopramide Hydrochloride	50
2.	Cetirizine Hydrochloride	
3.	Ondansetron Hydrochloride	
4.	Trifluoperazine Hydrochloride	
5.	Mebendazole	
6.	Tolperisone Hydrochloride	
7.	Loratadine	
8.	Fenofibrate and its intermediate	
9.	Telmisartan and its intermediate	
10.	Nebivolol and its intermediate	
11.	Atorvastatin	
12.	Phenylephrine	
13.	Ambroxol	
14.	Diclofenac Sodium	
15.	Ofloxacin	
Sub-Total		50
<b>Bulk Drug Intermediates</b>		
16.	3-4 Diamino Benzophenone	35
17.	Acetyl Para amino Salicylic Acid	
18.	4- Acetamido, 2- Methoxy, Benzoic Acid Methyl Ester	
19.	5- Chloro, 4- Acetamido 2, Methoxy Benzoic Acid Methyl Ester	

20.	4- Chloro Benzhydryl Chloride	
21.	4-Chloro Benzhydryl Piperazine	
22.	Cetirizine Base	
Sub-Total		
		<b>35</b>
<b>Grand - Total</b>		<b>85</b>
By-Products		
Sr. no.	Name of By-Products	Quantity MT/Month
1.	Sodium Sulphite (25%)	262
2.	Piperazine ML (22%)	40
3.	AlCl <sub>3</sub>	55

The Project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. Total plot area is 13920 sq. m & unit has proposed 2995 sq mtr area for the green belt development/Tree plantation. Expected project cost is Rs. 7.9 Crores. Total water consumption for proposed project will be 61 KL/day ( 5 KL for Domestic, 2 KL for Gardening, 98 KL for Industrial) which will be sourced from GIDC water supply. Industrial waste water generation will be 69 KL/day, which will be treated in proposed Primary, Secondary & Tertiary treatment plant & MEE Facility. 60.0 KL/Day effluent will be treated in ETP and finally treated effluent from ETP and 8 KL/Day condensate from MEE will be reused into plant premises. Domestic waste water (4 KL/day) will be disposed off into soak pit system. It is proposed to install one Boiler (4 TPH) and one TFH (5 Lac Kcal/hr). Agro waste: 2.5 MT/Day or LDO: 200 Lit/Hr will be used as a fuel for Boiler. Agro waste: 2.5 MT/Day or LDO: 200 Lit/Hr will be used as a fuel for TFH. Separate set of Bag filter + Scrubber will be provided with Boiler and TFH. Unit has proposed to install one DG set (250 KVA) in which HSD (20 Lit./hr) will be used as a fuel. Two stage scrubbers will be provided with Cetirizine HCl and its Intermediates, Metoclopramide Hydrochloride, Mebendazole, 5- Chloro, 4-Acetamido 2, Methoxy Benzoic Acid Methyl ester, and Process Vent to control HCl SO<sub>2</sub>. ETP waste, Used Oil, Discarded Containers/ Bags/ Carboys, Distillation Residue, MEE Salt, Spent Catalyst, Spent Carbon, MnO<sub>2</sub> Sludge, Sodium Sulphate, Spent HCl (32%), Spent Sulphuric Acid (35%).

#### Observations & Discussions:

Technical presentation made during the meeting by project proponent. During the meeting, Issues related to waste water management, safety aspect of hazardous chemicals, health effects of chemicals etc. have been discussed. Upon asking about possibility to adopt Zero Liquid Discharge (ZLD) concept for the proposed project, PP informed that they will go for complete ZLD and they will adopt state of the art technology to achieve ZLD. After detailed discussion, the following Terms of Reference (ToR) were prescribed for the EIA study to be done covering 5 km radial distance from the boundary of the project site.

1. Copy of plot holding certificate obtained from GIDC Dahej
2. Present land use pattern of the study area shall be given based on satellite imagery.
3. Layout plan of the factory premises. Provision of separate entry & exit and adequate margin all round the periphery for unobstructed easy movement of the emergency vehicle / fire tenders without reversing back. Mark the same in the plant layout.
4. Technical details of the plant/s along with details on best available technologies (BAT), proposed technology and reasons for selecting the same.

5. Details of manufacturing process / operations of each product along with chemical reactions, mass balance, consumption of raw materials etc. Details on strategy for the implementation of cleaner production activities.
6. Chemical name of each proposed product to be manufactured. Details on end use of each product.
7. Detailed mass balance and water balance (including reuse-recycle, if any) along with qualitative and quantitative analysis of the each waste stream from the processes.
8. Assessment of source of the water supply with adequacy of the same to meet with the requirements for the project. Permission obtained from the GIDC for supply of raw water. Undertaking stating that no bore well shall be dug within the premises.
9. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of methods to be adopted for the water conservation.
10. Qualitative and quantitative analysis of waste water to be generated from the manufacturing process of each product to be manufactured along with mass balance.
11. Segregation of waste streams and details on specific treatment and disposal of each stream.
12. Action plan for 'Zero' discharge of effluent shall be included.
13. Details of ETP including dimensions of each unit along with schematic flow diagram. Inlet, transitional and treated effluent qualities with specific efficiency of each treatment unit in reduction in respect of all concerned/regulated environmental parameters. Inlet effluent quality should be based on worst case scenario considering production of most polluting products that can be manufactured in the plant concurrently.
14. Technical details of MEE including evaporation capacity, steam required for evaporation, adequacy of the proposed boiler to supply steam for evaporation in addition to the steam required for the process etc. Techno-economical viability of the evaporation system. Control measures proposed for the evaporation system in order to avoid/reduce gaseous emission/VOC from evaporation of industrial effluent containing solvents & other chemicals.
15. Technical details of proposed Incinerator/Spray dryer including capacity, fuel to be used, adequacy etc. Techno-economical viability of the proposed Incinerator. Control measures proposed for the Incinerator in order to avoid/reduce gaseous emission/VOC from incineration of industrial effluent containing solvents & other chemicals.
16. Technical details of RO/NF system.
17. Undertaking stating that a separate electric meter will be provided for the ETP, RO, Incinerator/Spray Dryer & MEE.
18. Economical and technical viability of the effluent treatment system to achieve Zero Liquid Discharge (ZLD).
19. Proposal to provide and maintain separate electric meter, operational logbook for effluent treatment systems, online meters for monitoring of flow, pH, TOC/COD, etc.
20. Application wise break-up of effluent quantity to be recycled / reused in various applications like sprinkling for dust control and green belt development etc. In case of land application, details on availability of sufficient open land for utilizing effluent for plantation / gardening. How it will be ensured that treated effluent won't flow outside the premises linked with storm water during high rainy days.

21. Plans for management, collection and disposal of waste streams to be generated from spillage, leakages, vessel washing, used container washing etc. Measures proposed for preventing effluent discharge during unforeseen circumstances.
22. One season Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be incorporated.
23. Anticipated environmental impacts due to the proposed project/production may be evaluated for significance and based on corresponding likely impacts VECs (Valued Environmental Components) may be identified. Baseline studies may be conducted within the study area of 5 km for all the concerned/identified VECs and likely impacts will have to be assessed for their magnitude in order to identify mitigation measures.
24. One complete season base line ambient air quality data (except monsoon) to be given along with the dates of monitoring. The parameters to be covered shall be in accordance with the revised National Ambient Air Quality Standards as well as project specific parameters. Locations of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone and sensitive receptors. There should be at least one monitoring station in the upwind direction. There should be at least one monitoring station in the pre dominant downwind direction at a location where maximum ground level concentration is likely to occur.
25. Modeling indicating the likely impact on ambient air quality due to proposed activities. The details of model used and input parameters used for modeling should be provided. The air quality contours may be shown on location map clearly indicating the location of sensitive receptors, if any, and the habitation. The wind rose showing pre-dominant wind direction should also be indicated on the map. Impact due to vehicular movement shall also be included into the prediction using suitable model. Results of Air dispersion modeling should be superimposed on satellite Image / geographical area map.
26. Base line status of the noise environment, impact of noise on present environment due to the project and proposed measures for noise reduction including engineering controls.
27. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission, measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate from each utility (vii) Air Pollution Control Measures proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it.
28. Action plan for odour control to be submitted.
29. Details on management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling, its utilization and disposal etc. How the manual handling of the hazardous wastes will be minimized. Methodology of de-contamination and disposal of discarded containers and its record keeping.
30. Membership of Common Environmental Infrastructure including the TSDF / Common Incineration Facility, if any.
31. Complete management plan for By-products/Spent acids to be generated, along with the name and address of end consumers to whom the by-product/s will be sold. Copies of agreement / MoU /

