GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IMPACT ASSESSMENT DIVISION)
INDUSTRY-2 SECTOR: CHEMICAL BASED)

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Dated: 25th June, 2020

MINUTES OF THE 20th MEETING OF THE EXPERT APPRAISAL COMMITTEE (INDUSTRY-2 SECTOR-CHEMICAL BASED) HELD DURING JUNE 15-17, 2020

Venue: Meeting conducted through Video Conferencing (VC) and moderated by the Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003.

Time: 10:40 AM

(i) Opening Remarks by the Chairman: The Chairman welcome to the Committee and appreciated the effort of the Committee. After opening remarks, the Chairman opens the EAC meeting for further deliberations.

(ii) Confirmation of the Minutes of the 19th Meeting of the EAC (Industry-2: Chemical Sector) held during May 11-13, 2020 at MoEFCC through VC.

The EAC, having taken noted that final minutes were issued after incorporating comments offered by the EAC members on the minutes of its 19th EAC meeting held during 11-13 May, 2020 conducted through Video Conferencing (VC), confirmed the same.

After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim.

Details of the proposals considered during the meeting **conducted through Video Conferencing (VC)**, deliberations made and the recommendations of the Committee are explained in the respective agenda items as under:-

DAY 1: 15thJune, 2020 (Monday) Meeting held through Video Conferencing (VC) Mode

Consideration of Environmental Clearance

Agenda No. 20.1

Expansion of molasses based distillery from 120 KLPD to 300 KLPD and Co-generation plant from 3.5MW to 12 MW by M/s Vijaynagar Sugar Pvt. Ltd., located at village Gangapur, Taluk Mundargi, District Gadag (Karnataka) -Consideration of Environment Clearance

[IA/KA/IND2/137096/2020, J-11011/366/207-IA-II(I)]

The project proponent and their accredited consultant M/s Samrakshan made a detailed presentation through video conferencing meeting on the salient features of the project and informed that:

The proposal is for environmental clearance to the project for expansion of molasses based distillery from 120 KLPD to 300 KLPD and Co-generation plant from 3.5 MW to 12 MW by M/s. Vijayanagar Sugar Pvt. Ltd. in an area of 538232 sq. m. at Survey No. 32, 33, 34 of village Gangapur and Survey No.13, 14, 19, 20,21,22,23 of village Shiranahalli, Taluka Mundargi, District Gadag, Karnataka.

The project/activity is covered under category A of item 5 (g) 'Distilleries' of the Schedule to the EIA Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.

The Ministry has issued earlier EC on 15th April, 2008 to the existing project of Integrated Sugar complex of 5000 TCD Sugar Plant, 33.5 MW Cogeneration plant and 130 KLPD of rectified spirit or 120 KLPD Ethyl Alcohol (RS/ENA/Ethanol).

The details of products and capacity as under:

S. No	Products manufactured	Existing	Proposed	Total
1	Sugar	5000 TCD of sugar cane crushing	Nil	5000 TCD of sugar cane crushing
2	Distillery	120 KLPD	180 KLPD	300 KLPD
	Co-Generation	3.5 MW	8.5 MW	12 MW

Existing land area is 538232 sq m (133 Acres), out of which distillery land is 25 acres. Proposed expansion will be carried out within the existing premises. Industry has already developed greenbelt in an area of 36 % i.e., 36,421.7 sq m (9 Acres) out of total area of the project. The estimated project cost for expansion is Rs.225 Crores. Existing investment is Rs.172 Crores. Additional capital cost earmarked towards environmental pollution control measures is Rs. 975 Lakhs and the Recurring cost (operation and maintenance) will be about Rs. 318 Lakhs per annum. Total Employment will be 151 persons, direct 100 and indirect 51 persons after expansion.

PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from

the project site. Reserved forests viz., Kappatagudda Reserve Forest - 3 km towards West and Koyilargatti Reserve Forest - 5 km towards East is present within 10 Km radius of the project site. River/ water body is River Tungabhadra at 2 km towards North East of the industry.

Total fresh water requirement is as given in table below for different raw material mix. The water requirement will be met from Tungabhadra River reservoir located at about 2 km towards North East of the project site.

S. No.	Total fresh water requirement	KLD
1	Existing 120 KLPD molasses based unit	931
2	150 KLPD B Heavy + 150 KLPD B Heavy	1505
3	150 KLPD B Heavy + 150 KLPD S. Cane Juice	1308
4	150 KLPD B Heavy + 150 KLPD Grain	2278
5	150 KLPD S. Cane Juice + 150 KLPD S. Cane Juice	600
6	150 KLPD Grain + 150 KLPD S. Cane Juice	1576
7	150 KLPD Grain+ 150 KLPD Grain	2541

PP reported that spent wash will be treated in Multi Effect Evaporator (MEE) to concentrate the spent wash. Concentrated spent wash will be incinerated in incineration Boiler. The utility effluents such as spent lees, condensate from MEE, boiler blow down and cooling tower bleed will be treated in condensate polishing unit. RO is proposed in the expansion phase. RO permeate will be reused for cooling tower water makeup and molasses dilution to achieve Zero Liquid discharge. Part of the concentrated spent wash will also be used for composting.

Power requirement after expansion will be 2500 kW including existing 2100 kW. It will be met from Co-gen and captive power plant. 2 DG sets of 1250 KVA and 1 DG set of 250 kVA capacities are present in the industry and power will be drawn in case of power failure. No additional DG sets are proposed in the expansion programme. Stack of height 30 m is provided for the existing DG Sets, as per CPCB norms.

Existing sugar plant has 120 TPH Boiler and existing distillery has 32 TPH Incineration Boiler fired by Bagasse, slop and coal. In proposed expansion of distillery 1 x 20 TPH, 1 x 60 TPH boiler and modification of incineration boiler from 32 TPH to 40 TPH is proposed. These boilers will use coal/bagasse/slop as fuel for working. ESP/Bag filter with stack of height of 30 m, 60 m and 45 m will be installed respectively for controlling the particulate emissions within the statutory limit of 150 mg/Nm3 for the proposed boilers.

Process emissions are mainly CO2 from fermentation it will be scrubbed, recovered and bottled.

The certified compliance report dated 2nd March, 2020 was forwarded by the Ministry's Regional office at Bangalore, after conducting site on 23rd January, 2020. The Committee deliberated the compliance status of earlier EC and found the same to be satisfactory. PP reported that there is no litigation pending against the project. The Committee also deliberated the show cause notice issued by SPCB

The EAC also noted that the Ministry vide Notification No. S.O. 345(E) dated 17th January 2019, which was extended for another year, published certain relaxation in procedure for grant of environmental clearance for such units propose to produce ethanol under EBP program. One of the provision is to consider the applications seeking prior environmental clearance for production of ethanol as B2 project for appraisal under the EIA notification, 2006.

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the report. If any part of data/information submitted is found to be false/misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

The EAC, after detailed presentation noted that the proposal has been submitted as per Ministry's Notification dated 17th January, 2019, for expediting production of Ethanol for its limited purpose of blending with petrol exclusively for its usage as bio-fuel and considered under category B2 projects specified in the EIA Notification, 2006. The EAC while considering the proposal noted that the PP has requested the Ministry of Petroleum and Natural gas for certificate stating that the product i.e. ethanol for the purpose of blending bioethanol with petrol and OMCs will procure ethanol from this unit for blending with petrol. The EAC has deliberated the proposal for production of biofuel for the purpose of blending bioethanol with petrol.

The EAC, after deliberations, **recommended** the project for grant of environmental clearance under category B2 providing exemption from public hearing and preparation of EIA report as per provisions of the Notification dated 17.01.2019, subject to compliance of terms and conditions as under, and general terms of conditions at **Annexure**:-

(i) Grain unfit for human consumption shall only be used for industrial operations.

(ii) This EC is subject to obtaining certificate from the Ministry of Petroleum and Natural Gas.

(iii) Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board as required.

(iv) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. The reuse of treated effluent in gardening/ horticulture shall not be considered as ZLD.

(v) Concentrated spent wash shall be incinerated and not to be released in open space.

(vi) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

(vii) To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

(viii) Odour shall be prevented at the source and effective odour management scheme shall be implemented.

(ix) Total fresh water requirement shall not exceed 1800 cum/day (@6kl/kl of production of ethanol) proposed to be met from River Tungabhadra reservoir. Prior permission shall be obtained from the concerned regulatory authority.

(x) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the solvent transfer through pumps.

(xi) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

(xii) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

(xiii) The company shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed

system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xiv) The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(xv) As committed, funds allocation for the Corporate Environment Responsibility (CER) shall be Rs. 3 crore and the same will be used for education of nearby area. Item-wise details along with time bound action plan shall be implemented and submitted to the Ministry's Regional Office.

(xvi) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

(xvii) Solar Power shall be generated within the premises @30% of the total power requirement

(xviii) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.

(xix) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(xx) There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.

(xxi) Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.

(xxii) CO_2 generated from the process shall be bottled/made solid ice and sold to authorized vendors.

(xxiii) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For ZLD, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises. For continuous discharge the unit shall install pH, TSS, BOD,COD and flow meter at the ETP outlet.

Agenda No.20.2

Setting up Pesticide, Pesticides intermediates and specialty chemicals manufacturing unit by M/s Mangal Murti Bio-Chem Pvt Ltd at Survey No. 311/2, Block No. 261, At and PO Nana Borsara, Taluka Mangrol, Distt. Surat (Gujarat) - Consideration of Environmental Clearance.

[IA/GJ/IND2/106010/2017, IA-J-11011/536/2017-IA-II(I)]

The Project Proponent and their consultant M/s Aqua-Air Environmental Engineers Pvt. Ltd. (Hon'ble High Court of Gujarat stay order), made a detailed presentation through Video Conferencing (VC) on the salient features of the project. Consultant has informed to the EAC that they have also applied for QCI/NABET Accreditation on March 11, 2020, which is under active consideration before QCI/NABET.

The proposal is for environmental clearance to the project for Setting up Pesticide, Pesticides intermediates and specialty chemicals manufacturing unit by M/s Mangal Murti Bio-Chem Pvt Ltd in an area of 23,427 sqm at Survey No. 311/2, Block No. 261, At and PO Nana Borsara, Taluka Mangrol, Distt. Surat (Gujarat).

The proposal was earlier considered by the EAC in its meeting held during DECEMBER 30-31, 2019 AND JANUARY 1, 2020. The additional information desired by the Committee and response from the project proponent is as under:

S. No.	Query Raised	Query Reply Given by PP	Observation of the EAC
1.	The Committee noted that Consultant has not followed the generic structure of the EIA Notification, 2006. EIA report to be revised as per the terms of reference granted for the project, and shall conform to Appendix III of the EIA Notification, 2006.	EIA Report is revised with complying of all TORs points as per the terms of reference granted for the project, and conforms to the Appendix III of the EIA Notification, 2006. Revised EIA Report with Form-2 is attached with Additional Information file. EIA Report is revised with respect to revised details of raw material and its mitigation measure, copy of CTO's, CER, Schedule-I species, On site emergency plan, etc.	EAC deliberated the information submitted by PP and found the reply in order.

2.	Incremental GLC values in the EIA/Form 2 were reported to be much higher side, and needs to be confirmed	Yes, Value of SPM 121.5 µg/m3, SO2 is 19.56 µg/m3, NOx is 21.43 µg/m3, HCl is BDL and maximum incremental GLC value of SPM is 0.02 µg/m3, SO2 is 0.037 µg/m3, NOx is 0.013 µg/m3, HCl is 0.01 µg/m3 at Village Kharod which is 2.5 km away from the project site. We will provide Adequate Air Pollution Control Measures like Multi Cyclone Separator, Caustic Scrubber, Two Stage Water Scrubber followed by Alkali Water, Two Stage Caustic Water Scrubber and Two Stage Water Scrubber followed by Alkali Scrubber will be provided to control process and flue gas emissions.	
3.	PP needs to submit all the details of old CTO and production details for verifying any violation, if made by PP	The project proponent has submitted the copy of earlier CTOs	The EAC observed that the project proponent is producing DAP since 2018. The PP need to clarify whether the said Fertilizer i.e. Di Ammonium Phosphate requires prior EC.
4.	PP in Form 2 at S.No. 33(1) mentioned that benefits of quarry projects, however this instant project related to pesticides.	The project is related to pesticides, pesticides intermediates and specialty chemicals manufacturing unit and by mistake benefits of quarry projects was mentioned in Form 2 at S. No. 33 (1).	The Committee deliberated the issues.

5.	PH proceeding forwarded through SPCB needs to be uploaded on Form 2 alongwith all the annexures and action plan on the issues raised during PH.	PH proceeding forwarded through SPCB along with action plan on the issues raised during PH is submitted.	The Committee deliberated the issues.
6.	Onsite emergency plan as per MSIHC Rules	As per rule number 13 of Manufacture, Storage and Import of Hazardous Chemical (MSIHC) Rules, 1989, PP has prepared an on-site emergency plan and kept up-to-date detailing how major accidents will be dealt with on the site on which the industrial activity is carried on.	The EAC found satisfactory
7.	Revised water balance with details of total water and fresh water requirement	Total raw water requirement will be is 319.7 KL/day out of which 233.7 KL/Day fresh water will be taken from GIDC Water Supply Authority. Permission for water requirementobtained vide LetterNo. NO/GIDC/DEE/PNL/1796 dated01/09/2017.	The EAC found not satisfactory. The EAC suggested to reduce the fresh water requirement.
8.	Effluent treatment mechanism with plan for Zero Liquid Discharge	Total waste water generation will be 94.4 KL/Day. Total effluent will be treated in ETP, MEE and RO and 86 KL/Day final treated effluent will be recycled for industrial operations. Hence our Unit is Zero Liquid Discharge Unit.	The Committee deliberated the issues.
9.	Details of Wildlife Sanctuary/Protected Area within 10 km of the project site, and status of wildlife recommendations for the project, and conservation plan for Schedule I species, if any.	There is no Wildlife Sanctuary/Protected Area within 10 km of the project site. There is presence of 12 Schedule-I Species in our area. Conservation plan for schedule-I species along with budgetary allocation of Rs. 3,07,500/- is provided and attached	The Committee deliberated the issues.

10.	Plan for Corporate Environmental Responsibility @ 3%.	Plan for Corporate Environmental Responsibility @ 3% is attached	The Committee deliberated the issues.
11.	Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken accordingly	Process safety and risk assessment studies is carried out using PHAST MICRO software which is the most comprehensive software available for performing Process Hazard Analysis (PHA), Quantitative Risk Assessment(QRA) and Financial Risk Analysis (FRA)and all the mitigating be undertaken accordingly. Further Process safety and risk assessment studies using advanced modelswill be carried out after getting EC & will be submitted within 6 month of getting EC,	The EAC found not satisfactory and suggested to carry out 3D modeling for assessment of process safety and Risk assessment

The EAC, during deliberations noted that the project proponent was unable to establish that existing products does not requires prior EC. The EAC, after detailed deliberations decided to **defer the proposal** for clarification/inputs, in respect of the following:-

(i) The EAC observed that the project proponent is producing DAP since 2018. The PP need to clarify whether the said Fertilizer i.e. Di Ammonium Phosphate requires prior EC or not. Clarification in respect of manufacturing of DAP without obtaining prior EC needs to be submitted.

(ii) Detailed rain water harvesting plan needs to be submitted. Fresh water requirement shall be reduced utilizing the harvested rain water. Accordingly, revised water balance shall be submitted.

(iii) The Committee noted that the PP needs to conduct the process safety and Risk assessment studies using advanced/3D modeling and the mitigating measures needs to be analyzed along with the action plan.

(iv) Commitment for inventory for raw materials, products and by-products for 3 days.

(v) Copy of submission of conservation plan for schedule-I species to CWLW of the State Government as there are 12 schedule-I species are reported in the study area.

Agenda No. 20.3

Establishment of Bulk Drugs and Intermediates Manufacturing Unit of capacity 75 TPM, located at Sy No: 11/2B, Pochampally (V), Jaggayyapet (M), Krishna District, Andhra Pradesh by M/s Ajay Labs Pvt Ltd.–Environmental Clearance

[IA/AP/IND2/144171/2019 dated 23rd April, 2020, J-11011/48/2019-IA II (I)]

The Project Proponent and their accredited Consultant M/s Rightsource Industrial Solutions Pvt Ltd, gave a detailed presentation through video conferencing on the salient features of the project and informed that:

The proposal is for environmental clearance to the project for Establishment of Bulk Drugs & Intermediates Manufacturing Unit of capacity 75 TPM by M/s Ajay Labs Pvt Ltd at Survey No.: 11/2B, VillagePochampally, MandalJaggayyapet, District Krishna, Andhra Pradesh.

The project/activity is covered under category A of item 5(f) 'Synthetic organic chemicals industry' of the schedule to the Environment Impact Assessment (EIA) Notification, 2006 and requires appraisal at central level by sectoral Expert Appraisal Committee (EAC) in the Ministry.

The Standard ToR has been issued by the Ministry vide letter dated 15th March 2019.The land area available for the project is 2.62 acres (10602.76 sqm). Industry will develop greenbelt in an area of 4449 sqm covering 41.96 % of the total project area. The estimated project cost is Rs.6.4 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.74 lakhs and the recurring cost (operation and maintenance) will be about Rs.18 lakhs per annum. The project will lead to employment for 60 persons. Industry proposed to allocate Rs. 16 lakhs for 5 years @ 2.5% of the project cost towards Corporate Environment Responsibility.There are no National Parks, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site.

Ambient air quality monitoring was carried out at 8 locations during March - May 2019 and submitted baseline data indicates that ranges of concentrations of PM_{10} (59.24 – 62.13 µg/ m^3), $PM_{2.5}$ (21.48 – 25.18 µg/ m^3), SO_2 (13.81 – 15.86 µg/ m^3), NOx (17.10 – 22.92 µg/ m^3), CO (0.40 – 0.74 mg/ m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be $PM_{10,}$ $PM_{2.5}$, SO_2 & NOx would be 0.492 µg/ m^3, 0.326 µg/ m^3, 1.43 µg/ m^3 & 2.72 µg/ m^3 respectively. The resultant concentrations are within the National Ambient Air Quality Standards (NQQS).

The total water requirement is estimated to be 119 m^3/day, which includes fresh water requirement of 89.66 m^3/day and will be met from Ground Water supply. The permission to draw of ground water for industrial and drinking water purpose was obtained for 119 KLD from AP Ground Water & Water Audit Department Lt. No.: 1588/Hg-II/2018 Dated:

07.08.2019. It was suggested to develop rainwater harvesting system in the project area so that dependency on ground water can be reduced. The fresh water requirement shall be accordingly reduced by 10%.

Effluent of 39.26 m^3/day will be treated through stripper followed by MEE/ATFD, Biological Treatment Plant followed by RO plant. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

Power requirement will be 900 KVA and will be met from Andhra Pradesh Southern Power Distribution Company Limited (APSPDCL). DG sets of 2 X 320 KVAcapacities, with stack (height 10 mts) will be provided for each as per CPCB norms.Coal fired boiler of capacity 4 TPHis proposed, with stack of height 32 mtrs, multi cyclone separator/ bag filter each for controlling the particulate emissions within statutory limit of 115 mg/ Nm^3. During discussions, it was agreed that briquette shall be used as fuel in the boiler and only during rainy season coal shall be used as fuel.

Details of Process emissions generation and its management.

S.No.	Gas	Quantity (Kg/Day)	Treatment Method
1	Carbon dioxide	160	Dispersed into atmosphere
2	Ammonia	136	Scrubbed with Chilled water
3	Hydrogen chloride	393	Scrubbed with Chilled water

Details of Solid waste& Hazardous waste generation and its management.

S. No	Hazardous Waste	Quantity (Kg/Day)	Disposal Method
1	Organic Solid Waste	1086	Sent to Cement Industries
2	Spent Carbon	12	
3	Solvent distillation residue	148	
4	Organic distillate from Stripper	160	
5	ETP Sludge	100	Sent to TSDF
6	MEE Salts	677	
7	Inorganic solid waste	2305	
8	Used Oils	150 Ltrs/Annum	SPCB Authorized Agencies for Reprocessing/Recycling
9	Detoxified Container/liners	600 No's/Month	After Detoxification sent to SPCB Authorized Agencies
10	Used Lead Acid Batteries	4 No's /Annum	Sent back to suppliers on buyback basis
Solid Waste details			
11	Ash from boiler	5600	Sent to Brick Manufacturers

Public hearing for the project has been conducted by the State Pollution Control Board on 9th January, 2020, which was presided over by District Revenue Officer and Additional District Magistrate. The main issues raised during the public hearing are related to ZLD System, utilization of CSR & CER funds and pollution control equipment. The Committee deliberated the action plan and found in order. No litigation is pending against the proposal.

The details of products and capacity as under:

S. No	Product	Quantity (Kg/Month)	CAS Number	Therapeutic Category
1	Atorvastatin Calcium Trihydrate	5000	344423-98-9	Lipid-Lowering
2	Darunavir	5000	206361-99-1	Anti-Retroviral
3	Levetiracetam	10000	102767-28-2	Anti-Convulsan
4	Montelukast Sodium	10000	151767-02-1	Anti-Asthmatic
5	Tri Ethyl Ortho Formate	20000	122-51-0	Norfloxacin Intermediate
6	Di Cyclohexyl Carbo Di Imide	20000	538-75-0	Valacyclovir Intermediate
7	Curcumin	5000	458-37-7	Anti - Inflammatory
	Total	**75000**		

LIST OF BY-PRODUCTS

S. No	Product	By-Product	Quantity in Kg/Day
1	Darunavir	Isobutene	20.12
		1-Hydroxy-pyrrodiline-2,5-dione	35.86

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues in the study area and the issues raised during the public hearing. The Committee noted that the project proponent has obtained necessary permission for industrial usage of the land and found to be satisfactory. The Committee noted that the project proponent is using certain ODS substance as raw material and shall obtain permission for the same as per rules.

The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of environmental clearance.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at **Annexure**:-

(i) The project proponent shall obtain necessary permission for usage/import/export of Ozone Depleting Substances, if any, as applicable, from the Ozone cell of the MoEFCC.

(ii) Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.

(iii) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. All the waste water to be collected and to be reused after treatment.

(iv) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

(v) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R.608(E) dated 21st July, 2010 and amended from time to time shall be followed.

(vi) Briquette shall be used as fuel in the boiler. Coal (with sulphur content <0.5%) shall be used only during the rainy season.

(vii) No raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used.

(viii) Solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(ix) Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology.

(x) To control source and the fugitive emissions (at 99.997%), suitable and adequate pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

(xi) Rainwater harvesting system shall be developed in the project area and collected water shall be used in the process/utilities of the unit.

(xii) Total fresh water requirement shall not exceed 89.66 cum/day, proposed to be met from ground water. Necessary permission obtained in this regard shall be renewed from time to time. The fresh water demand shall be reduced by 10% using rain water harvesting system.

(xiii) Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system. All the vent pipes should be above the roof level.

(xiv) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps. Raw material and products should be stored in leak proof containers. Spent acid to be stored over the ground tank and to be sent to TSDF.

(xv) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

(xvi) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

(xvii) Fly ash should be stored separately as per CPCB guidelines so that it may not adversely affect the air quality. Direct exposure of workers to fly ash and dust should be avoided.

(xviii) The company shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xix) As proposed green belt of at least 10-20 m width shall be developed mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. As committed by the project proponent, the greenbelt area shall be developed and maintained in an area of 4449 sqm (~42%) out of the total project area.

(xx) All the Commitments made during public hearing shall be implemented in a timely manner. Preference shall be given to local villagers (70-80%) for employment in the unit

(xxi) As proposed Rs.16 lakhs shall be allocated towards Corporate Environment Responsibility (CER). As proposed, the CER allocation shall be spent mainly for addressing the issues raised during public consultation/hearing including Drinking water facility/skill development/solar lights, etc., and shall be completed within 5 years. The amount proposed in CER shall be spent during execution of the project and shall not be linked with the CSR.

(xxii) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

(xxiii) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xxiv) The project proponent shall make safety and risk audit of the factory every year and shall comply with the guidelines and suggestions.

(xxv) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(xxvi) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For ZLD, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xxvii) The Committee deliberated the Action plan for implementing EMP and environmental conditions along with budgetary allocations and responsibility. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

Agenda No.20.4

Expansion of Specialty Chemicals & Agrochemical Intermediates manufacturing unit by M/s Sajjan India Ltd at Plot No. 6102-6103, 6117-6119, 5809-5810 GIDC Estate Ankleshwar, District Bharuch (Gujarat)- Consideration of Environmental Clearance

[IA/GJ/IND2/152708/2019, IA-J-11011/130/2020-IA II (I)]

The Project Proponent and their consultant M/s Aqua-Air Environmental Engineers Pvt. Ltd. (Hon'ble High Court of Gujarat stay order), made a detailed presentation through Video Conferencing (VC) on the salient features of the project. Consultant has informed to the EAC that they have also applied for QCI/NABET Accreditation on March 11, 2020, which is under active consideration before QCI/NABET.

During deliberations the EAC noted the following:

The proposal is for environmental clearance to the project for expansion of Specialty Chemicals & Agrochemical Intermediates manufacturing unit from 19283 TPA to 25113 TPA by M/s Sajjan India Ltd in an area of 102746 sqm at Plot No. 6102-6103, 6117-6119, 5809-5810 GIDC Estate Ankleshwar, District Bharuch (Gujarat).

