MINUTES OF THE 41st EXPERT APPRAISAL COMMITTEE (INDUSTRY-2) MEETING HELD DURING 24-26 SEPTEMBER 2018

Venue: Indus/Narmada Hall, Ground Floor, Jal Wing, Ministry of Environment, Forest and Climate Change, Indira ParyavaranBhawan, JorBagh Road, New Delhi - 3.

Time: 10:30 AM

41.1 Opening Remarks by the Chairman

41.2 Confirmation of the Minutes of the 40th Meeting of the EAC (Industry-2) held during 27-29 August 2018 at Indira ParyavaranBhawan, New Delhi.

The EAC, having taken note that no comments were offered on the minutes of its 40th meeting held on 27-29 August, 2018 at New Delhi, confirmed the same.

Day One - 24th September 2018

41.3 Environmental Clearance

Agenda No.41.3.1

Bulk Drugs & Intermediates Manufacturing unit at Sy. No.109, Jayanthipuram Village, Jaggayyapet Mandal, Krishna District (Andhra Pradesh) by M/s Sarvani Labs Private Limited - For Environmental Clearance

[IA/AP/IND2/62366/2017, IA-J-11011/38/2017-IA-II(I)]

41.3.1.1 The project proponent and accredited Consultant M/sRightsource Industrial Solutions Pvt Ltd, gave a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project for setting up Bulk Drugs & Intermediates Manufacturing Unit at Sy. No.109, Jayanthipuram (V), Jaggayyapet (M), District Krishna (Andhra Pradesh) by M/s Sarvani Labs Private Limited.

(ii) The project Proposal was considered by Expert Appraisal Committee (Industry-II) in its 20th EAC meeting held during 27th to 28th February 2017 and recommended Terms of Reference (ToRs) for the Project. The ToR has been issued by Ministry vide letter no. IA-J-11011/38/2017 - IA II (I) dated 31st May 2017.

(iii) 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) Located outside the notified industrial area/ estate are listed at S.N. 5(f) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) The proposed project will be established in a land area of 2.93 Acres (11843 sqm).

(v) Industry will develop Greenbelt in an area of 36.87% i.e. 1.08 Acres out of 2.93 Acres of area of the project.

(vi) The estimated project cost is Rs. 6.38 Crores including investment on proposed project Total capital cost earmarked towards environmental pollution control measures is Rs. 100 Lakhs and the recurring cost (operation and maintenance) will be about Rs.19 Lakhs Per annum.

(vii) Total Employment will be 71 persons as direct & 10 persons indirect. Industry proposes to allocate Rs.32 Lakhs for 5 years @5% of Project cost towards Corporate Social Responsibility.

(viii) There are no national parks, wildlife sanctuaries Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10km distance from the project site. Palleru River is flowing at a distance of 3.6 km in W direction.

(ix) Ambient air quality monitoring was carried out at 8 locations during March 2017 - May 2017 and the baseline data indicates the ranges of concentrations as: PM_{10} (48.41 – 69.73 µg/ m^3), $PM_{2.5}$ (16.40 – 28.21 µg/ m^3), SO_2 (10.87 – 17.84 µg/ m^3), NOx (15.95 – 25.39 µg/ m^3), CO (0.42 – 0.85 mg/ m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.93 µg/ m^3, 2.70µg/ m^3 and 3.62µg/ m^3 with respect to $PM_{10,}$ $SO_2$and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NQQS).

(x) Total water requirement is 38.50 m^3/day of which fresh water requirement is 29.63 m^3/day, which will be met from ground water sources and obtained permission to draw 38.50 KL/Day water from Ground Water and Water audit Department , Government of Andhra Pradesh vide letter no:1050/Hg/SW/2017-18 Date 12-12-2017.

(xi) Total effluent of 10.64 m^3/day will be treated through stripper followed by MEE/ATFD, Biological Treatment Plant followed by RO plant. Treated water of 8.87 m^3/day will be recycled/treated water. The plant will be based on Zero Liquid Discharge System.

(xii) Power requirement will be 500 KVA and will be met from APSPDCL. DG set of 320 KVA capacity is proposed as standby with a stack height of 10 m as per CPCB norms .

(xiii) 3.0 TPH coal fired boiler is proposed with a stack of height of 30 mtr, Multi cyclone separator/ bag filter will be installed for controlling the particulate emissions (within statutory limit of 115 mg/ Nm^3).

(xiv) Details of Process emissions generation and its management.

S. No	Name of the Gas	Quantity	Treatment Method
1	Oxygen	27 Kg/Day	Dispersed into the atmosphere
2	Hydrogen	2 Kg/Day	Diffused by using Nitrogen through Flame arrestor.
3	Sulphur dioxide	7 Kg/Day	Scrubbed by using C.S.Lye Solution
4	Hydrogen chloride	38 Kg/Day	Scrubbed by using chilled water media

(xv) Details of Solid waste/Hazardous waste generation and its management.

S. No	Name of the Hazardous/Solid Waste	Quantity	Disposal Method
1	Organic waste (Process residue-46, Solvent Distillation Residue-74)	120 Kg/Day	Sent to Cement Industries

2	Spent Carbon	6 Kg/Day	Sent to Cement Industries
3	Inorganic Waste	4 Kg/Day	Sent to TSDF
4	MEE salts	257 Kg/Day	Sent to TSDF
5	ETP Sludge	50 Kg/day	Sent to TSDF
5	Used Oils	500 Ltrs/Annum	SPCB Authorized Agencies for Reprocessing/Recycling
7	Detoxified Containers	200 No's/Month	After Detoxification sent to outside agencies
8	Used Lead Acid Batteries	2 No's/Annum	Send back to suppliers for buyback of New Batteries
9	Ash from boiler	3.6 TPD	Sent to Brick Manufacturers

(xvi) Public hearing for the proposed project has been conducted by Andhra Pradesh Pollution Control Board on 22.12.2017.

(xvii) No Litigation Pending against the proposal

(xviii) The details of products and capacity as under:

S. No.	Name of the Product	CAS No.	Therapeutic Category	Quantity (TPM)
1	Closantel Amine	61437-85-2	Intermediate	3.00
2	Closantel Sodium	61438-64-0	Anti- Helminthic	2.00
3	Niclosamide	50-65-7	Tape Worm Infections	1.00
4	Rafoxanide	22662-39-1	Anti- Helminthic, Fasciolicide	1.00
5	Triclabendazole	68786-66-3	Fascioliasis	2.00
			Total	**9.00**

41.3.1.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up Bulk Drugs & Intermediates Manufacturing unit of capacity 9 TPM by M/s Sarvani Labs Private Limited in a total area of 11843 sqm at Sy. No: 109, Village Jayanthipuram, Mandal Jaggayyapet, District Krishna (Andhra Pradesh).

The proposed land has been converted from agriculture to non-agriculture purpose, then permitted to use for industrial purpose by Tahsildar, Mandal Jaggayyapet, District Krishna (AP) vide Rc.A.85/2018 dated 23rd June, 2018.

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

The ToR for the project was granted on 31st May 2017. Public hearing was conducted by the State Pollution Control Board on 22nd December, 2017.

Total water requirement is estimated to be 38.50 cum/day, which includes fresh water of 29.63 cum/day to be met from the ground water/existing borewell supply. Based on integrated ground water surveys, the State Ground Water and Water Audit Department, Government of Andhra Pradesh vide letter dated 12th December, 2017, has recommended the existing borewell to

draw a total quantity of 38.5 cum/day to meet the industrial requirements, subject to certain terms and conditions.

Effluent of 10.64 cum/day generated will be treated through stripper followed by MEE/ATFD, biological treatment plant and RO plant. Treated water of 8.87 cum/day will be recycled in the process and for green belt development, and thus the plant will conform to Zero Liquid discharge system.

Considering the baseline air quality, Committee suggested not to use coal as fuel in the boiler, instead suggested for using biofuel/briquettes/bagasse.

The expenditure towards CER for the project would be 2% of the project cost as committed by the project proponent.

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. Issues raised during the public hearing have been duly addressed by the project proponent.

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

- *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.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*
- *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.*
- *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.*
- *Coalshall not be used as fuel in the boiler, instead bio-fuel/briquettes/bagasse shall be preferred.*
- *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.*
- *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) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.
  (d) Solvents shall be stored in a separate space specified with all safety measures.
  (e) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
  (f) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
  (g) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- *Total fresh water requirement shall not exceed 29.63cum/day to be met from ground water. All the terms and conditions suggested by the State Ground Water and Water Audit*

Department, Government of Andhra Pradesh vide letter dated 12th December, 2017, shall be strictly followed.

- *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.*
- *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.*
- *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.*
- *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.*
- *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.*
- *The company shall undertake waste minimization measures as below:-*
  - *(i) Metering and control of quantities of active ingredients to minimize waste.*
  - *(ii) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*
  - *(iii) Use of automated filling to minimize spillage.*
  - *(iv) Use of Close Feed system into batch reactors.*
  - *(v) Venting equipment through vapour recovery system.*
  - *(vi) Use of high pressure hoses for equipment clearing to reduce wastewater generation.*
- *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.*
- *All the commitments made to the public during public hearing/consultation shall be satisfactorily implemented.*
- *At least 2% 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.*
- *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.*
- *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.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *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.41.3.2

Expansion of Grain/Molasses based Distilleryfrom 60KLPD to 150 KLPD (60 KLPD to 90 through modification and from 90 KLPDto 150 KLPD by installing a new 60 KLPD plant)

by M/s Rana Sugar Ltd (Distillery Division) Village Laukha, District Tarn Taran (Punjab) - For Environmental Clearance

[IA/PB/IND2/63809/2017, J-11011/175/2017-IA-II(I)]

41.3.2.1 The Project Proponent and the accredited Consultant M/s CPTL-EIA Division made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the projectfor Expansion of Grain/Molasses based Distillery from 60KLPD to 150 KLPD (60 KLPD to 90 through modification and from 90 KLPD to 150 KLPD by installing a new 60 KLPD plant) at VillageLaukha, DistrictTarnTaran (Punjab) by M/sRana Sugars Limited (Distillery Division).

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 23rd meeting held during 3rd – 5th May, 2017 and recommended Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No .J-11011/175/2017-IA-II (I)dated 30th May, 2017.

(iii) All projects are listed at S.N. 5 (g) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Ministry had issued EC earlier vide letter no. J-11011/9/2005-IA.-II (I); dated 26th April, 2005 to the existing project of 60 KLPD Distillery Unit in favour of M/s Rana Sugars Limited (Distillery Division).

(v) Existing land area is 161874 sqm. No additional land is required for proposed expansion.

(vi) Industry has already developed/will develop greenbelt in an area of 33 % i.e. 53,418 sqmout of total area of the project.

(vii) The estimated project cost is Rs. 145 Crores including existing investment of Rs. 75 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 80 Lakhs per annum.

(viii) Total Employment will be 175 persons as direct & indirect after expansion. Industry proposes to allocate Rs 1.42 Lakhs towards Corporate Social Responsibility.

(ix) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site. There is no water body near the project.

(x) Ambient air quality monitoring was carried out at eight locations during 1st October to 31st December, 2017 and the baseline data indicates the ranges of concentrations as: PM_{10} (50.6-86.6µg/m^3), $PM_{2.5}$ (24.2-45.2µg/m^3), SO_2 (6.0-15.1µg/m^3) and NO_2 (11.0-22.6µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 87.9µg/m^3 with respect to PM_{10}. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(xi) Total water requirement is 948 m^3/day which will be met from extraction of ground water for existing plant and water requirement for proposed expansion will be met through surface water. Permission from CGWA is already obtained.

(xii) The proposed project would have “Zero liquid discharge.”

(xiii) The total Power requirement of the unit after expansion will be 4.4 MW. The existing co-gen power plant is 1.6 MW which will be replaced with 2.4MW highly efficient turbines for the modernization/expansion plant. There will be another 2.0 MW turbine for 60KLPD plant. Existing unit has two DG sets of 500KVA capacity which will be used as standby during power failure. Stack with adequate height will be provided as per CPCB norms to the proposed DG sets.

(xiv) Existing unit has 14TPH boiler with 1.6MW turbine which will be upgraded to 2.4MW and one new 15TPH boiler for steam generation and 2.0MW turbine will be installed. ESP will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3 for the proposed boiler.

(xv) Details of Process emissions generation and its management: -

All major sources of air pollution are/will be provided with ESP as APCD to maintain PM emissions below permissible limits (i.e. < 50mg/Nm^3).
Proper maintenance of vehicles are /will be done regularly.
Green belt has been developed along the plant premises as dust preventive barrier.

(xvi) Details of Solid waste/Hazardous waste generation and its management: -Ash from boiler is being/will be sold to brick manufactures/disposed as per MoEF&CCnotification.Spent wash is being evaporated and burnt in incinerator.

(xvii) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 30/05/2018. The main issues raised during the public hearing are related to ‘Benefits to the local people from the establishment of the project.’

(xviii) Details of Certified compliance report submitted by RO, MoEF&CC:- The compliance reports vide F.No.5-54/2003-RO (NZ)/48 were submitted on dated 11/01/2016.

(xix) No litigation is Pending against the proposal.

(xx) The details of products and capacity as under: It is proposed to increase the overall capacity of existing Molasses/Grain based distillery from 60KLPD to 150KLPD, (60KLPD to 90KLPD through modification and 90KLPD-150KLPDby installing a new 60KLPD molasses/grain based distillery. Also the co-generation would be enhanced from 1.6MW to 4.4MW.

41.3.2.2 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for expansion of Grain/Molasses based Distillery from 60 KLPD to 150 KLPD by M/s Rana Sugars Limited (Distillery Division) in a total area of 161874 sqm at Village Laukha, District Tarn Taran (Punjab). Expansion from 60 KLPD to 90 KLPD will be achieved through process modification and from 90 KLPD to 150 KLPD by installing a new 60 KLPD plant).

The project/activity is 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 the sectoral EAC in the Ministry.

The ToR for the project was granted on 30th May, 2017. Public hearing was conducted by the SPCB on 30th May, 2018.

Total fresh water requirement after the proposed expansion is estimated to be 948 cum/day, including existingfresh water requirement of 548 cum/day being met from existing borewells, and fresh water requirement for expansion of 360 cum/day which will be met through surface water. Permission for ground water withdrawal of 588 cum/day has been obtained from CGWAvide letter dated 6th July, 2018 and for surface water use by the Superintending Engineer, Upper Bari Doab Circle, Amritsar vide letter dated 29th April, 2017.

Earlier, the Ministry had granted EC vide letter dated 26th April, 2005 to the existing molases/grain based distillery of 60 KLPD capacity by M/s Rana Sugars Limited (Distillery Division) at Village Laukha, District Tarn Taran (Punjab). The monitoring report on compliance status of EC conditions has been forwarded by the Regional Office vide their letter dated 27th August, 2018.

41.3.2.3 *The EAC, after deliberations, insisted for additional information/inputs and clarifications in respect of the following:-*

- *Proposed fresh water requirement of 948 cum/day needs to be reducedthrough improvement in the process. The water balance and effluent treatment process needs to revised accordingly.*
- *Action plan for implementation of Zero Liquid Discharge system.*
- *Action taken report in respect of non-complied points reported in the monitoring report dated 27thAugust, 2018, needs to be forwarded to the Ministry through the Regional Office.*
- *Plan for Corporate Environment Responsibility (CER) to be submitted.*
- *Action plan for ash management.*

The proposal was, therefore, deferred for the needful on the above lines.

Agenda No.41.3.3

Establishment of Molasses/Grain based distillery of 160KLD at Village Sabitgarh, Post Karora, District Bulandshahr (UP) by M/s Triveni Engineering and Industries Ltd - For Environmental Clearance

[IA/UP/IND2/71743/2017, IA-J-11011/574/2017-IA-II(I)]

41.3.3.1 The project proponent and the accredited Consultant M/s Ascenso Enviro Pvt Ltd, made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project for setting up molasses baseddistillery of capacity of 160KLPD along with 7MW Cogeneration Power Plant atVillageSabitgarh, Post Karora, Tehsil Khurja, District Bulandshahr (Uttar Pradesh) by M/s Triveni Engineering and Industries Limited.

(ii) The ToR has been issued by Ministry vide letter No.J-11011/574/2017-IA. II (I) ; dated 15th Feb 2018.

(iii) All Distillery (Molasses Based) are listed at S.N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Land area: 121400.0 m2 is used for proposed distillery establishment. Industry will develop greenbelt in an area of 33 % i.e., 40000.0 m2 out of total area of the project.

(v) The estimated project cost is Rs 20000Lakh. Total capital cost earmarked towards environmental pollution control measures is Rs 5600.0 Lakh and the Recurring cost (operation and maintenance) will be about Rs 320.0 Lakh per annum.

(vi) Total Employment will be 148.0 persons as direct & 150 persons indirect establishment. Industry proposes to allocate Rs 500.0 Lakh @ of 2.5 % towards Corporate Social Responsibility.

(vii) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River KaaliNadi is flowing at a distance of 3.94 km in North East direction and Upper Ganga Canal at a distance of 2.57 km in South direction.

(viii) Ambient air quality monitoring was carried out at Eight (08) locations during 1st January 2018 to 31st march 2018 and the baseline data indicates the ranges of concentrations as: PM10 (49.1 – 88.4 µg/m3), PM2.5 (22.8 – 55.8 µg/m3), SO2 (5.3- 22.2 µg/m3) and NO2 (4.7 – 18.8 µg/m3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 3.73 µg/m3, 2.04 µg/m3 and 2.20 µg/m3 with respect to PM10, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(ix) Total water requirement is 4142.0 m3/day of which fresh water requirement is 1296.0 (@ 8.1 KL/KL (Molasses Based Operation) m3/day will be met from Ground water.

(x) Effluent: spent wash of 1240.0 KLD quantity will be treated through Concentration in MEE then concentrate from MEE will be incinerated in Slop fired boiler. The plant will be based on Zero Liquid discharge system.
Other Effluent: Like MEE condensate, cooling tower and boiler blow down, floor washing etc will be treated in Condensate Polishing Unit.

(xi) Power requirement for establishment of Distillery will be 2130 – 2270 KW. Two number of DG sets of capacity: 1000.0 KVA (01) & 500.0 KVA (01) are used as standby during power failure. Stack (height 6.0 m above roof top) will be provided as per CPCB norms to the proposed DG sets.