- letter of intent from them, showing their willingness to purchase said by-products/Spent acids from the proposed project.
32. Name and quantity of each type of solvents to be used for proposed production. Details of solvent recovery system including mass balance, solvent loss, recovery efficiency feasibility of reusing the recovered solvents etc. for each type of solvent.
  33. A detailed EMP including the protection and mitigation measures for impact on human health and environment as well as detailed monitoring plan and environmental management cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/annum earmarked for environment pollution control measures.
  34. Permission from PESO, Nagpur for storage of solvents, other toxic chemicals, if any.
  35. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment to be provided. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical checkup of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.
  36. Details on volatile organic compounds (VOCs) from the plant operations and occupational safety and health protection measures.
  37. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the facilities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency Plan should be provided.
  38. MSDS of all the products and raw materials.
  39. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impacts. This shall include the details of Antidotes also.
  40. Details of quantity of each hazardous chemical (including solvents) to be stored, Material of Construction of major hazardous chemical storage tanks, dyke details, threshold storage quantity as per schedules of the Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals, size of the biggest storage tank to be provided for each raw material & product etc. How the manual handling of the hazardous chemicals will be minimized?
  41. Details of the separate isolated storage area for flammable chemicals. Details of flame proof electrical fittings, DCP extinguishers and other safety measures proposed. Detailed fire control plan for flammable substances and processes showing hydrant pipeline network, provision of DG Sets, fire pumps, jockey pump, toxic gas detectors etc.
  42. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, manufacturing utility staff for safety related measures.
  43. Detailed five year greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map], budgetary outlay; along with

commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby areas and elsewhere.

44. Detailed socio-economic development measures including community welfare program most useful in the project area for the overall improvement of the environment. Submit a detailed plan for social corporate responsibilities, with appropriate budgetary provisions for the next five years and activities proposed to be carried out; specific to the current demographic status of the area.
45. A tabular chart for the issues raised and addressed during public hearing/consultation and commitment of the project proponent on the same should be provided. An action plan to address the issues raised during public hearing and the necessary allocation of funds for the same should be provided.
46. (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report. (b). Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions ? If so, it may be detailed in the EIA.
47. What is the hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
48. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA Report.
49. Phase wise project implementation schedule with bar chart and time frame, in terms of site development, infrastructure provision, EMS implementation etc.
50. Certificate of accreditation issued by the NABET, QCI to the environmental consultant should be incorporated in the EIA Report.
51. A tabular chart with index for point-wise compliance of above TORs.

The above mentioned project specific TORs/additional TORs and the model TORs available in the MoEF's sector specific EIA Manual for Synthetic organic chemical industry shall be considered as generic TORs for preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006. The draft EIA report shall be submitted to the Gujarat Pollution Control Board for conducting the public consultation process as per the provisions of the EIA Notification, 2006. The project shall be appraised on receipt of the final EIA report.

21	Anlon healthcare Pvt Ltd	Survey no 36/2, village pipaliya, nr. Toll plaza, Rajkot-Gondal National highway, Ta. Gondal, District: Rajkot	Screening & Scoping
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**Project / Activity No.:** 5(f)

- M/s: Anlon healthcare Pvt Ltd (herein after Project Proponent – PP) has submitted application vide their proposal no. SIA/GJ/IND2/5690/2015 dated 28/12/2015.

**Project status:** New

**Project / Activity Details:**

This is a new unit proposes the manufacturing of Synthetic Organic Chemicals as tabulated below:

Sr.	Name of Products	Quantity
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no.		MT/Month
1.	Bosentan	6
2.	Rebamipide	
3.	Zaltoprofen	
4.	Candesartan	
5.	Valsartan	5
6.	Pranlukast	
7.	Ticagrelor	
8.	Bazedoxifene Acetate	
Total		11
<b>Name of By- Product</b>		
1	Sodium Bisulfite	7.6 MT/Month

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006.

Total plot area is 4971 sq. m & unit has proposed 1742 sq mtr area for the green belt development/Tree plantation. Expected project cost is Rs.8 Crores. Aerial distance of nearest habitat is @ 1.2 km of village Pipaliya from the project site. Total water consumption for proposed project will be 8.3 KL/day ( 1.5 KL for Domestic, 1.5 KL for Gardening, 5.3 KL for Industrial) which will be met through own Bore well. Industrial waste water generation will be 16.6 KL/day, which will be treated in proposed Primary, Secondary, Tertiary treatment plant and MEE followed by RO system. Treated waste water (16.2 KL/day) will be reused for process, APCM and Boiler make up. Domestic waste water (1 KL/day) will be disposed off into soak pit system. It is proposed to install one steam Boiler (2TPH) and one TFH (2 Lac Kcal/hr). Bio-Fuel or Agro waste (180 MT/Month) will be used as fuel for Boiler & TFH. Separate Multi Cyclone separator is proposed as APCM for Boiler & TFH. Unit has proposed one DG set (250 KVA) in which HSD (125 ltrs/hr) will be used as fuel. Alkali scrubber will be installed as APCM for process gaseous emission SO<sub>2</sub> from the reactor. Generated Sodium Bi-sulphite will be sell out to actual users or treated in ETP. Hazardous waste generated from the manufacturing activity will be ETP sludge (5 MT/Year), Spent Carbon (20 MT/Year), Organic Residue (211 MT/Year), Spent Solvent (275 MT/Year), Inorganic waste (35 MT/Year), Discarded containers/Bags/Liners (0.01 MT/Year) and used oil (50 Lit. /Year).

#### Observations/Discussion:

Technical presentation made during the meeting by project proponent. Committee observed that the proposed project is located outside the notified area and it is required to comply three conditions for small unit [i.e. water consumption less than 25 M<sup>3</sup>/day; Fuel consumption less than 25 TPD; and not covered in the category of MAH units as per the Management, Storage, Import of Hazardous Chemical Rules (MSIHC Rules), 1989] as per the amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014. PP presented that they are complying these conditions as per said amendment to EIA Notification 2006. It was reported that no national park/sanctuary or ecologically sensitive area is located within 10 km distance. Safety aspects of various hazardous chemicals have been discussed. The committee desired to have MSDS of materials to be handled, information on storage of each hazardous chemical and safety measures thereof. Committee also asked to submit action plan for odour generating chemicals as per CPCB guidelines. After detailed discussion, the following additional Terms of Reference were prescribed for the EIA study to be done covering 5 Km radial distance from the project boundary.

1. Land Possession Documents of the proposed site. NA permission documents from the concern authority.
2. Project site specific details such as distance of the project site from the nearest (1) Village-Nearest

residential area (2) Water Body: Creek / Nallah / Lake / Pond / Reservoir / Canal (3) National Highway (4) State Highway (5) Railway line (6) Heritage site (7) Eco Sensitive zone, National Park / Wild Life Sanctuary, Reserved forest, (8) Aanganwadi/School/College/Institute etc. and likely impact on them due to the proposed project along with the mitigation measures proposed to minimize the likely impact. Give satellite image of 5 KM radius.

3. Legal Undertaking stating that unit is complying the three conditions [i.e. water consumption less than 25 M3/day; Fuel consumption less than 25 TPD; and not covered in the category of MAH units as per the Management, Storage, Import of Hazardous Chemical Rules (MSIHC Rules), 1989] as per the amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014.
4. Layout plan of the factory premises. Provision of separate entry & exit and adequate margin all round the periphery for unobstructed easy movement of the emergency vehicle / fire tenders without reversing back. Mark the same in the plant layout
5. Present land use pattern of the study area shall be given based on satellite imagery.
6. Technical details of the plant/s along with details on best available technologies (BAT), proposed technology and reasons for selecting the same.
7. Details of manufacturing process / operations of each product along with chemical reactions, mass balance, consumption of raw materials etc. Details on strategy for the implementation of cleaner production activities. (Give specific details about source of effluent generation).
8. Chemical name of each proposed products to be manufactured. Details on end use of each products.
9. Detailed mass balance and water balance (including reuse-recycle, if any) along with qualitative and quantitative analysis of the each waste stream from the processes.
10. Assessment of source of the water supply with adequacy of the same to meet with the requirements for the project. Permission obtained from the concern authority for supply of raw water.
11. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of methods to be adopted for the water conservation.
12. Quality and quantity of waste water to be generated from the manufacturing process of each product to be manufactured along with mass balance.
13. Stream wise qualitative & quantitative analysis of each waste stream (including process water, cooling tower blow down, boiler blow down, washing effluent etc.) to be generated. Give segregation scheme at source. Characteristics of untreated and treated wastewater. A detailed effluent treat ability study vis-à-vis the adequacy and efficacy of the treatment facilities proposed for the wastewater to be generated. The characteristic on which treatability is based shall also be stated.
14. Details of the ETP units including its capacity, size of each unit, retention time and other technical parameters. Details regarding provision of online continuous pH meter, TOC analyser and flow meter at the final outlet of the ETP.
15. Technical details of RO system.
16. Details of provisions to be made for complete evaporation of industrial effluent in MEE. Technical details of the MEE including evaporation capacity, steam required for evaporation, adequacy of the proposed boiler to supply steam for evaporation in addition to the steam required for the process etc
17. Plans for management, collection and disposal of waste streams to be generated from spillage, leakages, vessel washing, used container washing etc. Measures proposed for preventing effluent discharge during unforeseen circumstances.
18. One season Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be incorporated.
19. Anticipated environmental impacts due to the proposed project/production may be evaluated for significance and based on corresponding likely impacts VECs (Valued Environmental Components) may be identified. Baseline studies may be conducted within the study area of 5 km for all the