The project/activities are covered under category A of item 5(b) 'Pesticides industry and Pesticide specific intermediates' and item 5(f) 'Synthetic Organic Chemicals' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

Details of existing and proposed products are as under:

S. No	Chemical Name of Product	CAS No.	Existing Qty.	Proposed Qty.	Total Qty. of Group	End Use of Each Products	LD-50/LC-50
			MT/Year				
Benzene Derivatives							
1	2,4,6-Trimethy Benzoyl Chloride	[938-18-1]	4696	0	5896	Photoinitiator	2 300 mg/kg bw (rat)
2	4-Nitro-2-sulphobenzoic Acid Potassium salt	[5344-48-9]				Herbicide	>1000 mg/kg
3	2-Bromo-4-fluoro acetanilide	[1009-22-9]				Fungicide	LC50 5.9 mg/lit (Invertebrates)
4	4[[(2Methoxybenzoyl)amino]sulfonyl] benzoylchloride	[816431-72-8]				Herbicide safener	>= 5000 mg/kg bw
5	Tris (4-Aminophenyl) methane	[548-61-8]				Colorant	> 2000 mg/kg bw
6	2,4,6 TrimethylPheneyl Acetyl Chloride	[52629-46-6]				Insecticide	>= 5 000 mg/kg bw
7	2,5-Dimethyl phenyl acetyl chloride	[55312-97-5]				Insecticide	>= 5 000 mg/kg bw
8	Ortho chloroaniline-5-Carboxylic Acid	2840-28-0				Colorant	> 8 000 mg/kg bw
9	3-(trifluoromethyl) acetophenone	[349-76-8]				Fungicide	> 2 000 mg/kg bw
10	3-chlorobenzotriflouried /Benzo triflouried	[98-15-7]				Colorant	> 5000 mg/kg bw

11	2-Methoxyethyl a-cyano-a-[4-(1,1-dimethylethyl)phenyl]-B-oxo-2-(trifluoromethyl)benzene propanoate	[400882-07-7]				Acaricides	>1000 mg/kg/day
12	4-Chloro-2,6-dimethyl bromobenzene	[103724-99-8]				Herbicide	N/A
13	1,2- bis (2-Aminophenoxy) ethane	[52411-34-4]				Colorant	> 2 000 mg/kg bw
14	2-Trilfuoromethyl benzamide	[360-64-5]				Fungicide	LC50 (calculated) > 100 mg/l @ 96 hr
15	5-Amino-2,4-di-tert-butylphenol	873055-58-4				Pharma	<1100 mg/Kg
16	Polymeric Yellow 2012	Not Available				Polymer	<1200 mg/Kg
17	3,4,5-Trimethoxy-toluene	6443-69-2				Fungicide	2664.35 mg/kg bw
18	AOX-D	Not Available				Polymer	>1000 mg/kg
19	4-Acetyl-2-methylbenzamide	[1095275-06-1]				Insecticide	>1200 mg/Kg
20	2-amino benzonitrile	[1885-29-6]				Fungicide	LD50 Mouse Intravenous - 180 mg/kg
21	2,3-Dichloro-4-hydroxy Aniline	[39183-17-0]				Fungicide	>1000 mg/kg
22	4-(Trifluoromethylbenzy	[349-95-1]				Insecticide	>1200 mg/Kg

	l) alcohol						
23	2-Chloro-5-methoxy benzenesulfonamide	[349-95-1]				Nematicides, Insecticide	>1100 mg/kg
24	2-Iodobenzenesulfonamide	[53730-99-7]	0	1200		Herbicide	>1200 mg/Kg
25	4-Amino-2,5-dimethylphenol	[3096-71-7]				Fungicide	>1100 mg/kg
26	3-Aminobenzotrifluoride	[98-16-8]				Fungicide	>300 mg/kg bodyweight
27	p-Xylene dimethyl ether	[6770-38-3]				Application is circuit board	> 2 000 mg/kg bw
28	2,4,6-Trimethylaniline (Mesidine)	[88-05-1]				Colorant	>743mg/kg
29	p-Xylene glycol	[589-29-7]				application is circuit board	LC50: 477.05 predicted
Benzene Nitro Derivatives							
30	2 – Hydroxy – 4 – nitro Benzene Amine	[121-88-0]	184	0	184	Colorant	MOUSE LD50 >2500 mg/kg
31	2-Hydroxy-5-Nitro Benzene Amine	[99-57-0]				Colorant	2400 mg/kg bw
32	Isopropyl-3-chloro-4-methyl-6-nitribenzoate	[1204518-43-3]				Insecticide	Rat (oral)LD50 > 2500 mg/kg
Benzidines and Alkyl Aromatics							
33	N Propyl Benzene	[103-65-1]	130	0	130	Colorant	LD50 Rat (Oral) 6040

							mg/kg
CPW							
34	Chlorinated Paraffin Wax	85535-85-9	1870	0	1870	used as a flame retardant and plasticizer in rubber, paints, adhesives, caulks, sealants and plastics	10 ml/kg bw
Heterocyclic Derivatives							
35	3-[1-(3,5-dichlorophenyl)-1-methylethyl]-2,3-dihydro-6-methyl-5-phenyl-4H-1,3-oxazin-4-one and its intermediates	[153197-14-9]	3460	0	4735	Herbicide	RAT (Oral) LD50 >500 mg/kg
36	2-Benzyl-2-(Dimethylamino)-4-Morpholino-Butyrophenone and its intermediates	[119313-12-1] & [199109-88-1]				Photoinitiator	> 5000 mg/kg bw
37	1,3-Dimethyl-5-pyrazolone	[2749-59-9]				Fungicide	<2000 mg/kg bw
38	1,3-Dimethyl-5-chloropyrazol carbonyl chloride	[27006-83-3]				Fungicide	>25 - < 50 mg/kg
39	1,3-Dimethyl-5-fluoropyrazol carbonyl fluoride	[191614-02-5]				Fungicide	> 2.000 mg/kg
40	2-(4-methylbenzyl)-2-(dimethylamino) -1-(4-	[119344-86-4]				Photoinitiator	>5000 mglkgbw

	morpholinophenyl)butan-1-one						
41	2,6-Dimethyl-,2,3-dihydro-1h-inden-1-one	[66309-83-9]				Herbicide	2000 mg/kg
42	N-[1,1-dimethyl-2-(4-isopropoxy-o-tolyl)-2-oxoethyl]-3-methylthiophene-2-carboxamide	[875915-78-9]				Fungicide	2000 mg/kg
43	3-Amino-2-(1,3-dimethylbutyl)thiophene	[183677-34-1]				Fungicide	>1100 mg/kg
44	1-{1-ethyl-4-{4-mesyl-3-(2-methoxy ethoxy)-o-toluoyl}-1H-pyrazol-5-yloxy}ethyl methyl carbonate	[1101132-67-5]				Herbicide	Rat (Oral)LD50 2031 mg/kg
45	S-sec-Butyl O-ethyl 2-oxo-3-thiazolidinyl phosphonothioate	[98886-44-3]				Nematicides	Rat (Oral) LD50 57 mg/kg
46	(E)-1,1-dimethylethyl 4-[[[[(1,3dimethyl-5-phenoxy-1H pyrazol-4-yl)methylene]amino]oxy]methyl]benzoate and its intermediates.	[134098-61-6]				Acaricide, Insecticide	Oral 440mg/kg
47	Mepanipyrim	[110235-47-7]				Fungicide	> 5 000 mg/kg bw
48	Methyl 3-amino-2-thiophenecarboxylate	[22288-78-4]				Fungicide	RAT (Oral) LDLo 150mg/kg

49	2-Benzyl-2-dimethylamino-1-(4-piperidinylphenyl)-1-butanone(IR 389)	[119312-76-4]				Photoinitiator	>1200 mg/Kg
50	1-(4-Fluorophenyl)-2-dimethylamino-2-benzyl-butan--1-one (Precursor of IR-389)	[119312-61-7]				Photoinitiator	>1100 mg/kg
51	2-chloro-N-[cyano(thiophen-2-yl) methyl]acetamide	[263137-41-3]				Fungicide	>1300 mg/kg
52	8-(2,6-Diethyl-4-methylphenyl) tetrahydro-7H-pyrazolo[1,2-d][1,4,5] oxadiazepine-7,9(8H)-dione	[314020-44-5]				Herbicide	>1000 mg/kg
53	6-Fluoro-2-methyl indole	[40311-13-5]				Fungicide	>1100 mg/kg
54	Bis[1-(N,N-dimethylsulfamoyl)-1,2,4-triazole-3-yl]disulfide	[247236-09-5]	0	1275		Fungicide	>1500 mg/kg
55	1,3-Thiazolan-2-one	[2682-49-7]				Nematicides	500 mg/kg bw
56	2',6'-dibromo-2-methyl-4'-trifluoromethoxy-4-trifluoromethyl-1,3-thiazole-5-carboxanilide	[130000-40-7]				Fungicide	>5000 mg/kg
57	2-Carbethoxy-3-(2-thienyl)propanoic acid	[143468-96-6]				Pharma	> 2 000 mg/kg bw
Electrolyte							

58	Bis(fluorosulfonyl)amide	[14984-76-0]	30	0	30	Electrolyte	> 2 100 mg/kg bw
Napthelene Based Dye Intermediates							
59	4 – Benzoylamino - 5 – Napthol – 2 – 7 Disulphonic Acid	[117-46-4]	115	0	115	Colorant	> 2500 mg/kg bw
60	4 – Hydoxy N – (3 – Sulfophenyl – 2 – Napthylamine – 6-Sulphonic Acid	[25251-42-7]				Reactive Dyes	LD50 4440 mg/kg b/w
Para quinone Derivatives							
61	Ethyl Trichloro Benzoquinone	[65824-98-8]	30	0	30	Colorant	>2000 mg/kg
Pyridine Derivatives							
62	(3-Ethylsulfonyl)-2-pyridinesulfonamide and its intermediates	[111812-58-9]	1140	0	2930	Herbicide	7500mg/kg
63	3-Chloro-5-trifluormethyl-pyridine-2-acetonitrile	[157764-10-8]				Fungicide	> 300 - < 2.000 mg/kg
64	5-chloro-2-methoxy-4-methylpyridine-3-carboxylic acid	[851607-38-0]				Fungicide	> 2000 mg/kg
65	(5-chloro-2-methoxy-4-methylpyridin-3-yl) (2,3,4-trimethoxy-6-methylphenyl)methanone	[6880046-61-9]				Fungicide	> 2000 mg/kg
66	2-Sulfonamide-3-trifluoromethylpyridine	[104040-76-8]				Herbicide	>1000 mg/Kg
67	3-Chloro-2-hydrazinopyridine	22841-92-5.				Insecticide	

68	3-Chloro-N-(3-chloro-5-tri uoromethyl-2-pyridyl)-α,α,α-tri uoro-2,6-dinitro-p-toluidine	[79622-59-6]				Fungicide	>5,000 mg/kg
69	3-Chloro-N-[3-chloro-2,6-dinitro-4-(trifluoromethyl) phenyl]-5-(trifluoromethyl)-2-pyridinamine	[79622-59-6]	0	1790		Fungicide	>5,000 mg/kg
70	2-Thiobenzyl nicotinic acid	[112811-90-2]				Herbicide	>1100 mg/kg
71	2,3-Dichloropyridine	[2402-77-9]				Insecticide	135mg/kg
72	2,3-Dichloro-5-trifluoromethylpyridine & 2-chloro-3-(trifluoromethyl)pyridine & 3-(trifluoromethyl)pyridine	[69045-84-7] & [65753-47-1] & [3796-23-4]				Agrochemicals	LD50 1190 mg/kg (Mouse) for DCTF
Pyrimidine Chloro Derivatives							
73	Trichloro 1,3-Diazabenzene	[3764-01-0]	1640	0	1840	Hair Regrowth Treatment	LC50 39.39144 predicted by PNN
74	Tetrachloro 1,3-Diazabenzene	[1780-40-1]				Colorant	LD50 (Mouse) 32mg/kg
75	Dichloro-1,3 diazabenzene	[1193-21-1]				Fungicide	LD50 >200 mg/kg bw
76	DiaminoChloro 1,3-diazabenzene	[156-83-2]				Hair Regrowth Treatment	LC50 956.5 mg/liter (96 hrs)

77	4,6-Dimethoxy-2-chloropyrimidine	[13223-25-1]	0	200		Herbicide	>1000 mg/kg
78	N-(2-Amino-4,6-dichloropyrimidin-5-yl) formamide	[171887-03-9]				Pharma	500 mg/kg bw
Pyrimidine Derivatives							
79	Amino-Dimethoxy-1,3 Diazabenzene	[36315-01-2]	1514	0	2089	Herbicide	Mice (Oral) LD50 737 mg/kg bw
80	Dimethoxy-(Phenoxy Carbonyl) Amino)-1,3 diazabenzene	[89392-03-0]				Herbicide	Rat (Oral) LD50 >500 mg/kg
81	2-Amino-4,6-dimethylpyrimidine	[767-15-7]				Herbicide	> 735 mg/kg
82	2-Amino-5,8-dimethoxy(1,2,4)triazolo(1,5-C) pyrimidine	[219715-62-5]				Herbicide	>1000 mg/kg
83	5-(1,3-Dioxan-2-yl)-4-(4-trilfuoromethylbenzyloxy)pyrimidine	[1449021-97-9]				Insecticide	Mice (Female) LD50 >300 mg/kg
84	3-(4-Chloro-2-fluoro-5-mercapto-phenyl)-1-methyl-6-trifluoromethyl-1H-pyrimidine-2,4-dione	[353292-92-9]				Herbicide	>1100 mg/kg
85	1-[(4,6-dimethyl pyrimidin-2-yl)-3-(3-ethyl sulfonyl pyridin-2-yl)] sulfonyl urea	[122931-48-0]				Herbicide	LD50 = > 5000 mg/kg Acute oral Rat
86	M-[(5-pyrimidinyl)methyl]-2-pyridinamine	[1383916-51-5]				Insecticide	Rat (Oral) MOAEL 57.6

							mg/kg
87	2,4,6-Trihydroxypyrimidine	[67-52-7]	0	575		Hair Regrowth Treatment	13400 mg/kg bw
88	4,6-Difluoro-2-ethoxy pyrimidine	[166524-65-8]				Herbicide	< 500 mg/kg bw
89	5-Bromopyrimidine	[4595-59-5]				plant growth regulator	LC50: 35.53 predicted
90	1-(4,6-Dimethoxy Pyrimidine-2-yl)propan-2-one	[414909-25-4]				Herbicide	>1200 mg/Kg
						Fungicide	1879 mg/kg
Pyrimidine-Pyridine Derivatives							
91	1-(4,6-dimethoxypyrimidin-2-yl)-3-(3-trifluoromethyl-2-pyridylsulfonyl)urea and its intermediates.	[104040-78-0]	640	0	640	Herbicide	LD50 = > 5000 mg/kg rats and rabbits
92	aryl fused pyrimidinedione	[1263133-33-0]				Insecticide	Marine water fish LC50 116 mg/kg
93	Benzoic acid , 2[[[[(4,6-dimethyl-2-pyrimidinyl) amino] carbonyl] amino]sulfonyl]- ,methylester ;Sulfometuron Methyl (DPX-T5648) (SMM)	[74222-97-2]				Herbicide	Oral LD50 in rats is > 5 g/kg

94	Benzoic acid,2[[[[(4-chloro-6-methoxy-2-pyrimi dinyl)amino]carbonyl] amino]sulfonyl]- ,ethylester; Chlorimuron Ethyl (DPX-F6025)	[90982-32-4]				Herbicide	Oral LD50 in Rats is 4102mg/ kg
Quinoxaline Derivatives							
95	2,6-Dichloroquinoxaline	[18671-97-1]	0	50	50	Herbicide	195 mg/kg
Triazine Derivatives							
96	2-(2,4-dihydroxyphenyl)-4,6-bis(4-biphenyl)-1,3,5-triazine	[182918-16-7]	280	0	280	Plastics	>1000 mg/kg
97	2-Chloro-4,6-dimethoxy-1,3,5-triazine	[3140-73-6]				Herbicide	LD50 870 mg/kg bw
98	2-(2,4-dihydroxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine	[1668-53-7]				Plastics	>1200 mg/Kg
Other Agro and Pharma Intermediates							
99	2,5-Dimethoxypyrimidin-4-amine	[6960-17-4]	2944	0	3444	Herbicide	>1000 mg/kg
100	(1E)-[2-[[6-(2-chlorophenoxy)-5-fluoro-4-pyrimidinyl] oxy]phenyl] and its intermediates.	[361377-29-9]				Fungicide	>2000 mg/kg
101	3',4'-difluoro-2-aminobiphenyl	[873056-62-3]				Fungicide	>1200 mg/Kg

102	isopropyl 2-(4-methoxybiphenyl-3-yl)hydrazinoformate 1-methylethyl 2-(4-methoxy[1,1'-biphenyl]-3-yl)hydrazinecarboxylate and its intermediates	[149877-41-8]				Insecticide	Ratte LD50 >5000 mg/kg
Napthols& Bases							
103	O-(2,4-dichlorophenyl)o-ethyl 5-propyl phosphorodithioate	[34643-46-4]				Insecticide	Oral (Rabbit)750mg/kg
104	POCL3	[10025-87-3]				Pharmaceutical Industry	Oral (RAT) 36mg/kg
105	2,3-dimethyl-1-nitroisourea	[255708-80-6]				Insecticide	
106	Diethyl Disulfide	[110-81-6]				Insecticide, Fungicide	Oral (RAT) 2030mg/kg
107	4-Methoxycyclohexanone	[13482-23-0]				Insecticide	> 2 000 mg/kg bw
108	1,1 -Carbonyl diazepan -2-One Code: (CBC)	[19494-73-6]				Polymer	>1500 mg/kg
109	1,4-Dihydroxyanthraquinone	81-64-1				Colorant	Oral (RAT) 5000mg/kg
110	2,6-difluoro phenyl hydrazine HCl	[502496-26-6]				Pesticide	>1100 mg/kg
111	4,4-Dimethoxy-2-butanone	[5436-21-5]	0	500		Herbicide	6200mg/kg

112	Dimethyl 1,3-acetonedicarboxylate	[1830-54-2]				Fungicide	> 2 000 mg/kg bw
113	Methyl 4-Methyl-3-oxopentanoate	[42558-54-3]				Pharma	> 2 000 mg/kg bw
114	N-Methylmethane sulfonamide	[1184-85-6]				Herbicide	> 2 000 mg/kg bw
115	Nitroguanidine	[556-88-7]				Insecticide	4640 mg/kg
116	2,2'-Oxybis[5,5-dimethyl-1,3,2-dioxa phosphorinane]2,2'di sulphide	[4090-51-1]				Polymer	> 5000 mg/kg
117	4-Methyl-3-oxopentanoate	[30414-53-0]				plant growth regulators	>1200 mg/Kg
118	2-(butan-2-yldisulfanyl)butane	[5943-30-6]				Fosthiazate (Agro chemical)	>1000 mg/kg
Thiol Derivatives							
119	N,N-Dimethyl-1,2,3-trithian-5-amine hydrochloride	[424827-89-4]	490	0	490	Insecticide	>1100 mg/kg
120	2-isopropylthioxanthone	[5495-84-1]				Photoinitiator	LD50 >2000 mg/kg bw
121	[(9-oxo-9H-thioxanthen-2-yl)oxy]acetic acid	[84434-05-9]				Photoinitiator	>2000 mg/kg bw
R&D							
122	R & D Products		120	240	360	R & D Products For Developm	>1000 mg/kg

						ent & above End Usage	
	Total		**19283**	**5830**	**25113**		

The standard terms of references (TOR) for the Project was granted by the Ministry on 24th February, 2020.

The Committee has opined that if there is storage of raw materials having high safety issues, the project proponent shall go for advanced modelling and prediction and make management plan accordingly. The Committee after detailed deliberations, **deferred** the proposal and insisted for requisite information/clarification with respect to the following:

(i) As project is located at CPA, PP needs to submit the Zero Liquid Discharge plan as per Ministry's OM dated 31.10.2019 (CPA).

(ii) PP needs to submit the following details on the Risk associated with the hazardous chemicals proposed to be used as a raw material;

- Risk need to be carried out for medium and catastrophic ruptures/leak even for Methanol, Bromine including Hydrochloric acid, Sulphuric acid and Benzoyl Chloride etc.
- Frequency/Probability of leak per year as done for any risk analysis.
- Individual risk contours and societal risk F-N curves to assess against risk acceptance criteria using advanced 3D modeling.

(iii) Adequate Plan for storage of rain water.

(iv) PP needs to submit copy of all CTOs since inception of the project and the production details to verify the violation case, if any.

(v) The Committee noted that for PM10 & PM2.5 value, the incremental value w.r.t. GLC is reported as 0.01-0.02 µg/ m^3. In this regard verification of incremental values w.r.t. GLC and revised data needs to be submitted.

Agenda No.20.5

Setting up bulk drug manufacturing unit by M/s Reynish Pharmachem Pvt. Ltd., located at Survey No.504, 505, 507, Village Dabhasa, Tehsil Padra, District Vadodara, Gujarat - Consideration of Environment Clearance – reg.

[IA/GJ/IND2/75368/2018, J-11011/194/2018-IA-II(I)]

The project proponent and their accredited consultant M/s San Envirotech Pvt Ltd. made a detailed presentation on the salient features of the project though Video Conferencing (VC).

The proposal is for environmental clearance to the project for setting up bulk drug manufacturing unit of capacity 50 TPM by M/s ReynishPharmachem Pvt. Ltd., in an area of 36958 sqm. located at Survey No.504, 505, 507, Village Dabhasa, Tehsil Padra, District Vadodara, Gujarat.

The proposal was earlier considered by the EAC in its meeting held during 13-15 April, 2020. The additional information desired by the Committee and response from the project proponent is as under:

S. No.	Query Raised	Query Reply Given by PP
1.	EIA report uploaded on the website was finalized in March, 2019 as per title of the Report. PP needs to upload the correct EIA/EMP Report. The Committee suggested that the Consultant/PP has to read all the documents before uploading on the Parivesh Portal.	Final EIA Report has been uploaded on the PARIVESH portal. The Committee deliberated the same.
2.	PP mentioned that instant site is not located at CPA, the Committee suggested that PP needs to submit a letter from CPCB or SPCB about the location of project side in CPA or not.	The Project location does not fall in Critically Polluted Area (CPA) or Severely Polluted Area (SPA) as per the MoEFCC Office Memorandum dated 31.10.2019. The project proponent has submitted letter to EAC issued by the GPCB regarding CPA stating that the proposed site is not located inside CPA. The Committee deliberated the same.
3.	PP has not carried out alternate site analysis. Committee is of the view that as PP shall conduct the alternate site analysis study and prepare the Report as per Appendix III of the EIA Notification, 2006.	The project proponent submitted that they have carried out alternate site analysis and finalized land of Site-2 based on maximum criteria fulfilled by this location. The Committee deliberated the same.

4.	PP in slide number 49 mentioned that there is no schedule-I species reported, However as per EIA/EMP Report Schedule I species were reported. The PP needs to prepare the Conservation plan for protection of schedule-1 species and submit to the CWLW for approval.	Conservation plan with budgetary allocation for schedule-I spices of the study has been submitted. The Committee deliberated the same.
5.	Status of TSDF membership	The Bharuch Enviro Projects Pvt. Ltd. Dahej, Bharuch district) a GPCB approved TSDF site and they have informed that they have spare capacity to accommodate our waste. They inform that after obtain EC from MoEFCC New Delhi & CTE from GPCB, applied for membership with granted quantity of waste and deposit respective amount for required membership.
6.	Land conversion details for industrial purpose needs to be submitted	The project proponent has submitted the land conversion document.
7.	Revised detailed CER plan @ 5% of project cost and needs to be submitted.	The project proponent has revised the CER amount from 2.5 % to 5% and modified amount is incorporated in EIA report. The Committee deliberated the same.
8.	Details technology/mitigation measure to achieve the Volatile organic compounds (VOCs)/Fugitive emissions @ 99.997%.	The project proponent has submitted the quick reference for mitigation measure to achieve the Volatile organic compounds (VOCs)/Fugitive emissions @ 99.997%.
9.	Details of fly ash brick making unit inside the plant for fly ash disposal.	Unit committed to install and operate fly ash brick making unit inside the plant for fly ash disposal with capacity of 2000 bricks per hour hydraulic pressure machine for operate once in a week to utilize fly ash to be generated from burning of Ago briquette in boiler, HAG and TFH.

During deliberations, the EAC noted the following:

The details of products are as under:

S. No.	Name of Products	Qty. (MTPM)
1.	Telmisartan	48
2.	Ondansetron HCl	
3.	Benfotiamine	
4.	Albendazole	
5.	4-Hexyl resorcinol	
6.	Zopiclone	
7.	Tamoxifen citrate	
8.	Bupropion HCl	
9.	Anstrozole	
10.	Theophylline	
11.	Allantoin	
12.	Terbinafine Hydrochloride	
13.	Pregabalin Hydrochloride	
14.	Rebamipide	
15.	Valsartan	
16.	R & D Drugs	2.0
Total		**50.0**

All Synthetic Organic Chemicals Industry **(**Dyes & Dye Intermediates; Bulk Drugs and Intermediates Excluding Drug Formulations; Synthetic Rubbers; Basic Organic Chemicals, Other Synthetic Organic Chemicals And Chemical Intermediates**)**are listed in S.N. 5**(f)** of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' to be appraised at Central level in the Ministry.