(xii) 60.0 TPH (01 No) Slop fired boiler will be installed. Bag filter with a stack of height of 60 m will be installed for controlling the particulate emissions within the statutory limit of 150.0 mg/Nm3 for the proposed boilers.

(xiii) From Process Carbon Di Oxide will be generated. Approx.: 120.0 TPD Carbon di oxide would be recovered from the process which will be sold in the market.

(xiv) Details of Solid waste:Ash (During molasses based operation): 67.5 MT/Day, it would be mixed with fermenter sludge and utilized as manure due to its high potash content.

Hazardous waste generation, used oil and Grease is the only hazardous waste generated in the industry and will be provided to the authorised vendor for end disposal.

(xv) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 26.06.2018. The main issues raised during the public hearing are related to Air pollution, Water pollution, Fly ash disposal and employment in the local area.

(xvi) No Litigation Pending is pending against the proposal.
(xvii) The details of products and capacity as under:

Product	Quantity	Mode of Transport / Transmission of Product
RS/ENA/AA	160 KLPD	By road Transport
Co-generation plant	7 MW	In-house Use / Surplus electricity supplied to State Electricity board.

41.3.3.2 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for setting up molasses baseddistillery of capacity 160 KLPD along with 7 MW Co Generation Power Plant by M/s Triveni Engineering and Industries Limited in a total area 121400 sqmatVillage Sabitgarh, Post Karora, Tehsil Khurja, District Bulandshahr (Uttar Pradesh).

The project/activity is covered under category A of item 5 (g) 'Molasses based distilleries' of the Schedule to the Environment Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on 15th February, 2018. Public hearing was conducted by the SPCB on 26th June, 2018.

Total water requirement is estimated to be 4142 cum/day, including fresh water requirement of 1296 cum/day proposed to be met from ground water, which will be reduced to 960 cum/day during season. Permission for ground water withdrawal of 1296 cum/day has been obtained from the CGWA vide letter dated 21st August, 2018.

Spent wash of 1240 cum/day will be treated through multi effect evaporators (MEE) followed by incineration in slop fired boiler. Other effluents will be treated in Condensate Polishing Unit. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

The expenditure towards CER for the project would be 2.5% of the project cost as committed by the project proponent.

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. Issues raised during the public hearing have been duly addressed by the project proponent.

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

- *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.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*
- *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.*
- *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.*
- *Total fresh water requirement shall not exceed* 1296 *cum/day during off-season and* 960 cum/day during season, *proposed to be met from ground water source. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard.*
- *The spent wash shall be taken to multi effect evaporators (MEE) and the concentrated spent wash shall be incinerated in the boiler along with bagasse.*
- *Number of working/operating days for the distillery shall be 365 days as proposed..*
- *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.*
- *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.*
- *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.*
- *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.

- *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.*
- *All the commitments made regarding issues raised during the public hearing/ consultation meeting shall be satisfactorily implemented.*
- *At least 2.5% 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.*
- *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.*
- *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.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*

- *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.*
- *Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.*
- *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.*
- *CO_2 generated from the process shall be bottled/made solid ice and sold to authorized vendors.*
- *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.*

Agenda No.41.3.4

Setting up 60 KLPD Sugarcane Juice and Molasses Based Distillery at Sr. No. 47/1, 47/2, 48, 49, 50, 51, 52 & 53, Village Mirwadi, Post Dahitane, Taluka Daund, District Pune (Maharashtra) by M/s Kunjir Bioenergy India LLP - For Environmental Clearance

[IA/MH/IND2/75943/2016, J-11011/305/2016-IA-II(I)]

41.3.4.1 The Project Proponent and the accredited Consultant M/s SMS Envocare Ltd made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project for setting up 60 KLPD Sugarcane Juice and Molasses Based Distillery at Sr. No. 47/1, 47/2, 48, 49, 50, 51, 52 & 53, Village Mirwadi, PostDahitane, Taluka Daund, District Pune (Maharashtra) by M/s Kunjir Bioenergy India LLP.

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 14th meeting held during 26th to 27th October, 2016 and recommended Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No. J-11011/305/2016-IA-II (I) dated 31st January, 2017.

(iii) All Molasses based distillery projects are listed at S. N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) The estimated project cost is Rs 69.3576 Crore. Total capital cost earmarked towards environmental pollution control measures is Rs 1115.00 Lakhs and the Recurring cost (operation and maintenance) will be about Rs. 53.8 per annum.

(v) Total Employment will be 100 Persons. Industry proposes to allocate Rs. 1.39 Crore @ of 2.5 % of Total project cost towards Corporate Social Responsibility.

(vi) There are No national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. MulaMutha River is flowing at a distance of 1.80 Km in south direction and Bhima River is flowing at a distance of 7.25 Km in North direction.

(vii) Ambient air quality monitoring was carried out at 8 locations during 1st March 2017 to 31st May 2017 and the baseline data indicates the ranges of concentrations as: PM10 (44.8 to 83.6 µg/m^3), PM 2.5 (28.05 to 43.9 µg/m^3), SO_2 (8.2 to 33.6 µg/m^3) and NO2 (13.5 to 35.0 µg/m3). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.17µg/m^3, 19.62 µg/m^3 and 4.37µg/m^3 with respect to PM10, SOx and NOx respectively. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(viii) Total fresh water requirement for the proposed unit will be 485 m^3/day which will be sourced from Mula- Mutha River. Spent wash will be treated in integrated evaporator followed by incineration boiler. Plant will be based on ZLD.

(ix) Concentrated spent wash of 185 TPD quantity with 55% w/w solids will be concentres in multi effect evaporator/ integrated evaporation followed by spent wash fired boiler. Spent lees will be recycled in the process. Process condensate will be treated in Condensate Polishing unit. Cooling tower and boiler blow down water will be used for green belt to reduce the fresh water requirement.

(x) Details of Process emissions generation and its management:

Air pollution during construction phase will be due to material handling, dust emission, vehicular movement and emission from machinery. Air emissions/pollution during operation phase will be mainly form flue gases manufacturing process, material & Ash handling and from vehicular movement.

Necessary preventive measures shall be taken during construction phase so that the ambient air quality will conform to National Ambient Air Quality standards.

To avoid the generation of dust emission water sprinklers will be provided to suppress the dust.

ESP will be provided to the proposed stack of 58 m height to control the particulate matter emission into the air as main pollution control measures. This boiler shall run on coal and concentrated spent wash.

Water sprinkler will be provided at coal stack pit and ash disposal area to control fugitive emission.

Work zone area including internal roads in the plant will be asphalted or concreted.

Water spraying system will be installed for regular spraying of water on road and work zone to minimizing fugitive dust emission.

(xi) Details of Solid waste/ Hazardous waste generation and its management:

Solid/ Hazardous waste generation quantification and disposal mechanism are given below:

Sr. No.	Solid Waste	Quantity	Disposal
1	Yeast sludge	9.6 TPD	Shall be used as a manure
2	Ash	Coal ash: 22.4 TPD Spent wash ash: 24.3 TPD	Spent wash ash is potash rich ash and can be use directly use as manure. Ash will be store in the ash silos, Coal ash will be separately collected in the ash

			silos and sent to brick manufacturer
3	Domestic waste	15-20 kg/d	Local waste collection system
4	Oil from DG	Negligible	To authorized dealer or mixed with coal and burnt in the boiler
5	Discarded drums and containers	Negligible	Will be sold to authorized Recyclers

(xii) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 01st November, 2017. The main issues raised during the public hearing are related to Pollution Controlling, Employment, Safe Disposal of Spent wash, Ash and other Solid/ hazardous waste. Project proponent has committed to ensure the safe management of spent wash, Ash, Other Solid Waste. ESP has been provided to ensure effective air pollution control. Thick green belt covering 33% of total plot are is secured for Green Belt development. Company has also committed to ensure its Corporate Social Responsibility and identified 2.5% of total project cost for activities related with social development. The project is welcomed by the local public.

(xiii) There is no litigation pending against the project.
(xiv) The details of products and capacity as under:

S. No	Product Details	Quantity
1	Rectified spirit(RS)/Absolute Alcohol (AA)/Extra Neutral Alcohol (ENA)	60 KLPD

41.3.4.2 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for setting up 60 KLPD Sugarcane Juice and Molasses Based Distillery (RS/AA/ENA) by M/s Kunjir Bioenergy India LLP in a total area of 45 acresat Sr. No. 47/1, 47/2, 48, 49, 50, 51, 52 & 53, Village Mirwadi, Post Dahitane, Taluka Daund, District Pune (Maharashtra).

The project/activity is covered under category A of item 5 (g) 'Molasses based distilleries' of the Schedule to the Environment Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on 31st January, 2017. Public hearing was conducted by the SPCB on 1st November, 2017.

Total water requirement is estimated to be 1125 cum/day, including fresh water requirement of 485 cum/day proposed to be met from Mula- Mutha River. Permission for withdrawal of 0.192 million cum (600 cum/day) has been obtained fromKhadakwasala Irrigation Division, Pune vide letter dated 21st June, 2018.

Spent wash will be treated in integrated evaporator followed by incineration boiler. Concentrated spent wash of 185 TPD will be concentrated in multi effect evaporator/ integrated evaporation followed by spent wash fired boiler. Spent lees will be recycled in the process. Process condensate will be treated in Condensate Polishing unit. Cooling tower and boiler blow down water will be used for green belt to reduce the fresh water requirement. There will be no

discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

The expenditure towards CER for the project would be 2% of the project cost as committed by the project proponent.

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. Issues raised during the public hearing have been duly addressed by the project proponent.

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

- *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.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*
- *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.*
- *Coal shall not be used as fuel in the boiler, instead bio-fuel/briquette/bagasse shall preferred.*
- *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.*
- *Total fresh water requirement shall not exceed 485 cum/day proposed to be met from* Mula-Mutha River*. Prior permission shall be obtained from the concerned regulatory authority.*
- *The spent wash shall be taken to multi effect evaporators (MEE) and the concentrated spent wash shall be incinerated in the boiler along with bagasse.*
- *Number of working/operating days for the distillery shall be 330 days as proposed. However, the same may be increased to round the year subject to zero liquid discharge ensured by the SPCB, while considering the Consent to Operate.*
- *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.*
- *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.*
- *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.*
- *The company shall undertake waste minimization measures as below:-*
  - *g) Metering and control of quantities of active ingredients to minimize waste.*
  - *h) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*
  - *i) Use of automated filling to minimize spillage.*
  - *j) Use of Close Feed system into batch reactors.*
  - *k) Venting equipment through vapour recovery system.*
  - *l) Use of high pressure hoses for equipment clearing to reduce wastewater generation.*
- *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.*

- *All the commitments made regarding issues raised during the public hearing/ consultation meeting shall be satisfactorily implemented.*
- *At least 2% 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.*
- *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.*
- *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.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *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.*
- *Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.*
- *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.*
- *CO_2 generated from the process shall be bottled/made solid ice and sold to authorized vendors.*
- *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.*

Agenda No.41.3.5

Expansion of grain based distillery from 65 KLPD to 74 KLPD by modernization and efficiency improvement at SP-156, RIICO Industrial Area, Village Ajitgarh, Tehsil Sri Madhopur, District Sikar (Rajasthan) by M/s Agribiotech Industries Limited - For Environmental Clearance

[IA/RJ/IND2/74891/2018, J-11011/486/2009-IA.II (I)]

41.3.5.1 The project proponent and the accredited Consultant M/s J.M. EnviroNetPvt. Ltd. made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project for expansion of grain based distillery from 65 KLPD to 74 KLPD by modernization and efficiency improvement (fermentation & distillation only) at SP-156, RIICO Industrial Area, Village Ajitgarh, Tehsil Sri Madhopur, District Sikar (Rajasthan)by M/s Agribiotech Industries Limited.

(ii) All activities are listed at S.No. 5 (g) {Distilleries} of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iii) Ministry had issued EC earlier vide letter no. J-11011/486/2009-IA II (I) dated 7th December, 2009 to the existing project in favor of M/s Agribiotech Industries Limited.

(iv) Existing land area is 13.35 ha. No additional land will be acquiredfor the proposedexpansion.Industry has already developed greenbelt in an area of 40% i.e.5.34 ha out of total area of the project.

(v) The estimated project cost for modernization & efficiency improvement is Rs 5 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 3.5 Crores and the Recurring cost (operation and maintenance) will be about Rs. 65 lacs per annum.

(vi) No additional manpower is required for proposed expansion project. Industry proposes to allocate Rs. 12.5 Lakhs @ of 2.5 % towards Corporate Social Responsibility.

(vii) There are no national parks, wildlife sanctuaries, biosphere reserves, Tiger/ Elephant Reserves, wildlife corridors etc., within 10 km distance from the project site. Three protected forests Devipura Protected Forest, Saiwar Protected Forest and ChatarpuraPiplod Protected Forest lies within 10 km distance from the plant site. DharajiNadi is flowing at a distance of 1.0 km in East direction.

(viii) Total water requirement is 401 m3/day which will be met from Ground water. No additional fresh water is required for the proposed expansion.

(ix) Process condensate water is being/ will be treated in Effluent Treatment Plant (ETP) and completely recycled in the plant. The plant is/will be based on Zero Liquid Discharge System.

(x) Power requirement after expansion will be 1.35 MW including existing 1.2 MW MW and will be met from Co-generation Power Plant and state grid. Existing unit has 2 DG sets of 500 KVA & 380 KVA capacity each, additionally 500 KVA is proposed which are used as standby during power failure. Adequate stack height will be provided as per CPCB norms to the proposed DG sets.

(xi) Existing unit has 12 TPH boiler is Biomass (Rice Husk) or coal fired. No additional boiler will be installed. Multi cyclone with a stack of height of 45 m has been installed for controlling the particulate emissions within the statutory limit of for the boiler.

(xii) Details of Process emissions generation and its management: Multi – cyclone has been installed as Air Pollution Control Equipment to maintain the emission levels within the stipulated standards. CO2 generated during the fermentation process is being/will be collected by utilizing CO2 scrubbers and sold to authorized vendors. Online Stack Monitoring system is already in place and operational.

(xiii) Details of Solid waste/ Hazardous waste generation and its management: Solid waste from the grain based operations generally comprises of fibres and proteins in the form of DWGS, which are being / will be ideally used as cattle feed. Yeast sludge is being / will be mixed with wet cake and sold to nearby vendors.Ash from the boiler is being / will be supplied to brick/cement manufacturers.Used oil & grease generated from plant machinery/gear boxes as hazardous waste are being / will be sold out to the CPCB authorized recyclers.

(xiv) Certified compliance report of existing EC was obtained from Regional Office of MoEFCC (Lucknow) vide letter dated 19thJanuary, 2018.

(xv) There is no litigation pending against the project.

(xvi) The details of products and capacity as under:

S. No.	Product Details	Existing	Proposed	Total
1.	Distillery	65 KLPD	9 KLPD	74 KLPD
2.	Co-generation Power Plant	1.2 MW	No change	1.2 MW
3.	IMFL/CL Bottling Plant	11,000 cases perday	No change	11,000 cases per day
4.	CO_2 Plant	15 MT/Day	3 MT/Day	18 MT/Day

41.3.5.2 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for expansion of grain based distillery from 65 KLPD to 74 KLPD by modernization and efficiency improvement (fermentation & distillation) by M/s Agribiotech Industries Limited in a total area of 13.35 ha at SP-156, RIICO Industrial Area, Village Ajitgarh, Tehsil Sri Madhopur, District Sikar (Rajasthan).

The proposed modernization would involve better fermentation technology and distillation, which would ultimately result in higher alcohol concentration and better efficiency. There shall be no increase in fresh water requirement, fuel and boiler.

The project/activity is 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 the sectoral EAC in the Ministry.

The proposal has been submitted under para 7 (ii) of the EIA Notification, 2006 for consideration.

Total water requirement of the existing distillery is 401 cum/day, which is being met through ground water. Permission in this regard has been obtained from the CGWA vide letter dated 15th July, 2005. No additional fresh water is required for the proposed expansion.

Process condensate water of 135 cum/day will be treated in Effluent Treatment Plant (ETP)and will be recycled. The plant will be based on Zero Liquid Discharge System.

Spent wash of 537 cum/day will be treated through multi effect evaporators (MEE) followed RO. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

The expenditure towards CER for the project would be 1% of the project cost as committed by the project proponent.

Earlier, the Ministry had granted EC vide letter dated 7th December, 2009 to the expansion of grain based distillery unit from 45 KLPD to 65 KLPD by M/s Agribiotech Industries Limited in a total area of 13.35 ha at SP-156, RIICO Industrial Area, Village Ajitgarh, Tehsil Sri Madhopur, District Sikar (Rajasthan). The monitoring report on compliance status of EC conditions and has been forwarded by the Regional Office vide their letter dated 19thJanuary, 2018

Consent to Operate for the present capacity of 65 KLPD has been obtained from the State PCB vide letter dated 26th May, 2017, which is presently valid up to 30th April, 2022.

41.3.5.3 *The EAC, after deliberations and as per the provisions contained in para 7(ii) of the EIA Notification, 2006, exempted the project from fresh EIA studies, EMP and the public hearing, and recommended the project for grant of environmental clearance for a period of one year, subject to compliance of terms and conditions as under: -*

- *The environmental clearance shall be valid for a period of one year. Meanwhile, based on the certified compliance report for the conditions stipulated in the EC and the prevailing status for no increase in pollution load at the enhanced capacity of* 74 KLPD*, the project shall be reviewed by the EAC for its continuance beyond one year.*
- *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.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*
- *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.*
- *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.*
- *Total fresh water requirement shall not exceed* 401 *cum/day proposed to be met from ground water source. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard.*
- *Number of working/operating days for the distillery shall be 330 days as proposed. However, the same may be increased to round the year subject to zero liquid discharge ensured by the SPCB, while considering the Consent to Operate.*
- *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.*
- *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.*
- *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.*
- *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.
- *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.*
- *At least 1% 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.*
- *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.*

- *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.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *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.*
- *Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.*
- *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.*
- *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.*

Agenda No.41.3.6

Setting up molasses basedfuel ethanol plant of 45KLPD & Incineration Plant at village Mendarana, PostKansul, Tehsil Pansemal, District Barwani (Madhya Pradesh) by M/s Shree Durga Khandsari Sugar Mills - For Environmental Clearance

[IA/MP/IND2/75508/2017, IA-J-11011/538/2017-IA-II(I)]

41.3.6.1 The project proponent and the accredited Consultant M/s Creative Enviro Services, Bhopal, made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project for setting up 45 KLPD molasses basedfuel ethanol plant and 1.2 MW Co gen plant within the existing premises of Sugar manufacturing unit of 2500 TCD and 11 MW Co gen plant at Village Mendrana, TehsilPansemalDistrict Barwani (Madhya Pradesh) by M/s Shree DurgaKhandsari Sugar Mill (SDKSM).