- concerned/identified VECs and likely impacts will have to be assessed for their magnitude in order to identify mitigation measures.
20. One complete season base line ambient air quality data (except monsoon) to be given along with the dates of monitoring. The parameters to be covered shall be in accordance with the revised National Ambient Air Quality Standards as well as project specific parameters. Locations of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone and sensitive receptors. There should be at least one monitoring station in the upwind direction. There should be at least one monitoring station in the pre dominant downwind direction at a location where maximum ground level concentration is likely to occur.
  21. Modelling indicating the likely impact on ambient air quality due to proposed activities. The details of model used and input parameters used for modelling should be provided. The air quality contours may be shown on location map clearly indicating the location of sensitive receptors, if any, and the habitation. The wind rose showing pre-dominant wind direction should also be indicated on the map. Impact due to vehicular movement shall also be included into the prediction using suitable model. Results of Air dispersion modelling should be superimposed on satellite image / geographical area map.
  22. Base line status of the noise environment, impact of noise on present environment due to the project and proposed measures for noise reduction including engineering controls.
  23. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission, measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate from each utility (vii) Air Pollution Control Measures proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it.
  24. Action plan for odour control to be submitted.
  25. Details on management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling, its utilization and disposal etc. How the manual handling of the hazardous wastes will be minimized. Methodology of de-contamination and disposal of discarded containers and its record keeping.
  26. Complete Management plan for By-products/Spent acids to be generated, (if any) from the project including their quantity, quality, characteristics, end use etc. along with the name and address of end consumers to whom the by-product will be sold. Copies of agreement / MoU / letter of intent from them, showing their willingness to purchase said by-product from the proposed project. Also give characteristics of the by products and feasibility of their actual use in respective products as a raw material.
  27. Name and quantity of each type of solvents to be used for proposed production. Details of solvent recovery system including mass balance, solvent loss, recovery efficiency feasibility of reusing the recovered solvents etc. for each type of solvent.
  28. A detailed EMP including the protection and mitigation measures for impact on human health and environment as well as detailed monitoring plan and environmental management cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/Year earmarked for environment pollution control measures.
  29. Permission from PESO, Nagpur for storage of solvents, other toxic chemicals, if any.
  30. Occupational health impacts on the workers and mitigation measures proposed to avoid the human

health hazards along with the personal protective equipment to be provided. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical checkup of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.

31. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the facilities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency Plan should be provided.
32. MSDS of all the products and raw materials.
33. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impacts. This shall include the details of Antidotes also.
34. Details of quantity of each hazardous chemical (including solvents) to be stored, Material of Construction of major hazardous chemical storage tanks, dyke details, threshold storage quantity as per schedules of the Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals, size of the biggest storage tank to be provided for each raw material & product etc. How the manual handling of the hazardous chemicals will be minimized?
35. Details of the separate isolated storage area for flammable chemicals. Details of flame proof electrical fittings, DCP extinguishers and other safety measures proposed. Detailed fire control plan for flammable substances and processes showing hydrant pipeline network, provision of DG Sets, fire pumps, jockey pump, toxic gas detectors etc.
36. A tabular chart for the issues raised and addressed during public hearing/consultation and commitment of the project proponent on the same should be provided. An action plan to address the issues raised during public hearing and the necessary allocation of funds for the same should be provided.
37. Membership of Common Environmental Infrastructure including TSDF, CHWIF etc. (Whichever is applicable)
38. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, manufacturing utility staff for safety related measures.
39. Detailed five year greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map], budgetary outlay; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby areas and elsewhere.
40. Detailed socio-economic development measures including community welfare program most useful in the project area for the overall improvement of the environment. Submit a detailed plan for social corporate responsibilities, with appropriate budgetary provisions for the next five years and activities proposed to be carried out; specific to the current demographic status of the area.
41. (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.(b). Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions ? If so, it may be detailed in the EIA.
42. What is the hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions? Details of this system may be given.
43. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This

reporting mechanism should be detailed in the EIA Report.

44. Certificate of accreditation issued by the NABET, QCI to the environmental consultant should be incorporated in the EIA Report.

45. A tabular chart with index for point-wise compliance of above TORs.

The above mentioned project specific TORs/additional TORs and the model TORs available in the MoEF's sector specific EIA Manual for synthetic organic chemical industry shall be considered as generic TORs for preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006. The draft EIA report shall be submitted to the Gujarat Pollution Control Board for conducting the public consultation process as per the provisions of the EIA Notification, 2006. The project shall be appraised on receipt of the final EIA report.

22	Bhanu Dyes Pvt. Ltd.	Plot no. 758/B, GIDC-Jhaghadia, Ta. Jhaghadia, Dist. Bharuch	Screening & Scoping
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**Project / Activity No.:** 5(f)

- M/s: Bhanu Dyes Pvt. Ltd. (herein after Project Proponent – PP) has submitted application vide their proposal no. SIA/GJ/IND2/3875/2015 dated 04/11/2015.

**Project status:** Expansion

**Project / Activity Details:**

This is an existing unit engaged in manufacturing of various Synthetic organic chemicals like Sulphur Dyes, Its derivatives and Antioxidant / Reducing agents and now proposes for expansion by addition of new products ONCB & DNCB, which are key raw materials for manufacturing of existing products. Existing and proposed project activity is as tabulated below:

Sr. No.	Name	Production Capacity, MT/Month		
		Existing	Proposed	Total after proposed Expansion
1-A	Sulphur Black Liquids <b>OR</b>	1500.00	Nil	1500.00
1-B	Sulphur Black Grains	800.00	Nil	800.00
2-A	<u>Sulphur Colour Liquids-</u> (Blue QL, Blue QR, Navy Blue QIG, Dark Brown SDCF, Brown QNR, Green QGCF etc.) <b>OR</b>	250.00	Nil	250.00
2-B	<u>Sulphur Colour Powder/Grains-</u> (Blue QL, Blue QR, Navy Blue QIG, Dark Brown SDCF, Brown QNR, Green QGCF etc.)	75.00	Nil	75.00
3	Antioxidant/Reducing Agents	100.00	Nil	100.00
4	<b>Ortho Nitro Chloro Benzene (ONCB)</b>	<b>Nil</b>	<b>175.00</b>	<b>175.00</b>
5	<b>Di Nitro Chloro Benzene (DNCB)</b>	<b>Nil</b>	<b>500.00</b>	<b>500.00</b>
<b>List of By-Products</b>				
i-a	Sodium Thiosulphate Liquid <b>OR</b>	3200.00	Nil	3200.00

i-b	Sodium Thiosulphate Pentahydrate Crystals	1230.00	Nil	1230.00
ii	Sodium Hydrogen Sulphide/Sodium Sulphide / Ammonia Solutions	40.00	Nil	40.00
iii-a	Potassium Thio Liquid OR	300.00	Nil	300.00
iii-b	Potassium Thiosulphate Crystals	20.00	Nil	20.00
iv	Sodium Hypo Sulphite	1.60	Nil	1.60
v	Dil. Sulfuric Acid (DSA)	Nil	410.00	410.00

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006.