The terms of References (TOR) for the Project has been issued by the Ministry vide letter dated 13th July, 2018. Public hearing for the project was conducted by the Gujarat Pollution Control Board on 21st June 2019 under the chairmanship of Additional District magistrate. The main issues raised during the public hearing are priority to local employment, utilization of CSR fund, management plan for waste water and air pollution control, use of agro based fuel instead of coal.

Total land area of the project is 36958 sqm. Industry will develop greenbelt in an area of 33% i.e. 12175m^2, out of total area of the project. The estimated project cost of

proposed unitisRs. 40.0Crore.Total capital cost earmarked towards environmental pollution control measures is Rs. 2.5Croreand the Recurring cost (operation and maintenance) will be about Rs. 1.5Croreper annum. Total employment including direct and indirect will be 65 persons.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance of the project site. Total water requirement is 253 m3/day of which fresh water requirement of 118 m3/day will be met from Bore well. Generated waste water of 135 m3/day will be recycled/treated inside the premises. Process effluent along with wastewater of scrubber, washing and utility (141 KLD) will be taken to ETP and then passed through to RO. RO reject will be sent to MEE; RO permeate (95 KLD) and condensate of MEE (40 KLD) will be reused. Domestic wastewater will be disposed to soak pit. Thus, achieving Zero Liquid Discharge (ZLD).

Power requirement will be 1000 kVA and will be met from Madhya Gujarat Vij Company Ltd. (MGVCL). Unit will install a D.G. Set of 500 kVA capacity and will be used as standby during power failure. Stack (height 11 meters) will be provided as per CPCB norms to the proposed D.G.Set. In proposed unit, one steam boiler (3.0 TPH), one Thermic Fluid Heater (20 Lakhs Kcal/hr.), one Hot Air Generator (30Lakhs Kcal/hr.) will be installed. Agro Briquette will be used as fuel in proposed utilities. Multi Cyclone,bag filter& water scrubber with a stack height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 150 mg/Nm3for the proposed utilities.

Process emission generation will be from oneventattached with Process Vessel and one common vent of 5 nos. of Spin Flash Dryer/FBD/RVD. Water scrubber followed by Alkali Scrubber will be provided as an APCM to control process emission. In built cyclone and bag filter will be provided for Spin Flash Dryer/FBD/RVD.

Ambient air quality monitoring was carried out at 8 locations during October, 2018 to December, 2018and the baseline data indicates the ranges of concentrations as: PM10 (63.7–71.0µg/m3), PM2.5 (37.0–48.0 µg/m3), SO2 (13.0 –16.3 µg/m3) and NOx (15.8–18.1 µg/m3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 3.603 µg/m3, 1.902 µg/m3, 1.628 µg/m3, and 0.287 µg/m3with respect to PM10, SO2 NOx and HCl. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of

data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues in the study area and the issues raised during the public hearing.

Additional information submitted by the project proponent to be satisfactory and addressing the concerns of the Committee. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at **Annexure**:-

(i) Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.

(ii) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.

(iii) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

(iv) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R.608(E) dated 21stJuly, 2010 and amended from time to time shall be followed.

(v) Fugitive emissions shall be controlled at 99.99% with effective chillers.

(vi) No raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used.

(vii) Solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(viii) Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology.

(ix) To control source and the fugitive emissions (at 99.997%), suitable and adequate pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

(x) Total fresh water requirement shall not exceed 118 cum/day, proposed to be met from bore well. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA and renewed from time to time.

(xi) Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.

(xii) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.

(xiii) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

(xiv) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

(xv) Fly ash should be stored separately as per CPCB guidelines so that it may not adversely affect the air quality. Direct exposure of workers to fly ash and dust should be avoided.

(xvi) Onsite brick manufacturing unit by using Fly ash shall be installed.

(xvii) The Project Proponent shall undertake waste minimization measures as below: (a) Metering and control of quantities of active ingredients to minimize waste, (b) Reuse

of by-products from the process as raw materials or as raw material substitutes in other processes, (c) Use of automated filling to minimize spillage, (d) Use of Close Feed system into batch reactors, (e) Venting equipment through vapour recovery system, (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xviii) The green belt of at least 5-10 m width shall be developed in not less than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(xix) As committed, at least 5 % of the project cost shall be allocated towards Corporate Environment Responsibility (CER). As proposed, the CER allocation shall be spent mainly for addressing the issues raised during public consultation/hearing including assistance/infrastructure development of village school, social/environmental activities, skill development, etc.

(xx) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

(xxi) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xxii) Solar Power shall be generated within the premises @30% of the total power requirement

(xxiii) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(xxiv) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xxv) The Committee deliberated the Action plan for implementing EMP and environmental conditions along with budgetary allocations and responsibility. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

Agenda No.20.6

Proposed technical grade pesticides manufacturing unit at Survey No: 65/2, Village: Shemala, Tehsil Gondal, District Rajkot by M/s Fengel Crop Sciences(Unit-II)-Reconsideration of Environmental Clearance.
[IA/GJ/IND2/98969/2019, IA-J-11011/81/2019-IA-II(I)]

The project proponent and their accredited consultant M/s San Envirotech Pvt Ltd. made a detailed presentation on the salient features of the project though Video Conferencing (VC).

The proposal is for environmental clearance to the project for setting up technical grade pesticides manufacturing unit of capacity 300 MTPM by M/s Fengel Crop Sciences (Unit-II) in an area of 11962.23 sqm at Survey No. 65/2, Village Shemala, Tehsil Gondal, District Rajkot, Gujarat.

The proposal was earlier considered by the EAC in its meeting held during 13-15 April, 2020. The additional information desired by the Committee and response from the project proponent is as under:

S. No.	Observations by the EAC	Query Reply Given by PP
(i)	Revised layout plan needs to be submitted consisting green belt around the periphery not in three side.	Revised layout plan covering peripheral greenbelt has been submitted in PARIVESH portal.The Committee deliberated the same.
(ii)	Commitment not to use furnace oil as fuel for boiler.	PP agreed to drop use of FO (Furnace Oil) even in the absence ofAgro Briquettes. PP shall not the use of FO (Furnace Oil) as fuel and during the unavailability of Agro Briquettes andPP will stop the production of our plant.
(iii)	PP in slide number 53 mentioned that there is no schedule-I species reported, However, as per EIA/EMP Report Schedule I species were reported. The PP needs to prepare the Conservation plan for protection of schedule-1 species and submit to the CWLW for approval.	Conservation plan with budgetary allocation for Schedule-I species of the study area has been submitted. The Committee deliberated the same.
(iv)	Action Plan on the	Action Plan on the issues raised during PH along

	issues raised during PH needs to be submitted along with timeline and budget. The concerns were related to dumping of waste in night and contamination of ground water in the area.	with timeline and budget has been submitted. The concerns related to dumping of waste in night and contamination of ground water in the area. PP committed not to dumping of waste anywhere except approved TSDF site. Additionally, PP wish to inform you that GPCB has prepared online manifest mechanism which covered type and quantity of waste to be disposed and at which TSDF site along with GPS mounted registered transport vehicle. This vehicle is real-time monitored by GPCB up to final disposal at TSDF site. In such situation no chances to dispose of waste anywhere. PP will submit legal undertaking at the time of CTO application to GPCB covering above commitments.
(v)	PP needs to submit the reasons for ground water contamination and its mitigation measures.	PP's consultant has taken ground water sample at eight locations in study area and not found any ground water contamination. We have also taken the opinion from Regional Officer, Gujarat Pollution Control Board, Rajkot regarding any observation for ground water contamination in the vicinity of the plant for taking sample of ground water.Such type ofground water contamination was not observed by GPCB as well. Mitigation measures: PP have proposed zero liquid discharge of entire industrial effluent. Industry will not discharge industrial effluent inside or outside the factory. Additionally, industry will periodically take the sample from nearby bore well/dug well and analysis will be submitted to Gujarat Pollution Control Board. Currently there is no ground water contamination that requires mitigation.
(vi)	PP needs to relook the water analysis report as in some of the samples eg. SW 1 & SW2, TDS < total ions. Please verify the water analysis and identify the root cause analysis for the same and resubmit.	Consultant have checked the calculation of water analysis and found deviation in ionic balance as well. There is ± 5% lower side TDS compared with total ions concentrations. Consultant have checked all records of analysis report and primarily observed that there was time gap of seven days between TDS analysis and Ions analysis. During this period there are chances of little quantity of water evaporated during this period resulting in observed minor ± 5% deviation between TDS and

		ions balance. Consultant assures you that they will analyze TDS and TDS related parameters at same time to avoid such type of deviation.
(vii)	Status of TSDF membership.	PP have approach to nearby TSDF operators (Eco Care Infrastructures Private Limited, Viramgam, Ahmedabad District and Saurashtra Enviro Projects Pvt. Ltd. Bhachau, Kutch district) and he informed that both the site have spare capacity to accommodate our waste. They inform that after obtain EC from MoEFCC& CTE from GPCB, applied for granted quantity of waste with CTE and deposit of membership. We will immediately obtained TSDF membership after grant of CTE based on EC grant by MoEFCC.
(viii)	Land conversion details for industrial purpose needs to be submitted.	Copy of Land conversion letter from Agriculture to non-agriculture for industrial purpose along with copy of part of sale deed has been submitted. The Committee deliberated the same.
(ix)	Revised detailed CER plan @ 5% of project cost and needs to be submitted.	Revised detailed CER plan @ 5% has been submitted. The Committee deliberated the same.

During deliberations, the EAC noted the following:

The details of product and capacity as under:-

S. No.	Name of Products	Class	CAS No.	LD_{50}	Quantity (MTPM)
1.	Azoxystrobin	Fungicide	131860-33-8	>2000 mg/kg	300
2.	Thiamethoxam	Insecticide	153719-23-4	1563 mg/kg	
3.	Acetamiprid	Insecticide	135410-20-7	217 mg/kg	
4.	Imidacloprid	Insecticide	138261-41-3	410 mg/kg	
5.	Chlorpyrifos	Insecticide	2921-88-2	>200 mg/kg	
6.	Bio Pesticide		--	--	100
7.	Bio Fertilizer		--	--	
				Total	**400**

The project/activities are covered under category A of item 5(b) 'Pesticides industry and Pesticide specific intermediates' of the Schedule to the Environment Impact

Assessment Notification, 2006, and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

The Terms of References (TORs) for the Project has been issued by the Ministry vide letter dated 13th April, 2019. Public hearing for the project was conducted by the Gujarat Pollution Control Board on 8th November, 2019 under the chairmanship of Additional District magistrate. The main issues raised during the public hearing are related topriority to local employment, proper management of generated waste and effluent.

PP reported that Total land area of the project is 11962.23 sqm. Industry will develop greenbelt in an area of 33% i.e. 3960m2, out of total area of the project. The estimated project cost of proposed unit isRs. 3.5Crore.Total capital cost earmarked towards environmental pollution control measures isRs. 1.2Croreand the Recurring cost (operation and maintenance) will be about Rs. 1 Crore per annum. Total employment including direct and indirect will be 50 persons.

PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance of the project site.

Total water requirement will be 62 m3/day of which fresh water requirement of 32 m3/day will be met from Bore well. 30 m3/day will be recycled/treated water. Process wastewater having high COD due to volatile organics is passed through live steam stripper column operated under vacuum. The aqueous layer (20 KLD) from the bottom of the stripper is taken to ETP along with effluent from utilities (7 KLD) and washing (5 KLD). Entire effluent will be treated into in-house ETP followed by RO and MEE/ATFD set up. Generated RO permeate (25 KLD) and MEE condensate (5 KLD) will be reused in utilities. Domestic wastewater will be discharged into soak pit. Thus, unit will achieve Zero Liquid Discharge. Power requirement will be 250 kVAand will be met from PaschimGujarat Vij Company Ltd. (PGVCL). Unit will install one D.G. Set of 250 kVA capacity and will be used as standby during power failure. Stack (height 11 meters) will be provided as per CPCB norms to the proposed D.G.Set.

In proposed unit, onesteam boiler (2 TPH)will be installed. Agro Briquettes will be used as fuel in proposed utility. Multi CycloneDust collector &bag filterwith a stack height of 30mwill beinstalled for controlling the particulate emissions within the statutory limit of 150 mg/Nm3for the proposed utilities. Process emission generation will be from oneventattached with Spin Flash Dryer.In built bag filter will be provided as an APCM.

Ambient air quality monitoring was carried out at 8 locations during March, 2019 to May, 2019and the baseline data indicates the ranges of concentrations as: PM10 (60.6 – 67.2µg/m3), PM2.5 (34.4 – 41.1 µg/m3), SO2 (15.8 – 18.8 µg/m3) and NOx (18.4–21.5 µg/m3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.461 µg/m3, 0.454 µg/m3 and

0.493 µg/m3 with respect to PM10, SO2andNOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues in the study area and the issues raised during the public hearing.

Additional information submitted by the project proponent to be satisfactory and addressing the concerns of the Committee. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at **Annexure**:-

(i) Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.

(ii) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.

(iii) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste

Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

(iv) National Emission Standards for Pesticides Manufacturing Industry issued by the Ministry vide G.S.R.446(E) dated 13th June, 2011, as amended from time to time, shall be followed.

(v) No pesticides/chemicals banned by the Ministry of Agriculture and Farmers Welfare, or having LD_{50}<100 mg/kg shall be produced. Also, no raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used for production of pesticides.

(vi) To control source and the fugitive emissions (at 99.99%), suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

(vii) Solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(viii) Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology.

(ix) Total fresh water requirement shall not exceed 32 cum/day and will be met from bore well. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA.

(x) Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system

(xi) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.

(xii) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

(xiii) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act, 1989.

(xiv) The Project Proponent shall undertake waste minimization measures as below: (a) Metering and control of quantities of active ingredients to minimize waste, (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes, (c) Use of automated filling to minimize spillage, (d) Use of Close Feed system into batch reactors, (e) Venting equipment through vapour recovery system, (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xv) The green belt of at least 5-10 m width shall be developed in not less than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. In addition, the project proponent shall develop greenbelt outside the plant premises also such as avenue plantation, plantation in vacant areas, social forestry etc.

(xvi) As committed, at least 5 % of the project cost shall be allocated towards Corporate Environment Responsibility (CER). As proposed, the CER allocation shall be spent mainly for addressing the issues raised during public consultation/hearing including assistance/infrastructure development of village school, social/environmental activities, skill development, etc.

(xvii) Safety and visual reality training shall be provided to employees. All the workers shall wear mask during working in process area.

(xviii) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

(xix) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xx) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(xxi) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of

effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xxii) The Committee deliberated the Action plan for implementing EMP and environmental conditions along with budgetary allocations and responsibility. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

Amendment in Environmental Clearance

Agenda No. 20.7

Enhancement of Phosphoric Acid production from 700 MTPD to 1000 MTPD P2O5 and other auxiliary facilities within the Existing Fertilizer Complex, Sriharipuram, Vishakhapatnam district, Andhra Pradesh by M/s Coromandel International Limited– Amendment in Environmental Clearance.

[IA/AP/IND2/149474/2020, J-11011/51/2016- IA II(I)]

The project proponent has informed their inability to attend the EAC meeting and requested to defer the proposal. The Committee has accordingly **deferred** the proposal.

Agenda No. 20.8

Expansion of Fertilizer and Chemicals Unit Ammonia (200 MTPD), Urea (4400 MTPD), Hear Recovery Steam Generator (HRSG), 100 TPH) and Captive Power Generation (18MW) & Facilities CFG3 at P.O Gadepan, District Kota, Rajasthan by M/s Chambal Fertilizers and Chemicals Ltd-Amendment in Environment Clearance

[IA/RJ/IND2/152694/2020, J-11011/664/2008-IA II(I)]

The proposal is for amendment in the Environment Clearance granted by the Ministry vide letter dated 24.04.2010,Corrigendum in Environmental Clearance for expansion dated 10.06.2011 and Extension in Environmental Clearance dated 22/06/2015 for project "Expansion of fertilizer and chemicals unit Ammonia (2200 MTPD), Urea (4000 MTPD), Heat recovery Steam Generator (HRSG 100 TPH) and Captive Power Generation (18MW) & Facilities CGF3 at P.O Gadepan, District Kota, Rajasthan by M/s Chambal Fertilisers and Chemicals Ltd. (CFCL) located at Gadepan located at P.O. Gadepan, District- Kota, Rajasthan by M/s Chambal Fertilisers and Chemicals Limited (CFCL).

The project proponent has requested for amendment in the EC with the details are as

under;

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be revised/read as	Justification/ reasons
1	Subject	Expansion of fertilizer and chemicals unitAmmonia (2200 MTPD), Urea (4000 MTPD), Heat recovery Steam Generator (HRSG 100 TPH) and Captive Power Generation (18MW) & Facilities CGF3 at P.O Gadepan, District Kota, Rajasthan by M/s Chambal Fertilizers and Chemicals Ltd. (CFCL)	Proposed Amendment in Environmental Clearance of CFCL Fertilizer plant for total production of 6100 MTPD of ammonia (G-I- 2000 MTPD, G-II-1750 MTPD and G-III-2350 MTPD) and 10800 MTPD of Urea (G-I- 3500 MTPD, G-II-3100 MTPD and G-III-4200 MTPD) along with total Captive Power generation of 55 MWH (G-I-37 MWH and G-III-18 MWH), 240 TPH of steam from HRSG and 320 TPH of steam from boilerat P.O Gadepan, District Kota, Rajasthan by M/s. Chambal Fertilisers and Chemicals Ltd. (CFCL).	Incorporation of total production data with individual capacity of G-I,G-II and G-III units. Internal production capacity change without changing the total production capacity. i.e reduction of 150 MTPD of Ammonia and 200 MTPD of Urea in G-II unit and subsequently increasing the G-III unit production of Ammonia and Urea by 150 MTPD and 200 MTPD respectively.
2	Point 2	The Ministry of Environment and Forests has examined the proposal and it is noted that M/s Chambal Fertilizers and Chemicals Limited have proposed for expansion of fertilizer and chemicals unit Ammonia (2200 MTPD), Urea (4000 MTPD), Heat Recovery steam generator (HrSG	The ministry of Environment and Forests has examined the proposal and it is noted that M/s Chambal Fertilisers and Chemicals Limited have proposed for Amendment in Environmental Clearance of CFCL Fertilizer plant for total production of 6100 MTPD of ammonia (G-I- 2000 MTPD, G-II-1750 MTPD and G-III-2350 MTPD) and 10800 MTPD of Urea (G-I- 3500 MTPD, G-II-3100 MTPD and G-III-4200 MTPD) along with total Captive Power generation of 55 MWH (G-I-37 MWH and G-III-18	

		100 TPH) and Captive power Generation (18 MW) & Facilities CGF3 at P.O Gadepan, District Kota, Rajasthan by M/s. Chambal Fertilizers and Chemicals Ltd. (CFCL). No additional land is required and proposed expansionwill be carried adjacent to the existing plants on the land available for future expansion. The company has an area of 1060 acres. No eco-sensitive areas are located within 15km periphery of the plant. Project is based on natural gas as a raw material which will be availbale through Gail pipeline. The total cost of the project will be Rs. 4000 crores.	MWH), 240 TPH of steam from HRSG and 320 TPH of steam from boilerat P.O Gadepan, District Kota, Rajasthan by M/s. Chambal Fertilisers and Chemcials Ltd. (CFCL).No additional land is required and proposed amendment will be carried within the existing facilities. The company has an area of 1060 acres. No eco-sensitive areas are located within 15km periphery of the plant. Project is based on natural gas as a raw material which will be availbale through Gail pipeline. No additional Cost is proposed in the amendment.	

The EAC during deliberations noted that the project proponent has obtained environmental clearance for its reported G1 and G2 complex vide Ministry's letter dated 21st May, 2007 and EC for its G3 complex vide letter dated 22nd April, 2010. The project proponent has also obtained corrections in the ECs and also has obtained extension of earlier EC for completion of the project as per the scope. The project proponent has informed that the G3 unit can achieve higher production due to its advanced configuration/latest technology and the incremental production in G3 shall be compensated with reduction in production in G1/G2. The Committee has suggested that to avoid ambiguity in the proposal, the PP shall actually need to submit proposal covering the entire complex, for better management and compliance.

The EAC after detailed deliberations has desired that the project proponent shall submit the proposal comprising the production/utility details of the entire complex and considering the cumulative scenario, with the proposed expansion, as per the provisions contained in the EIA Notification, 2006. The project proponent shall submit the proposal along with addendum to the EIA report having details of production/utilities, certified compliance report of the existing EC conditions and copy of the CTOs issued by the SPCB.

The proposal was accordingly **RETURNED** in its present form.

Agenda No. 20.9

Expansion of Sugar Plant from 7000 TCD to 10000 TCD, Co-gen plant from 28MW to 38MW and Distillery from 60 KLPD to 90 KLPD village & Taluka Kagal, District Kolhapur (Maharashtra) by M/s Shree Chhatrapati Shahu Sahakari Sakharkarkhana Ltd-Amendment in Environment Clearance

[IA/MH/IND2/30200/2015,J-11011/225/2015-IA II (I)]

The Proposal is for amendment in the environmental clearance (EC) granted by the Ministry vide letter dated 18.12.2019 to the project for Expansion of Sugar Factory from 7000 to 10000 TCD, Co-genation Plant from 28 to 38 MW & Molasses based Distillery unit from 60 up to 90 KLPD located at Kagal, Tal.: Kagal, Dist.: Kolhapur (Maharashtra) in favour of Shree ChhatrapatiShahuSahakariSakharKarkhana Ltd.

The project proponent has requested for amendment in the EC, with the details are as under;

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be Revised / Read as	Justification/ reasons
1.	Page No. 4 Point 10 (vii)	Total fresh water requirement shall not exceed 27 M^3/Day proposed to be met from Dudhaganga river.	Total fresh water requirement shall not exceed 351 cum/day proposed to be met from Dudhaganga river.	• In our EIA report and Form-2 submitted to Ministry, the fresh water requirement for integrated complex is 351 CMD. (Sugar & Cogeneration 27 M^3/Day and Distillery 324 M^3/Day). • This information is presented in Chapter -2, Page No. 32 & 33 of EIA and Sr. No. 15 Page No, 4 of Form-2. In EC letter, on Page No. 2, Point No. 6

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be Revised / Read as	Justification/ reasons
				correct figure of 351 M^3/Day fresh water (27 M^3/Day for Sugar Factory & Cogeneration Plant, 324 M^3/Day for Distillery) is mentioned. • However, on page No. 4; Point 10 (vii) of EC letter, fresh water 27 M^3/Day is mentioned which is only of Sugar &Cogeneration Plant. Here, Distillery Fresh Water is not considered which needs rectification.
2.	Page No. 4 Point 10 (viii)	No composting shall be carried out from next season i.e. October, 2020	Spentwash generated @667 M^3/Day shall be forwarded to Biomethanation followed by concentration and shall be dried to Form powder in Dryer (ATFD). No Composting shall be carried out from next season; i.e. October 2020	• In the EIA at Chapter -2, Page No. 33, we had proposed Bio-menthanation followed by Composting for 667 M^3/DaySpentwash Treatment. • But during deliberation, of our proposal in 12th EAC meeting, we were directed to discontinue composting. • Here, we at once accepted to discontinue Composting after Expansion of Distillery from 60 KLPD to 90 KLPD and commitment was given towards Concentration in MEE and drying of Spentwash to make Powder. • This change spentwash treatment is not reflected in EC letter.
3.	Page No. 3 Under EC Conditions	--	Distillery shall be operated for 330 Days.	There is no mention of operational days of Distillery.

The EAC has noted that the amendment sought by the project proponent regarding fresh water and operating days is factual correction and not necessarily required consideration by the Committee. The Committee showed its displeasure on the project

proponent and their consultant for not informing the Ministry regarding the corrections required in the Minutes of the meeting before grant of EC.

The Committee during deliberations has recommended factual corrections regarding fresh water requirement and operating days may be made in the EC. However, the Committee observed that the proposal for treating the spentwash, through Biomethanation and making dried concentration to form powder in Dryer, shall be analysed thoroughly depending upon the technology available and its efficacy. The Committee is of the view that incineration route may be considered, as it is a proven technology, and suggested the project proponent to undertake study on feasibility of the technologies.

The project proponent has informed that during deliberation for grant of EC, the Committee directed not to adopt bio-composting (after expansion) as treatment & disposal means for spentwash. Further, it was advised to discontinue spentwash bio-composting being carried out under the existing 60 KLPD distillery project from October 2020 and go for other ZLD methodology for spentwash treatment and disposal. Subsequently, from the two options namely spentwash incineration & powder making, commitment was given that from the next season (i.e. 2020-21), industry would adopt spentwash powder making through ATFD after spentwash bio-methanation& concentration in MEE. This commitment was given at once on 27.09.2019(during 12th EAC)**,** since directions were given to discontinue spentwash bio-composting from October 2020.

In due course MoM of the 12thEAC meeting were published followed by issue of EC letter under Ref. dated 18.12.2019. Ongoing through same, two discrepancies were noted. The first was that there was no mention of spentwash powder making as an alternative to spentwash treatment & disposal through bio-composting. In fact, direction to discontinue bio-composting from October 2020 have appeared in the EC letter but mentioning of spentwash powder making missed out.Secondly, the fresh water figure as 27 M^3/day has appeared instead of correct figure as 351 M^3/Day.