(ii) The project proposal was accorded slandered Terms of References (ToRs) by Ministry vide letter dated 26th December 2017.

(iii) All Molasses based distillery are listed at S.No. 5(g) of Schedule of EnvironmentImpact Assessment (EIA) Notification,2006 under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Total land available is 24.19 acres, Out of which 8.0048 acres of land have been earmarked for proposed project, Land occupied by the existing sugar/co gen unit is about 8 acres.

(v) Green belt has been developed within the existing premises covering an area of about 2 acres with approx 40 numbers of plants. Total plantation is proposed over 8.5 acres of area with 7200 number of trees out of 24.19 acres of total land, which is more than 33%.

(vi) The estimated project cost is Rs 110.82 crore including existing investment of Rs 6400 Lacs. Total capital cost for environmental measures is proposed as Rs 14.42 crores including of existing capital cost of 1.50 crores. The recurring cost (operation and maintenance) will be about Rs 63.40 lacs per annum including of existing recurring cost of Rs 20 Lacs.
(vii) Total Employment will be 170 persons after expansion as direct & 300 persons as indirect after expansion. Industry proposes to allocate Rs. 117.50 @ 2.5% of project cost towards Corporate Social Responsibility. Budget of Rs 23.50 Lacs per annum is proposed for execution of need base programme for the socio economic development of the area.

(viii) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves and Wildlife Corridors etc. within 10 km distance from the project site. Three reserve forest and one protected forest are present in the study area. Seasonal BanddharaBuzurg River is flowing at a distance of 0.01km in north direction.

(ix) Ambient air quality monitoring was carried out at 10 locations during December, 2017 to February 2018 and the baseline data indicates the ranges of concentrations as: PM_{10} (48.76-73.52 µg/m^3), $PM_{2.5}$ (16.23-27.82 µg/m^3), SO_2 (6.00 -10.36 µg/m^3) and NO_2 (8.00- 29.03 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.14µg/m^3, 10.00µg/m^3 and 2.00µg/m^3 with respect to PM_{10}, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(x) Total water requirement for the proposed fuel ethanol unitis estimated to be 830 KLD and after recycling & reuse of 479 KLD of water, net fresh water requirement is estimated to be 351 KLD. The total raw water requirement for the existing sugar unit operation is 215 KLD. The water requirement will be met from Ground water resources.

(xi) Multi-Effect Evaporation system followed by Incineration boiler is proposed for treatment of spent wash of 450 KLD to maintain zero discharge system. The concentrated spent wash generated after entire process of evaporation is then sprayed in a furnace with auxiliary fuel and is then burnt in a boiler.

(xii) Power requirement after additionof fuel ethanol plant will be 1685 KWH including existing 500 KWH and will be met from existing Co generation unit of 11MW and proposed co gen unit of 1.2 MW. Existing unit has 1 DG sets of 250 KVA capacity, and are used as standby during power failure. Additionally, 1010 KVA of DG sets with Stack height (30mt) will be provided and will be used as standby during power failure.

(xiii) Existing unit has 60 TPH bagasse fired boiler with ESP. Additionally, 14TPH concentrated spent wash & bagasse fired boiler will be installed in the proposed project, with ESP and stack height of 60m for controlling the particulate emissions within statutory limit of 150 mg /Nm^3.

(xiv) Details of process emissions generation and its management. Major emission are identified as Particulate matter, SO2, NOX will be generated from the fuel (Bagasse/spent wash) combustion whereas other air emissions like VOC from distillation columns, CO_2 and ethanol from fermentation process may also generates from the process. Following measures are proposed for implementation:

(a) ESP shall be provided at stack of boiler to control the emission below 150 mg per cubic meter.

(b) Adequate stack height of 60 mt for boiler and 30 mt for the DG set shall be provided for better dispersion.
(c) Dust collectors system shall be provided at various material transfer points.
(d) Online continuous monitoring system shall be provided for stack of boiler
(e) Development of green belt in time bound manner in consultation with forest department.
(f) Provision of dust mask for workers and instruction of compulsory use.
(g) Regular maintenance and water spraying arrangement over approach and internal road of the unit.
(h) CO_2 generated during the fermentation process is being/will be collected by utilizing CO_2 Scrubbers.

(xv) Solid waste/ Hazardous waste management practice to be adopted by unit is as under:

Details on Solid Waste Management				
S.No	Type of waste	Quantity		Disposal
		From existing sugar & cogeneration plant -	Proposed Distiller	
1	Yeast Sludge	-	0.2 Kg/day	Mixed yeast sludge may be used as manure or dried yeast will be used as supplement to cattle feed
2	Lime Sludge	0.008 MT/day	-	Mixed with sewage sludge and used as manure
3	WTP Sludge	0.001 MT/day	-	
4	ETP Sludge	0.001 MT/day	-	As manure
5	Ash	Bagasse ash: 24 MT/day	Spent wash Ash 1.73 MT/day	Fertilizer
6	Domestic waste	0.01 MT/day		N A

Details of Hazardous Waste Management			
S. No.	Description of Hazardous Waste	Quantity Per Year	Treatment Disposal
1	Used Oil	<500 lit	Stored in HDPE drums and given to re-processor authorized by MPPCB/MoEF
2	Waste Resin From DM plant	200 Kg	Stored in MS Drums and shall be disposed off at TSDF, Pithampur
3	Waste activated Carbon	50-75 Kg	Stored in MS Drums and shall be disposed off at TSDF Pithampur

(xvi) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 11.05.2018. People were provided their consent towards proposed proposal.

(xvii) Certified compliance report is not applicable for the proposed project. The existing project of sugar manufacturing unit of 2500 TCD is in operation, which does not require environment clearance.

(xviii) No litigation is pending against the proposal

(xix) Following are the list of existing and proposed products:

S.No	Product	Existing	Proposed	Total
1	Sugar	2500 TCD	---	2500 TCD
2	Co Gen Power Plant	11 MW	1.2 MW	12.2 MW
3	Ethanol	---	45 KLPD	45 KLPD

41.3.6.2 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for setting up 45 KLPD molasses based fuel ethanol plant and 1.2 MW Co gen plant within the existing premises of Sugar manufacturing unit by M/s Shree DurgaKhandsari Sugar Mill (SDKSM) in a land area of 8.0048 acres (out of the total area of 24.19 acres) at Village Mendrana, Tehsil Pansemal District Barwani (Madhya Pradesh).

The project/activity is covered under category A of item 5 (g) 'Molasses based distilleries' of the Schedule to the Environment Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on 26th December 2017. Public hearing was conducted by the SPCB on 11th May, 2018.

Total water requirement for sugar and ethanol unit is estimated to be 1045 cum/day (proposed ethanol unit 830 cum/day + existing sugar unit 215 cum/day), including fresh water requirement of 351 cum/day proposed to be met from ground water. Application for ground water withdrawal has been submitted with CGWA.

Spent wash of 450 cum/day will be treated through multi effect evaporators (MEE) followed by incineration boiler.Condensate/spent lees of 579 cum/daywill be treated in condensate polishing unit followed by RO. Treated water of 479 cum/day will be reused in the process.There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

The expenditure towards CER for the project would be 2% of the project cost as committed by the project proponent.

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. Issues raised during the public hearing have been duly addressed by the project proponent.

The existing sugar and cogen unit doesn't require prior environmental clearance. Consent to Operate for the present sugar and co-gen unit has been obtained from the State PCB vide letter dated 24th July, 2018, which is presently valid up to 30th June, 2019.

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

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

- *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.*
- *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.*
- *Total fresh water requirement shall not exceed 351 cum/day proposed to be met from ground water source. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard.*
- *The spent wash shall be taken to multi effect evaporators (MEE) and the concentrated spent wash shall be incinerated in the boiler along with bagasse.*
- *Number of working/operating days for the distillery shall be 300 days as proposed. However, the same may be increased to 330/round the year subject to zero liquid discharge ensured by the SPCB, while considering the Consent to Operate.*
- *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.*
- *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.*
- *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.*
- *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.*
- *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.*
- *All the commitments made regarding issues raised during the public hearing/ consultation meeting shall be satisfactorily implemented.*
- *At least 2% 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.*
- *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.*
- *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.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *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.*
- *Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.*

- *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.*
- *CO_2 generated from the process shall be bottled/made solid ice and sold to authorized vendors.*
- *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.*

Agenda No.41.3.7

Setting up Resin Manufacturing Unit (Melamine Formaldehyde &Phenol Formaldehyde)at Survey No.706 Paiki2 and 3, Village Amodra, Taluka Prantij, District Sabarkantha (Gujarat) by M/s Surfica India Ltd - For Environmental Clearance

[IA/GJ/IND2/69379/2017, IA-J-11011/465/2017-IA-II(I)]

41.3.7.1 The project proponent and the accredited consultant M/s T R Associates made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environment clearance to the project for setting up resin manufacturing unit (Phenol Formaldehyde Resin and Melamine Formaldehyde Resin) at Survey No.: 706 Paiki 2 & 3, Village Amodra, Taluka Prantij, District Sabarkantha (Gujarat) by M/sSurfica India Ltd.

(ii) The project proposal was granted standard TOR vide Ministry's letter No. J-11011/465/2017-IA.II (I) dated 26/10/2017.

(iii) All Synthetic Organic Chemicals Industry projects, located outside the notified industrial area/estate and not fall into small scale unit criteria are listed at S.N. 5(f) of schedule of Environmental Impact Assessment (EIA) notification under Category 'A' and are appraised at Central level by the Expert Appraisal Committee (EAC).

(iv) Total 19,966 m^2 land area will be used for proposed project.Industry will develop greenbelt in an area of 33 % i.e. 6,580 m^2 out of 19,966 m^2 area of the project.

(v) The estimated project cost is approx. Rs. 1.3 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 45 Lakhs and the recurring cost (operation and maintenance) will be about Rs. 9.4 Lakhs per annum.

(vi) Total employment will be 100 persons as a direct. Industry proposes to allocate Rs. 2.6 Lakhs @ of 2.0% towards Corporate Environment Responsibility.

(vii) There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River Khari is flowing at a distance of 2.11km in ESE direction and River Hathmati is flowing at a distance of 7.7 km in WNW direction. Khara Lake is situated at 1.30km in WNW direction and Hathmati Canal is flowing at a distance of 3.91 km in NNW direction.

(viii) Ambient air quality monitoring was carried out at 8 locations during October 2017 - December 2017 and the baseline data indicates the ranges of concentrations as: PM_{10} (54.05 to 81.36 µg/m^3), $PM_{2.5}$ (24.97 to 59.57 µg/m^3), SO_2 (7.21 to 31.69 µg/m^3), NO_2 (7.04 to 45.55 µg/m^3), VOC is B.D.L. and CO is N.D. respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.14 µg/m^3, 4.904 µg/m^3 and 2.98 µg/$m^3$with respect to PM_{10}, SO_2 and NO_2. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(ix) Total water requirement is 57.2 m^3/dayoutof which fresh water requirement is 38.1 m^3/day and which will be met from Bore well.

(x) Industrial effluent of 5.5 m^3/day will be treated through Effluent Treatment Plant to achieve Zero Liquid Discharge. Domestic effluent of 7.6m^3/day will be taken to STP for treatment.

(xi) Power requirement of proposed project will be 500 HP and will be met from Uttar Gujarat Vij Company Limited (UGVCL). 350 KVA D. G. Set will be used as standby during power failure. Stack (height 6 m) will be provided as per CPCB norms to the proposed D. G. Set.

(xii) Briquettes/Imported Coal/Pellets fired 4 million Kcal/hr Hot Water Generator and 25 Lakh Kcal/hr Thermic Fluid Heater will be installed. Multi - Cyclone Separator followed by Bag Filter with a stack height of 30 m will be installed for controlling the Particulate Emissions within statutory limit of 150mg/Nm^3.

(xiii) Details of Process emissions generation and its management

Sr. No.	Vent attached to	Vent Height	Expected Pollutant	APC System	Quality of pollutant
1.	Dryer	11 m	Methanol	Condenser followed by Activated Carbon Filter	As per GPCB Norms

(xiv) Details of solid waste/hazardous waste generation and its management.

S. No.	Description	Category	Quantity (TPA)	Management
1.	ETP Sludge & evaporation residue	35.3	33	Collection, storage and disposal at approved TSDF Site
2.	Used / Spent Oil	5.1	0.048	Collection, storage and used within premises as a lubricant / sold to registered recycler.
3.	Discarded Plastic bags/ barrels	33.1	4.08	Collection, storage & sold to authorized vendor

(xv) Public hearing for the proposed project has been conducted by the State Pollution Control Board on 19/06/2018. The main issues raised during the Public Hearing are related to employment potential, preventive measures to reduce impact on surrounding environment and CER activities.

(xvi) Following are the list of proposed products:

S. No.	Product	Capacity (TPM)
1	Phenol Formaldehyde Resin	900
2	Melamine Formaldehyde Resin	300

41.3.7.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up Resin manufacturing unit of total capacity 1200 TPM (Phenol Formaldehyde Resin- 900 TPM and Melamine Formaldehyde Resin-300 TPM) by M/s Surfica India Ltd in a total area of 19,966 sqmat Survey No. 706 Paiki 2 & 3, Village Amodra, Taluka Prantij, District Sabarkantha (Gujarat).

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

The ToR for the project was granted on 26th October, 2017. Public hearing was conducted by the State Pollution Control Board on 19th June, 2018.

Total water requirement is estimated to be 57.2 cum/day, which includes fresh water of 38.1 cum/day to be met from the ground water/borewell supply. Application in this regard has been submitted to CGWA.Industrial effluent of 5.5cum/day generated will be treated through Effluent Treatment Plant. Domestic effluent of 7.6cum/day will be taken to STP for treatment. Treated water will be recycled in the process and for green belt development, and thus the plant would conform to Zero Liquid discharge system.

The expenditure towards CER for the project would be 2% of the project cost as committed by the project proponent.

41.3.7.3 *The EAC, during deliberations, considering the critical nature of ground water in the area, suggested that the fresh water demand would be reduced by increasing the RO efficiency/replacing cooler tower with chilling tower/rain water harvesting etc., and accordingly desired for revised water balance and the effluent treatment mechanism.*

The proposal was, therefore, deferred for the needful on the above lines.

Agenda No.41.3.8

Manufacturing of Speciality and Agro chemicals Intermediates at Plot No. 824/18,GIDC Estate, Jhagadia (Gujarat) by M/s Prerana Agrochem Pvt Ltd - For Environmental Clearance

[IA/GJ/IND2/75823/2017, IA-J-11011/585/2017-IA-II(I)]

41.3.8.1 The project proponent and the accredited Consultant M/sJyoti Om Chemical Research Center Pvt Ltdmade a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project for setting upSpeciality and Agro Chemical Intermediates manufacturing unit at Jhagadia by M/s Prerana Agro chemicals Pvt Ltd.

(ii) The ToR has been issued by Ministry vide letter No. IA-J-11011/585/2017-IA-II(I); dated 28th January 2018.

(iii) All Speciality and Agro Chemical Intermediates are listed at S.N. 5(b) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) 6858.61 m^2 land area will be used for proposed Project. Industry will develop greenbelt in an area of 33 % i.e., 2118.66 m^2 out of total area of the project.

(v) The estimated project cost is Rs.480 Lakhs. Total capital cost earmarked to wards environmental pollution control measures is Rs.173 Lakhs and the Recurring cost (operation and maintenance) will be about Rs.64 Lakhs per annum.

(vi) Total Employment will be 69 persons as direct & indirect. Industry proposes to allocate Rs.12 Lakhs @ of 2.5% towards Corporate Social Responsibility.

(vii) There are no any national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site. River/ water body Narmada is flowing at a distance of 10.65 Km in the NNW direction.

(viii) Ambient air quality monitoring was carried out at 8 locations during January 2017 to March 2017 and the baseline data indicates the ranges of concentrations as: PM10 (32 – 74 µg/m^3), PM2.5 (48- 20 µg/m^3), SO_2 (37 – 9 µg/m^3) and NO_2 (47 – 8 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.98 µg/m3, 2.41 µg/m3 and 1.82 µg/m3 with respect to PM 10, Sox and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(ix) Total water requirement is 154 KL/day of which fresh water requirement of 154 KL/day will be met from GIDC water supply-Jhagadia.

(x) Effluent of 158.5 KLD [Industrial Effluent 149.5 KLD + Domestic 9.0 KLD]. The Total generation quantity of industrial effluent will be treated in unit's own effluent treatment plant and discharged into M/s. NCT.

(xi) Power requirement after expansion will be 225 KVA will be met from [DGVCL] Dakshin Gujarat Vij Company Limited. Unit has proposed 1 DG sets of 225 KVA capacity, as standby during power failure. Stack (height 10m) will be provided as per CPCB norms to the proposed DG sets.

(xii) Unit will install Solid Fuel Bas Boiler [3 MT], Natural gas bases Thermic fluid heater [2 Nos, 2 lakh Kcal Each]. Multi cyclone separator along with bag filter with a stack of height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm3 for the proposed boilers..