Plot area is approx. 16065 sq. m. Total green belt area after expansion will be 4000 sq. m ( E-1500 sq. m + P: 2500 sq. m.). Existing project cost is Rs.14.64 Crores. Estimated cost of proposed expansion is Rs. 5 Crores. Fresh water requirement after proposed expansion will be increased from 104 KL/day to 108.6 KL/day (8 KL Domestic, 80.6 KL Industrial & 20 KL Gardening) which will be supplied by the GIDC. Wastewater generation after the expansion will be increased from 27.1 KL/day to 51.1 KL/day [44.7 KL/day industrial + 6.4 KL/day domestic]. At present industrial waste water is being treated in primary ETP followed by MEE and condensate water is reused. Now unit has proposed to install additional MEE. The condensate water will be reused in DNCB process and phenolation process of sulphur Black. Domestic waste water (6.4 KL/day) will be disposed off into septic tank/soak pit system. At present FO is used in one Boiler (1 TPH) and Coal is used in 4 no.s of Evaporators and one 8 TPH Boiler. Two DG sets (160 & 500 KVA) are provided as stand-by facility. There will be no additional flue gas emission after proposed expansion. Alkali scrubber is provided with one reactor vessel to control SO<sub>2</sub>. Reflux condenser followed by three stage water scrubber followed by alkali scrubber is provided as APCM with 5 no.s of reactors to control H<sub>2</sub>S & NH<sub>3</sub>. Unit has proposed caustic scrubber with Nitration reactor to control Nitric Acid fumes. Hazardous waste to be generated are tabulated as below:

Type of waste	Cat.	Quantity, per Year*		
		Existing	Proposed	Total
Dried ETP sludge & MEE Salt	34.3	24.0 MT	6.0 MT	30.0 MT
Spent Carbon	35.3	30.0 MT	Nil	30.0 MT
Filter & Filter Material	35.1	0.1 MT	Nil	0.1 MT
Process Waste	26.1	550 MT	Nil	550 MT
Discarded Carboys/ Drums	33.3	20000 Nos.	Nil.	20000 Nos.
Discarded Bags/ Liners		4000 Nos. (400 kg)	Nil	4000 Nos. (400 kg)
Spent Oil	5.1	2.0 KL	Nil	2.0 KL

Management of hazardous waste will be done as per the HW Rules.

**Observations / Discussion:**

Technical presentation made during the meeting by project proponent. Committee noted that the existing unit is achieving Zero Liquid Discharge status and they will maintain the status after proposed expansion. Committee emphasized on sound management of by-products and hazardous waste to be generated from the proposed activities and asked to reuse or prepare an action plan to consume entire quantity of Spent acids within premises to convert into valuable products instead of sending such spent acids to outside premises. The project proponent presented that they have already started baseline environmental monitoring in the winter 2014-2015 and requested to allow them to use the same for the preparation of the EIA report which was agreed to by the committee. During the meeting, after detailed discussion on various aspects, following additional TORs were prescribed for the EIA study to be done covering 5 Km radius from the project boundary :

1. Demarcation of proposed expansion activities in lay out of the existing premises.
2. Exact details about additional infrastructural facilities, plant machineries etc. required for the proposed expansion.
3. Technical details of all the plants along with details of manufacturing process / operations of each product. Details on strategy for the implementation of cleaner production activities.
4. Chemical name of each product and raw materials along with chemical reactions of unit processes. Details on end use of each products.
5. Technical details of the plant/s along with details on best available technologies (BAT), proposed technology and reasons for selecting the same.
6. Assessment of source of the water supply with adequacy of the same to meet with the requirements for the project expansion. Permission obtained for supply of increased quantity of raw water. Undertaking stating that no bore well shall be dug within the premises.
7. Water consumption and consumption of each raw material per MT of each product.
8. Detailed manufacturing process of each product along with chemical reactions and mass balance (including reuse-recycle, if any).
9. Water balance diagram (including reuse-recycle, if any) alongwith qualitative and quantitative analysis of the each waste stream to be generated. A detailed treat ability study vis-à-vis the adequacy and efficacy of the treatment facilities proposed for the wastewater to be generated.
10. Detailed effluent treatment scheme and disposal method. Technical details of the proposed ETP including size of each unit, retention time etc. including modifications / upgradation to be done in existing ETP to take care of increased effluent quantity along with its adequacy report.
11. Details of provisions to be made for complete evaporation of industrial effluent in MEE. Technical details of the MEE including evaporation capacity, steam required for evaporation, adequacy of the proposed boiler to supply steam for evaporation in addition to the steam required for the process etc
12. Plans for management and disposal of waste streams to be generated from spillage or leakage of tanks, occasional tank washing etc.
13. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of methods to be adopted for the water conservation.
14. One season Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be incorporated.
15. Anticipated environmental impacts due to the proposed project/production may be evaluated for significance and based on corresponding likely impacts VECs (Valued Environmental Components) may be identified. Baseline studies may be conducted within the study area of 5 km for all the concerned/identified VECs and likely impacts will have to be assessed for their magnitude in order to identify mitigation measures.

16. One complete season base line ambient air quality data (except monsoon) to be given along with the dates of monitoring. The parameters to be covered shall be in accordance with the revised National Ambient Air Quality Standards as well as project specific parameters. Locations of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone and sensitive receptors. There should be at least one monitoring station in the upwind direction. There should be at least one monitoring station in the pre dominant downwind direction at a location where maximum ground level concentration is likely to occur.
17. Modelling indicating the likely impact on ambient air quality due to proposed activities. The details of model used and input parameters used for modelling should be provided. The air quality contours may be shown on location map clearly indicating the location of sensitive receptors, if any, and the habitation. The wind rose showing pre-dominant wind direction should also be indicated on the map. Impact due to vehicular movement shall also be included into the prediction using suitable model. Results of Air dispersion modelling should be superimposed on satellite image / geographical area map.
18. Base line status of the noise environment, impact of noise on present environment due to the project and proposed measures for noise reduction including engineering controls.
19. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate emission from each utility (vii) Air Pollution Control Measures proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it.
20. Action plan for odour control to be submitted.
21. Provision of online monitoring system for monitoring of the pollutants from the stacks with an arrangement to reflect gaseous emission parameters on company's server, which can be accessed by the GPCB on real time basis.
22. Details of management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling, its utilization and disposal etc. How the manual handling of the hazardous wastes will be minimized.
23. Management plan for by products/co-products to be generated. Name and address of units to whom the by-products will be sold. Copies of agreement / MoU / letter of intent obtained from them showing their willingness for purchasing the said by-products / wastes, including sodium bromide solution.
24. Complete Management plan for By-products/spent acid to be generated, from the project including their quantity, quality, characteristics, end use etc. along with the name and address of end consumers to whom the by-product will be sold. Copies of agreement / MoU / letter of intent from them, showing their willingness to purchase said by-products/spent acids from the proposed project. Submit the feasibility report for reuse of By-products/spent acid for particular item within premises or at the end user unit.
25. Methodology of de-contamination and disposal of discarded containers and its record keeping.
26. Membership of Common Environmental Infrastructure including the TSDF / Common Hazardous Waste Incineration facility along with an assessment to accommodate the additional quantity of wastes to be generated.
27. Data on air emissions, wastewater generation and solid / hazardous waste generation and management for the existing plant should also be incorporated.
28. Details of measures proposed for the noise pollution abatement and its monitoring.
29. A detailed EMP including the protection and mitigation measures for impact on human health and

- environment as well as detailed monitoring plan and environmental management cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimisation, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/annum earmarked for environment pollution control measures.
30. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impact.
  31. MSDS of all the products and raw materials.
  32. Permission from PESO, Nagpur for storage of solvents, other toxic chemicals, if any.
  33. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment to be provided to the workers. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical check up of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.
  34. Details of quantity of each hazardous chemical to be stored, material of construction of major hazardous chemical storage tanks, threshold storage quantity as per schedules of Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals.
  35. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the map clearly showing which of the facilities and surrounding units would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency Plan should be provided.
  36. Details of fire fighting system including provision for flame detectors, temperature actuated heat detectors with alarms, automatic sprinkler system, location of fire water tanks & capacity, separate power system for fire fighting, details of qualified and trained fire personnel & their job specifications, nearest fire station & time required to reach the proposed site. Submit line diagram of the fire hydrant network.
  37. Provision of qualified industrial hygienist, safety officer, factory medical officer employed for hazardous processes and monitoring of the occupational injury to workers as well as impact on the workers.
  38. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, manufacturing utility staff for safety related measures.
  39. Detailed five year greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map], budgetary outlay; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby areas and elsewhere.
  40. Proposal for socio-economic development activities including community welfare program most useful in the project area for the overall improvement of the environment. Submit a detailed plan for social corporate responsibilities, with appropriate budgetary provisions for the next five years and activities proposed to be carried out; specific to the current demographic status of the area.
  41. Copies of analysis report of the water samples of final outlet of ETP collected by GPCB (Last 3 years).
  42. Consent to Establish, Consent to Operate orders obtained in past along with point wise compliance status of all the conditions stipulated therein.
  43. Copy of Environmental Clearance obtained for the existing project and a certified report of the status of compliance of the conditions stipulated in the environmental clearance for the existing operation of the project by the Regional Office of the MoEF.
  44. Records of any legal breach of Environmental laws i.e. details of show- cause notices, closure notices

etc. served by the GPCB to the existing unit in last five years and actions taken then after for prevention of pollution.