During the 20thEAC meeting through VC, it was advised to rethink about spentwash powder making and go for spentwash incineration although the earlier option was discussed & approved during previous 12thEAC meeting on 27.09.2019. During deliberation, it was informed that the technology for spentwash powder making has not yet been completely developed & there will be some problems during actual operation such as chocking of tubes, functioning of dryer etc.

PP mentioned that the discussions were held with the Company. It was decided earlier to go for spentwash powder making by discontinuing bio-composting from season commencing in October 2020, as directed by the EAC. Accordingly, consultants were hired for preparing DPR (process consultant)& financial proposal (CA) for submission to funding agency. A study tour was done for inspection of working of ongoing spentwash powder making plants in some distilleries of Maharashtra& Karnataka states. Also, visits were made to manufacturing facilities of suppliers in Pune who are providing turn-key plants for spentwash treatment & disposal contemplating spentwash bio-methanation followed by

concentration in MEE followed by spentwash powder making in ATFD with crystal clear condensate recovery for 100% reuse in process.

It has been observed that the spentwash powder making has evolved as a full-proof technology patented by one supplier for MEE &Dryer configuration giving the best results for continuous plant operation with stoppage frequency of once during 28 days. After getting convinced of the technology, methodology and overall spentwash powder makingprocess concept and subsequent to seeing actual working of such plants, management of industry confirmed & decided to go for spentwash powder making (bio-methanation - MEE concentration – ATFD dryer) as the ZLD methodology for treatment & disposal of spentwash from our 90 KLPD distillery for which the EC has already been granted by Ministry. From study & evaluation of performance of spentwash powder making plants, the overall CAPEX of such a plant for distillery shall cost Rs. 8Cr. as against Rs. 40 Cr. for infrastructure under spentwash incineration route.

It was informed that spentwash storage tank's capacity as "3-days" shall be strictly followed. Only 4 Months remaining for beginning of coming crushing season (2020-21) and no other economically viable option in hand for spentwash disposal, it was requested to consider the proposed amendments.

The Committee after detailed deliberations and justifications submitted by the project proponent has **recommended** that following corrections/amendments may be made in the EC

- Para 10 (vii) shall be read as:

- Total fresh water requirement shall not exceed 351 cum/day proposed to be met from Dudhaganga river……

- Para 10 (viii) shall be modified as: Spentwash after biomethanation followed by concentration in MEE shall be dried to form powder in ATFD Dryer. No Composting shall be carried out from next season; i.e. October 2020

- Para 10 (additional condition): Distillery shall be operated for 330 Days, as per the rules and provisions.

- All other terms and conditions shall remain unchanged.

DAY 2: 16th June, 2020 (Tuesday) Meeting held through Video Conferencing (VC) Mode

Consideration of Environmental Clearance

Agenda No.20.10

Setting up synthetic organic chemical manufacturing unit by M/s Pentakem Industries at Plot No. 3121, Panoli Industrial Estate, Taluka Ankleshwar, District Bharuch (Gujarat) - Consideration of Environment Clearance

[IA/GJ/IND2/152750/2019, IA-J-11011/123/2020-IA-II(I]

The project proponent and their consultant M/s Shree Green Consultants (High Court Stay Order), made a detailed presentation through Video Conferencing (VC) on the salient features of the project.

The proposal was earlier considered by the EAC in its meeting held on 13-15 April, 2020, wherein the EAC, during deliberation observed that the unit is being proposed in a very small plot i.e. 1500 sqm. area. Also the project location comes under critically polluted area i.e. Ankleshwar. The EAC suggested to carried out alternate site analysis or to choose another location for the project. The EAC, after detailed deliberation, therefore return the proposal in present form.

The additional information desired by the Committee and response from the project proponent is as under:

S. No.	Query Raised	Query Reply Given by PP	Observation of the EAC
1.	The EAC, during deliberation observed that the unit is being proposed in a very small plot i.e. 1500 sqm. area. Also the project location comes under critically polluted area i.e. Ankleshwar.	The industry will provide 40% green belt and will contribute CER as per MoEF&CC guideline. The total plot area is 1500 sqm out of which 600 sqm area is earmarked for green belt. The remaining 900 qm area is adequate to set up the factory.	The EAC found the reply in order and satisfactory.

2.	The EAC suggested to carried out alternate site analysis or to choose another location for the project.	Alternate site analysis has been carried out and there is no other place in the near vicinity which is most suitable.	The EAC found the reply in order and satisfactory.

During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for setting up synthetic organic chemical manufacturing unit of capacity 38 TPM by M/s Pentakem Industries in an area of 1500 sqmat PlotNo. 3121, Panoli Industrial Estate, Taluka Ankleshwar, District Bharuch(Gujarat).

The details of products are as under:

S. No.	Product	Proposed (TPM)
1	1,4 Dimethoxy Benzene	8.00
2	Meta Amino Phenol	20.00
3	2,4, Disulpho benzaldehyde	10.00
	Total	38

All Synthetic Organic Chemicals Industry **(**Dyes & Dye Intermediates; Bulk Drugs and Intermediates Excluding Drug Formulations; Synthetic Rubbers; Basic Organic Chemicals, Other Synthetic Organic Chemicals and Chemical Intermediates**)**arelisted in S.N. 5**(f)** of Schedule of Environment Impact Assessment (EIA) Notification under category 'B' to be appraised at State level. However, being the project is located inside the critically polluted area, the project appraised at Central level in the Ministry.

The Terms of Reference (ToR) was granted by the SEIAA on 16.05.2019. Public hearing is exempted as per para 7(i), III. Stage (3), (i)(b) of the EIA Notification, 2006, and in accordance with the Ministry's OM dated 27th April 2018, as the project site is located in the notified industrial area.

Total land area is estimated to be 1500sqm. Green belt will be developed in 40% i.e 600 sqm out of total project area. The estimated project cost is Rs.470.00 lacs for proposed project. Total capital cost earmarked towards environmental pollution control measures is Rs.65.80 lacs and the recurring cost (operation & maintenance) will be about Rs.22.89 lacs per annum. Total Employment will be 15 No. persons as direct & 30 persons indirect due to proposed project.There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site.

Total water requirement is 13 m3/day of which fresh water requirement of 12.50 m3/day will be met from Panoli GIDC water supply. Effluent of 10.30 quantity will be treated through propose ETP and followed by inhouse MEE. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge. Domestic waste water (1.20 KLD) will be disposed off through septic tank followed by soak pit.

Power requirement for proposed project will be 95 KVA and will be met from Panoli GIDC Power Supply. One DG sets of 125 KVA capacity will be used as standby during power failure. Stack (height 7 meter) will be provided as per CPCB norms to the proposed DG sets. For proposed project, Boiler having 600 Kg/hr capacity, TFH having 8 Lac Kcal and D.G. Sets having capacity 125 KVA. Details of Utility required are given as below:-

S. No.	Source of emission	Stack Height (meter)	Fuel	Quantity of Fuel MT/Day	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
1.	Steam Boiler 600 kg/hr	13	Natural Gas	380 M^3/day	PM 120 mg/Nm³ SO_2 80 ppm NOx 40 ppm	Multi Cyclone and Natural gas
2.	TFH 8 lac Kcal	11	Natural Gas	420 M^3/Day		Multi Cyclone and Natural gas
3.	D.G set (125 KVA Standby)	7	HSD	20 lit/day		Adequate stack height and HSD

Ambient air quality monitoring was carried out at 9 locations during 1st March 2018 to 31st May 2018 and the baseline data indicates the ranges of concentrations as: PM10 (58.51 - 114.22 µg/m3), PM2.5 (19.09 – 85.83 µg/m3), SO2 (4.94 – 36.3 µg/m3) and NO2 (9.33 – 42.22 µg/m3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 14.05 µg/m3, 24.59 µg/m3 and 11.97. µg/m3 with respect to PM10, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be

rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has deliberated the baseline data and incremental GLC due to the proposed project.

The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

The Committee also deliberated the compliances of the Ministry's OM dated 31.10.2019 (Critically Polluted Areas) and accordingly stipulated the conditions. The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to submission of Action Plan for mitigation of Particulate matter and compliance of terms and conditions as under, and general terms of conditions at **Annexure**:-

(i) Consent to Establish/Operate (CTE/CTO) for the project shall be obtained from the State Pollution Control Board (SPCB) as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974, and the SPCB shall follow the mechanism/protocol issued by the Ministry vide letter no. Q-16017/38/2018-CPA dated 24th October, 2019 and forwarded by Central Pollution Control Board vide letter dated 25th October, 2019 to the SPCB's, while issuing the CTE/CTO for the project, for improvement of environmental quality in the area.

(ii) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. All the waste water to be collected and to be reused after treatment.

(iii) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

(iv) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R.608(E) dated 21st July, 2010 and amended from time to time shall be followed.

(v) Fugitive emissions shall be controlled at 99.98% with effective chillers.

(vi) Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology.

(vii) No raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used.

(viii) To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

(ix) Solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(x) Total fresh water requirement shall not exceed 12.50 cum/day, proposed to be met from Panoli GIDC water supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.

(xi) Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system. All the vent pipes should be above the roof level.

(xii) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps. Raw material and products should be stored in leak proof containers. Spent acid to be stored over the ground tank and to be sent to TSDF.

(xiii) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

(xiv) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

(xv) Fly ash should be stored separately as per CPCB guidelines so that it may not adversely affect the air quality. Direct exposure of workers to fly ash and dust should be avoided.

(xvi) The company shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xvii) The green belt of at least 5-10 m width shall be developed in not less than 40% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(xviii) As proposed by PP, Rs 40 Lakhs shall be allocated towards Corporate Environment Responsibility (CER). As proposed, and the CER allocation shall be spent mainly for addressing the issues (health, school development, skill development and plantation etc).

(xix) Preference shall be given to local villagers for employment in the unit. For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

(xx) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xxi) Occupational health surveillance including dental check up of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(xxii) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For ZLD, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xxiii) The Committee deliberated the Action plan for implementing EMP and environmental conditions along with budgetary allocations and responsibility. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

Agenda No.20.11

Setting up of technical grade pesticides manufacturing unit by M/s Popular Chemicals Manfacturers& Supplies at Plot No. 380, Village- Karagada, Tehsil Belur, District Hassan (Karnataka) - Consideration of Environment Clearance

[IA/KA/IND2/145725/2018, No.IA-J-11011/367/2018-IA-II(I)]

The project proponent and their accredited consultant M/sWolkem India Ltd made a detailed presentation on the salient features of the project through Video Conferencing (VC).

During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for Setting up of technical grade pesticides manufacturing unit of capacity 750 TPA by M/s Popular Chemicals Manfacturers& Supplies, in an area of 8215.12 sqm located at Plot No. 380, Village-Karagada, Tehsil Belur, District Hassan (Karnataka).

The details of products and capacity as under:

S. No.	product	Capacity (TPA)
1.	Aluminium Phosphide	500
2.	Zinc Phosphide	250
Total		**750 TPA**

The project/activities are covered under category A of item 5(b) 'Pesticides industry and Pesticide specific intermediates' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

The standard terms of references (TORs) for the Project was granted by the Ministry on 18th December, 2018.

The Committee noted that the project proponent was unable to present the case/presentation before the EAC. The KML file shows the construction at the project site and the project proponent has informed that the said construction is for their formulation unit. However, the project proponent has not any proof during the meeting.

The EAC, after detailed deliberations decided to **defer the proposal for want of requisite information as under** and have asked the PP to revise the Report alongwith following clarification/information: -

(i) The Committee noted that the KML file shows the construction at the project site and the project proponent has informed that the said construction is for their formulation unit. However, the project proponent could not explain the details and even no documentary evidence provided during the meeting. In this context, the Committee at first instance is of the view that the PP to explain all the details w.r.t. violation, if any, etc.

(ii) The project proponent need to submit clarification with proper proof to establish, past production details.

(iii) Permission for fresh water withdrawal other than gram panchayat.

(iv) Status of TSDF membership.

The EAC therefore **deferred** the proposal.

Agenda No.20.12

Setting up of technical grade pesticides manufacturing unit by M/s Sandhya Organic Chemical Pvt. Ltd. (Unit-2) located at plot No. 1249/1250, G.I.D.C. Area, G.I.D.C. Sarigam, Taluka Umbergaon, District Valsad (Gujarat) - Consideration of Environment Clearance

[IA/GJ/IND2/125353/2019, IA-J-11011/342/2019-IA-II(I)]

The Project Proponent and their consultant M/s Aqua-Air Environmental Engineers Pvt. Ltd. (Hon'ble High Court of Gujarat stay order), made a detailed presentation through Video Conferencing (VC) on the salient features of the project. Consultant has informed to the EAC that they have also applied for QCI/NABET Accreditation on March 11, 2020, which is under active consideration before QCI/NABET.

During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for Setting up of technical grade pesticides manufacturing unit of capacity 1600 TPM by M/s Sandhya Organic Chemical Pvt. Ltd. (Unit-2), in an area of 8,640sqm located at plot No. 1249/1250, G.I.D.C. Area, G.I.D.C. Sarigam, Taluka Umbergaon, District Valsad (Gujarat).

The project/activities are covered under category A of item 5(b) 'Pesticides industry and Pesticide specific intermediates' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

The standard terms of references (TORs) for the Project was granted by the Ministry on 20th December, 2019.

The EAC, after detailed deliberations decided to **defer the proposal for want of requisite information as under** and have asked the PP to revise the Report alongwith following clarification/information: -

(i) Submit revised water balance by reducing fresh water requirement and Effluent treatment mechanism with plan for Zero Liquid Discharge.

(ii) Solvent recovery plan needs to be submitted.

(iii) PP needs to submit the following details on the Risk associated with the hazardous chemicals proposed to be used as a raw material;

- Risk need to be carried out for medium and Catastrophic ruptures/leak even for Methanol, Bromine including Hydrochloric acid, Sulphuric acid and Benzoyl Chloride etc.
- Frequency/Probability of leak per year as done for any risk analysis.
- Individual risk contours and societal risk F-N curves to assess against risk acceptance criteria using advanced 3D modeling.
- Disaster management plan

(v) Status of TSDF membership needs to be submitted.

The EAC therefore **deferred** the proposal.

Agenda No. 20.13

Expansion of Molasses based Distillery (60 KLPD to 180 KLPD) and co-generation power plant (2.0 MW to 8.0 MW) within the existing plant premises at Village Jangraulipul, Tehsil Pilibhit, District Pilibhit (Uttar Pradesh) by M/s LH Sugar Factories Limited - Distillery Division- Environment Clearance

[IA/UP/IND/20749/2013, IA-J-11011/128/2020-IA-II(I)]

The Project Proponent and their accredited consultant M/s J M EnviroNetPvt Ltd, made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project for Expansion of Molasses based Distillery from 60 KLPD to 180 KLPD and co-generation power plant from 2 MW to 8 MW by M/s LH Sugar Factories Limited (Distillery Division) at Village Jangraulipul, Tehsil & District Pilibhit, Uttar Pradesh.

The project/activities are covered under category A of item 5 (g) 'Distilleries', 5 (j) 'Sugar' and 1(d) 'Thermal Power Plant' of the Schedule to the Environment Impact Assessment

Notification, 2006, and requires appraisal at central level by sectoral Expert Appraisal Committee (EAC) in the Ministry.

Standard ToR has been issued by the Ministry vide letter no. J-11011/354/2013-IA II(I) dated 30th November, 2018. The Ministry had issued EC earlier vide letter no. J-11011/354/2013-IA-II (I) dated 15thJuly, 2015 to the existing project 60 KLPD Molasses based distillery & 2.0 MW co-generation power plant in favour of M/s LH Sugar Factories Limited - Distillery Division.

The existing land area is 11.74 ha (29.0 acres/117400 m^2). No additional land will be required as proposed expansion. Industry has already developed greenbelt in an area of 33% i.e. 3.9 hectares (9.6 acres/39000 m^2) out of total area of the project and the same will be maintained and made dense in future. The estimated project cost is Rs. 107.10 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 15 Crores and the Recurring cost (operation and maintenance) will be about Rs. 1.5 Crores per annum. Total employment during operation phase will be 165 persons (80 Regular and 85 contract) after expansion. Industry proposes to allocate Rs. 1.05 Crores towards Corporate Environment Responsibility. Rs. 10.5 Lakh/year has been allotted to ensure the occupational health and safety of all contract and casual workers.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the plant site. Water bodies in 10 km radius study area are SinghniNala flowing at a distance of 0.4 km in East direction, Takia distributary is flowing at a distance of 0.5 km in NW direction, Deoha River is flowing at a distance of 1.8 km in West direction, Sarda Canal is flowing at a distance of 3.5 km in ENE direction, NarraNadi is flowing at a distance of 5.5 km in SSE direction, Nakti Distributary is flowing at a distance of 5.5 km in WNW direction, Sara Nala is flowing at a distance of 6.2 km in NNE direction, KhakraNadi is flowing at a distance of 8.5 km in NNW direction, BaghaNadi is flowing at a distance of 8.5 km in SSE direction, NaulaNala is flowing at a distance of 8.5 km in WSW direction.

Ambient air quality monitoring was carried out at 8 locations during Post Monsoon Season (October to December, 2018) and the baseline data indicates the ranges of concentrations as: PM_{10} (60.9 to 94.3 $\mu g/m^3$), $PM_{2.5}$ (30.1 to 52.3 $\mu g/m^3$), SO_2 (5.9 to 18.0 $\mu g/m^3$) and NO_2 (13.6 to 35.3 $\mu g/m^3$). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion project would be 0.36 $\mu g/m^3$, 0.19 $\mu g/m^3$, 1.50 $\mu g/m^3$, 1.33 $\mu g/m^3$ with respect to PM_{10}, $PM_{2.5,}$ SO_2 and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Existing water requirement is 570 KLPD (480 KLPD for 60 KLPD distillery & 2.0 MW co-generation power plant +90 KLPD for domestic & others). After expansion, total fresh water requirement will be 1360 KLPD (1203 KLPD for 180 KLPD distillery & 8.0 MW co-generation power plant + 90 KLPD domestic & others + 67 KLPD for blending & bottling unit) which will be met from ground water. During deliberations, it was agreed to reduce the fresh requirement for expansion project to 3 KL/KL i.e. 360 KLPD, for 6 MW of

Cogeneration Power Plant will be 200 KLPD and for proposed IMFL/CL bottling plant is 67 KLPD, and thus the total fresh water requirement for expansion will be 627 KLPD. Accordingly the total fresh water requirement for the plant shall be now 1197 KLPD. It was informed that the permission for existing ground water usage has been obtained and is being renewed from time. Application for present additional requirement has been submitted to CGWA, which will be modified as per EAC deliberations.

After expansion, effluent of 1640 KLPD quantity will be treated through Effluent Treatment Plant (Based on Anaerobic, aerobic digestion, Ultrafiltration and Reverse Osmosis) of capacity 1750 m^3. The plant is being/will be based on Zero Liquid discharge system.

Total Power requirement after expansion will be 6.6 MW including existing power requirement of 1.8 MW and will be met from 8.0 MW co-generation power plant. It was informed that 10% of the power requirement shall be met from solar power. Existing unit has 2 DG sets of capacity 320 kVA, additionally 1 DG set of capacity 1250 kVA will be installed and used as standby during power failure. Stack (height 7 m) will be provided as per CPCB norms to the proposed DG set.

Existing unit has 23 TPH conc. spent wash & rice husk/bagasse/coal fired boiler. Additionally, 56 TPH conc. spent wash & rice husk/bagasse/coal fired boiler will be installed. Bag filter with a stack height of 84 m will be installed for controlling the particulate emissions within the statutory limit for the proposed boiler.

Details of Process emissions generation and its management.

Source	Emissions	Management
Boiler	Particulate matter, SO_2, NOx	• Bag filter as air pollution control equipment for existing & proposed boilers. • Adequate stack height of 65 m with existing 23 TPH boiler and stack height of 84 m with proposed 56 TPH boiler. • Necessary temperature profile is being/will be maintained.
Fermentation	Carbon dioxide	Carbon dioxide generated is being/ will be collected by utilizing CO_2 scrubbers and sold to authorized vendors.

Details of Solid waste/ Hazardous waste generation and its management.

- Fly Ash (96 TPD) from the boiler is being / will be given to brick manufacturers or farmers to use for soil amelioration or converted to ash granules to be used as potash fertilizer.
- Conc. spent wash (536 TPD) is being/will be burnt as fuel in incineration boiler.
- ETP sludge is being/will be sent to drying beds and used as manure.
- Used oil & grease generated from plant machinery/gear boxes as hazardous waste is being / will be sold to the authorized recyclers.

- Fly ash generated from the boiler is rich in potash content so the company is giving the same to the farmers to use it as fertilizer. As a part of expansion, the company has proposed to make ash granules which can be used as potash fertilizer

Public Hearing for the expansion project has been conducted by Uttar Pradesh State Pollution Control Board on 10th July, 2019, which was presided over by the Additional District Magistrate. The main issues raised during the public hearing are related to employment and benefits to villagers.

The certified EC compliance report has been obtained by RO, MOEFCC, Lucknow vide letter no. IV/Env/UP/Ind-142/400/2015/682 dated 18th February, 2020 and date of site visit was 17th December, 2019. No Litigation is pending against the proposal.

The details of products and capacity as under:

S. No.	Units	Existing Capacity	Additional Capacity	Total Capacity after expansion	Products and By Products-
1.	Molasses Based Distillery	60 KLPD	120 KLPD	180 KLPD	Ethanol (Absolute Alcohol) / Extra Neutral Alcohol (ENA) / Rectified Spirit (RS) *By Product*- CO2 and Fusel oil
2	Co-Generation Power Plant	2 MW	6 MW	8 MW	Power
3	IMFL/CL Bottling Plant	-	10000 cases /day	10000 cases /day	IMFL/CL Bottles

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and

incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues in the study area and the issues raised during the public hearing. The certified compliance report also found to be satisfactory.

Additional information submitted by the project proponent found to be satisfactory and addressing the concerns of the Committee. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at **Annexure**:-

(i) Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.

(ii) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.

(iii) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

(iv) To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

(v) Total fresh water requirement shall not exceed 1197 cum/day proposed to be met from ground water. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and shall be renewed from time to time.

(vi) As proposed, spent wash shall be incinerated. Fly ash generated from the boiler shall be made as ash granules, to be used/sold as fertilizer.

(vii) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the solvent transfer through pumps.

(viii) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

(ix) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

(x) The Project Proponent shall undertake waste minimization measures as below: (a) Metering and control of quantities of active ingredients to minimize waste, (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes, (c) Use of automated filling to minimize spillage, (d) Use of Close Feed system into batch reactors, (e) Venting equipment through vapour recovery system, (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xi) The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(xii) As committed, atleast 10% of power requirement shall be met from solar power.

(xiii) All the commitments made regarding issues raised during the public hearing/ consultation meeting shall be satisfactorily implemented.

(xiv) The project proponent shall provide employment to the villagers residing in the local area.

(xv) As proposed Rs. 2 crores shall be allocated for Corporate Environment Responsibility (CER). As proposed, the CER allocation shall be spent mainly for addressing the issues like solar/non- conventional energy promotions, medical health, education facilities, skill development of farmers and for issued raised during public consultation/hearing.

(xvi) The project proponent shall ensure rain water harvesting system in the project area and reduce dependency on ground water.

(xvii) As proposed, atleastRs. 10.5 lakh/year shall be allotted for the occupational health and safety of all contract and casual workers.

(xviii) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

(xix) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xx) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(xxi) There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.

(xxii) Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.

(xxiii) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xxiv) CO_2 generated from the process shall be bottled/made solid ice and sold to authorized vendors.

(xxv) The Committee deliberated the Action plan for implementing EMP and environmental conditions along with budgetary allocations and responsibility. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

Reconsideration of Environmental Clearance

Agenda No. 20.14

Expansion of Cholar-Alkali Plant-Caustic Soda and Allied Products at Survey No. 129/1, 129/2, 130/1A, 130/2A, 104 Part, 105/1, 209/1B, 209/2B, 209/3B, 210/1A, 210/2A, 210/3A, 210/1B, 210/2B, 210/3B, 214/1A, 214/1B, 214/2A, 214/4, 215/4A Gnanananda Place, kalapet, Puducherry by M/s Chemfab Alkalis Limited- Reconsideration of Environmental Clearance

[IA/PY/IND2/95155/2019, File No: J-11011/371/2007-IA II (I)]

The Project Proponent and their accredited Consultants M/s Eco Chem Sales & Services and M/s Hubert Enviro Care System (P) Ltd have made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project for Expansion of Chlor-Alkali Plant from 45600 TPA to 73000 TPA by M/s Chemfab Alkalis Limited at Survey No. 129 and 130, Gnanananda Place, Kalapet, Puducherry.