(xiii) Details of Process emissions generation and its management are given below

Sr. no.	Source of emission	Type of emission	Type of emissions i.e. Air Pollutants	Stack/Vent Height (meter)	Air Pollution Control Measures (APCM)
1.	Process Reactor-1	HCl, Cl_2	< 20 mg/Nm^3	10	Water & Alkali

					Scrubber
2.	Process Reactor-2	SO_2 NO_x	< 40 mg/Nm^3 ≤ 50 mg/Nm^3	10	Alkali Scrubber
3.	Process Reactor-3	H_2S	≤ 45 mg/Nm^3	12	Alkali Scrubber

(xiv) Details of Solid waste/ Hazardous waste generation and its management are given below:

Sr. No.	Name of Hazardous Waste	Source of generation	Category and Schedule as per HW Rules.	Quantity (TPA)	Disposal Method
1.	Used/Spent oil	Packing of products & Raw Materials	5.1	0.6 KL	Collection, Storage, reuse, Transportation, and sold to GPCB registered reprocessor/ recycler.
2.	Used Filters/Filter Cloths & Materials / Hy-Flow Material / Used Carbon etc.	From Machinery	36.2	12 MT	Collection, storage, Transportation and Disposal at BEIL-Incineration.
3.	Distillation Residue	From Process	20.3	1864 MT	Collection, Storage, Transportation and send to Co-Processing.
4.	Iron Sludge	From Process	26.1	10000 MT	Collection, Storage, Transportation, and disposal at common TSDF or Co-Processing.
5.	ETP Sludge	From ETP	35.3	200 MT	Collection, Storage, Transportation, and disposal at common TSDF.
6.	Discarded drums Discarded Bags/Liners	Packing of products & Raw Materials	33.1	75000 Nos. 360000Nos.	Collection, Storage, Reuse, Decontamination Transportation and Sold to GPCB authorized Venders.
7.	Carbon Residue	From Process	36.2	160 MT	Collection, Storage, Transportation, and for incineration at TSDF or for Co-Processing.
8.	Spent Solvent	From Solvent recovery system	20.2	Max.18,500 MT	Collection, storage and reused within the plant premises or sell to those unit's who are having permission of rule-9/who have applied under rule-9.
9.	Hydrochloric Acid [30%]	From Process	---	539 MT	Collection, Storage, transportation and sell

	[CAS-7647-01-0]				to authorized users who are having permission of rule-9/ who have applied under rule-9.
10.	Spent Sulfuric acid [70%] [CAS-7664-93-9]	From Process	---	5330 MT	Collection, Storage, transportation and sell to authorized users who are having permission of rule-9/ who have applied under rule-9.
11.	Sodium Hydrosulfide [NaSH] Solution [CAS-16721-80-5]	From Process	---	2316 MT	Collection, Storage, transportation and sell to authorized users who are having permission of rule-9/ who have applied under rule-9.

(xv) Public Hearing for the proposed project is not applicable as unit is located in Industrial Estate.

(xvi) No litigation is pending against the proposal.

(xvii) The details of products and capacity as under:

S. No	Name of products	Products Group	CAS no.	Quantity [MT/Month]	End Use	Category	LD50
Agro Chemicals and its Intermediate							
1	2,3 Dichloro Phenol [2,3 DCP]	Hydrolysis of Amine	576-24-9	100	Agro chemicals Intermediates	5(b)	2376 mg/kg
2	3,4 Dichloro Phenol [3,4 DCP]		95-77-2				1685 mg/kg
3	3,5 Dichloro Phenol [3,5 DCP]		591-35-5				2400 mg/kg
4	5-Chloro-8-Hydroxy Quinoline [5 HQ]	HQ Group	130-16-5	20	Agro chemicals Intermediates	5(b)	1200 mg/kg
5	8 HydroxyQuinoline [8 HQ]		148-24-3				1,200 mg/kg
6	CloquintocetMexyl - Safener	Speciality Chemicals	99607-70-2	40	Agro Chemicals [Herbicide]	5(b)	>2000mg/kg
Synthetic Organics Chemicals							
7	2,5 Dichloro Aniline [2,5 DCA]	Group Reduction	95-82-9	300	Dyes/ Pigment Intermediates	5(f)	1600 mg/kg
8	2,3 Dichloro Aniline[2,3-DCA]		608-27-5				----------
9	3,4 Dichloro Aniline [3,4 DCA]		95-76-1				545 mg/kg
10	3,5 Dichloro Aniline[3,5-DCA]		626-43-7				129.60 mg/kg

11	P-Chloro Aniline [PCA]		106-47-8				300 mg/kg
12	M-Chloro Aniline [MCA]		108-42-9				256 mg/kg
13	2,4,5 Trichloro Aniline [2,4,5 TCA]		636-30-6				2400 mg/kg
14	4 Chloro-2-Nitro Phenol [4 CNP]	CNP & CAP Group	89-64-5	50	Dye Intermediates	5(f)	--
15	2 Chloro-4-Nitro Phenol [2 CNP]		619-08-9				900 mg/kg
16	4 Chloro-2-Amino Phenol [4 CAP]		95-85-2				690 mg/kg
17	2 Chloro-4-Amino Phenol [2 CAP]		3964-52-1				--
18	5-Chloro-2-Amino Phenol [5 CAP]		28443-50-7				--
19	4-Nitro-2-Amino Phenol [4-NAP]	Nitro-Amino Phenol group	99-57-0	25	Dye /Pigment Intermediates	5(f)	2.400 mg/kg
20	5-Nitro-2-Amino Phenol [5-NAP]		121-88-0				2.400 mg/kg
21	N-Propyl Bromide [N-Pr Br]	Alkyl Bromide	106-94-5	30	Dyes Intermediate	5(f)	4700 mg/kg
22	N-Hexyl Bromide [N-Hex Br]		111-25-1				1,226 mg/kg
23	IodoChloroHydroxyQuinoline [IODO]	Speciality Chemicals	130-26-7	5	Pharma Intermediate	5(f)	> 5000 mg/kg
24	2-Mercapto Benzaimidazole		583-39-1	50	Dye Intermediates		300 mg/kg
25	2-Mercapto-5-Methoxybenzimidazole		37052-78-1	50			--
26	4-Nitro-2,5 Dichloro Aniline [2,5 DCPNA]		6627-34-5	20	Dyes Intermediates		1500 mg/kg
27	2, 5 Dichloro 1,4 Phenylene Diamine [2-Cl-1,4-PDA]		20103-09-7	20	Pigment Intermediates		1.750 mg/kg
28	6-Chloro-M-Toludine-4-Sulfonic Acid [CLT Acid]		88-53-9	25	Pigment Intermediates		13000 mg/m^3
29	4-Sulfomido Phenyl Hydrazine HCl [4 SPH-HCl]		27918-19-0	10	Dye Intermediates		3200 mg/kg
30	3-Methoxy-4-Amino-Azobenzene-3'-Sulfonic Acid [Yellow Base]		6300-07-8	10	Dyes Intermediates		--
31	5 Chloro - 2-Benzaxolone [Chlorzoxazone]		95-25-0	25	Pharma Intermediates		763mg/kg
	Total			780 MT/ Month			

41.3.8.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for Manufacturing of Agro chemicals and Intermediates (160 TPM) and speciality chemicals (620 TPM) of total capacity 780 TPM by M/s PreranaAgrochem Pvt Ltd in a total land area of 6858.61 sqmat Plot No. 824/18,GIDC Estate, Jhagadia (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 industry' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on 28th January 2018. Public hearing is exempted as per Para 7 Stage III (3) (i) (b) of the EIA Notification, 2006.

Total fresh water requirement is estimated to be 154cum/dayto be met from GIDC water supply. Effluent of 158.5 cum/day(Industrial effluent 149.5 KLD + Domestic 9.0 KLD) generated treated through Effluent Treatment Plant and proposed to be discharged into M/s. NCT.

41.3.8.3 *The EAC, after deliberations, insisted for additional information/inputs and clarifications in respect of the following:-*

- *Details of individual products in each group along with their quantum, LD_{50} values etc. The products having LD_{50} less than 1000 mg/kg, reported to be highly toxic, need to be deleted. The remaining products need to be reviewed for the toxicity involved and biodegradability, to revise the product list accordingly.*
- *Revised water balance for the unit conforming to Zero Liquid Discharge.*
- *Rain water harvesting plan and its utilization in the process to reduce the fresh water demand.*
- *Plan for Corporate Environment Responsibility (CER) to be submitted.*

The proposal was, therefore, deferred for the needful on the above lines.

Agenda No.41.3.9

Setting up of Molasses/Grain based distillery of 120 KLPD and Co-generation (3 MW) unit at village Hakimpur, Post Nandganj, Tehsil Saidpur District Ghazipur (Uttar Pradesh) by M/s Lords Distillery Limited - For Environmental Clearance

[IA/UP/IND2/63478/2017, J-11011/150/2017-IA-II(I)]

41.3.9.1 The Project Proponent and the accredited consultant M/s Ascenso Enviro Pvt Ltd made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project for setting up of Molasses/Grain based distillery of 120 KLPD and Co-generation (3 MW) unit at village Hakimpur, Post Nandganj, Tehsil Saidpur District Ghazipur (Uttar Pradesh) by M/s Lords Distillery Limited.

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 22nd meeting held during 17- 18 April, 2017 and recommended Terms of References (ToRs)

for the Project. The ToR has been issued by Ministry vide letter No. J 11011/150/2017 - IA. II (I); dated 30th May, 2017.

(iii) All Distillery (Molasses Based) are listed at S.N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Total land area will be 64820 sqm. Green belt will be developed Industry will develop in an area of 33 % i.e., 21390 sqm out of total area of the project. The estimated project cost is Rs.12500 Lakh. Total capital cost earmarked towards environmental pollution control measures is Rs 5625 Lakh and the Recurring cost (operation and maintenance) will be about Rs 175 Lakh per annum. Total Employment will be 155.0 persons as direct &150.0persons indirect establishment. Industry proposes to allocate Rs 3.12 Crores @ of 2.5 % towards Corporate Social Responsibility.

(v) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River Ganga is flowing at a distance of 6.22 km in South direction and River Ganga is flowing at a distance of 3.36 km in North East direction.

(vi) Ambient air quality monitoring was carried out at Eight (08) locations during 1st January 2017 to 31st march 2017 and the baseline data indicates the ranges of concentrations as: PM10 (45.2 – 82.8 µg/m3), PM2.5 (26.0 – 46.8 µg/m3), SO2 (7.0 - 15.6µg/m3) and NO2 (9.2 – 22.6 µg/m3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.55 µg/m3, 1.93 µg/m3 and 2.32 µg/m3 with respect to PM10, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(vii) Total water requirement is 2739m3/day of which fresh water requirement is840m3/day 0 (@ 7.0 KL/KL (Molasses Based Operation)will be met from Ground water. During Grain based Operation Total water requirement is 2434m3/day of which fresh water requirement is 780 (@ 6.5 KL/KL m3/day.

(viii) During Molasses based operation spent wash of 840 KLD quantity will be treated through Concentration in MEE then concentrate from MEE will be incinerated in Slop fired boiler. The plant will be based on Zero Liquid discharge system. During Grain based operation spent wash of 816 KLD quantity will be treated through will be first centrifuged for solid separation, supernatant will be concentrate in MEE and Concentrate from MEE, will be mixed with the Wet cake.

(ix) Power requirement will be 3000 kW. Two number of DG sets of capacity 1000 kVA & 500 kVA will be used as standby during power failure. Stack (6 m height) will be provided as per CPCB norms.

(x) One Slop fired boiler of 35 TPH capacity will be installed. Bag filter with a stack of height of 65 m will be installed to control the particulate emissions within the statutory norms. Recovered Carbon Di oxide will be sold in the market.

(xi) Demolition solid waste will be disposed as per Solid waste management rules 2016. Ash generated during molasses based operation (47.3 MT/Day) will be used as manure. Ashgenerated duringgrain based operation (74.0 MT/Day) will be used in manufacturing of cattle feed. Used oil and Grease will be provided to the authorised vendor for end disposal.

(xii) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 30.01.2018. The main issues raised during the public hearing are related to Air pollution, Water pollution, Fly ash disposal and employment in the local area.

(xiii) No Litigation Pending is pending against the proposal.

(xiv) The details of products are as under:

S. No.	**Product**	Quantity
1	RS/ENA/AA	120 KLPD
2	Co-generation plant	3 MW

41.3.9.2 The proposal was earlier considered by the EAC in its meeting held on 25-27 July, 2018. The Committee observed that the proposed distillery would be of course of total capacity 120 KLPD, but the capacity of different plants both molasses based and grain based, were not firmed up. Given the different operational details, raw materials, utilities, treatment mechanism, etc for the two trains namely, molasses and grain based plants, the project proponent were asked for submission of the revised proposal accordingly with additional details. The information provided by the project proponent is as under:

S.No.	Information desired by the EAC	Information provided by the PP
1.	Only the non-edible grains to be utilized for the grain based distillery	We assure that only broken rice and other non-edible grains shall be utilised in Grain based Manufacturing of Alcohol.
2.	Detailed plot plan indicating both the trains separately	The total production capacity of the proposed manufacturing activities will not exceed 120.0 KL/day of ENA/AA/RS in any case. This production capacity will be achieved by producing alcohol from either Molasses or Gains utilising the same fermenter and Distillation equipment. A lead time of 7 Days has been proposed to shift overs. Effluent generated from molasses based and grain based activities shall not mix together.Layout plan along with 10.0 m wide green belt and list of plant and machinery for proposed project has been submitted.
3.	Details of effluent treatment and disposal, separately for both the trains	The effluent from Grain based manufacturing operation will be taken through decanter, MEE and dryer to produce DDGS as per the scheme. Spent wash from Molasses based operation will be concentrated in same MEE and conc. Spent wash incinerated in Slop fired boiler. A comprehensive condensate polishing unit is being provided for MEE condensate. Detailed plan has been submitted.
4.	Mitigation measures for odour management,	The main source of bad odour from distillery operation appear to be from spent wash storage

		and the bio composting process. The industry is proposing to use raw spent wash as a regular feed for concentration and incineration and there is no need of any storage during regular operation. However, in order to meet exigencies, a storage of 7 days has been provided. This is as against a storage of 30 days as permitted for bio composting. The reduced storage time will also restrict the anaerobic activities in the system and cause a reduction in the odour generated. • In addition to this the plantation around storage area would be managed planting Hedges and fragrant shrubs intermixed with trees to minimize the odours. • Better housekeeping by regular steaming of all fermentation equipments, • Regular steaming of all fermentation equipment, • Use of efficient bio-cides to control bacterial contamination, • Control of temperature during fermentation to avoid in-activation / killing of yeast, • Avoiding staling of fermented wash, • Regular use of bleaching powder in the drains to avoid generation of putrefying micro-organisms.
5.	Plan for Corporate Environment Responsibility (CER) and the traffic management to be submitted. Traffic management plan to be duly certified by the concerned regulatory authority	Plan for Corporate Environment Responsibility (CER) : Industry has prepared the CER plan as per the OM : F No 22 – 65 / 2017 – IA.III, dated 1stMay 2018.ApproxRs : 187.0 Lakhs will be used for CER activities. Detailed plan is submitted.
		Traffic Management Plan: The Site is located on NH – 29 (four lane with divider) which is the main feeder road of the project. A traffic study has been carried and included in paragraphs, chapter 3 and pg no 153 of EIA report. As per the study, the recommended passenger car unit per day NH – 29 is 15000.0 PCU/Day, maximum load observed during survey is 1051.0 PCU/Day with an expected within 200.0 PCU (worst case) load from the project to be 1251.0 which is much below the IRC – 64 - 1990 norms . No change in Level of service of major roads connecting the project site. There is no need for separated management plan for NH 29. However, a robust internal traffic movement has been planned for the industry. It shall be ensure that no vehicle is allowed to park outside premises. Parking for 48.0 Vehicles will be provided within premises. The internal traffic flow plan is submitted.

41.3.9.3 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up of Molasses/Grain based distillery of 120 KLPD (RS/ENA/AA) and Co-generation (3 MW) unit by M/s Lords Distillery Limited in a total area of 64820 sqm at village Hakimpur, Post Nandganj, Tehsil Saidpur District Ghazipur (Uttar Pradesh).

The project/activity is 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 the sectoral EAC in the Ministry

The ToR for the project was granted on 30th May, 2017. Public hearing was conducted by the SPCB on 30th January, 2018.

Total estimated water requirement during molasses based operations will be 2739 cum/day of which fresh water requirement will be 840 cum/day. For grain based operation, total estimated water requirement would be 2434cum/day which includes fresh water of 780 cum/day (@ 6.5 KL/KL)proposed to will be met from Ground water.Application in this regard has been submitted with CGWA. The committee suggested for reducing the fresh water requirement to 720 cum/day (@ 6 KL/KL) for both molasses/grain based distillery.

During Molasses based operation, spent wash of 840 KLD will be treated through Concentration in MEE then concentrate from MEE will be incinerated in Slop fired boiler. The plant will be based on Zero Liquid discharge system. During Grain based operation spent wash of 816 KLD quantity will be will be first centrifuged for solid separation, supernatant will be concentrate in MEE and Concentrate from MEE will be mixed with the Wet cake.

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. Issues raised during the public hearing have been duly addressed by the project proponent. The additional information provided by the project proponent was found to be satisfactory and addressing the issues raised by the Committee.

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

- *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.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*
- *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.*
- *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.*
- *Total fresh water requirement shall not exceed 720 cum/day proposed to be met from ground water source. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard.*
- *The spent wash shall be taken to multi effect evaporators (MEE) and the concentrated spent wash shall be incinerated in the boiler along with bagasse.*

- *Number of working/operating days for the distillery shall be 350 days as proposed. However, the same may be increased to round the year subject to zero liquid discharge ensured by the SPCB, while considering the Consent to Operate.*
- *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.*
- *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.*
- *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.*
- *The company shall undertake waste minimization measures as below:-*
  - *(g) Metering and control of quantities of active ingredients to minimize waste.*
  - *(h) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*
  - *(i) Use of automated filling to minimize spillage.*
  - *(j) Use of Close Feed system into batch reactors.*
  - *(k) Venting equipment through vapour recovery system.*
  - *(l) Use of high pressure hoses for equipment clearing to reduce wastewater generation.*
- *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.*
- *All the commitments made regarding issues raised during the public hearing/ consultation meeting shall be satisfactorily implemented.*
- *At least 2% 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.*
- *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.*
- *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.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *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.*
- *Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.*
- *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.*
- *CO_2 generated from the process shall be bottled/made solid ice and sold to authorized vendors.*
- *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.*

Day Two - 25th September 2018

Agenda No.41.3.10

Expansion in Production Capacity from 2150 MT/month to 4662 MT/month of existing products and addition of new (nine) products at CH-1, CH2/A, GIDC Dahej, Taluka Vagra, District Bharuch (Gujarat) by M/s Meghmani Organics Ltd (Unit-III Agro Div) - For Environmental Clearance

[IA/GJ/IND2/66011/2017, IA-J-11011/372/2017-IA-II(I)]

41.3.10.1 The project proponent and the accredited Consultant M/sAnand Environmental Consultants Pvt Ltdmade a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the expansion project by increasing its production capacity (from 2150 MT/Month TO 4662 MT/Month) consisting increase in production capacity of existing products and addition of new products within the existing premises of M/s. Meghmani Organics Ltd. (Unit-III, Agro Div) located at Plot No.: CH-1, CH2/A, D-2/CH10/A, GIDC Dahej, Taluka Vagra, District Bharuch (Gujarat).