45. Details of fatal / non-fatal accidents, loss of life or man hours, if any, occurred in the existing unit in last three years and measures proposed to be taken for avoiding reoccurrence of such accidents in future.
46. (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report. (b). Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions ? If so, it may be detailed in the EIA.
47. What is the hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions? Details of this system may be given.
48. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA Report.
49. Compliance of the MoEF's OM dated 04/08/2009 and 05/10/2011 regarding compliance of TOR prescribed & factual correctness of the data submitted in the EIA report, the names of experts associated with / involved in the preparation of the EIA report and the ownership of the EIA report by the Project proponent.
50. Certificate of accreditation issued by the NABET, QCI to the environmental consultant should be incorporated in the EIA Report.
51. A tabular chart with index for point-wise compliance of above TORs.

The above mentioned project specific TORs/additional TORs and the model TORs available in the MoEF's sector specific EIA Manual for Synthetic Organic Chemical industry shall be considered as generic TORs for preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006. The project shall be appraised on receipt of the final EIA report.

23	Chemieorganic Chemicals (India) Pvt. Ltd.	Plot No. 758, GIDC-Jhaghadia, Ta.: Jhaghadia, Dist.: Bharuch	Screening & Scoping
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**Project / Activity No.:** 5(f)

- M/s: Chemieorganic Chemicals (India) Pvt. Ltd. (herein after Project Proponent – PP) has submitted application vide their proposal no. SIA/GJ/IND2/5074/2015 dated 09/11/2015.

**Project status:** Expansion

**Project / Activity Details:**

This is an existing unit engaged in the manufacturing of synthetic organic chemicals with the production capacity of 7,525 MT/Month and inorganic chemicals with the maximum production capacity of 10,200 MT/Month. Now, the unit proposes to manufacture various other synthetic organic chemicals with additional production capacity of 5,350 MT/Month. Hence, total production capacity of the synthetic organic chemicals will be 12,875 MT/Month after proposed expansion. List of proposed products is tabulated as below:

Sr. no.	Name of Products	Quantity MT/Month
1	2:4 Di-Chloro Aniline	100.00
2	Ortho Nitro Chloro Benzene And/OR	1,850.00
	Para Nitro Chloro Benzene	

3	Meta Nitro Chloro Benzene	200.00
4	Ortho Anisidine And/Or	600.00
	Para Anisidine	
5	Ortho Nitro Anisole And/Or	600.00
	Para Nitro Anisole	
6	Ortho Toludine And/OR	300.00
	Para Toludine	
7	Meta Di Chloro Benzene	300.00
8	N-Iso Propyl Para Chloro Aniline	100.00
9	Ortho Chloro Aniline	150.00
10	Ortho Phenylene Di Amine And/Or	400.00
	Para Phenylene Di Amine And /Or	
	Meta Phenylene Di Amine	
11	2,4 Di Nitro Aniline	100.00
12	Ortho Nitro Aniline And/Or	200.00
	Para Nitro Aniline	
13	Ortho Chloro Para Nitro Aniline And/Or	200.00
	Para Chloro Ortho Nitro Aniline	
14	2-Chloro 4-Amino Phenol And/Or	100.00
	4-Chloro 2-Amino Phenol	
15	2,4 Di Nitro Anisole	50.00
16	2,4 Di Chloro Acetophenone	100.00
	Total	5,350.00
By-Products		
1.	Dil. Sulphuric Acid	1,092.00
2.	Dil. Hydro Chloric Acid	608.00
3.	Nitrosyl Sulfuric Acid (NOHSO <sub>4</sub> )	2,180.00
4.	Ortho / Para Nitro Phenol	27.00
5.	2,4 Di Nitro Phenol	2.50
6.	Acetic Acid (30%)	120.00

The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006. The proposed expansion will be carried out within the existing premises having total land area of approx 48,204.55 sq. m. Unit has proposed 13286 sq. m area for green belt/tree plantation. The unit has been granted "Consent to Operate (CTO/CC&A)" from Gujarat Pollution Control Board (GPCB) for their existing unit vide order no. AWH-60005, dated 21/02/2014, which is valid up to 24/10/2018. The Unit has been granted Consent to Establish (CTE/NOC) for the Manufacturing of inorganic products vide order no. CTE-59435 dated 21/02/2014, which is valid up to 02/01/2019. Existing project cost is Rs.35.77 Crores. Estimated cost of proposed expansion is Rs. 4.55 Crores. Fresh water requirement after proposed expansion will be increased from 843 KL/day to 1147 KL/day (29 KL Domestic, 1094 KL Industrial & 24 KL Gardening) which will be supplied by the GIDC. Wastewater generation after the expansion will be increased from 28 KL/day [16 KL/day industrial + 12 KL/day domestic] to 195 KL/day [184 KL/day industrial + 11 KL/day domestic]. Presently, effluent generation from various industrial activities is 16 KLD. After treatments in ETP and Single Effect Evaporator, treated water @ 16 KLD is recycled for greenbelt

development. Unit proposes to discharge it into underground pipeline, to be laid by Narmada Clean-tech Ltd. (NCTL), after its commissioning as per CTE granted. The total industrial effluent generation after proposed expansion project will be 200 KLD. Effluent from proposed process, APCM and washing @184 KLD will be treated into proposed effluent treatment plant (ETP) comprising of Primary, Secondary treatment and Multiple Effect Evaporator (MEE). Treated wastewater from proposed expansion will be discharged into underground pipeline, to be laid by Narmada Clean-tech Ltd. (NCTL), after its commissioning, along with the treated wastewater @ 16 KLD from the existing unit. Permission from NCTL to discharge 200 KLD effluent has been granted.

Flue gas details is as under

Sr. No.	Stack Attach to	Status		Dia.& Ht. (m)	Type of Fuel	Concentration of Pollutants	APC Measure
		Existing	Proposed				
1.	Steam Boiler (14.5 TPH)	Working	Working	1.35 & 35	Imported Coal/ Lignite	PM ≤ 150 mg/Nm <sup>3</sup> SO <sub>2</sub> ≤ 100 ppm NO <sub>x</sub> ≤ 50 ppm	Multi Cyclone Separator with Bag filter
	Steam Boiler (20 TPH)	CTE Obtained	--	1.35 & 35	Imported Coal/ Lignite		Electro Static Precipitator
3.	Heater (attached with CaCl <sub>2</sub> Plant)	Working	Working	0.2& 15.0	NA*		Bag filter
4.	Thermic fluid heater (10 lac kcal/hr)	Stand- by	Stand- by	0.5& 15.0	Furnace Oil		Adequate Stack Ht. is provided
5.	D.G. Set (1000 KVA)	Stand-by	Stand-by	0.26& 12.0	Diesel		Adequate Stack Ht. is provided
6.	D.G. Set (500 KVA)	Stand-by	Stand-by	0.16& 8.0	Diesel		Adequate Stack Ht. will be provided
7.	D.G.Set (1000 KVA)	CTE Obtained, Yet not installed	--	0.26& 12.0	Diesel		Adequate Stack Ht. will be provided
8.	D.G. Set (500 KVA)	--	Stand-by	0.26 & 12.0	Diesel		Adequate Stack Ht. will be provided

Presently, the unit uses coal @ 180 MT/Day as a fuel for the steam boilers, furnace oil @ 275 Lit/Hr for Thermic fluid heater and HSD @ 400 Lit/Hr for DG Sets. The same type of fuel will be used after proposed expansion. There will not be any additional requirement of fuel for steam boiler and Thermic fluid heater.

Additional fuel, HSD @ 150 Lit/Hr will be required for DG Set for proposed expansion.