The proposal was earlier considered by the EAC in its meeting held during 26-28 June, 2019, the additional information desired by the Committee and response submitted by the project proponent are as under:

S. No	Information desired by the EAC	Response from the PP
1	The project involves desalination plant, Laying of intake pipeline and modification of existing pipeline for marine outfall. These facilities are proposed in CRZ areas and require prior clearance under the CRZ notification, 2011/2019. The project proponents was asked to obtain recommendations of the State Coastal Zone Management Authority (SCZMA)	Puducherry Coastal Zone Management Authority (PCZMA) CRZ clearance for the discharge of 700 KLD Treated waste water using of Reverse Osmosis (RO) technology from Secondary Treated Sewage water of the STP at Karuvadikuppam through the existing Marine pipeline. CRZ Clearance for laying intake and outfall pipeline and Sea water Reverse Osmosis (SWRO) for the proposed Sea water Desalination Plant at Kalapet Village, Puducherry by National Coastal Zone Management Authority (NCZMA).
2	Comprehensive plan for Corporate Environment Responsibility.	Detailed Comprehensive plan for corporate environment responsibility by project proponent is submitted. CER is now proposed with an amount of Rs. 2.1208 crore.
3	Risk assessment using advance model and the proposed mitigation measures accordingly.	Risk assessment using advance model and the proposed mitigation measures are detailed.
4	Details of Court matter in NGT and the outcome, if any.	Chemfab Alkalis Ltd. submitted the detailed compliance report for the NGT order No: 89/2014 Dated: 29.01.2019 to Puducherry Pollution Control Committee (PPCC) on 16.04.2019. Based on that, PPCC issued modified Consent order No: 1844/PPCC/CON/AIR/OMK/JE/2019 /463 & 1844 /PPCC / CON/ WTR/

		OMK/ JE/ 2019/ 462 Dated: 05.08.2019. Compliance report along with NGT order and modified consent is submitted.

The project/activity is covered under category B of item 4(d) "Chlor-alkali Industry" of the Schedule to the Environment Impact Assessment (EIA) Notification, 2006. Due to non-existence of SEIAA/SEAC Puducherry the project was appraised at Central Level by the Expert Appraisal Committee (EAC) in the Ministry. As per the Ministry's OM dated 24th December, 2013, the project is categorized as category B2, not requiring ToR, public hearing and EIA report.

The existing land area is 36.516 Acres (154248.035 m^2). No additional land will be used for proposed expansion. Industry has developed greenbelt in an area of 64.32 % i.e.95048.52 m^2 (23.487 Acres) out of total area of the project. The estimated project cost is Rs.60 Crore. Total capital cost earmarked towards environmental pollution control measures is Rs 5.18 Crore and the Recurring cost (operation and maintenance) will be about Rs. 51.8 Lakh per annum. The project will provide total employment for 240 persons directly and 160 person indirectly after expansion. Industry proposes to allocate Rs. 1.15 crore towards Corporate Environmental Responsibility.

There are no National parks, Wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km radius from the project site. Bay of Bengal $\simeq$ 0.5 km (E) and Kuliveli lake$\simeq$ 4.26 km (NNW) are located within 10 km from the project site. It was informed that the project is not located in the CRZ area.

Total water requirement is estimated to be 1303 cum/day of which fresh water requirement of 986 cum/day will be met from Seawater Desalination plant or Treated sewage water (PWD) RO plant for which CRZ clearance also obtained from PCZMA and NCZMA. The unit is permitted to draw 490 KLD from the existing open/ dug wells. Total water requirement for the proposed expansion will be met from Seawater Desalination Plant/Treated sewage water (PWD) RO plant.

Effluent of 12 cum/day will be treated through existing ETP. The Treated water is discharge to marine outfall. It was suggested that 75% of effluent shall be reused and only 25% shall be discharged. Domestic sewage of 10 cum/day shall be treated in STP and used for gardening.

Power requirement after expansion will be 25000 kVA including existing 14000 KVA and will be met from Pondicherry Electricity Department. Existing unit has 380 KVA and 750 KVA DG Sets, along with stacks as per CPCB norms. It was suggested that 5 MW power shall be met from solar power. Existing unit has 1 x 2.0 million Kcal/Hr TFH and Boiler 1x2 MT/hr& 1x6 MT/hr, which will cater to the proposed project. Stack of height of 30 m was installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3.

The Ministry had issued EC earlier vide F.No: J-11011/371/2007-IA II(I) dated: 16.08.2007 in the name of M/s. Chemfab Alkalis Ltd to expand the Caustic Soda production from 100 TPD to 200 TPD and five by products capacity from 9133 TPD to 18266 TPD. Validity of EC was extended till 15.08.2017 vide F.No: J-11011/371/2007-IA II(I) dated: 31.010.2016 to the existing project "Expansion of Chlor Alkali Plant" infavour of M/s. Chemfab Alkalis Limited.

Certified compliance report obtained from RO, MoEF&CC on 08.12.2017 based on site inspected by PPCC on 26 & 27.10.2017 vide letter No. EP/12.1/2016/PY/1970.

Puducherry Coastal Zone Management Authority (PCZMA) vide letter dated 27th September 2019 has issued NOC/recommended for CRZ clearance for the discharge of 700 KLD Treated waste water using of Reverse Osmosis (RO) technology from Secondary Treated Sewage water of the STP at Karuvadikuppam through the existing Marine pipeline.

The Ministry (CRZ Division) vide letter no. 11-5/2020-IA.III dated 2nd March, 2020 has granted CRZ Clearance for laying of intake and outfall pipeline and Sea water Reverse Osmosis (SWRO) for the proposed Sea water Desalination Plant at Kalapet Village, Puducherry. It was reported that now no litigation is pending against the proposal.

The details of products and capacity as under:

S. No	**Products Name**	**Existing capacity (TPA) as per CTO**	**Proposed capacity (TPA)**	**Total capacity (TPA)**
1	Caustic soda (at a concentration of 33%,48% and Flakes)	45600	27400	73000
By-products				
2	Chlorine	40400	23088	63488
3	Hydrochloric Acid	18250	36500	54750
4	Hypo (Sodium hypochlorite)	2950	1430	4380
5	Barium/Sodium sulphate*	-*	-*	-*
6	Hydrogen (Bottled) (Nm^3/Annum)	4.2	1.8	6.0
7	Soda Ash	1460	Nil	1460
8	Sodium Sulphate	Nil	2920	2920
*Note: As vide NGT order, Barium sulphate manufactured has been withdrawn.(As per Form-1, Existing quantity is 450 TPA and Additional- 280 TPA has been dropped and				

removed from rest)

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with Form 1/PFR Report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the PFR report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the PFR is in compliance of the guidelines/OMs issued by the Ministry for such projects, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has deliberated on the complaints received, court cases, reply submitted by the PP, CER plan and found to be addressing the issues in the study area and the issues raised. The Committee found the compliance status of the existing EC conditions to be satisfactory. The Committee noted that the project proponent has undertaken advanced modeling for safety and risk assessment.

Additional information submitted by the project proponent found to be satisfactory and addressing the concerns of the Committee. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Committee has noted that the project proponent has obtained CRZ clearance for the associated facilities in the project which is attracting the provisions of the CRZ Notification, 2011. Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at **Annexure**:-

(i) All the conditions/recommendations stipulated in the Ministry's CRZ clearance dated 2nd March, 2020 and Puducherry SCZMA letter dated 27th September, 2019 shall be strictly followed.

(ii) Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as

applicable from time to time, shall be obtained from the State Pollution Control Board.

(iii) The project proponent shall ensure 75% recycling and reuse of treated water. As approved by the Puducherry CZMA and as per the CRZ clearance, the project proponent shall not discharge more than 700 KLD of rejects which include RO rejects and treated effluent from process.

(iv) The project proponent shall use solar power for meeting atleast 5 MW of power requirements.

(v) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

(vi) Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.95% with effective chillers/modern technology. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

(vii) No raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used.

(i) Solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(viii) Total fresh water requirement shall not exceed 986 cum/day, proposed to from Seawater Desalination plant/Treated sewage water (PWD) RO plant. The unit shall be permitted to draw 490 cum/day from the existing open/dug wells, during emergency, after obtaining necessary permissions from the concerned authorities/CGWA.

(ix) Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system. All the vent pipes should be above the roof level.

(x) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps. Raw

material and products should be stored in leak proof containers. Spent acid to be stored over the ground tank and to be sent to TSDF.

(xi) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

(xii) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

(xiii) Fly ash, if any, should be stored separately as per CPCB guidelines so that it may not adversely affect the air quality. Direct exposure of workers to fly ash and dust should be avoided.

(xiv) The Project Proponent shall undertake waste minimization measures as below: (a) Metering and control of quantities of active ingredients to minimize waste, (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes, (c) Use of automated filling to minimize spillage, (d) Use of Close Feed system into batch reactors, (e) Venting equipment through vapour recovery system, (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xv) The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(xvi) As proposed Rs. 2.1208 crore shall be allocated towards Corporate Environment Responsibility (CER). As proposed, the CER allocation shall be spent mainly for addressing the issues in the study area, including drinking water facility for villagers/schools, educational/infrastructural assistance in school/university, skill development, plantation, solar lights, etc. Preference shall be given to local villagers for employment in the unit.

(xvii) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

(xviii) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xix) All the safety and risk management suggested during the advanced study shall be implemented.

(xx) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(xxi) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. Proper effluent monitoring shall be done for the quality and quantity send for marine disposal.

Agenda No.20.15

Pesticide unit at Dahej SEZ near Bharuch Gujarat by M/s Indofil Organic Industries Ltd. - Amendment in Environment Clearance

[IA/GJ/IND2/112594/2019, J-11011/165/2008-IA.II(I)]

The proposal is for amendment in the environmental clearance granted by the Ministry vide letter dated 19th August 2008 in favour of M/s Indofil Organic Industries Ltd for the project Pesticide Unit at Plot No. Z/8, Dahej SEZ-1, GIDC Dahej, Taluka Vagra, District Bharuch (Gujarat). The said EC was further amended on 24th March, 2011.

The project proponent has requested for amendment in the EC with the details are as under:-

S. No.	Matter as per EC Letter	Amendment Required	Justification
Para No. 3	The details of various products and their production capacity are as given below: Product List (Existing)	The details of various products and their production capacity are as given below: Product List (Total After Amendment)	Sodium Sulfate and MnCO3 are added as INORGANIC product in product list as it is pure product recovered from mother liquor generated from the process. There is requirement of process to keep MnSO4 in excess to ensure complete reaction of D14 intermediate into Mancozeb/Maneb. Excess MnSO4 is recovered as MnCO3 by reaction with Na2CO3 and NaOH at high pH of 10.5. MnCO3 is used in manufacturing MnSO4 which is a raw material for Mancozeb. Sodium sulfate is inorganic salt generated during reaction D14 with MnSO4 and it remain as dissolved compound in mother liquor. There

			is 12-13% concentration of Na2SO4 in mother liquor with COD of 2000 ppm (Approximately). Mother liquor was treated in ETP to reduce COD and then treated water having Sodium sulfate was discharged to Sea through GIDC drainage. GPCB has issued directives vide letter no. GPCB/BRCH-B/CCA-1260(4)/ID-33323/493041 dated 30/01/2019 to remove sulfate content from waste water. Hence, it is proposed to install MEE to recover inorganic salt Na2SO4 from Mother liquor. Na2SO4 recovered by this process has 99.99% purity with crystal clear white appearance. Na2SO4 will be sold in market directly which is used in many industries. Hence Sodium Sulfate and MnCO3 are added in product list as Inorganic products.
Para No. 4	Water requirement of 555 m3/day would be met from GIDC. Total effluent to be generated from the process and utilities blow down would be 400 m3/day. Another 40 m3/day will be the domestic sewage. The company has own effluent treatment plant to treat 400 m3/day of industrial	Water requirement of 555 m3/day would be met from GIDC. Total effluent to be generated from the process and utilities blow down would be 460 m3/day (400 m3/day – Discharge to Deep Sea + 60 m3/day – Recycled to Cooling). Another 40 m3/day will be the domestic sewage. The company has own effluent treatment plant and MEE of capacity (2 No. x 400 KL/day) to treat 460 m3/day of industrial effluent upto tertiary treatment including additional arrangement for	1. There is increase of 60 KL of waste water which will be treated in MEE and recycled in cooling tower; hence there is no increase in discharge of waste water to deep sea. 2. There is generation of contaminated plastic liners due to double layer protection for all export consignment during storage. Second layer is removed before dispatch and it generates liner waste. This is new requirement of Europe customer; hence liner waste has increased. 3. Lube oil consumption and use is higher due to addition of capital equipments like MEE stream, Boiler, spin flash dryer, hence generation used lube oil

	effluent upto tertiary treatment including additional arrangement for manganese recovery so that the effluent discharge is within GPCB standards. The recovered Manganese Carbonate will be sent to Manganese Sulfate manufacturer located in GIDC, Panoli, and will be used for production of Manganese Sulfate which is raw material for Mancozeb. The sewage shall be collected in a soak pit and overflow if any will be used in watering the greenbelt developed. Power requirement of 3 MW will be met from the Dakshin Gujarat Vij Corporation Ltd. Solid waste generated in form of Chemical Sludge	manganese recovery so that the effluent discharge is within GPCB standards. The recovered Manganese Carbonate will be sent to Manganese Sulfate manufacturer located in GIDC, Panoli, and will be used for production of Manganese Sulfate which is raw material for Mancozeb. The sewage shall be collected in a soak pit and overflow if any will be used in watering the greenbelt developed. Power requirement of 3 MW will be met from the Dakshin Gujarat Vij Corporation Ltd. Solid waste generated in form of Chemical Sludge (32 MTPM), Discarded Contaminated Barrels, contaminated bags and liners, Liners used for Laboratory process (25 MTPM). Hazardous waste stock chemicals (25 MTPM), Used lube oil (0.5 MTPM), toxic metal containing residue from used ion exchange resin for water purification (0.4 MTPM) and glass wool (0.3 MTPM) will be sent to approved landfill site at Ankleshwar. Fly ash from incinerator (90 MTPM) will be sent to landfill site. Process Residue generated from product slurry,	will be increased. 4. There is product carry over in mother liquor which is removed by settling in pre-primary treatment of ETP and leaf filter that does not meet specific quality of product, hence generated as waste. There is also spilled powder on floor during drying, packing activity which is generated as waste. Hence 5 MTPM process waste residue is sought for amendment.

	(32 MTPM), Discarded Contaminated Barrels, Liners used for Laboratory process (0.5 MTPM). Hazardous waste stock chemicals (500 kg/m), used lube oil (140 kg/m), toxic metal containing residue from used ion exchange resin for water purification (400 kg/m) and glass wool (300 kg/m) will be sent to approved landfill site at Ankleshwar. Fly ash from incinerator (600 kg/m) will be sent to landfill site.	rejected/contaminated product, waste product recovered from mother liquor (5 MTPM)	
	MEE is not mentioned in Existing Environmental Clearance There is No MEE Plant in the EC issued in 2008 as there is deep sea discharge of treated effluent.	MEE Shall be installed to recover the sodium sulphate • 400 KL/Day X 2 MEE Plant • 2 Spin Flash Dryer – two stack of Bag filter • Condensate shall be reuse in plant	It is proposed to install MEE is as directed by GPCB to remove sulfate from treated waste water after COD reduction in ETP.
	Boiler, DG Sets	Steam Boiler	There is new boiler installation to

	and Process Vents not mentioned in Earlier Environmental Clearance of 2008	(12 MT/Hour)	operate MEE.
		DG Set-1 (1650 KVA)	It is emergency power supply, for which CTE was sought from GPCB. GPCB advised to include it in EC. Copy of CTE is attached in Form 1.
		DG Set-2 (1650 KVA)	
		Spin Flash Dryer – 2 nos for new MEE	Wet slurry of NaSO4 generated from MEE shall be fed to spin flash dryer to get dry NaSO4 product
		Spray Dryer Tech	There is customer requirement to produce specific quality product for which spray dryer is to be installed.

Product List (Existing)

S. No.	Name of the Proposed Products	Existing Quantity (MTPA)
1	Mancozeb& its formulations (These includes Mancozeb, Zineb, Propineb, Maneb and its formulations)	45000
2	Cymoxanil& its Formulations	5000
3	Tricyclazole& its Formulations	5000
By-Product		
4	Manganese Carbonate (MnCO3)	18000

Product List (After EC Amendment)

Sr. No.	Name of the Proposed Products	Existing Quantity (MTPA)	Total Proposed Quantity (MTPA) (after EC Amendment)	CAS Nos.	LD50	End Use
PESTICIDE TECHNICAL & ITS FORMULATIONS						
1	Mancozeb& its Formulations (These includes	45000	45000	8018-01-7	>5 gm/kg	Crop Protection

	Mancozeb, Zineb, Propineb, Maneb and its formulations)					
2	Cymoxanil& its Formulations	5000	5000	57966-95-7	966 mg/kg	Crop Protection
3	Tricyclazole& its Formulations	5000	5000	41841-78-2	250 mg/kg	Crop Protection
INORGANIC PRODUCTS (NOT COVERED UNDER EIA NOTIFICATION, 2006)						
4	Manganese Carbonate (MnCO3)	18000	18000	598-62-9	-	Sold to MnSO4 Manufacturer
5	Sodium Sulphate (Na2SO4)	18000	18000	7757-82-6	5989 mg/kg	Collection, Storage and Sold to end users

The EAC, after deliberations, **recommended** the amendment in EC dated 19th August 2008 as proposed by the project proponent.

Agenda No.20.16

Setting up Agrochemicals & agrochemicals intermediate manufacturing unit of 36300 TPA capacity of M/s Bharat Rasayan Limited (Unit-III), at Plot No.DP53-55, Sayakha-I GIDC Industrial Estate, Sayakha, Taluka- Vagra, District-Bharuch (Gujarat) by M/s Bharat Rasayan Limited (Unit-III) - Amendment in Environment Clearance

[IA/GJ/IND2/102692/2019, IA-J-11011/170/2019-IA-II(I)]

The PP did not attend the meeting. The project proponent has informed that there is no amendment proposed in the EC and the proposal was for minor correction in the EC letter, as per the Minutes, which do not require any consideration by the EAC.

The Committee has suggested for issuing correction in the EC letter and decided to **RETURN** the proposal.

Agenda No.20.17

BulK Drug Manufacturing Unit at Valkkkadu, Ambattur, Thiruvallur, TamilNadu by M/s NATCO Organics Ltd - Amendment in Environmental Clearance

[IA/TN/IND2/146309/2020, J-11011/456/06/2006-IA-II (I)]

The proposal is for amendment in the Environmental Clearance (EC) granted by the Ministry vide letter dated 15th June, 2007 in favor of M/s NATCO Organics Ltd. for bulk drug unit. Further, the SEIAA vide letter dated 20th February, 2019 has also granted EC for Bulk Drugs (APIs) manufacturing Unit at Manali Industrial Area, ThiruvottiyurTaluk (formerly Vaikkadu, AmbatturTaluk) Thiruvallur District (Tamilnadu).

The project proponent has requested for amendment in the EC with the details are as under:-

S. No.	Para of ToR	Details as per the EC	To be revised read as	Justification / reasons
1.	**EC dated 15-06-2007** Specific condition No. 4A(v) of	"Use of toxic solvents like Methylene Chloride (M.C.) etc. shall be minimum and Benzene shall be replaced with alternate solvents. All venting equipment shall have vapour recovery system. Methylene Chloride shall be phased out in a time bound manner. A report shall be submitted to the Ministry after 2 year on the status of replacement of Methylene Chloride and Chloroform Solvent"	Amendment is for relaxation in usage of MDC & Chloroform in manufacturing Oncology products as per the specific condition No. 4A(v) in EC vide F.No. J-11011/456/06/2006-IA-II(I) dated 15-06-2007.	Replacing solvents like MDC and Chloroform with other solvents is leading to formation of new impurities in most of the cases contributing to generation of waste on higher levels. Also the product viability is drastically reduced and affecting the overall yields. Hence we request you to kindly allow the usage of MDC and Chloroform.
2.	**EC dated 20-02-2019** Page No. 33 of 33: **Annexure-01** of Proposed Products No. 40 and 41	Proposing to drop 2 products S.No. 40. Sertaline HCl- 6TPA & S.No. 41.Sumatriptan Succinate-3TPA	Dropping 2 products from total 42 products i.e. Maximum 16 products from total 40 products	Due to high usage of MDC and Chloroform.

The EAC, after detailed deliberations, **recommended** the amendment in EC dated 15th June, 2007 and 20th February, 2019 as proposed by the project proponent.

Agenda No.20.18

Expansion of Synthetic Organic Dyes, Dispersing Agent and Dye Intermediates Manufacturing unit by M/s Spectrum Dyes & Chemicals Pvt Ltd at NH.8, Palsana District Surat (Gujarat) - Correction in Environment Clearance

[IA/GJ/IND2/135471/2020, J-11011/517/2017-IA II(I)]

The proposal is for correction in the Environmental Clearance granted by the Ministry vide letter dated 9th May, 2019 in favour of M/s Spectrum Dyes & Chemicals Pvt. Ltd for the project expansion of Synthetic Organic Dyes, Dispersing Agent and Dye Intermediates manufacturing Unit located at Block No. 484, 502, 503-A, 504 & 505, NH No.8, Palsana, Dist.-Surat (Gujarat).

The project proponent has requested for correction in the environmental clearance with the details are as under;

Para of EC	Details as per EC	To be Revised / read as	Justification / Reasons	
Environmental Clearance Letter on page no.2 condition no.6, para no.3. (As per Approved EC Letter)	Coal Fired Steam Boiler of Capacity 10 MTPH will be installed in the Proposed Project.	Coal Fired Steam Boiler of capacity 10 MTPH, **HAG (6000 U) & Spray Dryer** will be installed in the proposed project.	Form-1	Point No.3,Sub Heading No.5.1 & 5.2- Annexure-XI
			Final EIA Report	Chapter No.4, Table No.4.1, A. Flue Gas Stack; (Proposed) Page No.4-109 B. Process Stacks; (Proposed) Page No.4-110
			EC Presentation	Slide No. 31,32 & 33

The EAC, after detailed deliberations, **recommended** the correction in EC dated 9th May, 2019 as proposed by the project proponent.

DAY 1: 17th June, 2020 (Wednesday) Meeting held through Video Conferencing (VC) Mode

Consideration of Environmental Clearance

Agenda No.20.19

MANUFACTURING OF SYNTHETIC ORGANIC CHEMICALS (ACRYLATE POLYMERS) at Survey No. 473 & 481, Borisana Village, Kadi Thol Road, Kadi, Dist: Mehsana, Gujarat M/s Corel Pharma Chem Pvt. Ltd - Consideration of Environment Clearance

[IA/GJ/IND2/65363/2017, IA-J-11011/313/2017-IA-II(I)]

The project proponent and their accredited consultant M/s. Green Circle, Inc, made a detailed presentation through Video Conferencing (VC) on the salient features of the project.

The proposal was earlier considered by the EAC in its meeting held during 26-28 June, 2019. The additional information desired by the Committee and response from the project proponent is as under:

S. No.	Query Raised	Query Reply Given by PP	Observation of the EAC
12.	Details of products and capacity vis-à-vis the items of the EIA Notification, 2006.	The project proponent has submitted the details of products and capacity vis-à-vis the items of the EIA Notification 2006	EAC found the reply in order
13.	Additional one month baseline data and prediction for air quality to be carried out by recognized labs/institution.	One month Baseline Data from 1stOctober to 31stOctober 2019 carried out by Green Circle. Inc, Vadodara	EAC found the reply in order
14.	Details of different pollution control measures and detailed justification for their efficacy and adequacy.	The pollution control measures and detailed justification for their efficacy and adequacy has been submitted	EAC found the reply in order

15.	Revised water balance and permission for ground water withdrawal.	The project proponent has submitted the revised water balance and submitted application at CGWA only on 18th May, 2020.	The EAC observed that the proposal was deferred in its meeting held on June, 2019. However, the project proponent has submitted their reply of additional information and application at CGWA in May, 2020. The committee also noted that the project proponent has not yet submitted the permission for ground water withdrawal. The Committee suggested for alternate source of fresh water. The PP in this regard has identified the alternate source of water. The Committee deliberated the issues.
16.	Details of effluent treatment plan/scheme as to achieve ZLD.	Effluent of 13.33 cum/day will be treated through ETP. Total water treated in MEE+ATFD 13.33 KLD Condensate water will be used for Green belt Development & Cooling Make up. 8 KLD will be generated from Domestic use which will be treated in STP and treated water will be used for Gardening purpose. The plant will be based on Zero liquid discharge system	EAC found the reply in order
17.	Issues raised during public hearing and reply.	The project proponent has submitted the details of iissue raised during public hearing and its reply in tabular form	EAC found the reply in order

18.	Original analysis reports of AAQ monitoring & Modelling results of GLC submitted.	Monitoring & Modelling results of GLC has been submitted	EAC found the reply in order

During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for Manufacturing of synthetic organic chemicals (Acrylate Polymers) by M/s Corel Pharma Chem Pvt Ltd in an area of 56,129sqm located at Survey No. 473 & 481, Village Borisana, Kadi Thol Road, Kadi, District Mehsana (Gujarat).

The details of products are as under:

S. No.	Name of Product	Production Capacity (TPM)
1.	Polymethacrylate dispersion	400
2.	Polymethacrylate powder	200
3.	Polyacrylate powder (by solvent method)	400
4.	Polyacrylate powder (by aqueous method)	100
5.	Polyacrylate dispersion	600
6.	Hydrogenated castor oil 400	200
7.	Hydrogenated castor oil powder	100
Total		**2000**

All Synthetic Organic Chemicals Industry **(**Dyes & Dye Intermediates; Bulk Drugs and Intermediates Excluding Drug Formulations; Synthetic Rubbers; Basic Organic Chemicals, Other Synthetic Organic Chemicals And Chemical Intermediates**)** are listed in S.N. 5 **(**f**)** of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' to be appraised at Central level in the Ministry.