(ii) The project/activity is covered under category A of item 5 (b) 'Pesticides industry and pesticides specific intermediates' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry.

i. The project was earlier accorded environment clearance by the MoEF&CC vide its letter dated 13th April, 2009. The ToR for project was accorded by the MoEF&CC, vide its letter dated 24th August, 2017

ii. Existing land area is 82,987 m^2. Proposed expansion activity will be carried out within the existing premises.

iii. Industry has already developed/will develop greenbelt in an area of 33 % i.e. approximately in 27490$m^2$of the total project area.

iv. The total estimated cost of the expansion project is Rs. 120 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 11.45 crores and the Recurring cost (operation and maintenance) will be about Rs. 2.19 crores per annum.

v. Total Employment will be 40 persons as direct and indirect employment will be generated by way of transportation, shopkeepers and other casual employment for many people after expansion. Industry proposes to allocate Rs 300 lakh which is more than 2.5 % towards Corporate Social Responsibility.

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

vii. Ambient air quality monitoring was carried out at 8 locations during October 2017 to December 2017 and the baseline data indicates the ranges of concentrations as: PM_{10} (58 - 92µg/m³), $PM_{2.5}$ (12 - 39µg/m³), SO_2 (8 - 39 µg/m³) and NO_2 (8 - 32µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 3 µg/m³, 5 µg/m³ and 1 µg/m³ with respect to PM_{10}, SO_2 and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

viii. Total water requirement is 2824 m³/day (existing 1099 m³/day + proposed 1725 m³/day) of which fresh water requirement of 2718 m³/day will be met from GIDC. From 2nd day onwards 106 m³/day treated water from the ETP will be recycled/ reused for industrial use. Thus, total fresh water requirement from 2nd day onwards will be 2718 m³/day (2824 – 106 m³/day).

ix. Effluent of 2123 m³/day quantity will be treated through ETP, out of which 106 m³/day will be reused and remaining will be discharge into underground GIDC - drainage line and ultimately disposal in deep sea.

x. Power requirement after expansion will be 4000 KVA (including existing 2500 KVA + proposed 1500 KVA) and will be met from GEB/DGVCL. Existing unit has gas based captive

power generator plant of 2 MW capacity, additionally proposed D.G. Set of 750 KVA capacity will be installed and used as standby during power failure/ emergency. Stack (height 11m) will be provided as per CPCB norms to the proposed D.G. Set.

xi. Existing unit has 8 TPH natural gas fired boiler. Additionally 8 TPH coal fired boiler will be installed. Multi cyclone dust collector/ bag filter with a stack of height of 30 m will be installed for controlling particulate emissions within the statutory limit for proposed boiler.

xii. Details of Process emissions generation and its management.

S. N.	Stack attached to	Stack height (m)	Stack diameter (m)	Types of Pollutant	Air Pollution Control Measures
	EXISTING				
1.	Reactor of MCAA plant	15	0.15	HCl Cl_2	Two Stage Water Scrubber followed by Alkali scrubber & Ventury
2.	Reactor of 2, 4 D plant	15	0.15	HCl Cl_2	Two Stage Water Scrubber followed by Alkali scrubber & Ventury
3.	Reactor of MPB plant	15	0.15	HCl Cl_2	Two Stage Water Scrubber followed by Alkali scrubber & Ventury
4.	Reactor of Permethrin plant /Diafenthiuron	15	0.15	HCl NH_3	Two Stage Water Scrubber (consisting water/ acid) followed by Alkali scrubber & Ventury
5.	SFD of 2,4 D Acid/ 2,4 D Sodium	15	0.15	HCl PM	Two Stage Water Scrubber followed by Alkali scrubber & Ventury
6.	Bromine recovery for Profenophos and MPB	15	0.15	HBr	NaOH/ $Na_2S_2O_3$ Scrubber
	PROPOSED				
7.	Reactor of TCAC plant	15	0.15	HCl Cl_2	Two Stage Water Scrubber followed by Alkali scrubber & Ventury
8.	Reactor of Flonicaminde plant	15	0.15	HCl SOx	Two Stage Water Scrubber followed by Alkali scrubber & Ventury
9.	Reactor of Bifenthirn	15	0.15	HCl SOx	Two Stage Water Scrubber followed by Alkali scrubber & Ventury
10.	Reactor of 2, 4 D plant	15	0.15	HCl Cl_2	Two Stage Water Scrubber followed by Alkali scrubber & Ventury
11.	SFD of 2,4 D Acid/ 2,4 D Sodium	15	0.15	HCl PM	Two Stage Water Scrubber followed by Alkali scrubber & Ventury

xiii. ETP sludge, process waste (dry salt) will be collected, stored and sent to TSDF site. Process residue, date-expiry and off specification pesticides, spent resin, spent carbon will be collected, stored and sent to common hazardous waste incineration facility. Used oil and discarded containers will be collected, stored and sold to registered re-refiners / authorized recyclers.

Hydrochloric acid, Hypochlorite, Bromine by products will be utilized in process and excess, if any, will be sold to authorized recycler. KCl solution, Aluminum Chloride, ML (of MCA Plant), Ammonium solution (in the form of Ammonium Sulphate solution), HBr solution (30%),Trimethyl Ammonium Bromide, SBS (Sodium bi-Sulphite) by products will be sold to actual end users/authorized recycler. Fly ash will be sold to cement/brick manufacturers.

xiv. As the project is located within GIDC, Dahej / PCPIR, Gujarat, Public Consultation is not applicable as a requirement towards obtaining Environmental Clearance.

xv. Certified compliance report has been obtained from the Regional Office of the MoEF&CC on 24th April, 2018.

xvi. No litigation is pending against the industry.

xvii. The details of products and capacity as under:

Products

S. No.	Name of product	Quantity (MT/Month)		
		Existing [1]	Proposed [2]	Total [1+2]
1.	2,4 D Esters	50	0	50
2.	MCA (Mono Chloro Acetic Acid)	400	0	400
3.	Cypermethrin	200	0	200
4.	Profenophos	200	0	200
5.	Diafenthiuron	100	0	100
6.	2,4 D Amine	150	200	350
7.	2,4 D Sodium	100	200	300
8.	2,4 D Acid (2,4,Di Chloro Phenoxy Acetic Acid)	700	900	1600
9.	MPB (Meta Phenoxy Benzaldehyde)	150	50	200
10.	Permethrin	50	50	100
11.	Zeta Cypermethrin	50	50	100
12.	L C Acid (Lambda Cyhalothric Acid)	0	100	100
13.	Thiamethoxam	0	100	100
14.	A. Fipronil and / Or B. Flonicamide	0	100	100
15.	Bifenthrin Alchohol	0	100	100
16.	Bifenthrin	0	100	100
17.	TCHO (Thiocyclam)	0	100	100
18.	TCAC (Tri Chloro Acetyl Chloride)	0	300	300
19.	2,6 DCP	0	109	109
20.	Chlorophenols	0	53	53
	Total Product	**2150**	**2512**	**4662**

By-Products

S. No.	Name of by-product	Quantity (MT/Month)		
		Existing [1]	Proposed [2]	Total [1+2]
1.	Hydrochloric Acid (30%)	1632	2890	4522
2.	Aluminium Chloride	672	224	896
3.	Bromine	70	113	183
4.	Hypochlorite	270.2	352.2	622.4
5.	KCl solution	389	130	519
6.	ML (from MCA plant)	193	0	193
7.	Ammonia Solution (in the form of Ammonium Sulphate)	20.5	0.5	21
8.	HBr solution (30%)	210	0	210
9.	Trimethyl Ammonium Bromide	448	0	448
10.	SBS (Sodium Bi-Sulphite)	0	448	448
	Total By-Product	**3904.7**	**4157.7**	**8062.4**

41.3.10.2 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for expansion of agro-chemicals unit from the present capacity of 2150 TPM to 4662 TPM (involves change in production capacity of some of the existing products and addition of 9 new products) by M/s Meghmani Organics Ltd. (Unit-III, Agro Div) in an area of 82987 sqm at plot No.CH-1, CH-2/A, D-2/CH 10/A, GIDC, Dahej, Taluka Vagra, District Bharuch (Gujarat).

The project/activity is covered under category A of item 5 (b) 'Pesticides industry and pesticides specific intermediates' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on 24th August, 2017. As the project is located within PCPIR, Gujarat, Public Hearing is exempted as per para 7(i) III stage (3) (i) (b) of EIA Notification, 2006.

Total water requirement is 2824 m³/day (existing 1099 m³/day + proposed 1725 m³/day) of which fresh water requirement of 2718 m³/day will be met from GIDC. From 2nd day onwards 106 m³/day treated water from the ETP will be recycled/ reused for industrial use. Thus, total fresh water requirement from 2nd day onwards will be 2718 m³/day (2824 – 106 m³/day).

Effluent of 2123 m³/day quantity will be treated through ETP, out of which 106 m³/day will be reused and remaining will be discharge into underground GIDC - drainage line and ultimately disposal in deep sea.

The project was earlier granted environment clearance by the Ministry vide letter dated 13th April, 2009. Certified compliance report has been obtained from the Regional Office of the MoEF&CC vide their letter dated 24th April, 2018.

Consent to Operatehas been obtained from the State PCB vide letter dated 20th July, 2015, which is presently valid up to 1st August, 2020.

41.3.10.3 *The EAC, after deliberations, observed discrepancies in project details, not consistent with the EC earlier granted and the details now provided, especially in respect of plot numbers, project area, water quality monitoring results, etc, and insisted for rectifying the same.*

In addition, the Committee asked for information/additional details in respect of the following:

- *LD_{50} values for the each of the products. No product having LD_{50} less than 1000 mg per kg to be included.*
- *Comprehensive plan for achieving ZLD and also the solid waste management.*
- *3D modelling for risk assessment to be carried out to arrive at adequate mitigation measures to effectively address the same.*

The proposal was deferred for the needful on the above lines.

Agenda No.41.3.11

Expansion of Trichy POL Terminal at village Vazhavanthankottai, District Trichy (Tamil Nadu) by M/s Indian Oil Corporation Limited - For Environmental Clearance

[IA/TN/IND2/76191/2017, SIA/TN/IND2/6469/2017]

41.3.11.1 The project proponent and the accredited consultant M/s ABC Techno Labs India Private Limited, made a detailed presentation on the salient features of the project and informed that:

i. The proposal is for environmental clearance to the project for expansion of Trichy POL Terminal from the present storage capacity of 41782 KL (14 number of tanks) to 72182 KL (18 numbers of tanks) by M/s Indian Oil Corporation Limited in an area of 26.30 ha at Plot No.191, Women SIDCO Industrial Estate, Village Vazhavanthankottai, Post Thuvakudi, Taluk Thiruverumbur Taluk, District Trichy (Tamil Nadu).

ii. The ToR for the project was granted by the SEIAA, Tamil Nadu vide their letter dated 18th January, 2018. The project is exempted from the public hearing as it is located in the notified industrial area.

iii. As per the provisions of the EIA Notification, 2006, as contained at S. No.6 (b) of Schedule of EIA Notification, the project is covered under Category 'B', however, as the SEIAA, Tamil Nadu is yet to be constituted, the project is categorized as Category 'B' and are appraised at Central Level by Expert Appraisal Committee (EAC).

iv. The Terminal was established in 2003, hence no EC was required. The existing unit is operating with valid consents from TNPCB.

v. Existing land area is 263046 m^2 and no additional land will be required for the proposed expansion.

vi. Industry has already developed green belt in an area of 33% i.e. 86805.07 m^2out of total area of the project.

vii. The estimated project cost is Rs 2378.46 lakhs. Total capital cost earmarked towards environmental pollution control measures is Rs. 60 lakhs and the Recurring cost (operation and maintenance) will be about Rs. 41per annum.

viii. Total employment will be 84 persons as direct and 140 persons indirect after expansion. Industry proposes to allocate 1 % (Rs 24 lakhs) of proposed project cost toward Corporate Environment Responsibility.

ix. There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. located within 10 km distance. Thirunedukulam Village Pond is at 1.3 km (SE), Thuvakudi Village Pond at 2 km (S), Vennar River at 5 km (N), Kaveri River at 6 km (N) and Kollidam River is at 6.5 km (N).

x. Ambient air quality monitoring was carried out at 8 locations during January to March 2018 and the baseline data indicates the ranges of concentrations as: PM_{10}(58.1 to 32.8µg/m^3), $PM_{2.5}$ (27.2 to 15.9µg/m^3), SO_2 (9.4 to BDL (<5)µg/m^3) and NO_2 (18.1 to 7.86µg/m^3). DG sets are only source of Air pollution, which will be operated only during power failures. The hydrocarbon concentrations are below detection limit.

xi. Total water requirement after expansion is 9.42 KLD and it will be met through SIDCO.

xii. Power requirement after expansion will be 405 KVA including existing and will be met from Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO). Existing 3DG sets of 2 x 250 and 1x 160 kVA capacity are used as standby source of power during power failure, no additional DG sets is proposed. Stack height of 7.5 m, each is provided as per CPCB norms to the proposed DG sets.

xiii. With regards to the details of process of emissions generation and its management, it is informed that the terminal is only for storage and dispatch of POL products, hence no process is involved in the Terminal. The source of emission is from operation of DG Sets, stack with the height of 7.5 m from ground level is provided as Air Pollution control measure. Inbuilt acoustic enclosures are provided to control Noise Pollution. Greenbelt all along the boundary will act as a barrier by preventing Air and Noise Pollution

xiv. Details of Solid waste/ Hazardous waste generation and its management- All biodegradable wastes (food and kitchen wastes) generated at the Terminal will be collected, after treatment in Biogas plant fuel issued for canteen needs. Tank bottom sludge is generated while cleaning of oil storage tanks, which is treated through bioremediation technique inside the Terminal. The

STP sludge and composite from bioremediation pit will be used as manure for Greenbelt development. The spent or used oil will be stored at a specific location prior to safe disposal through CPCB/TNPCB approved recycler.

xv. No litigations are pending against the project.

xvi. The details of products and capacity as under:

S. No.	Name of the product	Quantity (Existing)	Quantity (Proposed)	Product Conversion	Unit
1	MS	3455	-	-	KL
2	MS	3455	-	-	KL
3	MS	2600	-	-	KL
4	HSD	3835	-	-	KL
5	HSD	3835	-	-	KL
6	HSD	3835	-	-	KL
7	HSD	6063	-	MS	KL
8	HSD	6063	-	MS	KL
9	SKO	1830	-	-	KL
10	SKO	1830	-	-	KL
11	SKO	1830	-	-	KL
12	Transmix Tank	250	-	-	KL
13	MS	2600	-	ETHANOL	KL
14	ETHANOL	120	-	-	KL
15	ETHANOL	120	-	-	KL
16	HSD	-	2 x 15000	-	KL
17	BIODIESEL	-	2 x 200	-	KL

41.3.11.2 During deliberations, the Committee noted the following:-

The proposal is for environmental clearance to the project for expansion of Trichy POL Terminal from the present storage capacity of 41782 KL (14 number of tanks) to 72182 KL (18 numbers of tanks) by M/s Indian Oil Corporation Limited in an area of 26.30 ha at Plot No.191, Women SIDCO Industrial Estate, Village Vazhavanthankottai, Post Thuvakudi, Taluk Thiruverumbur Taluk, District Trichy (Tamil Nadu).

The project/activity is covered under category B of item 6 (b) 'Isolated storage and handling of hazardous chemicals' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal/approval at State level by the concerned SEAC/SEIAA. However, there being no SEAC/SEIAA in the State for the present, the project was appraised at Central Level by Expert Appraisal Committee (EAC).

The ToR for the project was granted by the SEIAA, Tamil Nadu vide their letter dated 18th January, 2018. Project is located in the notified industrial area and accordingly, exempted from Public Hearing as per the provisions of para 7(i) III stage (3) (i) (b) of EIA Notification, 2006.

Total water requirement after expansion will increase from 8.5 cum per day to 9.42 KLD and it will be met through SIDCO water supply.

Proposed terminal is only for storage and dispatch of POL products, hence no process is involved and no effluents will be generated from the proposed project.

The unit is reported to have been established in the year 2003 i.e. prior to the enforcement of the EIA Notification, 2006, and thus there is no requirement of the prior EC for the existing operations and no relevance for compliance status of the EC conditions.