Process gaseous emission details is as under:

Sr. No.	Stack attached to	Status	Ht. & Dia. (m)	Pollutant Concentration, mg/Nm <sup>3</sup>	Air Pollution Control Equipment		
					1 <sup>st</sup> Stage	2 <sup>nd</sup> Stage	3 <sup>rd</sup> Stage
1.	Chlorinator	Existing	20 m & 2"	HCl ≤ 20 Cl <sub>2</sub> ≤ 09	Water Scrubber	Alkali Scrubber	-
2.	Nitrator	Existing	20 m & 2"	NO <sub>x</sub> ≤ 25	Alkali Scrubber	-	-
3.	Reactor of MNCB	Proposed	20 m & 6"	HCl ≤ 20	--	Water Scrubber	Alkali Scrubber
4.	Reactor of MDCB	Proposed	20 m & 6"	NO <sub>x</sub> ≤ 25 HCl ≤ 20	Acidic Scrubber		
5.	Reactor of Amination	Proposed	20 m & 4"	NH <sub>3</sub> ≤ 175	Water Scrubber	Water Scrubber	-

Hazardous waste to be generated are as tabulated below:

Source	Type of waste	Cat.	Quantity, per Month*			Method of Disposal
			E	A	T	
ETP	Dried ETP sludge	34.3	15 MT	100 MT	115 MT	Collection, storage, reception within factory premises, Transportation, solidification, and final disposal at common TSDf, BEIL.
Storage	Discarded Carboys/ Drums	33.3	550 Nos.	550 Nos.	1100 Nos.	Collection, storage, Decontamination, Transportation.
	Discarded Bags/ Liners		250 Kg	250 Kg	500 Kg	
Plant/ Mach.	Spent Oil	5.1	1.5 KL	5 KL	6.5 KL	Collection, Storage, Reuse or sell to MoEF approved recycler/Reuse within premises
Process	Spent Catalyst	35.2	0.12 MT	0.23 MT	0.35 MT	Collection, Storage and send to authorized re – processor.
	Spent Carbon	35.3	Nil	6 MT	6 MT	Collection, storage, transportation and sale to authorized co-processors
	Inorganic Process Waste	28.1	175 MT	184 MT	359 MT	Collection, storage, transportation and Disposal by land filling at BEIL, Bharuch

#### Observations / Discussion:

Technical presentation by the PP included general information, details of products and raw materials, Waste generation, hazards & control, analysis of pollution parameters before and after treatment, resource consumption and conservation, Risk estimation etc. During the meeting Issues related to segregation of effluent stream and its treatment, safety and occupational health and infrastructure by NCTL etc. were discussed. Hydrogen and Chlorine will be received through pipeline. The committee suggested the project proponent to provide proper height and barrier for the transportation of Chlorine & Hydrogen and to get confirmation from supplier industry for all safety measures related to Chlorine & Hydrogen conveyance. While discussing about resource management, Committee asked to explore the possibility of maximum reuse / recycle of treated waste water to minimize fresh water requirement and discharge of waste water.

The project proponent presented that they have already started baseline environmental monitoring in the winter 2014-2015 and requested to allow them to use the same for the preparation of the EIA report which was agreed to by the committee. After deliberation on various aspects, following additional TOR was prescribed for the EIA study covering 10 km radius of the project boundary.

1. Copy of plot holding certificate obtained from GIDC Jhaghadia.
2. Need for the proposed expansion should be justified in detail.
3. Demarcation of proposed expansion activities in lay out of the existing premises.
4. Exact details about additional infrastructural facilities, plant machineries etc. required for the proposed expansion
5. Present land use pattern of the study area shall be given based on satellite imagery.
6. Layout plan of the factory premises. Provision of separate entry & exit and adequate margin all round the periphery for unobstructed easy movement of the emergency vehicle / fire tenders without reversing back. Mark the same in the plant layout.
7. Technical details of the plant/s along with details on best available technologies (BAT), proposed technology and reasons for selecting the same.
8. Details of manufacturing process / operations of each product along with chemical reactions, mass balance, consumption of raw materials etc. Details on strategy for the implementation of cleaner production activities.
9. Chemical name of each proposed product to be manufactured. Details on end use of each product.
10. Detailed mass balance and water balance (including reuse-recycle, if any) along with qualitative and quantitative analysis of the each waste stream from the processes.
11. Assessment of source of the water supply with adequacy of the same to meet with the requirements for the project. Permission obtained from the GIDC for supply of raw water. Undertaking stating that no bore well shall be dug within the premises.
12. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of methods to be adopted for the water conservation.
13. Qualitative and quantitative analysis of waste water to be generated from the manufacturing process of each product to be manufactured along with mass balance.
14. Segregation of waste streams and details on specific treatment and disposal of each stream.
15. Details of ETP including dimensions of each unit along with schematic flow diagram. Inlet, transitional and treated effluent qualities with specific efficiency of each treatment unit in reduction in respect of all concerned/regulated environmental parameters. Inlet effluent quality should be based on worst case scenario considering production of most polluting products that can be manufactured in the plant concurrently.
16. Technical details of MEE including evaporation capacity, steam required for evaporation, adequacy of the proposed boiler to supply steam for evaporation in addition to the steam required for the process etc. Techno-economical viability of the evaporation system. Control measures proposed for the evaporation system in order to avoid/reduce gaseous emission/VOC from evaporation of industrial effluent containing solvents & other chemicals.
17. Technical details of proposed Incinerator/Spray dryer including capacity, fuel to be used, adequacy etc. Techno-economical viability of the proposed Incinerator. Control measures proposed for the Incinerator in order to avoid/reduce gaseous emission/VOC from incineration of industrial effluent containing solvents & other chemicals.
18. Technical details of RO/NF system.
19. Undertaking stating that a separate electric meter will be provided for the ETP, RO, Incinerator/Spray Dryer & MEE.
20. Proposal to provide and maintain separate electric meter, operational logbook for effluent treatment

systems, online meters for monitoring of flow, pH, TOC/COD, etc.

21. Copy of permission letter with quantity from the authority regarding confirmation for spare capacity available to take additional effluent load in NCTL pipeline.
22. Application wise break-up of effluent quantity to be recycled / reused in various applications like sprinkling for dust control and green belt development etc. In case of land application, details on availability of sufficient open land for utilizing effluent for plantation / gardening. How it will be ensured that treated effluent won't flow outside the premises linked with storm water during high rainy days.
23. Plans for management, collection and disposal of waste streams to be generated from spillage, leakages, vessel washing, used container washing etc. Measures proposed for preventing effluent discharge during unforeseen circumstances.
24. One season Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be incorporated.
25. Anticipated environmental impacts due to the proposed project/production may be evaluated for significance and based on corresponding likely impacts VECs (Valued Environmental Components) may be identified. Baseline studies may be conducted within the study area of 10 km for all the concerned/identified VECs and likely impacts will have to be assessed for their magnitude in order to identify mitigation measures.
26. One complete season base line ambient air quality data (except monsoon) to be given along with the dates of monitoring. The parameters to be covered shall be in accordance with the revised National Ambient Air Quality Standards as well as project specific parameters. Locations of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone and sensitive receptors. There should be at least one monitoring station in the upwind direction. There should be at least one monitoring station in the pre dominant downwind direction at a location where maximum ground level concentration is likely to occur.
27. Modeling indicating the likely impact on ambient air quality due to proposed activities. The details of model used and input parameters used for modeling should be provided. The air quality contours may be shown on location map clearly indicating the location of sensitive receptors, if any, and the habitation. The wind rose showing pre-dominant wind direction should also be indicated on the map. Impact due to vehicular movement shall also be included into the prediction using suitable model. Results of Air dispersion modeling should be superimposed on satellite Image / geographical area map.
28. Base line status of the noise environment, impact of noise on present environment due to the project and proposed measures for noise reduction including engineering controls.
29. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission, measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate from each utility (vii) Air Pollution Control Measures proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it.
30. Action plan for odour control to be submitted.
31. Details on management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling, its utilization and disposal etc. How the manual handling of the hazardous wastes will be minimized. Methodology of de-contamination and disposal of discarded containers and its record keeping.
32. Membership of Common Environmental Infrastructure including the TSDF / Common Incineration Facility, if any.