The Terms of Reference (ToR) for the project was granted on 17th August, 2017. Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 26th February, 2019. The public hearing was presided over by Additional District Magistrate. The main issues raised during the public hearing are related to environment management system, air pollution etc.

Land area available for the project is 56,129sqm. Industry will develop greenbelt in an area of 18,750sqm, covering 33.41 % of total project area. The estimated project cost is Rs. 20 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.41 lakhs and the recurring cost (operation and maintenance) will be about Rs.6.75 lakhs per annum. Employment opportunity will be for 220 persons.

There are National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors, etc. within 10 km distance from the project site. Narmada riveris flowing at a distance of 2 km from the project site.

Total water requirement is 203 cum/day of which fresh water requirement will be 203 m^3/day proposed to be met from ground water source (Bore well). The committee noted that the project location comes under over exploited area as per the ground water concern and NOC from CGWA will not be met. The Committee suggested for alternate source of water. The project proponent has informed that they will draw surface water from canal of Sardar Sarovar Nigam Limited. The project proponent has also informed that necessary application has been submitted in this regard. Effluent of 13.33 cum/day will be treated through ETP. Total water treated in MEE+ATFD 13.33 KLD Condensate water will be used for Green belt Development & Cooling Make up. 8 KLD will be generated from Domestic use which will be treated in STP and treated water will be used for Gardening purpose. The plant will be based on Zero liquid discharge system

Power requirement of 2500 kVA will be met from Uttar Gujarat Vij Company Limited (UGVCL). Two DG sets of 250 kVA capacity & three nos. of DG sets of 500 kVA capacity will be installed and reused as standby during power failure. Stack height 3 m for 250 kVA DG sets and 5 m for 500 KVA DG sets will be provided as per CPCB norms to the proposed DG sets.

The unit is proposed 2 nos. of steam boilers, 2 nos. of TFH, 6 nos. of HAG. The details of boilers are as under:-

S. No	Details	Capacity	Fuel name	Fuel Quantity	Air Pollution control Measure
1.	Steam boiler - I	3 TPH	White coal / Briquettes/ PNG	3.5 MT/Day OR 400 SCM/Day	Multi Cyclone Separator/ beg filter
2.	Steam boiler - II	3 TPH	White coal / Briquettes/ PNG	3.5 MT/Day OR 400 SCM/Day	Multi Cyclone Separator/ beg filter
3.	Thermic Fluid Heater – I	4 Lacs kcal/hr	HSD/LDO	40 Lt/hr	Adequate Stack Height
4.	Thermic Fluid Heater - II	4 Lacs Kcal/hr	HSD/LDO	40 Lt/hr	
5.	D.G. set–1 250 KVA	250 KVA	HSD	40 Lt/hr	
6.	D.G. set–2 250 KVA	250 KVA	HSD	40 Lt/hr	

7.	D.G. set-3 500 KVA	500 KVA	HSD	80 Lt/hr	
8.	D.G. set-4 500 KVA	500 KVA	HSD	80 Lt/hr	
9.	D.G. set-5 500 KVA	500 KVA	HSD	80 Lt/hr	
10.	Hot Air Generator-1	500 Kg/hr.	HSD/LDO	100 Lt/hr	
11.	Hot Air Generator-2	500 Kg/hr.	HSD/LDO	100 Lt/hr	
12.	Hot Air Generator-3	400 Kg/hr.	HSD/LDO	90 Lt/hr	
13.	Hot Air Generator-4	400 Kg/hr.	HSD/LDO	90 Lt/hr	
14.	Hot Air Generator-5	400 Kg/hr.	HSD/LDO	90 Lt/hr	
15.	Hot Air Generator-6	400 Kg/hr.	HSD/LDO	90 Lt/hr	
The Stack Height of Boiler will be 30 m, TFH 11 m, HAG 5m and DG set 3-5 m. There is no process emission from manufacturing processes.					

Ambient air quality monitoring was carried out at 8 locations during November, 2017 to 31st January, 2018 and the baseline data indicates the ranges of concentrations as: PM10 (60-78 µg/m3), PM2.5 (30-38 µg/m3), SO2 (10-18 µg/m3) and NO2 (17-32 µg/m3). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 78.00µg/m3,18.00 µg/m3 and 32.01µg/m3 with respect to PM10, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards.

The project proponent has also carried out additional one month ambient air quality monitoring at 10 locations during 1st October to 31st October, 2019 and the baseline data indicates the ranges of concentrations as: PM10 (50.1 – 79.2µg/m3), PM2.5 (22.5 – 35.6µg/m3), SO2 (6.4 – 14.3µg/m3) and NO2 (10.1 -24.6µg/m3).

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues in the study area and the issues raised during the public hearing.

Additional information submitted by the project proponent to be satisfactory and addressing the concerns of the Committee. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at **Annexure**:-

(i) Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.

(ii) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.

(iii) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

(iv) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R.608(E) dated 21stJuly, 2010 and amended from time to time shall be followed.

(v) Fugitive emissions shall be controlled at 99.99% with effective chillers.

(vi) No raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used.

(vii) To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

(viii) Solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to

prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(ix) Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology.

(x) Total fresh water requirement shall not exceed 203 m^3/day, proposed to be met from canal of Sardar Sarovar Nigam Limited. Prior permission in this regard shall be obtained from the concerned regulatory authority. No ground water shall be used.

(xi) Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.

(xii) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.

(xiii) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

(xiv) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

(xv) Fly ash should be stored separately as per CPCB guidelines so that it may not adversely affect the air quality. Direct exposure of workers to fly ash and dust should be avoided. Onsite brick manufacturing unit by using Fly ash shall be installed.

(xvi) The Project Proponent shall undertake waste minimization measures as below: (a) Metering and control of quantities of active ingredients to minimize waste, (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes, (c) Use of automated filling to minimize spillage, (d) Use of Close Feed system into batch reactors, (e) Venting equipment through vapour recovery system, (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xvii) The green belt of at least 5-10 m width shall be developed in not less than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(xviii) As committed, at least 2.5 % of the project cost shall be allocated towards Corporate Environment Responsibility (CER). As proposed, the CER allocation shall be spent

mainly for addressing the issues raised during public consultation/hearing including assistance/infrastructure development of village school, social/environmental activities, skill development, etc.

(xix) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

(xx) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xxi) Solar Power shall be generated within the premises @30% of the total power requirement

(xxii) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(xxiii) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xxiv) The Committee deliberated the Action plan for implementing EMP and environmental conditions along with budgetary allocations and responsibility. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

Agenda No.20.20

Setting up of dye intermediates & specialty chemicals manufacturing unit of capacity of 170.5 TPM by M/s Orgo Chem (Gujarat) Pvt. Ltd at Plot No. 719, Road No. 7, Sachin GIDC, Taluka Chorasi, District Surat (Gujarat) - Consideration of Environment Clearance

[IA/GJ/IND2/152216/2019, IA-J-11011/339/2019-IA-II(I)]

The project proponent and their accredited Consultant M/s. ENPRO Enviro Tech and Engineers Pvt. Ltd, made a detailed presentation through Video Conferencing (VC) on the salient features of the project.

During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for setting up of dye intermediates & specialty chemicals manufacturing unit of capacity of 170.5 TPM by M/s Orgo Chem (Gujarat) Pvt. Ltd in an area of 2010 sqm at Plot No. 719, Road No. 7, Sachin GIDC, Taluka Chorasi, District Surat (Gujarat).

The details of products are as under:

S. No.	Product Group	CAS No.	Capacity (TPM)
1	**CONDENSATION**		
1.1	4 Chloro Benzamide	619-56-7	25
1.2	4 Nitro Benzamide	619-80-7	
1.3	4 Amino Benzamide (1)	2835-68-9	
1.4	4 Amino Benzamide (2)	2835-68-9	
1.5	3 Amino Benzamide	3544-24-9	
1.6	4 Chloro 3 Amino Benzamide	19694-10-1	
1.7	4 Methyl 3 Amino Benzamide	19406-86-1	
1.8	MUB	7695-46-4	
1.9	3 Nitro Benzamide	645-09-0	
1.10	2 Amino - 5 - (4 aminobenzoylamino) Benzene Sulphonic Acid	58862-43-4	
1.11	4 Amino Benzanlide	2657-85-4	
1.12	3 Amino Benzamide	3544-24-9	
1.13	4, 4 Di Amino Benzanilide	785-30-8	
2	**AMINATION**		
2.1	4 Chloro 3 Amino Benzoic Acid	2840-28-0	50
2.2	Para Amino Benzoic Acid	150-13-0	
2.3	Di Amino Benzoic Acid	535-87-5	

2.4	4 Chloro Aniline 3 Sulphonic Acid	88-43-7	
2.5	2 Chloro Aniline 5 Sulphonic Acid	98-36-2	
2.6	2 Amino Phenol 4 Sulphonic Acid	98-37-3	
2.7	Meta Amino Benzoic Acid	99-05-8	
2.8	3, 4 Di Amino Benzene Sulphonic Acid	7474-78-4	
2.9	3, 4 Di Amino Benzoic Acid	619-05-6	
2.10	Para Nitro Aniline Sulphonic Acid	616-84-2	
2.11	Ortho Nitro Aniline Para Sulphonic Acid	82324-60-5	
2.12	Para Amino Toluene Ortho Sulphonic Acid	121-03-9	
2.13	4 Chloro 3, 5 Di Amino Benzoic Acid	32961-44-7	
2.14	2, 5 Di Amino Benzene Sulphonic Acid	88-45-9	
3	**OXIDATION**		
3.1	Para Nitro Benzoic Acid	62-23-7	50
3.2	4 Chloro 3 Nitro Benzoic Acid	96-99-1	
3.3	Para Chloro Benzoic Acid	74-11-3	
3.4	Meta Nitro Benzoic Acid	121-92-6	
4	**CYCLIZATION**		
4.1	6-Nitro Benzoxazolone 3, Methyl Sulphone	-	15
4.2	5-Nitro 2-Amino Phenol	121-88-0	
5	**METHOXYLATION**		
5.1	3 Nitro 4 Methoxy Benzoic Acid	97-52-9	15
6	**AMMONIUM SULPHATE**	7783-20-2	15
7	**RESEARCH AND DEVELOPMENT PRODUCTS**	-	0.5
	TOTAL		**170.5**

All Synthetic Organic Chemicals Industry **(**Dyes & Dye Intermediates; Bulk Drugs and Intermediates Excluding Drug Formulations; Synthetic Rubbers; Basic Organic Chemicals,

Other Synthetic Organic Chemicals and Chemical Intermediates**)** are listed in S.N. 5**(**f**)** of Schedule of Environment Impact Assessment (EIA) Notification under category 'B' to be appraised at State level. However, being the project is located inside the critically polluted area, the project appraised at Central level in the Ministry.

The Terms of Reference (ToR) was granted by the Ministry on 26th December, 2019. Public hearing is exempted as per para 7(i), III. Stage (3), (i)(b) of the EIA Notification, 2006, and in accordance with the Ministry's OM dated 27th April 2018, as the project site is located in the notified industrial area.

Total land area is estimated to be 2010 sqm. Green belt will be developed in 40% i.e. 805 sqm. out of total project area. The Estimated project cost is Rs.9.25 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.288 Lakh and the Recurring cost (operation and maintenance) will be about Rs.146.1 lakh per Annum. Total Employment in operation phase will be 45 persons as direct & indirect basis.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc within 10 km distance from the project site. Mindhola River flows at 5.45 km in South direction.

Total water requirement will be 45 m3/day (22m3/day Fresh Water+ 23m3/day Recycled Water) Fresh water will be met from Sachin Notified Area Authority (Sachin GIDC). Industrial Effluent of 30 m3/day quantity from process, Boiler, cooling tower, washing and scrubber will be treated in inhouse MEE and ETP Plant. Effluent will be collected and neutralized. Then it will be sent to inhouse Stripper followed by MEE plant. MEE Condensate will be further treated in biological treatment and RO Plant. RO Permeate of 23 KLD will be reused within premises and RO reject will be sent back to MEE. Thus, The plant will be based on entire Zero Liquid discharge system. Domestic sewage of 5 m3/day will be disposed of through septic tank/soak pit system.

Power requirement will be 200 kVA will be met from Dakshin Gujarat Vij Company Limited (DGVCL). One D.G. Set having capacity 125 kVA will be kept as standby power back up. Stack (Height: 12 Meters) will be provided as per CPCB norms. Unit has proposed Boiler with capacity of 2 MT/hr and Thermopack with capacity of 200 U. Natural gas (2000 SCM/Day for Boiler and 500 SCM/Day for thermos pack) will be used as fuel in proposed utilities. As natural gas is used in boiler and thermos pack, 33 m of stack height will be provided for controlling the particulate emissions within the statutory limit of 115 mg/Nm3.

Ambient air quality monitoring was carried out at eight locations during 1st March 2019 to 31st May 2019 and the baseline data indicates the ranges of concentrations as: PM10 (40.4 – 120.7 µg/m3), PM2.5 (20.7 – 68.1 µg/m3), SO2 (11.3 – 56.1 µg/m3) and NOx (20.1 – 58.2 µg/m3), CO (0.19 – 0.91 mg/m3), NH3(2.3 – 15.4 µg/m3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be PM10 - 0.08 µg/m3, PM2.5 - 0.03 µg/m3, SO2 – 0.13 µg/m3, NOx – 0.05 µg/m3, NH3 – 0.06 µg/m3. The EAC noted that the PM10 values are in

higher side. The Committee suggested the project proponent to submit the action plan to control

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has considered the baseline data and incremental GLC of proposed project.

The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

The Committee also deliberated the compliances of the Ministry's OM dated 31.10.2019 (Critically Polluted Areas) and accordingly stipulated the conditions. The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to submission of action plan to control the particulate matter and to compliance of terms and conditions as under, and general terms of conditions at **Annexure**:-

(i) Consent to Establish/Operate (CTE/CTO) for the project shall be obtained from the State Pollution Control Board (SPCB) as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974, and the SPCB shall follow the mechanism/protocol issued by the Ministry vide letter no. Q-16017/38/2018-CPA dated 24th October, 2019 and forwarded by Central Pollution Control Board vide letter dated 25th October, 2019 to the SPCB's, while issuing the CTE/CTO for the project, for improvement of environmental quality in the area.

(ii) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. All the waste water to be collected and to be reused after treatment.

(iii) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

(iv) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R.608(E) dated 21st July, 2010 and amended from time to time shall be followed.

(v) Fugitive emissions shall be controlled at 99.98% with effective chillers.

(vi) No raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used.

(vii) To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

(viii) Solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(ix) Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology.

(x) Total fresh water requirement shall not exceed 22 cum/day, proposed to be met from Sachin GIDC water supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.

(xi) Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system. All the vent pipes should be above the roof level. Domestic waste water shall be treated in Sewage Treatment plant.

(xii) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps. Raw

material and products should be stored in leak proof containers. Spent acid to be stored over the ground tank and to be sent to TSDF.

(xiii) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

(xiv) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

(xv) The Project Proponent shall undertake waste minimization measures as below: (a) Metering and control of quantities of active ingredients to minimize waste, (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes, (c) Use of automated filling to minimize spillage, (d) Use of Close Feed system into batch reactors, (e) Venting equipment through vapour recovery system, (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xvi) The green belt of at least 5-10 m width shall be developed in not less than 40% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(xvii) As proposed 2.5% of the total project cost shall be allocated towards Corporate Environment Responsibility (CER). As proposed, and the CER allocation shall be spent mainly for addressing the issues (health, school development, skill development and plantation etc).

(xviii) Preference shall be given to local villagers for employment in the unit. For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

(xix) Solar Power shall be generated within the premises @20% of the total power requirement

(xx) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xxi) Occupational health surveillance including dental check up of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(xxii) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For ZLD, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xxiii) The Committee deliberated the Action plan for implementing EMP and environmental conditions along with budgetary allocations and responsibility. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

Agenda No.20.21

Setting up of dyes and dyes intermediates manufacturing unit of capacity 35 TPM by M/s. Universal Dyes and Intermediates located at Plot No.136, GIDC Nandesari, District Vadodara (Gujarat)- Consideration of Environment Clearance

[IA/GJ/IND2/131290/2019, IA-J-11011/423/2019-IA-II(I)]

The Project Proponent and their consultant M/s Aqua-Air Environmental Engineers Pvt. Ltd. (Hon'ble High Court of Gujarat stay order), made a detailed presentation through Video Conferencing (VC) on the salient features of the project. Consultant has informed to the EAC that they have also applied for QCI/NABET Accreditation on March 11, 2020, which is under active consideration before QCI/NABET.

During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for Setting up of dyes and dyes intermediates manufacturing unit of capacity 35 TPM by M/s. Universal Dyes and Intermediates in an area of 1650 sqm located at Plot No.136, GIDC Nandesari, District Vadodara (Gujarat).

The details of products and capacity as under:

S. No.	Name of the Products	CAS no. /CI no.	Total Quantity MT/Month	End-use of products
Group-A				
1	Vat Golden Yellow GK or Vat	1324-11-4	7.5	Textile industries

	Golden Yellow RK			
2	Vat Magenta B or Vat Red Violet RRN or CCI Vat Violet 3	379-75-1		
3	Vat Pink R or D & C Red 30 (CI Vat Red 1)	2379-74-0		
4	Vat Orange RF or CCI Vat Orange 5	552-75-8		
5	Vat Yellow 5G	129-09-9		
AND/ OR				
Group-B				
6	Vat Violet 2R	522-75-8	35	
7	Vat Olive T	4395-53-3		
8	Vat Olive Green B	3271-76-9		
9	Vat Blue RSN	81-77-6		
10	Vat Navy Blue BR or CI Vat Blue 4	1324-54-5		
11	Vat Brown BR or CCI Vat Brown 1	2475-33-4		
12	Ortho Benzoyl Benzoic Acid	85-52-9		
13	Benzanthrone	82-05-3		
14	Anthraquinone	84-65-1		
15	1- Nitro Anthraquinone	82-34-8		
16	1- Amino Anthraquinone	82-45-1		
17	1- Acetyl Napthalene or αNapthyl methyl ketone	941-98-0		
18	BromoBenzanthrone	81-96-9		
19	DibromoBenzanthrone	81-98-1		
20	Vat Blue 20 (Dark Blue BO)	116-71-2		
21	Indigo Sols (Solubelize Vat Dyes)	482-89-3		

TOTAL			**35**	
Note: Either of Group-A and/ or Group-B will be manufactured and maximum of 35 MT/Month shall be manufactured.				
1	Hydrochloric Acid Solution (3%)	7647-01-0	23.33	Organic Chemical Production
2	HBr (5%)	10035-10-6	38.33	Bromine recovery
3	Sodium Bromide Solution	7647-15-6	35.00	Bromine recovery
4	Potassium Sulphate Solution	7778-80-5	71.00	Dilution purpose in dyes industries
5	Copper Sulphate	7758-98-7	34.00	Copper recovery & for different salt production
6	Aluminium Chloride	7446-70-0	525.00	PAC production, Treatment of wastewater
7	Zinc Sulphate	7733-02-0	69.00	Zinc Hydroxide & Carbonate
8	Nitric Acid 30%	7697-37-2	292.00	Reuse in plant
9	Sodium Chloride Solution	7440-23-5	17.34	Dyes industries
	Total		**1105**	
Note: In case above mentioned by-products are not saleable, it can also be treated in ETP.				

All Synthetic Organic Chemicals Industry **(**Dyes & Dye Intermediates; Bulk Drugs and Intermediates Excluding Drug Formulations; Synthetic Rubbers; Basic Organic Chemicals, Other Synthetic Organic Chemicals and Chemical Intermediates**)** are listed in S.N. 5**(**f**)** of Schedule of Environment Impact Assessment (EIA) Notification under category 'B' to be appraised at State level. However, being the project is located inside the critically polluted area, the project appraised at Central level in the Ministry.

The standard terms of references (TORs) for the Project was granted by the Ministry on 10th March, 2020. The Committee during deliberation noted that the project proponent has proposed only 9.6% i.e., 160 sqm land for greenbelt inside the plant premises and proposed for discharge of waste water to CETP of M/s Nandesari Industries Association, Nandesari. **However, as per the Ministry's OM dated 31.10.2019 (Critically Polluted Areas), the project which are located inside the CPA should develop green belt in 40% area and unit should adopt ZLD.**

The EAC, after detailed deliberations decided to **defer the proposal** for want of requisite information as under and have asked the PP to revise the Report alongwith following clarification/information: -

(i) Revised water balance with details of total water and fresh water requirement and details of water recycling and reuse.
(ii) Effluent treatment mechanism with plan for Zero Liquid Discharge.
(iii) Revised layout plan with 40**%** greenbelt area.
(iv) Revised the EMP cost as the same is not adequate for the same.

The EAC therefore **deferred** the proposal.

Agenda No.20.22

Setting up of pesticide intermediates and specialty chemicals manufacturing unit in existing inorganic chemical manufacturing unit by M/s Acetochem Private Limited at Plot No.274/3/1, GIDC Estate, Pandesara, District Surat (Gujarat) - Consideration of Environment Clearance

[IA/GJ/IND2/91826/2019, IA-J-11011/23/2019-IA-II(I)]

The Project Proponent and their consultant M/s Aqua-Air Environmental Engineers Pvt. Ltd. (Hon'ble High Court of Gujarat stay order), made a detailed presentation through Video Conferencing (VC) on the salient features of the project. Consultant has informed to the EAC that they have also applied for QCI/NABET Accreditation on March 11, 2020, which is under active consideration before QCI/NABET.

During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for setting up of pesticide intermediates and specialty chemicals manufacturing unit in existing inorganic chemical manufacturing unit from 600.08 TPM TO 2387.9 TPM by M/s Acetochem Private Limited at Plot No.274/3/1, GIDC Estate, Pandesara, District Surat (Gujarat).

The details of existing and proposed products and capacity as under:

Sr. No.	Product Name	CAS No.	Production (MT/Month)			LD 50 (mg/Kg)
			Existing	Proposed	Total	
1	Nytrosyl Sulphuric Acid **(from Sulfur) ***	7782-78-7	132.08	467.92	600	2140
2	Nytrosyl Sulphuric Acid **(from Sodium Thio Sulphate**	7782-78-7	468	00	468	2140

	Solution and Spent Acid (H2SO4)) **					
3.1	4-Methyl Acetophenone	122-00-9	00	60	60	1400
3.2	Acetyl Furan	1192-62-7				1130
4.0	Diethyl Ketone	96-22-0	00	179	179	2737
5.1	Methyl Propyl Ketone	107-87-9	00	100	100	20001
5.2	Dipropyl Ketone	123-19-3				20001
5.3	Propiophenone	93-55-0				4500
6	Alpha Nitro Napthalene	86-57-7	00	100	100	2560
7	Alpha Napthylamine	134-32-7	00	165	165	2000
8	Phenyl Alpha Naphthylamine (PANA)	90-30-2	00	90	90	2000
9	Epichlorohydrin Based Polyamide resin	106-89-8	00	116	116	1580
10	2,4-Dichloro Acetophenone	2234-16-4	00	60	60	1800
11	Acetophenone	98-86-2	00	60	60	815
12.1	IGBA - 3-(2-methylpropyl) pentanedioic acid	75143-89-4	00	68.2652	68.2652	3580
12.2	KSM - 3-(2-amino-2-oxoethyl)-5-methylhexanoic acid	181289-15-6				5000
13	Anisole	100-66-3	00	100	100	3700
Pesticide Interemdiates						
14	3, 5 Dichloro aniline	626-43-7	00	50	50	2870
15	D- Allethrollone	43917-8-56	00	10	10	5000
16	3-Methyl 4- Nitro Imino Per hydro1,3,5 Oxidiazine	153719-38-1	00	20	20	2000
17	Transfluthrin Acid Chloride	118712-89-3	00	30	30	5000
18	1,2,4 Triazole	288-88-0	00	50	50	1750
19	2- Chloro 5- Chloromethyl Pyridine	70258-18-3	00	30	30	1289
20	4-Methoxy Acetophenone	100-06-1	00	60	60	1720
	Total		**600.08**	**1787.82**	**2387.9**	

The project/activities are covered under category A of item 5(b) 'Pesticides industry and Pesticide specific intermediates' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

The standard terms of references (TORs) for the Project was granted by the Ministry on 6th April, 2019. Total land area is estimated to be 2700 sqm. Industry will develop

greenbelt in an area of 20% i.e., 540 sqm out of total area of the project and remaining (20%) (107 trees) will be develop at Survey Number 287, lajpore Village, Surat. Therefore total green belt will be 40%. Therefore total green belt will be 40%.

The Committee during deliberation noted that the project proponent has proposed only 20% area i.e., 540 sqm. land for greenbelt inside the plant premises and 20% green belt will be developed at outside the premises in nearby area. The committee suggested to submit the revised layout plan with 33**%** greenbelt area.

The EAC therefore **deferred** the proposal.