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

- *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.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*
- Total fresh water requirement shall not exceed 9.42 KLD to be met from SIDCO water supply. *Prior permission in this regard shall be obtained from the concerned regulatory authority.*
- *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.*
- *During construction phase, air pollution and the solid waste management aspects need to be properly addressed ensuring compliance of the Construction and Demolition Waste Management Rules, 2016.*
- *The green belt of 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 and in consultation with the State Forest Department.*
- *At least 1 % 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.*
- *Regular monitoring of VOC and HC in the work zone area in the plant premises should be carried out and data to be submitted to Ministry's Regional Office, CPCB and State Pollution Control Board. Quarterly monitoring for fugitive emissions should be carried out as per the guidelines of CPCB and reports submitted to Ministry's Regional Office.*
- *Necessary approvals from Chief Controller of Explosives, as applicable, shall be obtained before commissioning of the project. Requisite On-site and Off-site Disaster Management Plans shall be prepared and implemented.*
- *Emergency Response Plan should be based on the guidelines prepared by OISD, DGMS and Govt. of India. Mock drill should be conducted once a month.*
- *Additional safety measures should be taken by using remote operated shut off valve, Double Block &Bleed valve (DBB), impervious dyke wall and un-bonded flexible roof drain pipe, if applicable.*
- *Occupational health surveillance of worker should be done on a regular basis and records maintained as per the Factory Act.*
- *Road tankers should be equipped to the standard specified in national regulations reputable code. Vehicles should be mobilized during transfer operations and equipped to prevent untimely movement. Loading/unloading bays should be protected against impact. Fire-resistant coatings shall be provided to tanks/vessels.*
- *High and low-level alarms shall be fitted to plant storage tanks which can detect overfilling. However, proper supervision shall be done every time.*
- *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.*

- *Water sprinkling has to be undertaken on regular basis to control the polluting particles.*
- *Approach road shall be made pucca to minimize generation of suspended dust.*
- *The energy sources for lighting purposes shall preferably be LED based.*
- *Oil spillage prevention and mitigation scheme shall be prepared. In case of oil spillage/ contamination, action plan shall be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers.*
- *Emergency preparedness plan based on the Hazard Identification and Risk Assessment (HIRA) and guidelines prepared by OISD, DGMS and Govt. of India. Mock drill should be conducted once in a month. onsite and off-site Disaster Management Plan shall be implemented.*
- *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.*
- *Additional safety measures should be taken by using remote operated shut off valve, double block & bleed valve (DBB), impervious dyke wall and un-bonded flexible roof drain pipe, if applicable.*
- *High and low-level alarms shall be fitted to plant storage tanks which can detect overfilling. However, proper supervision shall be done every time.*
- *Unit should carry out safety audit and report be submitted to the Regional Office.Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.*

Agenda No.41.3.12

Expansion Project of Active Pharmaceuticals Ingredients (APIs) with R&D Facility at Sy. No.11, 12, 13 of Yawapur & 233, 233 E2, 261, 261AAE, 262, 262 AAE, 267, 267 A2, 267E, 276, 276AA, 276 E, 276/A/1, 278, 279 AA, 280, 280A, 281, 281AA, 281 VU, 285, 285E, 287, 287A1, 288, 288A, 289, 290, 290/VU, 291 & 291/A of Maddikunta village, Sadasivpet (M), District Sangareddy (Telangana) by M/s AVR Organics Pvt Ltd –For Environmental Clearance

[IA/TG/IND2/60745/2016, J-11011/380/2016-IA.II(I)]

41.3.12.1 The Project Proponent and the accredited Consultant M/s KKB Envirocare Consultants Pvt. Ltd., Hyderabad, made a detailed presentation on salient features of the project and informed that

(i) The proposal is for environmental clearance to the project for manufacturing Active Pharmaceutical Ingredients (APIs) and its intermediates (73 nos of products) along with R&D products of total capacity 1728 TPA (any 16 products at a time on campaign basis) by M/s AVR Organics Private Limited in an area of 42.08 ha at Sy. No.11, 12, 13 of village Yawapur & 233, 233 E2, 261, 261AAE, 262, 262 AAE, 267, 267 A2, 267E, 276, 276AA, 276 E, 276/A/1, 278, 279 AA, 280, 280A, 281, 281AA, 281 VU, 285, 285E, 287, 287A1, 288, 288A, 289, 290, 290/VU, 291 & 291/A of village Maddikunta, Sadasivapet (M), District Sangareddy (Telangana). Presently, the unit is engaged in production of chemicals/drugs namely, Thionyl Chloride, Mono Choloro Aecitic Acid and Tri Chloro Acetyl Chloride of total capacity 4039 TPA which are not be continued under the present project.

(ii) The ToR for the project was granted by the MoEF&CC vide letter dated 29th April, 2017.

(iii) The project/activity is covered under category A of item 5 (f) 'Synthetic Organic Chemical Industry' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry

(iv) M/s AVR Organics Private Limited formerly known as Tejasviny Rasayans Ltd., was established in 1995 and had obtained Consent to Establish from the State PCB vide order No. 5176/PCB/NOC/AEE-IX/95-78 dated 2nd January, 1995 and Consent to Operate was obtained vide order No. 44/PCB/CTP/RO-SRD/AEE.IX/95 dated 11th December, 1995 for manufacturing 3 basic chemicals and API Intermediates. Hence Environmental Clearance was not applicable as per EIA Notification 27th January, 1994.
(v) Existing land area is 32600 m^2 and additional area of 388273.07 m^2 land will be used for proposed expansion. Total area would be 420873.07 m^2 (42.08 Ha).
(vi) Industry will develop Greenbelt in an area of 33% i.e. 138888 m^2 out of total area of the project.
(vii) Total cost of the project is Rs. 285 crores including existing investment of Rs.35 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 26.05 crores including existing and the Recurring cost (operation and maintenance) will be about Rs. 20.5 croresper annum.
(viii) Total employment will be 1000 persons as direct and 500 persons as indirect after expansion. Industry proposes to allocate Rs. 625 lakhs @ of 2.5 % towards Corporate Social Responsibility (Enterprise Social Commitment). However as per the MoEF&CC OM vide F. No. 22-65/2017-IA.III dated 1st May, 2018, industry proposes to allocate Rs. 188 lakhs i.e., 0.75% of capital cost towards Corporate Environment Responsibility and spend according to the guidelines.
(ix) There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. located within 10 km distance. Nandivagu reservoir is at 6.74 km SSW direction; Malgiripet Cheruvuis at 4.73 km in WNW direction; Tekulapalli village cheruvu is at 7.5 km in SSE direction; Enkepally Peddacheruvu is at 5.6 km in N direction; Nandivagu near Kambalpalli is at 2.13 km in SSE direction; Gangakatvavagu near Suraram is at 5.49 km in NW direction;
(x) Water bodies like pond namely Mahaboob Pasha Darga is at a distance of 1.7 km in NNE direction; Sadasivpet pond is at a distance of 3.8 km in NE direction; Gollagudemis pond is at a distance of 5.8 km in NE direction and Anantsagar is at a distance of 3.9 km in SSE direction.
(xi) Ambient air quality monitoring was carried out at *9* locations during *December 2016 to February 2017* and submitted baseline data indicates that ranges of concentrations of PM_{10}:*33–55*µg/m^3, $PM_{2.5}$: 11-*26*µg/m^3, SO_2: *BDL – 8.3µg/m^3* and NO_2: *5.2-13.8*µg/m^3 respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be *2.44*µg/m^3, 25.71µg/m^3 and *15.16*µg/m^3 with respect to PM_{10}, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).
(xii) Total water requirement is 863m^3/day out of which fresh water requirement is 556 m^3/day and it will be met from ground water through bore wells and surface water through Mission Bhagiratha.
(xiii) Effluent of 348 KLD quantity will be treated through Effluent Treatment plant. The plant will be based on Zero Liquid discharge system.
(xiv) Power requirement after expansion will be 2565 KVA(2750 HP) including existing 700KVA(750 HP) and will be met from Telangana State Power Distribution Corporation limited (TSPDCL).Existing unit has DG sets of 125 KVA capacity, additionally 2 nos. of DG sets of 1000 KVA and 2 nos. of 500 KVAare used as standby during power failure. Stack height11 m will be provided for 2 nos. of 1000 KVA DG Sets each and 9 m for 2 nos. of 500 KVA DG sets each per CPCB norms to the proposed DG sets.
(xv) Existing unit has 3 TPH coal fired boiler. Additional 10 TPH and 2 nos. of 6 TPH coal fired boilers will be installed. Multi cyclone separator and bag filter with a stack of height of 40 m each will be installed for controlling the Particulate emissions within statutory limit of

115mg/Nm^3 for proposed boilers. Additional 4 lakh K.cal/hr coal fired Thermic Fluid Heater (TFH) and 2 nos. of 2 lakh Kcal/hr Diesel fired TFH will be installed.

Details of Process emissions generation and its management

S. No.	Process Emission	Maximum Quantity (kg/day)	Treatment
1	H_2	63.44	• Diluted with nitrogen and diffused with flame arrestor.
2	HCl	1605.8	• Scrubber with water / caustic solution
3	SO2	394.1	• Scrubber using caustic solution.
4	NO2	25.2	• Scrubber using caustic solution.
5	$CO_{2,}$	1906.9	• Dispersed into atmosphere
6	n-butane	3.6	• Diffused with flame arrestor
7	O_2	1.5	• Dispersed into atmosphere
8	NH_3	166.4	• Scrubber with water / caustic solution
9	Methylamine	0.2	• Scrubber with water
10	Methyl Chloride	11.4	• Scrubber using caustic solution.
11	HF	0.1	• Scrubber with water / caustic solution
12	HBr	0.2	• Scrubber with water / caustic solution

Details of Solid waste/ Hazardous waste generation and its management

S. No.	Source	Proposed Quantity (TPD)	Handling Method	Disposal
1.	Organic residue	13.5	HDPE Drums	Sent to SPCB Authorized Cement industries / TSDF
2.	Spent Carbon	0.45		
3.	Distillation Bottom Residue (1% of spent solvents)	2		
4.	Inorganic & Evaporation salt (Process)	20.5	HDPE Bags	
5.	Evaporation salt (Non-Process)	1.5		
6.	ETP Sludge	0.5		
7.	Boiler Ash	41	Stored in covered area	Sold to Cement Brick Manufacturers
Other Hazardous Waste generation from the Plant				
8.	a) Detoxified Container / Liners drums b) HDPE Carboys c) Fiber Drums	500 Nos./ month	Designated covered area	Disposed to SPCB Authorized agencies after complete detoxification
	d) PP Bags	200 Kg/month		
9.	Spent solvents (with moisture) (solvents 70 + water 5)	75 KLD	Stored in Drums / Tanks	Sent to In-house Solvent Recovery System
10.	Recovered Solvents from spent solvents	65 KLD	Stored in Drums /	Recovery within the premises duly sending

			Tanks	the residue to Authorized agencies
11.	Spent Mixed solvents (5 from SRS + 3 from ETP)	8 KLD	Stored in Drums / Tanks	Recovery within the premises / Sent to SPCB Authorized agencies
12.	Waste oils & Grease	3 KL/A	Stored in Drums	Sent to SPCB Authorized agencies for reprocessing / recycling.
13.	Used Lead acid Batteries	50 Nos. / annum	Designated covered area	Sent to suppliers on buy-back basis.
14.	Misc. Waste (spill control waste)	12 TPA	Stored in Drums	TSDF
15.	Spent Catalyst	1 TPD	Stored in Drums	Sold to suppliers on buy-back basis.

Non-Hazardous Waste Generation, Handling and Disposal

Sl. No.	Name of the waste	Quantity (TPD)	Quantity (TPA)	Handling	Disposal option
1.	Used Insulation waste, PVC Scrap, HDPE & PP scrap, Paper waste, Used Thermocouple waste, Glass scrap, Iron scrap, SS scrap, Aluminium & other Metal Scrap, Cotton waste (used aprons/ uniforms, etc.), Packing wood etc.,	0.5	180	Storage yard	Sent to outside agencies for recycling
2.	Kitchen waste	0.2	72	HDPE Drums	Composted on site and reused for green belt

Biomedical Waste and E- Waste Generation, Handling & Disposal

Sl. No.	Name of the waste	Quantity (kg/day)	Quantity (TPA)	Disposal option
1.	Category : Yellow (h) Decontaminated media from Microbiology Lab	20	7.2	Pre-treat to sterilize with non-chlorinated chemicals on-site as per BMW Rules and sent to PCB authorized agency for incineration.
2.	Category: White Waste sharps from OHC (Needles, syringes, scalpels, blades, glass, etc.)	0.1	0.036	Autoclaving and sent to PCB authorized agency.
3.	Category : Yellow (c) Soiled Waste from OHC (cotton, dressings, soiled plaster casts, other material)	0.3	0.108	Sent to PCB authorized agency for incineration.
4.	E – waste	10	3.6	Sent to authorized E-waste collection centres/ registered dismantlers / authorized recyclers/ return back to manufacturers.

(xvi) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 8th June, 2018.The main issues raised during the public hearing are related to provide employment to locals, implementation of appropriate environmental protection measures, plantation development, rain water harvesting pits outside the premises, conducting medical camps, drinking water supply to nearby villages, skill development training to the local youth, planning of CER / CSR fund allocation as per Village requirements.
(xvii) Certified compliance report by RO, MoEF&CC has not been submitted in view of the fact that no EC was accorded in the past as environmental clearance for the existing industry was not applicable as it was manufacturing only basic chemicals and API Intermediates which is exempted from EC as per EIA Notification 1994.
(xviii) No litigations are pending against the project.
(xix) The details of products and capacity as under:

S. No.	Product	Quantity (Kg/Day)	Quantity (TPA)	Therapeutic Category
1.	Abacavir Sulfate	33.3	12	*Anti-Retroviral*
2.	Aceclofenac	166.7	60	*Anti-Inflammatory*
3.	Albendazole	100	36	*Anthelmintic*
4.	Amlodipine Besylate	166.7	60	*Anti-Hypertensive*
5.	AtazanavirSulphate	66.7	24	*Anti-Retroviral*
6.	Azacitidine	3.3	1.2	*Anti-Neoplastic*
7.	Bimatoprost	6.7	2.4	*Anti-Glaucoma*
8.	Bortezomib	0.8	0.3	*Anti-Neoplastic*
9.	Bupropion Hydrochloride	16.7	6	*Anti-Depressant*
10.	Capecitabine	66.7	24	*Anti-Neoplastic*
11.	Carboplatin	0.7	0.4	*Anti-Neoplastic*
12.	Ciprofloxacin Hydrochloride	166.7	60	*Anti-Biotic*
13.	Cisplatin	0.7	0.2	*Anti-Neoplastic*
14.	Citalopram Hydrogen Bromide	100	36	*Anti-Depressant*
15.	ClopedegralBisulphate	166.7	60	*Anti-Platelet*
16.	Darunavir	100	36	*Anti-Retroviral*
17.	Dexrazoxane	0.8	0.3	*Anti-Neoplastic*
18.	Diclofenac Sodium	33.3	12	*Anti-Inflammatory*
19.	Docetaxel	0.8	0.3	*Anti-Neoplastic*
20.	Doletagravir	**666.7**	**240**	*Anti-Retroviral*
21.	Domepridone	166.7	60	*Anti-Emetic*
22.	Efavirenz	166.7	60	*Anti-Retroviral*
23.	Emtricitabine	66.7	24	*Anti-Retroviral*
24.	Erlotinib	16.7	6	*Anti-Neoplastic*
25.	Escitalopram Oxalate	100	36	*Anti-Depressant*
26.	Felbamate	16.7	6	*Anti-Consulvant*
27.	Flucanazole	**166.7**	**60**	*Anti-Fungal*
28.	Folic Acid	**166.7**	**60**	*Vitamin*
29.	Fosampanavir	**333.3**	**120**	*Anti-Retroviral*
30.	Gabapentain	**333.3**	**120**	*Anti-Consulvant*
31.	Gefitinib	16.7	6	*Anti-Neoplastic*
32.	Gemcitabine Hydrochloride	3.3	1.2	*Anti-Neoplastic*
33.	ImatinibMesylate	66.7	24	*Anti-Neoplastic*
34.	Irbesartan	66.7	24	*Anti-Hypertensive*

35.	Irinotecan Hydrochloride	1.7	0.6	*Anti-Neoplastic*
36.	Lamivudine	66.7	24	*Anti-Retroviral*
37.	Latanoprost	6.7	2.4	*Anti-Glaucoma*
38.	Lenalidomide	0.8	0.3	*Anti-Neoplastic*
39.	LevocetirizineHCl	**166.7**	**60**	*Anti-Histamines*
40.	Levoflaxacin Hemihydrate	100.0	36	*Anti-Biotic*
41.	Lopinavir	6.7	2.4	*Anti-Retroviral*
42.	Lopiramide	3.3	1.2	*Anti-Neoplastic*
43.	Loratidine	66.7	24	*Anti-Histamines*
44.	Losartan Potassium	**166.7**	**60**	*Anti-Hypertensive*
45.	Mefenamic Acid	**166.7**	**60**	*Anti -Inflammatory*
46.	Montelukast Sodium	33.3	12	*Anti-Asthmatic*
47.	Moxifloxacin Hydrochloride	66.7	24	*Anti-Biotic*
48.	Naproxen	33.3	12	*Anti-inflammatory*
49.	Naratriptan	100	36	*Anti-Migraine*
50.	Nevirapine	100	36	*Anti-Retroviral*
51.	Norfloxacin	100	36	*Anti-Biotic*
52.	Oseltamavir Phosphate	33.3	12	*Anti-Retroviral*
53.	Oxaliplatin	0.7	0.2	*Anti-Neoplastic*
54.	Pantoprazole Sodium Sesquihydrate	**166.7**	**60**	*Anti-Ulcerative*
55.	Pemetrexed	0.8	0.3	*Anti-Neoplastic*
56.	Phenylepherine Hydrochloride	16.7	6	*Nasal decongestant*
57.	Pregablin	**1000**	**360**	*Neuropathic*
58.	Raltegravir	33.3	12	*Anti-Retroviral*
59.	Rilpivirine Hydrochloride	**166.7**	**60**	*Anti-Retroviral*
60.	Ritonavir	33.3	12	*Anti-Retroviral*
61.	Rosuvastatin Calcium	33.3	12	*Antihyperlipidemic*
62.	SaqunairMesylate	10	3.6	*Anti-Retroviral*
63.	Sildnafil Citrate	**333.3**	**120**	*Anti-Erectile*
64.	Sunitinib	3.3	1.2	*Anti-Neoplastic*
65.	Telmisatran	**166.7**	**60**	*Anti- Hypertensive*
66.	Temozolamide	1.7	0.6	*Anti-Neoplastic*
67.	TenofovirDiisoproxilFumarate	**233.3**	**84**	*Anti- Retroviral*
68.	Thalidomide	3.3	1.2	*Anti-Neoplastic*
69.	Tramadol Hydrochloride	**333.3**	**120**	*Analgesic*
70.	Travoprost	6.7	2.4	*Antiglaucoma*
71.	Valgancyclovir	**166.7**	**60**	*Anti-Retroviral*
72.	Valsartan	100	36	*Anti-Hypertensive*
73.	Zidovudine	10	3.6	*Anti-Retroviral*
Total Production on campaign basis		**4733.5**	**1704**	
R & D Facility				
	R & D	**66.7**	**24**	
Total Production on campaign basis (any 16 products at a time) + R&D		**4800.2**	**1728**	

List of By-products along with their quantity

S. No.	Name of the By-Product	Quantity (Kg/day)	Quantity (TPA)	Name of the Product
1.	Tributyl methyl Stannane +Tributyltin Chloride	78.85	28.39	Valsartan (Stage-4)

S. No.	Name of the By-Product	Quantity (Kg/day)	Quantity (TPA)	Name of the Product
2.	Spent Acetic acid	1577.89	568.04	Amlodipine Besylate (Stage-4)
3.	4-Nitrophenol	23.42	8.43	Ritonavir (Stage-3 & Stage-6)
4.	Tert-Butyl (fluoro) dimethylsilane	12.75	4.59	Rosuvastatin Calcium (Stage-8)
5	Piperazine Hydrochloride	72.09	25.95	Ciprofloxacin Hydrochloride Monohydrate
6	Platinum	18.22	6.56	Cisplatin
7	Silver Iodide + Silver Nitrate	1.8	0.65	
8	Recovery of Platinum	18.76	6.75	Carboplatin
9	Silver	3.21	1.16	
10	NMBA Hydrobromide	23.97	8.63	Phenylephrine Hydrochloride
11	Sodium Bromide Solution	61.17	22.02	

41.3.12.2 The EAC, after deliberation, noted as under:

The proposal is for environmental clearance to the project for manufacturing Active Pharmaceutical Ingredients (APIs) and its intermediates (73 nos of products) along with R&D products of total capacity 1728 TPA (any 16 products at a time on campaign basis) by M/s AVR Organics Private Limited in an area of 42.08 ha at Sy. No.11, 12, 13 of village Yawapur and 233, 233 E2, 261, 261AAE, 262, 262 AAE, 267, 267 A2, 267E, 276, 276AA, 276 E, 276/A/1, 278, 279 AA, 280, 280A, 281, 281AA, 281 VU, 285, 285E, 287, 287A1, 288, 288A, 289, 290, 290/VU, 291 & 291/A of village Maddikunta, Sadasivapet (M), District Sangareddy (Telangana). Presently, the unit is engaged in production of chemicals/drugs namely, Thionyl Chloride, Mono Choloro Aecitic Acid and Tri Chloro Acetyl Chloride of total capacity 4039 TPA which are not be continued under the present project.