33. Complete management plan for By-products/Spent acids to be generated, along with the name and address of end consumers to whom the by-product/s will be sold. Copies of agreement / MoU / letter of intent from them, showing their willingness to purchase said by-products/Spent acids from the proposed project.
34. Name and quantity of each type of solvents to be used for proposed production. Details of solvent recovery system including mass balance, solvent loss, recovery efficiency feasibility of reusing the recovered solvents etc. for each type of solvent.
35. A detailed EMP including the protection and mitigation measures for impact on human health and environment as well as detailed monitoring plan and environmental management cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/annum earmarked for environment pollution control measures.
36. Permission from PESO, Nagpur for storage of solvents, other toxic chemicals, if any.
37. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment to be provided. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical checkup of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.
38. Details on volatile organic compounds (VOCs) from the plant operations and occupational safety and health protection measures.
39. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the facilities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency Plan should be provided.
40. MSDS of all the products and raw materials.
41. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impacts. This shall include the details of Antidotes also.
42. Details of quantity of each hazardous chemical (including solvents) to be stored, Material of Construction of major hazardous chemical storage tanks, dyke details, threshold storage quantity as per schedules of the Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals, size of the biggest storage tank to be provided for each raw material & product etc. How the manual handling of the hazardous chemicals will be minimized?
43. Details of the separate isolated storage area for flammable chemicals. Details of flame proof electrical fittings, DCP extinguishers and other safety measures proposed. Detailed fire control plan for flammable substances and processes showing hydrant pipeline network, provision of DG Sets, fire pumps, jockey pump, toxic gas detectors etc.
44. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, manufacturing utility staff for safety related measures.
45. Detailed five year greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map], budgetary outlay; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby areas and elsewhere.
46. Detailed socio-economic development measures including community welfare program most useful in

the project area for the overall improvement of the environment. Submit a detailed plan for social corporate responsibilities, with appropriate budgetary provisions for the next five years and activities proposed to be carried out; specific to the current demographic status of the area.

47. (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report. (b). Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions ? If so, it may be detailed in the EIA.
48. Copies of Consent to Establish, Consent to Operate orders obtained in past along with point wise compliance status of all the conditions stipulated therein.
49. Copy of Environmental Clearance obtained for the existing project and a certified report of the status of compliance of the conditions stipulated in the environmental clearance for the existing operation of the project by the Regional Office of the MoEF.
50. Records of any legal breach of Environmental laws i.e. details of show- cause notices, closure notices etc. served by the GPCB to the existing unit in last five years and actions taken then after for prevention of pollution.
51. Details of fatal / non-fatal accidents, loss of life or man hours, if any, occurred in the existing unit in last three years and measures proposed to be taken for avoiding reoccurrence of such accidents in future.
52. What is the hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
53. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA Report.
54. Phase wise project implementation schedule with bar chart and time frame, in terms of site development, infrastructure provision, EMS implementation etc.
55. Certificate of accreditation issued by the NABET, QCI to the environmental consultant should be incorporated in the EIA Report.
56. A tabular chart with index for point-wise compliance of above TORs.

The above mentioned project specific TORs/additional TORs and the model TORs available in the MoEF's sector specific EIA Manual for Synthetic Organic Chemical industry shall be considered as generic TORs for preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006. The project shall be appraised on receipt of the final EIA report.

24.	AIA Engineering Ltd.	Plot No. 103, 104, 105, 115, 116, 117, 118, 1513 and 1514, GIDC-Kerala Ind. Estate & Block No. 130, Vill. Kerala, Ta. Bavla, Dist. Ahmedabad.	Screening & Scoping
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**Project / Activity No.:** 3 (a) (c)

- M/s: AIA Engineering Ltd. (herein after Project Proponent – PP) has submitted application vide their proposal no. SIA/GJ/IND/4018/2015 dated 09/11/2015.

**Project status:** Expansion

**Project / Activity Details:**

This is an existing unit engaged in Alloy Steel Castings and unit is now proposing the expansion with increase in production capacity as tabulated below:

Sr. no.	Production Item	Capacity MT/Year		
		Existing	Proposed	Total

1	Alloy Steel Castings	180000	220000	400000
<p>The project falls under Category B of project activity 3(a) (c) (ii) [Non toxic, secondary metallurgical processing Industry] as per the schedule of EIA Notification 2006.</p>				
<p>Total plot area is 138258 sq. m (87,572 Sq. m. existing + 50,686 Sq. mtrs. additional) &amp; unit has provided 14526 sq. m area for the green belt development/Tree plantation and now proposed additional 31371 sq. m land for green belt development/Tree plantation. Land of block No. 130 of village Kerala is under process of acquiring by company. It will be used only for green belt development. Expected project cost is Rs. 600 Crores. Main raw materials for the proposed production are Various types of M.S. / SS Scrap, Ferro Alloys, Silica sand and Binders etc. Total water consumption for proposed expansion will be 700 KL/day (65 KL for Domestic, 635 KL for Industrial) which will be sourced from GIDC water supply. Domestic sewage (60 KL/day) will be treated in sewage treatment plant and re-used within premises for gardening purpose. Industrial effluent (125 KL from Cooling blow down &amp; 25 KL from regeneration of softening plant) will be blended with fresh water and used for preparation of sand moulds and sand cooling process / slag cooling process to the maximum extent possible. Excess quantity will be blended with treated sewage from STP and will be utilized for gardening within premises. Unit has provided four nos. of 600 KVA capacity stand by DG sets in existing unit. Additional 7 nos. of 600 KVA DG sets are proposed. Flue gas emission will be from induction furnace, heat treatment furnace and DG sets. Process emission will be from Rotary Shakeout, Sand Plant &amp; Breaker drum. Adequate APCM will be provided. A suitable hood will be installed over the melting pot and duct will be connected to a vent along with suitable exhaust fan to vent out fumes of melting. The slag is formed to protect the metal from oxidation and to avoid reduce the melting loss. Excess slag is skimmed off periodically. Adequate Air pollution control equipments in the form of dust collectors &amp; bag filters will be installed. Adequate Stack / vent heights will be provide. Natural Gas - 1200000 SCM/M (additional) will be used as a fuel for heat treatment furnaces, tandish and ladle preheating. LDO or C9 (for heat treatment furnaces) – 850 KL/M (additional) (Optional in case Natural Gas is not available). HSD (1020 KL/year) will be used as a fuel for stand-by DG set – 85 KL/M (additional). Additional Hazardous waste generated from the proposed manufacturing activity will be Discarded containers/Bags/Liners (6000 No.s /Year) and used oil (84 KL/Year). Waste / residue containing oil (160 MT/Year). Discarded barrels / containers / bags / liners will be either reused or returned back to suppliers or sold only to the authorized recyclers. Used oil will be sold only to the registered recyclers. Waste / residue containing oil Will be sent to common incineration facility. Moulding Sand &amp; Fine dust-1,32,000 MT / year and additional Slag – 12000 MT/year will be generated. Additional Bio-sludge generation from STP will be 18 MT/Year. Slag residue, Moulding sand &amp; Fine dust Will be given for filling – up in low lying area, construction of roads etc. Bio-sludge from STP Will be used as fertilizer in gardening area.</p>				
<p><b>Observations/Discussions:</b></p>				
<p>Technical presentation made during the meeting by project proponent. On asking about the purpose of procuring additional land, which is outside GIDC, PP informed that the proposed expansion will be carried out within the plot of GIDC Kerala and additional land will be used for gardening purpose only. Further they informed that they will submit undertaking in this regard. Committee concern about fugitive dust emission from the proposed activity and asked to provide adequate APCM and to develop thick green belt along the periphery of the boundary. The project proponent presented that they have already started baseline environmental monitoring from February 2016 and requested to allow them to use the same for the preparation of the EIA report which was agreed to by the committee. After deliberations on various aspects of the proposed expansion, the TOR proposed by the project proponent were accepted and the project proponent was asked to include the following additional TOR for the EIA study to be done covering 5 km</p>				