Agenda No.20.23

Proposed additional Pesticides & expansion of Specialty chemicals manufacturing unit from 2038.61 TPM to 18234 TPM by M/s VAL Organics Pvt Ltd at Plot No.2201, GIDC Estate, Sarigam, Taluka Umargaon, District Valsad (Gujarat) - Consideration of Environment Clearance

[IA/GJ/IND2/153091/2019,IA-J-11011/129/2020-IA-II(I)]

The Project Proponent and their consultant M/s Aqua-Air Environmental Engineers Pvt. Ltd. (Hon'ble High Court of Gujarat stay order), made a detailed presentation through Video Conferencing (VC) on the salient features of the project. Consultant has informed to the EAC that they have also applied for QCI/NABET Accreditation on March 11, 2020, which is under active consideration before QCI/NABET.

During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for proposed additional Pesticides & expansion of Specialty chemicals manufacturing unit from 2038.61 TPM to 18234 TPM by M/s VAL Organics Pvt Ltd in an area of 19804 sqm at Plot No.2201, GIDC Estate, Sarigam, Taluka Umargaon, District Valsad (Gujarat).

The project/activities are covered under category A of item 5(b) 'Pesticides industry and Pesticide specific intermediates' and 5(f) 'Synthetic Organic Chemicals Industry' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

The Ministry had issued earlier EC on 20th March, 2009 in favour of M/s Val Organics Pvt. Limited for intermediates manufacturing.

The details of existing and proposed products are as under:

S. No.	Name Of Product	Existing	Additional	Total	CAS NO.	LD50

		(TPM)				
GROUP – 1						
Pesticides Techncal = 2,000 MT/Month						
1	Cyproconazole	0	2,000	2,000	94361-06-5	Rat Oral <350 mg/kg
2	Difenaconazole	0			119446-68-3	Rat Oral > 1453 mg/kg, Rat Dermal >6400 mg/kg
3	Flutriafol	0			76674-21-0	Rat Oral => 2000 mg/kg, Rat Dermal =>5000 mg/kg
4	Epoxiconazole	0			133855-98-8	Rat Oral = 5000 mg/kg, Rabbit Dermal = 2000 mg/kg
5	Hexaconazole	0			79983-71-4	Rat Oral > 4000 mg/kg, Rat Dermal >2000 mg/kg
6	Propiconazole (T)	0			60207-90-1	Rat Oral > 1517 mg/kg
7	Tebuconazole (T)	0			1075	Rat Oral >

					34-96-3	2000 mg/kg, Rat Dermal >2000 mg/kg
GROUP – 2						
CHLORINATED COMPOUNDS = 200 MT/MONTH						
8	Mono Chloro Benzene	0	200		108-90-7	Oral Rat=1110 mg/kg
9	Ortho Dichloro Benzene	0	200		95-50-1	Oral Mouse=4386 mg/kg, Oral Rabbit=500 mg/kg, Oral Rat=500 mg/kg
10	Para Dichloro Benzene	0	200		106-46-7	Oral Rat=500 mg/kg, Dermal Rabbit=6000 mg/kg
11	1,2,4-Trichloro Benzene	0	200		120-82-1	Oral Mouse=300 mg/kg, Dermal Rat=6139 mg/kg
12	1,2,3-Trichloro Benzene	0	200		87-61-6	Rat oral=756 mg/kg, Mouse oral=766 mg/kg
13	Ortho Chloro Toluene	0			95-	Oral Rat=3227

					49-8	mg/kg, Dermal Rat>1080 mg/kg
14	Para Chloro Toluene	0			106-43-4	Oral Rat=2389 mg/kg
15	2,4 Dichloro Phenol	0		200	120-83-2	Oral Mouse=1276mg/kg, Oral rat=47 mg/kg
16	2,6 Di Chloro Phenol	0			87-65-0	Intraperitoneal Rat - 390 mg/kg, Oral Mouse-2198 mg/kg.
17	Ortho Chloro Phenol	0	200		95-57-8	Rat oral=670 mg/kg, Mouse oral=670 mg/kg
18	Para Chloro Phenol	0			106-48-9	Oral Mouse=367 mg/kg ,Dermal Rat=1500 mg/kg
19	2,4 - Dichloro Toluene	0			95-73-8	Oral rat=2400 mg/kg ,Oral Mouse=24

						00mg/kg
20	2,4,6-TrichloroAniline	0			634-93-5	Rat oral=2400 mg/kg, Mouse oral=1180 mg/kg
GROUP – 3						
NITRO COMPOUNDS = 300 MT/MONTH						
21	2,5-Dichloro Nitro Benzene	75	225		89-61-2	Oral mouse= 2850 mg/kg,Oral rat = 1210 mg/kg
22	2,3-Dichloro Nitro Benzene	0	300		3209-22-1	Rat oral=381 mg/kg
23	3,4-Dichloro Nitro Benzene	0			99-54-7	Rabbit=643 mg/kg, dermal Rat > 2000 mg/kg
24	2,4-Dichloro Nitro Benzene	10	290		611-06-3	Oral Rat=990 mg/kg, Dermal Rabbit=921 mg/kg
25	2,4,5-Trichloro Nitro Benzene	37.5	262.5		89-69-0	Oral Mouse= 1070 mg/kg
26	2-Nitro Toluene	0			88-72-2	Rat oral=1680 mg/kg, Mouse oral=2462

				300		mg/kg
27	3-Nitro Toluene	0			99-08-1	Mouse oral= 1231 mg/kg, Rat oral =2121 mg/kg
28	4-Nitro Toluene	0	300		99-99-0	Rat oral=2140 mg/kg, Mouse oral=1230 mg/kg
29	3,5-Dinitro Benzoic Acid	0			99-34-3	Oral Mouse=1800 mg/kg, Oral Rat=1800 mg/kg
30	4-Chloro-3,5-Dinitro Benzoic Acid	0			118-97-8	Intravenous Mouse = 180 mg/kg
31	5-Nitro Salicylic Acid	0			96-97-9	Oral Mouse= 970 mg/kg
GROUP – 4						
SPECIALTY PHENOLS/ SPECIALTY CHLORO PHENOL = 200 MT/MONTH						
32	2,5-Dichloro Phenol	0			583-78-8	Oral Mouse=946 mg/kg Oral Rat=580 mg/kg
33	2,3-Dichloro Phenol	0			576-24-9	Oral Mouse=2376 mg/kg
34	3,4-Dichloro Phenol	0			95-77-2	Oral Mouse=16

						85 mg/kg
35	3,5-Dichloro Phenol	0			591-35-5	Oral Mouse=2389 mg/kg
36	3-Mehtyl Phenol (m Cresol)	0			108-39-4	Oral Rat=242 mg/kg
37	3-Chloro Phenol	0	200	200	108-43-0	Oral Mouse=521 mg/kg, Oral Rat=570 mg/kg
38	4-Fluoro Phenol	0			371-41-5	Oral Rat=293 mg/kg, Dermal Rabbit=600 mg/kg
39	2-Fluoro Phenol	0			367-12-4	Oral mouse = 537 mg/kg
GROUP – 5						
HYDROGENATION COMPOUNDS = 200 MT/MONTH						
40	2,4-Dichloro Aniline	0			554-00-7	Rat oral=1600 mg/kg, Mouse oral=400 mg/kg
41	2,3-Dichloro Aniline	0			608-27-5	Oral rat = 250 mg/kg, Dermal rabbit= 820 ul/kg
42	3,4-Dichloro Aniline	0			95-	Rat oral=648

					76-1	mg/kg, Mouse oral=740 mg/kg
43	3,5-Dichloro Aniline	0	200	200	626-43-7	Rat oral=720 mg/kg, Mouse oral=780 mg/kg
44	Ortho Toluidine	0			95-53-4	Rat oral=940 mg/kg, Mouse oral= 150 mg/kg
45	Para Toluidine	0			106-49-0	Rat oral=336 mg/kg, Rabbit dermal=890 mg/kg
46	Meta Toluidine	0			108-44-1	Rat oral=450 mg/kg, Mouse oral=740 mg/kg
47	4 Acetoxy phenyl methyl Carbinol	0			53744-50-6	Oral rat=500 mg/kg, Dermal Rabbit>7800 mg/kg
GROUP – 6						
ACETYLATED COMPOUNDS = 800 MT/MONTH						
48	2,4-Dichloro Acetophenone	200	600		2234-16-	Oral Rat=1800 mg/kg,

					4	Skin Rat > 6233 mg/kg
49	2,6-Dichloro Acetophenone	0	800		2040-05-3	Oral Rat=1700 mg/kg
50	2,5-Dichloro Acetophenone	0			2476-37-1	Oral Rat=1750 mg/kg
51	3,4-Dichloro Acetophenone	0			2642-63-9	Oral Rat=1500 mg/kg, Oral Mouse=1600 mg/kg
52	2,4-Dichloro-5-Fluoro Acetophenone	35	765		704-10-9	Oral Mouse=1700 mg/kg
53	2,6-Dichloro-3-Fluoro Acetophenone	0	800		290835-85-7	Oral Rat=1500 mg/kg
54	Para Hydroxy Acetophenone	50	750		99-93-4	Oral Mouse=1500 mg/kg
55	Ortho Hydroxy Acetophenone	0	800		582-24-1	Oral Mouse=1000 mg/kg
56	Para Chloro Acetophenone	50	750		99-91-2	Oral Mouse=1207 mg/kg
57	Para Chloro Benzophenone	0			134-85-0	Oral Rat=1300 mg/kg
58	4-Chloro-4'-Hydroxy Benzopehenone	0			42019-78-3	Oral Mouse = 1150

59	2,4-Dichloro Butyrophenone	0		800	66353-47-7	Oral Rat=1500 mg/kg
60	4-Methyl Acetophenone	0			122-00-9	Oral Rat=1400 mg/kg
61	4-Methyl Propiophenone	0			5337-93-9	Oral Rat=1200 mg/kg
62	Propiophenone	0	800		93-55-0	Oral Rat=4490 ul/kg, Skin Rabbit=4490 ul/kg
63	3-Chloro Propiophenone	0			936-59-4	Oral Mouse = 1150
64	4-Fluoro Acetophenone	0			403-42-9	Oral Mouse = 1350
65	4,4'-DifluoroBenzophenone	0			345-92-6	Rat oral=5000 mg/kg,Rat dermal>2000 mg/kg
66	4-Fluoro Phenacyl Chloride	0			403-26-2	Mouse Intravenous=89 mg/kg
67	2,2',4-Trichloro Acetophenone	0			4252-78-2	Oral Rat = 1150 mg/kg
68	2,4-Dichloro Valerophenone	10	790		61023-66-3	Oral Rat = 1050 mg/kg
69	4-Acetyl-3,4'-Dichloro Diphenyl Ether	0			119851-28-4	Rat oral=1500 mg/kg, Rat dermal>90

						0 mg/kg
70	2-Acetyl-2',4,4'-Trichloro Diphenyl Ether	0	800		3380-34-5	Oral Mouse = 1550 mg/kg
71	2,4-Dichloro Fluoro Benzoyl Chloride	0			86393-34-2	Rat oral=1750 mg/kg, Rat dermal>1000 mg/kg
72	4 Hydroxy Benzophenone	0			1137-42-4	Rat oral - 12,086 mg/kg
GROUP – 7						
DICHLORO DIPHENYL ETHERS = 100 MT/MONTH						
73	3',4'-Dichloro Diphenyl Ether	0	100	100	6842-62-2	Oral Rat=1300 mg/kg, Oral Mouse=1500 mg/kg
GROUP – 8						
CARBONYL CHLORIDES = 50 MT/MONTH						
74	N-Valeryl Chloride	-	50	50	638-29-9	
75	4-Nitro Benzoyl Chloride	-			122-04-3	Oral Rat=5600 mg/kg, Oral Mouse=3440 mg/kg, Oral Rabbit=4750 mg/kg
76	4-Chloro Butyryl Chloride	-			4635-59-0	Oral Rat=1100 mg/kg

77	2,4-Dichloro Benzyl Chloride	-			89-75-8	Oral Rat=4640 mg/kg, Dermal/Skin Rabbit=3160 mg/kg
GROUP-9						
ISOMERIZED PRODUCTS = 500 MT/MONTH						
78	1,3-Dichlorobenzene	-	500	500	541-73-1	Oral Mouse=820 mg/kg,Oral Rat=500 mg/kg
79	1,3,5-Trichlorobenzene	16.5	483.5		108-70-3	Oral Mouse=3350 mg/kg, Oral rat=800 mg/kg
GROUP-10						
Physical Separation by Distillation = 400 MT/Month						
80	ODCB	90	310		95-50-1	Oral Mouse=4386 mg/kg, Oral Rabbit=500 mg/kg, Oral Rat=500 mg/kg
81	PDCB	110	290		106-46-7	Oral Rat=500 mg/kg, Dermal Rabbit=6000 mg/kg

82	1,2,4 -Tri Chloro Benzene	118.8	281.2	400	120-82-1	Oral Mouse=300mg/kg, Dermal Rat=6139 mg/kg
83	1,3,5-Tri Chloro Benzene	16.5	383.5		108-70-3	Oral Rat=800 mg/kg
84	1,2,3-Tri Chloro Benzene	40.7	359.3		87-61-6	Oral Rat=1830 mg/kg
GROUP-11						
Amino Compounds = 70 MT/Month						
85	2,5-Dichloro Aniline	40	30	70	95-82-9	Oral Rat=1600 mg/kg
86	2,4,5-Trichloro Aniline	30	40		636-30-6	Oral Rat=1650 mg/kg, Oral Mouse=1800 mg/kg
GROUP-12						
Poly Aluminum Chloride = 12,000 MT/Month						
87	Poly Aluminum Chloride 12%	1,047.42	10,952.58	12,000	1327-41-9	Oral Rat=650 mg/kg
GROUP-13						
Other Compounds 150 MT/Month						
88	Para Hydroxy Phenyl Acetamide	0	50	50	17194-82-0	Oral Rat=1350 mg/kg, Oral

						Mouse=1600 mg/kg
89	2,4-Dichloro 5-Fluoro Benzoyl Chloride	0	50	50	86393-34-2	Oral Rat=1200 mg/kg
90	4-Acetoxy Acetophenone	0	50	50	13031-43-1	Oral Rat=1200 mg/kg, Oral Mouse=1500 mg/kg
By Products						
91	Dilute sulphuric acid (80 to 85 %)	77.69	916.31	994	7664-93-9	Rat oral=2140 mg/kg
92	Sodium Sulphite Soln.	0.0	270	270	1313-82-2	Rat iv-115 mg/kg, Mouse ip-950 mg/kg
	TOTAL	**2,038.61**	**16,195.39**	**18,234**		

Total land area is 19804 sqm. Industry has already developed greenbelt in an area of 33% i.e. 6536 out of total area of the project. The estimated project cost is Rs. 9.96 Crores. Total capital cost earmarked towards environmental pollution control measures is 698.47 lacs and the recurring cost (operation and maintenance) will be about Rs. 61.259 Crores per annum. Total Employment will be 325 persons as direct & indirect for project**.**

The Terms of Reference (ToR) was granted by the Ministry on 19th July, 2019. Public hearing is exempted as per para 7(i), III. Stage (3), (i)(b) of the EIA Notification, 2006, and in accordance with the Ministry's OM dated 27th April 2018, as the project site is located in the notified industrial area.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc within 10 km distance from the project site.

Total water requirement is 381 cum/day of which fresh water requirement of 289.2 cum/day proposed to be met from GIDC Water Supply. Total water requirement will be 381 KL/Day ((Fresh: 286.2 m3/Day from GIDC + Reuse: 91.8 m3/Day + Rain Water: 3.0 KLD). Total wastewater generation will be 123.0 KL/Day (Existing: 24.328 KL/Day + Proposed: 98.752 KL/Day). Total Industrial Existing wastewater (19.248 KL/Day) will be sent to ETP consists of primary, Secondary and tertiary treatment and then treated effluent shall be sent to CETP of M/s. Sarigam Clean initiative for the further treatment and final disposal. Total Industrial Proposed wastewater (78.752 KL/Day) Low COD/TDS will be sent to ETP consists of primary, Secondary and tertiary treatment and then treated effluent shall be sent to R.O. plant and R. O Permeate 63.0 KLD will be reused in Plant premises. R.O. Reject & High TDS will be sent to In House MEE & ATFD. MEE Condensate 28.8 KLD will be Reused in plant premises. Domestic effluent (10.0 KL/Day) will be Treated In STP Plant and will be used for Gardening Purpose. The EAC suggested the project proponent to achieve the complete Zero Liquid Discharge. The project proponent was agreed with it.

Power requirement for proposed project will be 2500 KVA and will be met from DGVCL. Existing 1 Nos. 500 KVA, Proposed 2 Nos. DG set of 650 KVA capacity shall be used as standby during power failure. Stack (height 32.0 m) will be provided as per CPCB norms to the proposed DG sets of 125 KVA which will be used as standby during power failure.

Existing unit has one steam boiler (6.0 TPH) and one DG Set of 500 kVA capacity. Proposed: Steam Boiler (8.0 TPH)* 2 Nos. DG Set (650 KVA)* 2 will be installed. Adequate Stack height will be provided. Stack of height of 32.0 m will be installed for controlling the Particulate emissions (within statutory limit of 150 mg/Nm3) respectively.

The certified compliance report dated 4th December, 2019 forwarded by the Ministry's Regional office at Bhopal. The Committee deliberated the compliance status of earlier EC and found the same to be satisfactory. PP is reported that there is no litigation Pending against the proposal.

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for

all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the CER plan and found to be addressing the issues in the study area. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at **Annexure**:-

(i) No pesticides/chemicals banned by the Ministry of Agriculture and Farmers Welfare, or having LD_{50}<100 mg/kg shall be produced. Also, no raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used for production of pesticides.

(ii) Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.

(iii) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.

(iv) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

(v) National Emission Standards for Pesticides Manufacturing Industry issued by the Ministry vide G.S.R.446(E) dated 13th June, 2011, as amended from time to time, shall be followed.

(vi) To control source and the fugitive emissions (at 99.99%), suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

(vii) Solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be

flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(viii) Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology.

(ix) Total fresh water requirement shall not exceed 289.2 cum/day and will be met from GIDC Water supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.

(x) Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system

(xi) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.

(xii) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

(xiii) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act, 1989.

(xiv) The Project Proponent shall undertake waste minimization measures as below: (a) Metering and control of quantities of active ingredients to minimize waste, (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes, (c) Use of automated filling to minimize spillage, (d) Use of Close Feed system into batch reactors, (e) Venting equipment through vapour recovery system, (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xv) The green belt of at least 5-10 m width shall be developed in not less than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. In addition, the project proponent shall develop greenbelt outside the plant premises also such as avenue plantation, plantation in vacant areas, social forestry etc.

(xvi) As committed, at least 2.5 % of the project cost shall be allocated towards Corporate Environment Responsibility (CER). The CER plan shall be completed within two years

and activities as proposed like drinking water supply to nearby villages etc. shall be implemented.

(xvii) Safety and visual reality training shall be provided to employees. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. All the workers shall wear mask during working in process area.

(xviii) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

(xix) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xx) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xxi) The Committee deliberated the Action plan for implementing EMP and environmental conditions along with budgetary allocations and responsibility. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

Agenda No.20.24

Expansion of Synthetic Organic Chemicals manufacturing unit from 10.5 to 38 TPM by M/s Chemox Chemopharma Industries, located at Plot No. 3704/B, GIDC Estate Ankleshwar, District Bharuch (Gujarat) - Environment Clearance - reg.

[IA/GJ/IND2/128261/2011, IA-J-11011/399/2019-IA-II(I)

The Project Proponent and their consultant M/s. Jyoti Om Chemical Research Centre Pvt. Ltd (Hon'ble High Court of Gujarat stay order), made a detailed presentation through Video Conferencing (VC) on the salient features of the project.

The proposal is for environmental clearance to the project for expansion of Synthetic Organic Chemicals manufacturing unit from 10.5 to 38 TPM by M/s Chemox Chemopharma Industries, located at Plot No. 3704/B, GIDC Estate Ankleshwar, District Bharuch (Gujarat).

The proposal was earlier considered by the EAC in its meeting held during 13-15 April, 2020. The additional information desired by the Committee and response from the project proponent is as under:

S. No.	Query Raised	Query Reply Given by PP	Observation of the EAC
1.	Proof to establish that existing unit is operating with proper prior permission and to confirm that unit is not violating the provision contained in EIA Notification, 1994 and 2006. In this regard, PP needs to submit all the old CTE/CTO to verify the violation, if any.	The project proponent has submitted the copy of CTO issued in 2005.	The EAC found the reply to be satisfactory
2.	This is an expansion case and as per TOR PP needs to submit the certified compliance report of CTO from SPCB. However, PP has not submitted the same.	The project proponent has submitted the copy of compliance report of CTO submitted in SPCB	The EAC found the reply to be satisfactory
3.	PP needs to submit the details of production since inception of the unit to verify violation, if any.	The production data has been submitted	
4.	PP needs to update the Report as per provisions of the Ministry's OM, dated 31.10.2019 (CPA).	The compliance of Ministry's OM dated 31.10.2019 (CPA) has been submitted	The EAC noted that the project proponent has not proposed plan for 40% green belt and ZLD plan

The Committee during deliberation noted that the project proponent has proposed only 23% area for greenbelt inside the plant premises and proposed for discharge of waste

water to CETP i.e. ETL. However, as per the Ministry's OM dated 31.10.2019 (Critically Polluted Areas), the project which are located inside the CPA should develop green belt in 40% area and unit should adopt ZLD.

The EAC, after detailed deliberations noted that PP has not submitted the proposal as per provisions of the Ministry's OM dated 31.10.2019 (Critically Polluted Areas) and the Committee dissatisfied and observed that Consultant/PP is unable to submit the proposal as asked by the EAC in the last meeting and decided to **defer the proposal** and have asked the PP to revise the Report alongwith following clarification/information: -

(i) Revised water balance with details of total water and fresh water requirement and details of water recycling and reuse.
(ii) Effluent treatment mechanism with plan for Zero Liquid Discharge.
(iii) Revised layout plan with 40**%** greenbelt area**.**

The EAC therefore **deferred** the proposal.

Agenda No. 20.25

Modernization of existing 70 KLPD Molasses based Distillery to 70 KLPD Molasses/Grain/Juice (Juice Slurry) based distillery and to use Grain, Cane Juice (Juice Slurry) as raw material to produce Rectified Spirit/ENA Ethanol at Village Hamjheri, Jakhal Road, Patron, District Pariala, Punjab by M/s Piccadily Sugar & Allied Industry Ltd- Environment Clearance

[IA/PB/IND2/152910/2020, J-11011/240/2011- IA II]

The Project Proponent and their accredited Consultant M/s JM EnviroNetPvt Ltd made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project for Expansion of Molasses/Grain based distillery from 40 KLPD to 105 KLPD & Co-generation Power Plant from 1 MW to 3 MW by M/s Piccadily Sugar & Allied Industry Limited at Village Hamjheri, Jakhal Road, Tehsil Patran, District Patiala, Punjab.

The project/activities are covered under category A of item 5 (g) 'Distilleries' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at central level by sectoral Expert Appraisal Committee (EAC) in the Ministry. The proposal has been submitted under para 7 (ii) of the EIA Notification, 2006 requesting exemption from ToR, public hearing and EIA report.

The unit installed 40 KLPD Grain/Molasses based distillery & 1.0 MW Co-generation Power Plant at Village Hamjheri, Jakhal Road, Tehsil Patran, District Patiala, Punjab. The

Environmental Clearance was obtained from MoEFCC, vide letter no. J-11011/14/2004 -IA II(I) dated 12th May, 2004. Environmental clearance for Expansion of Molasses based Distillery Unit from 40 KLPD to 70 KLPD was obtained from MoEFCC, vide F. No. J-11011/1263/2007-IA II (I) dated 16th September, 2008 and then amendment in the Environmental Clearance was obtained from MoEFCC, New Delhi for Modernization of existing 70 KLPD Molasses based Distillery to 70 KLPD Molasses/Grain/Juice (Juice Slurry) vide F. No. J-11011/240/2011- IA II (I) dated 26th February, 2013. Presently, the company has installed the 70 KLPD plant but haven't started operations yet due to delay in obtaining Consent to Operate from PPCB and other circumstances. It is reported that there is no litigation pending against the project.

The existing land area is 28.32 ha (283200 sqm/70 acres). The proposed expansion will be done within the existing plant premises and no additional land is required. Industry has developed greenbelt in an area of 9.3 ha (23 Acres/93000 m2) covering 33 % of the total project area. The estimated project cost is Rs. 20 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 10 Crores and the Recurring cost (operation and maintenance) will be about Rs. 1 Crores per annum. The project will provide employment for 180 persons (120 as regular & 60 as contract) after expansion. Industry proposes to allocate Rs. 40 lakhs towards Corporate Environment Responsibility.

There are no National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/ Elephant Reserves, wildlife corridors etc., within 10km from the plant site. Water bodies in 10 km radius study area are River Ghagghar flowing at a distance of 9.0 km in SE direction, ChoaNala flowing at a distance of 1.0 km in NW direction, Kalbhanu Drain flowing at a distance of 1.0 km in South direction, main drain no. 1 flowing at a distance of 9.0 km in WNW direction. Also, there are many agricultural canals viz Alan Branch (0.5 km in East direction), KaramgarhRajbaha (2 km in South direction), Hariau Branch (4.0 km WSW direction), Bhakra Canal (6 km in ESE direction) and Ladbanjara Distributary (7.5 km in WNW direction).