The ToR for the project was granted by the Ministry vide letter dated 29th April, 2017. Public hearing was conducted by the SPCB on 8th June, 2018.

The project/activity is covered under Category A of item 5 (f) 'Synthetic Organic Chemical Industry' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry

Total water requirement is estimated to be 863 m^3/day out of which fresh water requirement is 556 m^3/day mainly to be met from ground water through bore wells. The Ground Water Department of the State Government of Telangana has accorded permission vide letter dated 10th August, 2018 for withdrawal of 298 KLD from 5 recommended bore wells and vide letter dated 12th September, 2018 for withdrawal 144 KLD from one existing bore well. In addition, Rural Water Supply and Sanitation Department of the State Government of Telangana vide letter dated 22nd September, 2018, has committed to provide 100 KLD of water form Madikunta OHSR-2 under the Mission Bhagiratha.

Effluent of 348 KLD will be treated through Effluent Treatment plant. The plant will be based on Zero Liquid discharge system.

Existing unit has 3 TPH coal fired boiler. Additional 10 TPH and 2 nos. of 6 TPH coal fired boilers will be installed. Multi cyclone separator and bag filter with a stack of height of 40 m

each will be installed for controlling the Particulate emissions within statutory limit of 115mg/Nm^3 for proposed boilers. Additional 4 lakh Kcal/hr coal fired Thermic Fluid Heater (TFH) and 2 nos. of 2 lakh Kcal/hr Diesel fired TFH will be installed.

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. Issues raised during the public hearing have been duly addressed by the project proponent.

The unit is reported to have been established in the year 1995 i.e. prior to the enforcement of the EIA Notification, 2006, and thus there is no requirement of the prior EC for the existing operations and no relevance for compliance status of the EC conditions.

Consent to Operate for the present capacity has been obtained from the State PCB vide letter dated 18th January, 2018, which is valid up to 30th November, 2022.

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

- *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.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*
- *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.*
- *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.*
- *Coal/lignite shall not be used as fuel in the boiler. 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.*
- *Solvent management shall be carried out as follows:*
  - *(h) Reactor shall be connected to chilled brine condenser system.*
  - *(i) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.*
  - *(j) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.*
  - *(k) Solvents shall be stored in a separate space specified with all safety measures.*
  - *(l) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.*
  - *(m) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.*
  - *(n) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.*
- *Total fresh water requirement shall not exceed 556 cum/day to be met from ground water. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA.*
- *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.*

- *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.*
- *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.*
- *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.*
- *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.*
- *The company shall undertake waste minimization measures as below:-*
  - *(vii) Metering and control of quantities of active ingredients to minimize waste.*
  - *(viii) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*
  - *(ix) Use of automated filling to minimize spillage.*
  - *(x) Use of Close Feed system into batch reactors.*
  - *(xi) Venting equipment through vapour recovery system.*
  - *(xii) Use of high pressure hoses for equipment clearing to reduce wastewater generation.*
- *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.*
- *All the commitments made to the public during public hearing/consultation shall be satisfactorily implemented.*
- *At least 1% 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.*
- *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.*
- *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.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *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.41.3.13

Expansion of Agrochemical & Intermediates Manufacturing Plant at Plot no: K2 to K11 & D2 to D4, Phase-1, UPSIDC Industrial area, Village Mahfona, Tehsil Sandila, District-Hardoi (Uttar Pradesh) by M/s India Pesticides Ltd - For Environmental Clearance

[IA/UP/IND2/58820/2016, J-11011/331/2016-IA II (I)]

41.3.13.1 The project proponent and the accredited Consultant M/s EQMS India Pvt Ltd, made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project Expansion of Agrochemicals & Intermediates Manufacturing Plant atPlot No: K2 To K11 & D2 To D4, Phase-1, UPSIDC Industrial Area, Tehsil Sandila, District Hardoi (Uttar Pradesh) by M/s India Pesticide Limited.

(ii) The ToR for the project was accorded by the Ministry vide letter dated 14th February, 2017.

(iii) All Pesticide industry and pesticide specific intermediates are listed at S.N. 5 (b) of Schedule of Environment Impact Assessment(EIA) Notification under category 'A' and are appraised at Central Level by ExpertAppraisal Committee (EAC).

(iv) Existing land area is 24281m^2, additional area of 49,919 m^2 will be used for proposed expansion. Total land area after expansion will be 74200 m^2.

(v) Industry has already developed green belt of 8820 m2 andis committed to develop additional greenbelt to meet the target 33 % of open area as per approved TOR.

(vi) The estimated project cost is Rs 25 crores.Total capital cost earmarked towards environmental pollution control measures is Rs. 6.07 crores and the recurring cost (operation and maintenance) will be about Rs 253 lakh per annum.

(vii) Total Employment will be 110 persons as direct and 90 persons indirect after expansion. Industry proposes to allocate Rs 25.5 lakh.

(viii) There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the projectsite. River/ water body Bahca Nadi is flowing at a distance of 6.73 Km in NE direction.

(ix) Ambient air quality monitoring was carried out at 8 locations during 1st October 2016 to 31st December 2016 and the baseline data indicates the ranges of concentrations as: PM_{10} (63-83 µg/m3),$PM_{2.5}$ (43-55 µg/m3), SO_2 (6.1- 7.7 µg/m3) and NO_2 (13.5 – 17.6 µg/m3). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after

(x) The proposed estimates of the project would be 89.84µg/m3, 15.84 µg/m3 and 17.93 µg/m3 with respect toPM_{10}, Sox and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(xi) One time water requirement will be 1520 KLD and daily fresh water requirement will be1009 m3/day out of which total recycled will be 511 KLD , 271 m^3/day will be met from ETP treated water of 320 KLD rest from other sources , RO System/MEE. The plant will be based on Zero Liquid discharge system (if applicable).

(xii) Power requirement after expansion will be 3000 KVA including existing 1000 KVA and will be met from Uttar Pradesh Power Corporation Ltd. Existing unit has 2 DG sets of (1X 125 KVA+ 1X 750 KVA)capacity, additionally 2x750 DG sets will be used as standby during power failure. Stack (height 7.5 m) will be provided as per CPCB norms to the proposed DG sets.

(xiii) Existing unit has 6 TPH HSD/Rice husk fired boiler. Additionally, one boiler of 8 TPH will be installed. Multi cyclone separator/ bag filter with a stack of height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 115mg/Nm3 for the proposed boilers.

(xiv) Details of existing emissions generation and its management

Existing process Emission

S. No.	Stack Attached	Stack Height (From Ground)	Stack Dia	Pollutants
1.	Boiler (06 Ton/Hr)	30 Meter	1000 mm (At Top)	RSPM, SPM, SO2, NOx
2.	Hot Air Generator	30 Meter	420 mm (At Top)	RSPM, SPM, SO2, NOx
3.	Stripping tower	04 Meter	800 mm (At Top)	Organic Vapours
4.	Chlorine Scrubber	11 Meter	800 mm (At Top)	Chlorine & HCl

5.	Process Vent Scrubber	11 Meter	400 mm (At Top)	Chlorine & HCl
6.	Storage Tank Vent Scrubber	11 Meter	300 mm (At Top)	Organic Vapours
7.	D.G. Set (750 KVA)	7.5 Meter	150 mm	RSPM, SPM, SO2, NOx, CO
8.	D.G. Set (125 KVA)	7.5 Meter	150 mm	RSPM, SPM, SO2, NOx, CO
9.	Thermic Fluid Heater (20 Lakh KCal/Hr)	17 Meter	300 mm (At Top)	RSPM, SPM, NOx, CO
10.	Dust Collector -I	17 Meter	300 mm (At Top)	RSPM, SPM
11.	Dust Collector -II	17 Meter	300 mm (At Top)	RSPM, SPM

Emission generation from Proposed Process

S. No.	Stack Attached	Stack Height in Meter; (From Ground)	Stack Dia	Flow in Nm3/hr; /Temp in 0C	Pollutants Concentration in mg/Nm3	Remarks
1	Boiler (8TPH)	30	1200 mm (At Top)	27,000/ 170	SPM<150ppm SO2 <150ppm NOx < 20ppm	(Common stack for existing boiler of 6TPH)
2	Thermic Fluid Heater -1 Thermic Fluid Heater -2 (15 Lac Kcal/hr each)	30 (Combined)	800 mm	9000 /170 (Combined)	SPM<150ppm SO2 <150ppm NOx < 20ppm	(Combined stack for both the TFH)
3	D.G. Set (750 KVA)	7.5	150 mm	340 /400-450	SPM<0.3g/KWhr SO2<4.0g/KWhr NOx<3.5g/KWhr	During Power Failure only
4	NABAM Scrubber	29	300 mm	3000 /Ambient	CS2 < 20	3m+Roof Ht Floor Height=22m Roof Height=26m
5	Vent for Bag Filter of Spray Dryer -1	27.5	800 mm	30000 /70	SPM<20 mg/Nm³	1.5 m+RoofHt Floor Height=22m Roof Height=26m
6	Vent for Bag Filter of Spray Dryer -2	27.5	800 mm	30000/70	SPM<20 mg/Nm³	1.5 m+RoofHt Floor Height=22m Roof Height=26m

7	Powder Pneumatic Conveying System	27.5	300 mm	3000/Ambient	SPM<20 mg/Nm³	1.5 m+RoofHt Floor Height=22m Roof Height=26m
8	By product drying system	17.5	300 mm	6000 / 60	SPM<20 mg/Nm³	1.5 m+RoofHt Floor Height=10m Roof Height=15m

(xv) Solid waste will be generated during the operation phase in the form of ETP sludge/ process residue etc. Used oil will be sold to registered refiners or reused in plant as lubricant. All existing plant and additional hazardous waste due to expansion project will be collected and will be sent to TSDF site (Ramkay, Kanpur Dehat).
(xvi) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 30th December 2017. The main issues raised during the public hearing are related to employment, effect of the plant on the agriculture crop and the pollution load that will arise due to the Plant.
(xvii) Certified compliance report has been obtained from the Regional Office of the MoEF&CC at Lucknow vide their letter dated 14th May, 2018.

Proposed Products

Products Proposed to be Added							
S.No	**Tag No**	**Product**	**Capacity (Tone per month)**	**S.No**	**Tag No**	**Product**	**Capacity (Tonne per month)**
1	F-18	Carboxin	100	16	H-15	Metolachlor	30
2	F-19	Diafenthiuron	10	17	H-16	Diuron	30
3	F-20	Propineb	50	18	I-19	Acequinocyl Tech	25
4	F-21	Paclobutrazole	10	19	I-20	Pyriproxyfen	10
5	F-22	Zineb	50	20	I-21	Novaluran	25
6	F-23	Etridiazole	25	21	I-22	Propargite	100
7	F-24	Tricyclazole	25	22	IN-3	PTBSA(N-Phenyl-N-(Trichloromethyl)-Thio-benzensulfonamide	30
8	F-25	Chlorothalonil	100	23	IN-4	Caprolactam Disulfide	15
9	F-26	Trichlopyr	20	24	IN-5	Propargile Alcohol	100
10	F-27	Difenoconazole	25	25	IN-6	Trichloro Methoxy Nitrobenzene	15
11	F-28	Ipconazole	50	26	FL-1	Solid Formulation - WDG, WP	500
12	F-29	Dodine	30	27	FL-2	Liquid Formulation - EC,SL	1000
13	H-12	Imazethapyr	10	28	BP-1	Sodium Sulphate	360

14	H-13	Metribuzin	25	29	BP-2	Ammonium Sulphate	60
15	H-14	Bispyribac Sodium	30	30	BP-3	Sodium Sulphite	114
				31	BP-4	HCl Spent acid	108

41.3.13.2 During deliberations, the Committee noted the following:

The proposal is for environmental clearance to the project for expansion of agro-chemicals and intermediates manufacturing unit from the present capacity of 3650 TPA to 36500 TPA by M/s India Pesticides Limited in an area of 74200 sqm at plot No. K2 to K11 & D2 to D4, Phase-I, UPSIDC Industrial area, Village Mahsona, Tahsil Sandila, District Hardoi (Uttar Pradesh)

The project/activity is covered under category A of item 5 (b) 'Pesticides industry and pesticides specific intermediates' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on 14th February, 2017. Public hearing was conducted by the State Pollution Control Board on 30th December 2017.

Total water requirement is estimated to be 1520 KLD which includes fresh water requirement of 1009 m^3 per day (existing-135 cum per day, additional-874 cum per day). To meet the additional water requirement of 874 cum per day, it has been informed by the Central Ground Water Board, that the proposal is under advance stage of processing and shall be recommended to CGWA shortly.

The project for its capacity of 3650 TPA was earlier granted environment clearance by the Ministry vide letter dated 22nd March, 2013.

Certified compliance report has been obtained from the Regional Office of the MoEF&CC at Lucknow vide their letter dated 14th May, 2018.

41.3.13.3 *The EAC, after deliberations, asked for information/additional details in respect of the following:*

- *Comprehensive plan for achieving ZLD and also the solid waste management. Water balance to be revised accordingly.*
- *3D modelling for risk assessment to be carried out to arrive at adequate mitigation measures.*
- *Fly ash management plan*
- *Consent to operate for the existing operations.*
- *Detail of effluents generation, treatment and management/disposal.*

The proposal was deferred for the needful on the above lines.

Agenda No.41.3.14

Manufacturing of Active Pharmaceutical Ingredients of capacity 125 TPM at Survey No. 112 Paiki 2&113, Paiki 1& 2, Village chachapar, Taluka & District Morbi (Gujarat) by M/s Healthgenic Chemicals Pvt Ltd - For Environmental Clearance

[IA/GJ/IND2/65521/2017, J-11011/328/2017-IA-II(I)]

41.3.14.1 The project proponent and the accredited consultant M/s T R Associates, made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environment clearance to the project for proposed Active Pharmaceutical Ingredients manufacturing unit an area of 74200 m^2 at Survey No.112 Paiki 2 & 113, Paiki 1 & Paiki 2, Village Chachapar, Taluka and District Morbi (Gujarat) by M/s Healthgenic Chemicals Pvt. Ltd.
(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 39th meeting held during 25th to 27th July 2018 and the Committee recommended Terms of References (TORs) for the project. The TOR was granted by the Ministry vide letter dated 10th November, 2017.
(iii) All Synthetic Organic Chemicals Industry projects, located outside the notified industrial area/estate and not fall into small scale unit criteria are listed at S.N.5(f) of schedule to the Environmental Impact Assessment (EIA) Notification, 2006 under Category 'A' and are appraised at Central level by the Expert Appraisal Committee (EAC).
(iv) Total land area will be 13,304 sqm. Green belt will be developed in an area of 4590 sqm covering 34.5% area of total project area of 13,304 sqm.
(v) The estimated project cost is approx. Rs.4 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.70 lakhs and the recurring cost (operation and maintenance) will be about Rs.37. lakhs per annum. Total employment will be 40 persons as direct employment.
(vii) There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wild Life Corridors etc within 10 km distance from the project site. Phulki River is flowing at a distance of 4.7 km in ENE direction. Demi River is flowing at a distance of 3.6 km in WSW direction and DEMI II-Irrigation Project is situated at a distance of 5.30 km in SSE direction.
(viii) Ambient air quality monitoring was carried out at 8 locations during October, 2017 to December, 2017 and submitted baseline data indicates that ranges of concentrations of PM_{10} (57.10 to 86.20 µg/m^3), $PM_{2.5}$ (21.15 to 36.63 µg/m^3), SO_2 (9.79to 24.97µg/m^3), NO_2 (20.01to 35.87µg/m^3) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.40 µg/m^3, 0.055 µg/m^3, 0.40 µg/m^3, 1.00 µg/m^3, 3.00 µg/m^3 with respect to PM_{10}, SO_2, NO_2, NH_3, HCl. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).
(ix) Total estimated water requirement is 79 cum/day of which fresh water requirement of 32m^3/day will be met from bore well.
(x) Industrial effluent of 53.8m^3/day will be treated through Effluent Treatment Plant followed by MEE and the stated system will achieve Zero Liquid Discharge. Domestic effluent of 3.8 m^3/day will be disposed off through Septic tank/ Soak pit system.
(xi) Power requirement of proposed project will be 375 KVA proposed to be met from Paschim Gujarat Vij Company Limited (PGVCL). DG set of 125 kVA capacity will be installed and will be used as standby during power failure. Stack height of 6 m will be provided as per CPCB norms.
(xii) Briquettes/Coal fired boiler of 1 TPH capacity will be installed. Cyclone Separator followed by Bag Filter with a stack height of 30 m will be provided to control the particulate emissions within statutory norms.
(xiii) Details of process emissions generation and its management is as under:-

S. No.	Stack attached to	Stack Height (m)	Expected Pollutant	APC System
1	Reactor -1	12	HCl Gas	Caustic scrubber followed by stack
2	Reactor -2	12	Ammonia	HCl scrubber followed by stack

3	Reaction vessels	12	VOC	Two stage Condenser followed by activated carbon and scrubber.

(xiv) Details of solid waste/hazardous waste generation and its management is as under:-

S. No.	Description	Category	Quantity (MTPM)	Mode of Disposal
1	ETP Sludge + Evaporation residue	35.3	390	Collection, storage and disposal at approved TSDF Site.
2	Distillation residue	20.3	175	Collection, storage and disposal at approved CHWIF for disposal.
3	Process residue	28.1	180	Collection, storage and disposal at approved CHWIF for disposal
4	Spent Carbon	28.3	26	Collection, storage and disposal at approved CHWIF for disposal
5	Spent catalyst	28.2	3	
6	Used / Spent Oil	5.1	0.5	Collection, storage and used within premises as a lubricant / sold to registered recycler.
7	Discarded bags/ drums/ containers	33.1	30	Collection, storage & sell to authorized vendor
8	Off specification product/drugs	28.4 & 28.5	App. 5	Collection, storage and disposal at approved CHWIF for disposal.