radius from the project boundary of the proposed site

1. Need for the proposed expansion should be justified in detail.
2. Demarcation of proposed expansion activities in lay out of the existing premises.
3. Land possession documents and NA permission for the additional land.
4. Exact details about additional infrastructural facilities, plant machineries etc. required for the proposed expansion.
5. Project site specific details such as distance of the project site from the nearest (1) Village (2) lake / pond / reservoir / canal (3) National Highway (4) State Highway (5) Railway line (6) Heritage site (7) National Park/Sanctuary/Reserve Forests shall be included in the rapid EIA report to be prepared covering one season (other than monsoon) data.
6. Present land use pattern within 10 km radius from the project boundary based on satellite imagery.
7. Provision of separate entry & exit and undertaking for the same. Provision of adequate margin all round the periphery for easy unobstructed movement of fire tender without reversing.
8. Technical details of Induction Furnaces including its cooling and interlocking systems alongwith drawing of the induction furnace. Details of Air Pollution Control Measures proposed for Induction Furnace along with its adequacy. Details of specific measures to ensure that emission from the Induction Furnace will not escape from the furnace in form of fugitive emission bypassing the air pollution control system.
9. Complete process flow diagram describing each unit, its processes and operations along with material and energy inputs & outputs (material and energy balance).
10. Characteristics of MS scrap to be purchased as a raw material in terms of presence of foreign material like plastic, rubber, dirt, oily residues, paint etc. Details of scrap cleaning / sorting process, if any to be carried out, for removal of foreign materials.
11. Details of proposed source-specific pollution control schemes and equipments to meet the national standards.
12. Details on requirement of raw materials, its source and storage at the plant.
13. Assessment of source of the water supply with adequacy of the same to meet with the requirements for the project expansion. Permission from concern Authority.
14. Detailed water balance (including reuse-recycle, evaporation if any).
15. Specific measures proposed to conserve water and plans for the future in this regard.
16. Detailed cleaner production measures like energy efficiency in the furnaces to reduce emissions if possible in the proposed project & commitment of the management on futuristic development / implementation for the same.
17. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes.
18. Generation, characteristics and mode of disposal of wastewater in existing and proposed scenarios. Details of the wastewater treatment facilities, if any proposed, including its capacity, size of each unit, retention time and other technical parameters along with adequacy and efficacy report.
19. One season Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be incorporated.
20. Anticipated environmental impacts due to the proposed project/production may be evaluated for significance and based on corresponding likely impacts VECs (Valued Environmental Components) may be identified. Baseline studies may be conducted within the study area of 5 km for all the concerned/identified VECs and likely impacts will have to be assessed for their magnitude in order to identify mitigation measures.
21. One complete season base line ambient air quality data (except monsoon) to be given along with the dates of monitoring. The parameters to be covered shall be in accordance with the revised National Ambient Air Quality Standards as well as project specific parameters. Locations of the monitoring

- stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone and sensitive receptors. There should be at least one monitoring station in the upwind direction. There should be at least one monitoring station in the pre dominant downwind direction at a location where maximum ground level concentration is likely to occur.
22. Modeling indicating the likely impact on ambient air quality due to proposed activities. The details of model used and input parameters used for modeling should be provided. The air quality contours may be shown on location map clearly indicating the location of sensitive receptors, if any, and the habitation. The wind rose showing pre-dominant wind direction should also be indicated on the map. Impact due to vehicular movement shall also be included into the prediction using suitable model. Results of Air dispersion modeling should be superimposed on Google map / geographical area map.
  23. Specific details of (i) Details of the furnaces & utilities required (ii) Type and quantity of fuel to be used in each furnace and utility (iii) Gaseous emission from each furnace and utility (iv) Air pollution Control Measures alongwith its adequacy to achieve the GPCB Norms (v) Flue gas emission rate from each utility (vi) List the sources of fugitive emission from the unit along with its quantification and proposed measures to control it.
  24. Details regarding D.G. sets including its capacities, location, fuel consumption & storage and acoustic measures to abate noise pollution.
  25. Base line status of the noise environment, impact of noise on present environment due to the project and proposed measures for noise reduction including engineering controls.
  26. Details of generation and management of the hazardous wastes/Solid wastes to be generated from the project stating detail of storage area for each type of waste, its handling and its disposal. Details of slag generation, it quality and method of disposal / reuse in various applications. How spillages / leakages of used oil shall be managed.
  27. A detailed EMP including the protection and mitigation measures for the impacts on human health and environment as well as detailed monitoring plan. The EMP should also include the concept of waste-minimisation, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/annum earmarked for environment pollution control measures. Environmental management cell proposed for implementation and monitoring of EMP.
  28. Environment Management Cell equipped with laboratory and qualified environment engineer shall be established.
  29. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipments (PPEs) to be provided to the workers. Detailed work area monitoring plan. Plan for periodic medical examinations of the workers exposed.
  30. Details of activity wise hazards, likely heat stress to the workers, radiation heat level in and around the furnaces, measures proposed for reduction of heat stress around furnaces and for safe handling of the molten metal considering the provision of the Gujarat Factories Rules. Details of automated systems to be provided to avoid manual handling / conveyance of materials.
  31. Detailed risk assessment report including identification of the most hazardous activity, its sub activity, prediction of the worst-case scenario and maximum credible accident scenario along with damage distances and preparedness plan to combat such situation and risk mitigation measures.
  32. Details of fire fighting system including provision for flame detectors, temperature actuated heat detectors with alarms, automatic sprinkler system, location of fire water tanks & capacity, separate power system for fire fighting, details of qualified and trained fire personnel & their job specifications, nearest fire station & time required to reach the proposed site. Submit line diagram of the fire hydrant network.
  33. Provision of qualified industrial hygienist, safety officer, factory medical officer employed for hazardous processes and monitoring of the occupational injury to workers as well as impact on the workers.

34. Impact of the transportation of raw materials and finished product on the transport system should be assessed and provided.
35. Details of possibility of occupational health hazards from the manufacturing activities and proposed measures to prevent it.
36. Ambient temperature in the work zone and distance of the workers from the furnaces. Details of likely heat stress to the workers involved in the manufacturing process. Radiation heat level in & around the furnace, monitoring and mitigation measures for the same including barricading, if any to be provided.
37. Details of personal protective equipments to be provided to the workers. Plan for periodic medical examinations of the workers.
38. Details of first-aid / occupational health centre and arrangement of ambulance van provided for injured workers.
39. Detailed work zone environment monitoring plan. Details of equipment/instrument to measure, record and analyze workplace exposure including air quality, noise, vibration, heat stress, ventilation, illumination etc.
40. Details of five year greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map], budgetary outlay; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in surrounding area.
41. Undertaking from the management regarding maximum employment to the local people.
42. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, mfg utility staff for safety related measures.
43. Proposal for socio economic upliftment activities along with time bound action plan and cost should be included.
44. Copy of Environmental Clearance obtained, if any, for the existing project and a certified report of the status of compliance of the conditions stipulated in the environmental clearance for the existing operation of the project by the Regional Office of the MoEF.
45. Records of any legal breach of Environmental and Safety laws i.e. details of show- cause notices, closure notices etc. served by the GPCB to the existing unit in last five years and actions taken then after for prevention of pollution.
46. Details of any fatal and non-fatal accidents and dangerous occurrences under the Gujarat Factories Rules 1963 (GFR) for factories for the last three years.
47. Copy and condition wise compliance report of the CC&A obtained from the GPCB for the existing plant.
48. Whether any litigation pending and / or any direction / order passed by any Court of Law against the company, if so, details thereof.
49. Certificate of accreditation issued by the NABET, QCI to the environmental consultant should be incorporated in the EIA Report.
50. An undertaking by the Project Proponent on the ownership of the EIA report as per the MoEF&CC OM dated 05/10/2011 and an undertaking by the Consultant regarding the prescribed TORs have been complied with and the data submitted is factually correct as per the MoEF&CC OM dated 04/08/2009. (Compliance of OM dated 05/10/2011 & 04/08/2009).
51. A tabular chart with index for point-wise compliance of above TORs.

The above mentioned project specific TORs/additional TORs and the model TORs available in the MoEF's sector specific EIA Manual for "Metallurgical Industry" & " Induction, Electric Arc & Cupola Furnace" shall be considered as generic TORs for preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006. The project shall be appraised on receipt of the final EIA report.

The following proponents did not remain present during the meeting:

1. Super LIFE Care Pvt.Ltd S.N.140, VILL:Naroda, Ahmedabad.
2. M/s. A P Process, block no 413 paiki, jorjanag village jorjanag jamnapur road post ambaliyasan ta&dist mehsana
3. Radhey Foam Pvt Ltd, Block No. 176, Vill. Kadodara, Tal: Palsana, Dist: Surat.

It was decided to call them in one of the upcoming meetings of SEAC.

The additional information received from the project proponents, which was sought during various SEAC meetings for granting Environmental Clearance to the projects. The said submissions by the project proponents were considered by the committee during the meeting and as it was found satisfactory, the committee decided to recommend the following projects for grant of environmental clearance.

1. M/s. Pellucid Life Sciences Pvt. Ltd, Plot no:3538, Ph:4, GIDC- Chhatral, Ta.: Kalol, Dist. Gandhinagar.
2. Kissan Toners & Developers, Plot no:36, GIDC- Ranasan, Mahudi cross roads, Ta.: Vijapur, Dist.: Mehsana.

*Meeting ended with thanks to the Chair and the Members.*

**Minutes approved by:**

1	Shri V. C. Soni, Vice Chairman, SEAC.	
2.	Shri R. J. Shah, Member, SEAC.	
3.	Shri Natrajan Pratap, Member, SEAC	
4.	Shri V.N. Patel, Member, SEAC.	
5.	Shri Hardik Shah, Secretary, SEAC	