After expansion net fresh water requirement will be 800 KLD (630 KLPD for Distillery & Co-generation Power Plant, 150 Bottling Plant & 20 KLPD Domestic) which will be met from existing ground water source. During deliberations in the Committee, it was proposed that the fresh water requirement shall be restricted to 3KL/KL of alcohol. For 105 KLPD Distillery the water requirement as per 3 KL/KL will be 315 KLPD, for Co-generation power Plant will be 145 KLPD, for IMFL/CL Bottling Plant will be 150 KLPD and for domestic usage, greenbelt and others will be 70 KLPD. Thus, total fresh water requirement shall be now reduced to 680 KLPD.

Effluent (Process condensate) of 781 KLD will be treated through ETP (Anaerobic, aerobic, Filters & RO) of capacity 1200 m3/day. The plant will be based on Zero Liquid discharge system.

Power requirement after expansion will be 3 MW including existing 1 MW and will be met from proposed 3 MW co-generation power plant, State Electricity Board & D.G. Sets (for

emergency). Existing unit has 1 DG set of 500 KVA&1 DG set of 75 KVA, additionally 1 DG set of 500 kVA is proposed. DG sets are used as standby during power failure. Stack (Height –5 m) has been/will be provided as per CPCB norms to the existing & proposed DG sets. Existing unit has 12 TPH Bagasse/rice husk/biomass fired boiler. Additionally, 35 TPH bagasse/rice husk/biomass fired boiler will be installed. Existing boiler will be kept standby after expansion. ESP/Bag filter with a stack height of 50 m will be installed for controlling the particulate emissions within the statutory limit for the proposed boiler.

Details of Process emissions generation and its management

- Electrostatic Precipitators (ESP)/ Bag filter with adequate stack height (50 m)with the proposed 35 TPH boiler will be installed.

- CO2 generated during the fermentation process is being/will be collected by utilizing CO2 scrubbers and sold to authorized vendors.

- Online Stack Monitoring System will be installed as per CPCB guidelines.

Details of Solid waste/ Hazardous waste generation and its management.

- During grain based operation - Solid waste from the grain based operations generally comprises of fibers and proteins in the form of DDGS, which will be ideally used as Cattle Feed.

- During Molasses based operation - Dry Powder from ATFD Process will be sold as manure to fertilizer manufacturers.

- Ash from the Boiler is being/will be given to nearby brick manufacturers. Used oil generated from the plant machinery/ gear boxes as hazardous waste is being/will be sold out to the CPCB authorized recycler.

In order to contribute in Ethanol Blending programme of Govt. of India and to become self-reliant on fuel within the country, it was planned for proposing expansion from 40 to 105 KLPD by modernization and efficiency improvement in the existing installed 70 KLPD plant and it will produce ethanol as product.

For this expansion through modernization, the existing boiler of 12 TPH will be replaced by new boiler of 35 TPH to fulfill requirement of desired steam and power. ESP/Bag filter will be installed as APCE with the new boiler to meet the latest prescribed norms of pollution control.

The expansion of Distillery by modernization will involve following improvement in the present scheme;

- Process improvement in fermentation to achieve higher alcohol concentration and higher efficiency by maintaining better hygienic conditions and by use of best yeast strains and Enzymes.

- Based on experience in foreign countries and improved varieties of enzymes & strains of yeast, the company will be able to increase the concentration of alcohol.

- Reduction in existing fresh water requirement KL/KL of alcohol produced.

- The expansion will not envisage large movements of equipment & machineries and will be at a small scale. As such no major environmental impact will be seen.

The details of products and capacity as under:

Units	**Existing operating Capacity**	**Proposed Capacity**	**Total**	**Products**
Distillery Plant (Grain / Molasses Based)	40 KLPD	65 KLPD	105 KLPD	Ethanol/ Extra Neutral Alcohol(ENA) / Rectified Spirit (RS)
Co-generation power plant	1.0 MW	2.0 MW	3.0 MW	Power

It was informed that PP can start operations of 70 KLPD plant immediately after obtaining all statutory permissions and for expansion from 70 to 105 KLPD there will be process modification and efficiency improvement in existing installed plant and also replacement of 12 TPH boiler with 35 TPH boiler.

The Member Secretary informed the Committee that the project proponent has earlier submitted an application for extension of validity of the EC dated 16th September, 2008 for operation of the work completed 70 KLPD distillery, which was not agreed by the Committee considering the completion of validity of the EC. The project proponent has been advised to apply as per the provisions of the Notification. The project proponent has submitted an application under amendment category and then for EC as per para 7(ii) of the EIA Notification, 2006, stating that higher production in the unit can be achieved with improved technology/enzymes.

The project proponent has informed the Committee that the amendment application shall be treated as withdrawn and proposal under para 7(ii) of the EIA Notification, 2006 may be considered with exemption from fresh ToR, public hearing and EIA.

The Committee has noted that the project proponent has installed the 70 KLPD unit, which is yet start operation/obtain CTO due to expiry of EC validity. The project shall achieve higher production in the unit with the improved technology. The process improvement in fermentation with better yeast strains and enzymes shall provide higher production. The PP has also agreed for reduction in fresh water requirement to 3KL/KL of alcohol produced. There is no major impact envisaged on the environment due to the modernization of the plant.

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with PFR report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the PFR report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the Form 1/PFR report is in compliance of the notification/guidelines/OMs issued by the Ministry for such projects, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has also deliberated on the CER plan and found to be addressing the issues in the study area. The compliance of the existing EC conditions found to be satisfactory.

The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance as per para 7(ii) of the EIA Notification, 2006 exempting ToR, fresh public hearing and EIA report.

The EAC, after detailed deliberations, **recommended** the project for grant of environmental clearance, subject to compliance of terms and conditions as under, and general terms of conditions at **Annexure**:-

(i). Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.

(ii). As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.

(iii). Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

(iv). To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

(v). Total fresh water requirement shall not exceed 680 cum/day proposed to be met from ground water. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and shall be renewed from time to time.

(vi). Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the solvent transfer through pumps.

(vii). Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

(viii). The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

(ix). The Project Proponent shall undertake waste minimization measures as below: (a) Metering and control of quantities of active ingredients to minimize waste, (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes, (c) Use of automated filling to minimize spillage, (d) Use of Close Feed system into batch reactors, (e) Venting equipment through vapour recovery system, (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(x). The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(xi). All the commitments made regarding issues raised during earlier public hearing/ consultation meeting shall be satisfactorily implemented.

(xii). The project proponent shall provide employment to the villagers residing in the local area.

(xiii). As proposed Rs. 40 lakhs shall be allocated for Corporate Environment Responsibility (CER). As proposed, the CER allocation shall be spent mainly for addressing the issues like infrastructure/assistance to schools/hospital.

(xiv). The project proponent shall develop 10% of power from solar power for use in the unit.

(xv). The project proponent shall ensure rain water harvesting system in the project area and reduce dependency on ground water.

(xvi). For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

(xvii). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xviii). Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(xix). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.

(xx). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.

(xxi). CO_2 generated from the process shall be bottled/made solid ice and sold to authorized vendors.

(xxii). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

Agenda No. 20.26

Expansion of Pesticides and Pesticide Specific Intermediates manufacturing unit at E51-1&2, E52, MIDC Notified Industrial Estate Tarapur, Boisar, District Palghar (Maharashtra) by M/s UPL Ltd (Unit 10) -Amendment in Environment Clearance

[IA/MH/IND2/150671/2020, IA-J-11011/7/2017-IA II(I)]

The proposal is for amendment in the Environmental Clearance granted by Ministry vide letter No J-11011/7/2017-IA-II(I) dated 17-1-2020 for the project Expansion of Pesticide & Pesticide Specific Intermediates Manufacturing Unit Located at Plot No E-51-1&2, E52, Notified Industrial Estate, MIDC, Tarapur , District : Palghar (Maharashtra) in Favour of M/s UPL Limited (Unit 10).

The project proponent has requested for amendment in the EC with the details are as under:

S. No	Para of EC issued by MoEF&CC	Details as per EC	To be Revised / Read as	Justification (Reasons)
1	*EC Condition No* 12 (xix) –	At least 5 % of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office	*Request for Amendment As Follows:-* At least 1.5 % of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office	• As per MoEF&CC Office Memorandum No : F.No.22-65/2017-IA.III dated 1st May 2018, The Maximum CER % of Project cost is 0.75% (Brownfield) of Project Cost Since Investment was Rs. 227.06 Crores (>100 Crores To< 500 Crores). • The Proposal for EC Was Considered with Agenda Item No : 6.3.5.1 vide 6th Expert Appraisal Committee (Industry II) Meeting held during 08-09 April 2019. During meeting, Given CER in Recommendation MoM was 2.5% which was already higher as per MoEF&CC Office Memorandum No : F.No.22-65/2017-IA.III dated 1st May 2018.

				• However, In Condition No 12(XIX) of Granted EC dated 17/1/2020, The % CER is given as 5% of Project Cost which is double then recommended % CER in MoM. • In Compliance To Later On MoEF&CC Office Memorandum No 22-23/2018-IA.III (Pt) dated 31/10/2019 for Compliance of Hon'ble NGT Order dated 19.08.2019 in O.A No 1038-2018, We request to amend CER from 5 % of Total Project Cost To CER of *Maximum 1.5% (2 Times the slab given in OM dated 1/5/2018)* of Total Project Cost.

The Committee during deliberations noted that the CER amount has been stipulated at 5% considering that the project site is located in the critically polluted area and as per the extant policy of the Ministry. Based on the recommendations of the EAC and subsequent to Ministry's OM on consideration of projects in the CPA, the environmental clearance has been granted. As such there is no rationale in considering the proposed amendment. *The Committee has accordingly decided to* ***RETURN*** *the proposal.*

Agenda No.20.27

Expansion of Pesticide & Pesticide Specific Intermediate Manufacturing Unit at Plot No 3-11, A-2/1, A-2/2, A-2/6 & A-1/2, Phase-I, GIDC Notified Industrial Area Vapi, District Valsad (Gujarat) by M/s UPL Limited - Amendment in Environment Clearance

[IA/GJ/IND2/150515/2020, IA-J-11011/330/2016-IA-II(I)]

The proposal is for amendment in the Environmental Clearance granted by Ministry vide letter No J-11011/330/2016-IA-II(I) dated 25-11-2019 for the project Expansion of Pesticide & Pesticide Specific Intermediates Manufacturing UnitLocated at Plot No 3-11,A-2/1,A-2/2,A2/6 & A-1/2, Notified Industrial Estate, Phase 1, GIDC Vapi, District : Valsad (Gujarat) in Favour of M/s UPL Limited.

The project proponent has requested for amendment in the EC with the details are as under.

S. No	Para of EC issued by MoEF&CC	Details as per EC	To be Revised / Read as	Justification (Reasons)
1	*EC Condition No* 11 (XVI) –	As committed fund allocation for Corporate Environmental Responsibility (CER) shall be 5 % of the total project cost.Item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.	***Request for Amendment As Follows:-*** As committed fund allocation for Corporate Environmental Responsibility (CER) shall be 1.5 % of the total project cost.Item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office	• As per MoEF&CC Office Memorandum No : F.No.22-65/2017-IA.III dated 1st May 2018, The Maximum CER % of Project cost is 0.75% (Brownfield) of Project Cost Since Investment was Rs. 285.63 Crores (>100 Crores To ≤ 500 Crores). • The Proposal for EC Was Considered with Agenda Item No : 41.3.20 vide 41st Expert Appraisal Committee (Industry II) Meeting held during 24-26 September 2018.During meetingGiven CER in Recommendation MoM was 2.5% which was already higher as per MoEF&CC Office Memorandum No : F.No.22-65/2017-IA.III dated 1st May 2018. • However, In Condition No 11(XVI) of Granted EC dated 25/11/2019, The % CER is given as 5% of Project Cost which is double then recommended % CER in MoM. • In Compliance To Later On MoEF&CC Office Memorandum No 22-23/2018-IA.III (Pt) dated 31/10/2019 for Compliance of Hon'ble NGT Order dated

				19.08.2019 in O.A No 1038-2018, We request to amend CER from 5 % of Total Project Cost To CER of Maximum 1.5% (2 Times the slab given in OM dated 1/5/2018) of Total Project Cost.

The Committee during deliberations noted that the CER amount has been stipulated at 5% considering that the project site is located in the critically polluted area and as per the extant policy of the Ministry. Based on the recommendations of the EAC and subsequent to Ministry's OM on consideration of projects in the CPA, the environmental clearance has been granted. As such there is no rationale in considering the proposed amendment. *The Committee has accordingly decided to **RETURN** the proposal.*

Agenda No. 20.28: Any other items with the permission of the Chairman.

Item No. (1)

Setting up of Acrylic Co-Polymers manufacturing unit of capacity 4000 TPM in the existing Industrial facilities at Plot No, E-72, MIDC Additional Patalganga, Karade (Budruk), Taluka Panvel, District Raigad, Maharashtra by M/s Chryso India Private Limited –Environmental Clearance-reg.

[IA/MH/IND2/113824/2019, No.IA-J-11011/253/2019-IA-II(I)]

The proposal was considered by the EAC in its meetings held on 30-31 December, 2019 & 1st January, 2020 and 11-13 May, 2020, and has recommended to grant environmental clearance, subject to certain conditions.

During examination of the proposal in the Ministry, it was desired to know the following:

The MoM mentions that the Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project. Then why EAC has stipulated that the PP required to submit individual risk contours and societal risk F-N curves for acrylic acid and Risk Assessment be under taken by using 3D CFD technique. No timeline also has been given for such study and how the EAC would appraise the report has also not been spelt out. EAC may also be asked to elaborate how existing modelling techniques are not good enough for risk assessment and how 3D modelling could prove to be better. The same may be deliberated by EAC separately from all angles including availability of adequate number of agencies for such studies, for recommending policy decision. There could be some site specific issues for

individual project, otherwise it is expected that EAC maintains consistency in imposing specific conditions for projects within same category and make unambiguous recommendations to avoid delay in decision by the regulatory authority.

The Committee has deliberated on the subject matter and informed the following:

Risk Assessment in process plant is an important activity in safe design of the plants and identification of mitigation measure at design stage. Several studies have proven that identification of risk at concept stage helps in designing safer plants. When existing plant is under expansion risk assessment need to be updated considering effect of expansion project in existing facility and combined facility.

Recent accidents in chemical plants (Vizag, Dahej, Ankaleshwar) shows that neither regulatory authorities or industry have identified consequences of accidents. The effect of chemical release resulting fire/explosion and toxic release is important aspect and conventionally done using 2D techniques developed 30 years back. Since 2000 onwards several CFD based models are developed by global/Indian organizations such as ANSYS, Fluent, DNV, Fluidyn, Gexcon etc. and found effective in estimating precise effects of fire/explosion and toxic release. This is input in designing safer plants, identification and designing of engineering mitigation measures (F&G system, Firefighting system etc.). If the input for such design is accurate plan becomes inherently safe.

Several companies have adopted these developments and standardized their design, operations and maintenance activities. More details and justification is available in attached article written by Du Pont operating experts.

Industry can contact experts who can help in carrying out such studies and EAC is competent to appraise these studies in line with regulatory requirements.

As explained earlier existing modelling techniques are developed 30 years ago and worldwide and several Indian companies have started using CFD 3 models. The major difference in both models are as follows:

Modelling discharge and dispersion of toxic or flammable materials to the environment is important to study risk to humans, environment and property. Common simple models such as Gaussian plume models or 2D slab models are commonly used for dispersion modelling, effects of fire & explosion. Computational fluid dynamics (CFD) methods have typically been used for modelling the behavior of instantaneous releases of flammable materials and predicting the resulting impact of potential explosions usually within or around buildings/plant.

CFD has been applied to a wide range of problems from material design, reaction engineering, solid mechanics, wind models, ocean and weather analysis, and liquid flows in channels and pipelines. Most of these applications deal with problems that have a simple

geometry, such as airplanes or simple mechanical elements, whereas others may deal with complex geometry but for a small-scale problem, such as engines, turbo-machinery, and fluidized bed reactors. For these problems, grid generation, which is an important aspect of CFD analysis, is easier to carry out than for the scales and geometry in a large industrial facility.

Following table gives comparison of both methodologies:

S. No.	2D Modelling	3D CFD Modelling
1	Gaussian dispersion models are used.	Computational Fluid Dynamics (CFD) is a branch of fluid mechanics that solves fluid flow problems by numerical methods and algorithms.
		Approach: a mesh (grid) divides the spatial domain into smaller volumes (grid cells), and suitable algorithms solve the relevant equations of motion for each grid cell.
		Governing equations: continuity equation, Navier-Stokes (NS) equations for viscous flow, and energy equation.
2	Assume average congestion, symmetric around cloud center •Assume (or calculate) max flame speed based on type of fuel, cloud size and congestion •Neglect effect of remote obstructions on pressure buildup	Considers actual geometry •Calculates local flame speed as the flame front propagates •Considers effect of ignition location and remote obstacles on pressure buildup In an industrial facility, there are many open and closed structures, piping, buildings, and so forth that can in some cases be very confined and congested. Such complex geometry can lead to generation of turbulence that the CFD models need to represent adequately. Also the scale of the problems dealing with atmospheric dispersion of chemicals is much larger than the examples mentioned above, and the proper representation of the atmospheric winds and the boundary layer becomes critical.
3	Neglect effect of obstacles and terrain features •Assume wind is parallel to release (jets) •Assume liquid spills have no	Details are accounted for •Obstacles •Terrain features •Leak direction and wind direction are independent of each other

	momentum (pools) •Assume radial symmetry of gas dispersion around release location	•Liquid pool and flashing jet can both be included
4	For dispersion, 2D models: •Cannot account for the effects of obstacles or terrain features on wind and gas dispersion •Cannot consider releases cross-wind or into the wind •Cannot simulate both the flashing jet and the vaporizing pool from a pressurized liquid release •Cannot be assumed to give conservative results •Cannot evaluate the effects of mitigation strategies (e.g. cloud barriers)	The primary value of 3D modelling of atmospheric dispersion using a CFD tool versus the simple 2D tools (e.g.Gaussian plume models or dense gas slab models) is the ability to represent buildings, obstructions, and topography. CFD modelling isused to determine concentrations at specific locations in and around a structure or set of buildings for a range of weather conditions andrelease scenarios. A realistic determination of impacts canbe made to minimize the risk to population near the release locations.
5	For Vapor Cloud Explosions, 2D models: •Require significant assumptions to approximate a "real" geometry with an idealized, "regular" one •Cannot predict explosion loads in the fuel region •Cannot account for the effects of ignition location or of flame fronts entering a congested region •Cannot account for effects of obstructions (e.g., walls) and reflected pressures •Cannot evaluate the effects of mitigation strategies (e.g., blast walls, cloud segregation, deluge, etc.)	Realistic accident scenarios •All equipment details are taken into account •Can be used for explosion analysis and design (structural response) •Local explosion effects can be accounted for (structural response) •Layout optimization can be performed •Mitigation measures can be investigated •Accurate answers •Requires detailed geometry model (can be prepared manually for old plants)
6	2D models can be used in areas with low levels of congestion for screening purposes	NORSOK standards Z-013 Risk and emergency preparedness analysis section says G.5.2 Selection of simulating models: One should select an advanced CFD-type of model such as FLACS

7	Cost: Established over years	IIT Delhi, IIT Mumbai and ICT (Formerly UDCT) Mumbai are in cooperation cooperate with Norwegian Universities and undertake sponsored research programs jointly. Efforts are being made to put software in cloud and make it affordable.
8	Not suitable for flammable dust release and explosion modelling	Internationally 3 D is used Dust explosion effects can be estimated by 3D modelling only. World leaders 3D Affordability Cloud at affordable cost Training will be given to all users For MSME sectors

Applications where 2D models shall not be used and where CFD is the preferred model include:

Dispersion analyses:
Dispersion applications in congested process installations and/or involving partial confinement (except for screening purposes as discussed below).

Explosion analyses:
Explosion analyses for congested process installations. Key words:
- Detailed near field pressure evaluation
- Near field design parameters
- In cloud pressure developments
- Domino effects
- When investigating likelihood of transition from deflagration to detonation.

Scenarios where the use of integral/analytical models could be beneficial

There are a number of applications where the use of integral/analytical models could be beneficial and should be considered.

Dispersion:
Outside the valid range of application of 2D models it can be used in areas with low levels of congestion for screening purposes (provided in case of gas jets these do not impinge on larger obstructions). 2D model dispersion analyses could support the selection of relevant scenarios for further CFD analysis.

Order of magnitude estimation:
When a customer is interested in order of magnitude effects only, the conservative use of 2D models can be used – if and when it is possible to demonstrate that the use is

conservative. In conclusion, it should be expressed clearly that it is an order of magnitude analysis.

General modelling:
2D models can be used to perform general modelling in a simple way. From the results an explosion and dispersion expert can determine which scenarios are not valid and for which cases more detailed CFD analyses are needed. This, however, requires competence and expertise on the part of the analyst. If this competence is not available, one may end up with 2D model analyses which are wrong.

Item No. (2)

Optimization of EC Conditions related to Industry 2 Sector Projects [Chemical Based]

The Member Secretary has informed to the EAC that the issues related to standardization/optimization of EC conditions was deliberated in the Ministry and it has been decided that the EAC/Ministry may deliberates the Standard EC conditions for all categories of the projects as per schedule of the EIA Notification, 2006. The EC conditions shall be specific to the project and monitorable and be implemented in time bound manner. In this regard a meeting was held under the Chairmanship of Secretary (EF&CC) on May 19, 2020. The meeting was attended by the Chairmen & Member Secretaries of all the EAC constituted for various sector projects.

Dr. J P Gupta, Chairman EAC (Industry 2) and Dr R B Lal, Member Secretary have attended the meeting and accordingly the matter was deliberated in the EAC meeting held during June 15-17, 2020. The Committee deliberated the issues related to standardization of monitorable EC conditions and it was decided that a Zero Draft has to forwarded by the Member Secretary to the EAC for the comments and suggestions. The Member Secretary has informed to the Committee that a Draft is being under preparation and will forward to the Committee for further deliberations. The Member Secretary has forwarded the Draft document to the EAC for further deliberations.

The meeting ended with thanks to the Chair.

The EAC has appreciated the work of NIC Team for successful conduction of meeting through VC mode.

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Annexure-I

All the projects recommended for grant of environmental clearance by the EAC shall also comply with the following General conditions:

(i) The Project Proponent shall obtain all other statutory/necessary permissions/recommendations/NOCs prior to start of construction/operation of the project, which inter alia include, permission/approvals under the Forest (Conservation) Act, 1980; the Wildlife (Protection) Act, 1972; the Coastal Regulation Zone Notification, 2019, as amended from time to time, and other Office Memoranda/Circular issued by the Ministry of Environment, Forest and Climate Change from time to time, as applicable to the project.

(ii) The project proponent shall ensure compliance of 'National Emission Standards', as applicable to the project, issued by the Ministry from time to time. The project proponent shall also abide by the rules/regulations issued by the CPCB/SPCB for control/abatement of pollution.

(iii) The project authorities shall adhere to the stipulations made by the State Pollution Control Board/Committee, Central Pollution Control Board, State Government and any other statutory authority.

(iv) The project proponent shall prepare a site specific conservation plan and wildlife management plan in case of the presence of Schedule-1 species in the study area, as applicable to the project, and submit to Chief Wildlife Warden for approval. The recommendations shall be implemented in consultation with the State Forest/Wildlife Department in a time bound manner.

(v) No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.

(vi) The energy source for lighting purpose shall be preferably LED based, or advance having preference in energy conservation and environment betterment.

(vii) The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one station each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.

(viii) The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.

(ix) The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall

conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

(x) The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and to utilize the same for process requirements.

(xi) Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.

(xii) The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(xiii) The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented.

(xiv) The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.

(xv) A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

(xvi) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.

(xvii) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, ZillaParishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.

(xviii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.

(xix) The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as

prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.

(xx) The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at https://parivesh.nic.in/. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.

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

(xxii) This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

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Annexure-II

List of the Expert Appraisal Committee (Industry-2) members participated during Video Conferencing (VC) meeting

S. No.	Name and Address	Designation
1.	Dr. J. P. Gupta	Chairman
2.	Shri R. K. Singh	Member
3.	Shri Ashok Agarwal	Member
4.	Shri S.C. Mann	Member
5.	Dr. Y.V. Rami Reddy	Member
6.	Dr. T. K. Joshi	Member
7.	Dr. J. S. Sharma	Member
8.	Dr. T. Indrasena Reddy	Member
9.	Dr. Uma Kapoor, CGWA	Member
10.	Shri Dinabandhu Gouda, CPCB	Member
11.	Dr. R. B. Lal, Scientist 'E', MoEFCC	Member Secretary
MoEFCC		
12.	Dr Saurabh Upadhyay	Scientist 'C'
13.	Dr. E.P. Nobi	Research Officer

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Annexure-III

Approval Email of Chairman EAC

From: jpglobalconsultinggroup@gmail.com
To: "Additional Director MoEFCC Dr R B LAL" <rb.lal@nic.in>
Sent: Thursday, June 25, 2020 2:22:19 PM
Subject: Re: Draft Minutes of the 20th EAC (Industry 2 Sector)-Chemical Sector meeting held during June 15-17, 2020 (through Video Conferencing)

Dear Dr. R.B. Lal,

The minutes stand approved.

Regards,

Dr. J.P. Gupta