(xv) Public hearing for the proposed project has been conducted by the State Pollution Control Board on 2nd May, 2018. The main issues raised during the Public hearing are related local employment and social upliftment activities in surrounding area.

(xvi) The detail of proposed products is as under:-

S. No.	Name of Product	Capacity (MTPM)
1	Povidon Iodine	30
2	Bronopol	4
3	Diclofenac Sodium	4
4	Diclofenac Potassium	4
5	Sodium Citrate	15
6	Carvedilol	4
7	Metformin Hydrochloride	4
8	Pentoxifylline	10
9	Pregabalin	4
10	Pentoprazole Sodium	4
11	Glimepiride	4
12	Topiramate	4
13	Gabapentin	4
14	Atorvastatin Calcium	30

41.3.14.2 The proposal was earlier considered by the EAC in its meeting held on 25-27 July, 2018, wherein the EAC, after deliberations and especially in view of the unit proposed in non-industrial area, desired for concurrence of the State Pollution Control Board to allow APIs manufacturing therein.The project proponent has submitted the NOC issued by the GPCB vide their letter dated 9th August, 2018, as per the observations of the EAC.

41.3.14.3 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up of Active Pharmaceutical Ingredients manufacturing unit of capacity 125 TPM by M/s Healthgenic Chemicals Pvt Ltd in a total area of 13,304 sqm at Survey No.112 Paiki 2 & 113, Paiki 1 & Paiki 2, Village Chachapar, Taluka and District Morbi (Gujarat).

The project/activities are covered under category A of item 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 EAC in the Ministry.

The ToR for the project was granted on 10th November, 2017. Public hearing was conducted by the SPCB on 2nd May, 2018.

Total water requirement is estimated to be 79 cum/day which includes 32 cum/day of fresh water proposed to be met from bore well. It is informed that the application has been submitted to Central Ground Water Board on 9th June, 2018 seeking permission for withdrawal of 32 m^3/day of ground water.

Total effluent generated from different industrial operations is estimated to be 53.8 m^3/day, which would be treated in the Effluent Treatment Plant followed by MEE. Domestic effluent of 3.8 m^3/day will be disposed off through septic tank/soak pit system. There will be no discharge of treated/untreated waste water from the unit, and thus conforming to Zero Liquid Discharge.

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. Issues raised during the public hearing have been duly addressed by the project proponent.

In response to the earlier observations of the EAC in its earlier meeting held on 25-27 July, 2018, the project proponent has submitted consent to establish dated 9th August, 2018 amending the earlier consent to establish dated 1st December, 2017 by adding APIs of total capacity of 125 TPM (14 nos of products).

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

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

- *Coal/lignite shall not be used as fuel in the boiler. 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.*
- *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) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.
  (d) Solvents shall be stored in a separate space specified with all safety measures.
  (e) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
  (f) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
  (g) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- *Total fresh water requirement shall not exceed 79 cum/day to be met from ground water. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA.*
- *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.*
- *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.*
- *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.*
- *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.*
- *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.*
- *The company shall undertake waste minimization measures as below:-*
  (i) Metering and control of quantities of active ingredients to minimize waste.
  (ii) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
  (iii) Use of automated filling to minimize spillage.
  (iv) Use of Close Feed system into batch reactors.
  (v) Venting equipment through vapour recovery system.
  (vi) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- *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.*
- *All the commitments made to the public during public hearing/consultation shall be satisfactorily implemented.*
- *At least 2% 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.*

- *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.*
- *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.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *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.41.3.15

Setting up Agrochemicals, Intermediates and Specialty chemicals by M/s United Phosphorus Limited (UPL) at Plot No.D-3/6, Dahej-III, GIDC Industrial Estate, Village Kadodara, Taluka Vagra, District Bharuch (Gujarat) - For Environmental Clearance

[J-11011/306/2016- IA II(I)) (IA/GJ/IND2/58497/2016]

41.3.15.1 The project proponent and the accredited consultant M/s Siddhi Green Excellence Pvt. Ltd, made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project having proposed new unit at Plot No. D-3/6, Dahej– III GIDC Industrial estate (within PCPIR region), Village Kadodara, Taluka-Vagra, Dist. Bharuch, State-Gujarat, India by M/s. UPL Limited.

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 14th meeting held during 26th October, 2016 and the Committee recommended Terms of References (ToRs) for the Project. The ToR was granted by the Ministry vide letter dated 13th December, 2016.

(iii) Pesticides Industry and Pesticide Specific Intermediates (Excluding Formulations) at Sr. No. 5(b) under category 'A' 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) at Sr. No. 5(f) Thermal Power Plants at Sr. No. 1(d). Project is appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Total plot area is 755495.16 sqm will be used for proposed project. Industry will develop Greenbelt in an area of ~34.81 % i.e., 263005.16 sq. m out of total area of the project.

(v) The estimated cost of the project shall be Rs.2388.19 crore. Total capital cost earmarked for pollution control measures is Rs.209 crore and the Recurring cost (operation and maintenance) will be about Rs.14.15 crore per annum.

(vi) Total Employment will be 700 nos. persons as permanent employees &1300 nos. people's contractual basis for proposed project. Industry proposes to allocate Rs.60 crore @ of 2.5 % of total project cost towards Corporate Social Responsibility.

(vii) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site. There is Dahej Reserved Forest towards west side from project site (~9.6 km). Bhukhi river is flowing at a distance of 14.32 in SEE direction.

(v) Ambient air quality monitoring was carried out at 8 locations (including project site) during October 2016 to December 2016 and the baseline data indicates that ranges of concentrations of PM_{10} (77-89µg/m^3), $PM_{2.5}$ (18-38µg/m^3), SO_2 (20-31µg/m^3) and NO_x (20-33µg/m^3) (98th percentile values) respectively. AAQ modelling study for point source emissions

indicates that the maximum incremental GLCs after the proposed project would be 4.31 µg/m^3 with respect to PM_{10}. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(vi) Total water requirement shall be 12453 m^3/day of which fresh water requirement of 7795 m^3/day will be met from GIDC reservoir. (Total fresh water requirement is @ 9313 KLD from GIDC.As per Additional TOR No.II, GIDC water requirement is reduced from 9313 KLD to 7795 KLD).Overall water consumption reduction is 38%. Effluent of 2134 KLD quantity will be treated through GIDC drainage network to deep sea.

(vii) 4 MWPH electricity power shall be obtained from Dakshin Gujarat Vij Company Ltd. (DGVCL) & for remaining power requirement Captive power plant of 55 MWH will be installed for power generation. Captive Power plant shall be installed according to GPCB/CPCB guidelines and in three phases-55 MWPH (Phase-1:20MWPH + Phase-2:20MWPH+ Phase-3 :15 MWPH). DG sets (4 nos.) of 2000 KVA each shall be used as standby during power failure. Stack (height 20 m of each) will be provided as per CPCB norms to the proposed DG sets.

(viii) Flue Gas Emissions& proposed control measures:

S. No.	Stack attached to	Stack Height in Meter	Fuel used and Rate of consumption	Parameter	Permissible Limits	Control Measures provided
1.	Boiler 130 TPH x 2 nos.- for captive power plant (20 MW)	100 x 2 nos.	Briquettes/ Coal- 2180.3 MT/day Or Natural gas- 1026037.4 NM^3/day Or Furnace Oil 969 MTPD	Particulate Matter SO_2 NOx	100 mg/Nm^3 100 ppm 50 ppm	ESP + water scrubber for each boiler
2.	Boiler 100 TPH – for captive power plant (15 MW)	100				
3.	Boiler 31 TPH x 2 nos.	55 x 2 nos.		Particulate Matter SO_2 NOx	150 mg/Nm^3 100 ppm 50 ppm	Multi Cyclone separator, Bag filter & water Scrubber
4.	Boiler 20 TPH x 2 nos.	31 x 2 nos.				
5.	Boiler 40 TPH x 2 nos.	55 x 2 nos.				
6.	Boiler 10 TPH x 2 nos.	31 x 2 nos.				
7.	Thermic fluid heater-1 (4 lakh Kcal/ Hr)	30 x 3 nos.	Natural gas- 1329 NM^3/day			-
8.	Thermic fluid heater-1 (12 lakh Kcal/ h)		Natural gas- 3986 NM^3/day			
9.	Thermic fluid heater-1 (1.5 lakh Kcal/ h)		Natural gas- 498 NM^3/day			
10.	DG set (2000 KVA x 4 nos.)	20 x 4 nos.	Diesel- 847 L/h	To be used as stand by during power failure		

(ix) Process gas emissions& proposed control measures:

Stack No.	Stack attached to	Air pollution Control	Height (M)	Air emission	
				Pollutant Name	Permissible limit

		System			(mg/NM^3)
(A) Ethylenediamine **(EDA)**					
1.	2-Stage Water scrubber of Vapor Liquid separator	Water scrubber	30	NH_3	175
(B) Dicamba					
2.	Bag filter attached to SPD	Bag Filter	30	PM	20
(C) Dimethyl Phosphoroamidothioate **(DMPAT)**					
3.	Reactor	2-Stage Caustic scrubber	30	PCl_3	09
4.	NH_3 recovery column	2-Stage water scrubber	30	NH_3	175
(D) Isocyanates & Chloroformates					
5.	Reactor	1st solvent +2nd water+3rd caustic scrubber	30	Phosgene	NIL
6.	Reactor	2-Stage water & Caustic scrubber	30	HCl	20
(E) Tri Methyl Phosphite(TMP) / Tri Ethyl Phosphite (TEP)					
7.	PCl_3 storage tank	Dilute Caustic scrubber	30	PCl_3	0 9
8.	Reactor	Dilute HCl scrubber	30	NH3	175
9.	Wet scrubber attached to SPD	Water Scrubber	30	PM	150
(F) Meta Phenoxy Benzaldehyde (MPBAD)					
10.	Reactor	Alkali Scrubber	30	Bromine	05
(G) Acephate					
11.	Reactor	2-Stage water scrubber	30	NH_3	30
12.	Bag filter attached to SPD	Bag Filter	30	PM	20
(H) Sulphur-WDG (Wettable Dispersible Granule)					
13.	Bag filter attached to SPD	Bag Filter	30	PM	20
(I) Chloroacetyl Chloride					

14.	Reactor	2-Stage water scrubber	30	HCl	20
15.	Reactor	Caustic scrubber	30	SO_2	40
(J) Methoxyacetyl Chloride					
16.	Reactor	Water Scrubber	30	HCl	20
17.	Reactor	Caustic scrubber	30	SO_2	40
(K) 2-Chloro-3, 3-tri fluoropropen-1,2 dimethylcyclopropane Carbonyl chloride					
18.	Reactor	Water Scrubber	30	HCl	20
19.	Reactor	Caustic scrubber	30	SO_2	40
(L) DV Acid Chloride					
20.	Reactor	Water Scrubber	30	HCl	20
21.	Reactor	Caustic scrubber	30	SO_2	40
(M) DL-Methionine					
22.	Reactor	Water Scrubber	30	NH_3	175
(N) Acrolein**, 1-Methylamino-1-Methylthio-2-Nitroethene , Sodium Cyanide ,Potassium Cyanide and Cyanuric Chloride**					
23.	Combined fume incinerator 1 & 2 (2 nos.)	Thermal destruction	30	PM HCl SO_2 NO_x H_2S HC (Organic Trace) HCN	150 20 40 25 45 20 30
(O) Sodium Cyanide					
24.	Reactor	NH_3 absorber in H_2SO_4 scrubber	30	NH_3	175
(P) Potassium Cyanide					
25.	Reactor	NH_3 absorber H_2SO_4 scrubber	30	NH_3	175
(Q) Cyanuric Chloride					
26.	Reactor (Crystalizer)	HCl absorber Water scrubber	30	HCl	20
(R) Tri Methyl Phosphide					
27.	Spray dryer of $CaCl_2$	Water scrubber	30	PM	150
(S) Glufosinate					

28.	From Reactor to water scrubber & its vent to Stack	Alkali scrubber	30	HC	20
29.	From Reactor to water scrubber & its vent to Stack	Water scrubber	30	NH_3	30
30.	From Reactor to water scrubber & its vent to Stack	Caustic scrubber	30	HC + NH_3	20 + 30
31.	From Reactor to water scrubber & its vent to Stack	Caustic scrubber	30	PCl_3	09
32.	From Tank to water scrubber & its vent to Stack	Caustic scrubber	30	HCl	20
33.	From Reactor to water scrubber & its vent to Stack	Carbon Absorption Tower	30	VOC + HC	60 + 20
(T) Aluminium Phosphide					
34.	Reactor	Water scrubber	30	P_2O_5/ PM	5 / 20
35.	AP furnace	Water scrubber	30	P2O5 + PM	5 / 20
36.	AP Blender	Water scrubber	30	Phosphine	NIL
(U) Magnesium Phosphide					
37.	Reactor	Water scrubber	30	P_2O_5/ PM	5 / 20
38.	MP furnace	Water scrubber	30	P2O5 + PM	5 / 20
39.	MP Blender	Water scrubber	30	Phosphine	NIL
(V) Zinc Phosphide					
40.	Reactor	Water scrubber	30	P_2O_5/ PM	5 / 20
41.	ZP furnace	Water scrubber	30	P2O5 + PM	5 / 20
(W) Captive Incinerator (2 nos)					
42.	Incinerator Plant (for solid & liquid)	Caustic scrubber attached to incinerator plant	30	PM HCl SO2 CO TOC Total dioxin & Furans	50 50 200 100 (daily avg.) 20 0.2 ng

				Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V & their compounds	TEQ/Nm^3 (8 hr sampling) 1.5 mg/Nm^3 (2 hr sampling)
43.	Stack attached to Bag Filter-2 nos. for pesticide formulation products.	Bag filter	30	PM	20

(x) Hazardous / Non-Hazardous Wastes Management:

S. No.	Type of Waste	Category (As Per Sch-2016)	Generation per Annum	Source of Generation	Mode of Storage & treatment	Mode of Disposal
1.	ETP sludge/STP Sludge	35.3	5200 MT	From ETP/STP	Store in impervious storage area with roofing near ETP / STP	Send to TSDF site of M/s BEIL at Dahej for landfilling
2.	Used Oil	5.1	250 KL	Machinery	Store in drums in H.W. storage area (with shed and impervious flooring)	Sale to CPCB registered re-processor / recycler
3.	Discarded containers / bags / liners	33.1	Containers - 21666 Nos. (435 MT) / Bags - 21666 Nos. (217 MT) / Liners - 21666 Nos. (435 MT)	Raw material containers / bags	Collection, decontamination and store in impervious storage area with roofing	recycle/reuse into process or sale to GPCB authorized dealers and scrap processors or contaminated drums to M/s. BEIL at Dahej
4.	Organic Residue	29.1	52378*** MT	From process	Store in drums / Tanks in H.W. storage area (with shed and impervious	Send to Cement Industry for co processing / CHWIF site

					flooring)	of M/s. BEIL at Ankleshwar for Incineration
5.	Aqueous Waste	29.1	4243 *** MT	From process	Store in drums / Tanks in H.W. storage area (with shed and impervious flooring)	Send to Cement Industry for co processing / CHWIF site of M/s. BEIL at Ankleshwar for Incineration
6.	Inorganic Salts from Evaporation / Process	35.3	128690** MT	From process	Stored in drums / bags in H.W. storage area (with shed and impervious flooring)	Send to TSDF site of M/s. BEIL at Dahej for landfilling
7.	Date - expired and off specification pesticides	29.3	150 MT	From process	Stored in drums / bags in H.W. storage area (with shed and impervious flooring)	CHWIF site of M/s. BEIL at Ankleshwar for Incineration / captive incineration
8.	Used Batteries	B1 (B1020)	300 Nos.	From process plant	Stored in drums / bags in H.W. storage area (with shed and impervious flooring)	Sale it to MoEF&CC authorized recycler
9.	Spent filter Material	36.2	120 MT	From process	Stored in drums / bags in H.W. storage area (with shed and impervious flooring)	Send to CHWIF site of M/s. BEIL at Ankleshwar for Incineration
10.	Spent solvent	29.4	6500 KL	From process	Stored in drums / tanks in H.W. storage area (with shed and impervious flooring)	Recovery / sale to GPCB approved recyclers / Send to CHWIF site

						of M/s. BEIL at Ankleshwar for Incineration / captive incineration
11.	Contaminated cotton waste	33.2	30 MT	From process plant	Stored in drums / bags in H.W. storage area (with shed and impervious flooring)	Send to TSDF site of M/s. BEIL at Dahej for landfilling / Send to CHWIF site of M/s. BEIL at Ankleshwar for Incineration / captive incineration
12.	Insulation Waste	33.1	40 MT	From Equipment	Stored in drums / bags in H.W. storage area (with shed and impervious flooring)	Send to TSDF site of M/s. BEIL at Dahej for landfilling
13.	Non recyclable Plastic waste	33.1	45 MT	Raw material containers / bags	Stored in drums / bags in H.W. storage area (with shed and impervious flooring)	Send to TSDF site of M/s. BEIL at Dahej for landfilling
14.	Used PPE	33.1	10 MT	From process plant	Stored in drums / bags in H.W. storage area (with shed and impervious flooring)	Send to TSDF site of M/s. BEIL at Dahej for landfilling
15.	Incineration ash	37.2	4000 MT	From incinerator	Packed in HDPE bags and stored in designated place (with shed and impervious flooring)	Send to TSDF site of M/s BEIL at Dahej for landfilling
16.	Spent Catalyst	29.5	50 MT	From process	Stored in Bags/drums in	Send to CHWIF site

					designated place (with shed and impervious flooring)	of M/s. BEIL at Ankleshwar for Incineration
17.	HCl sol. (28-32%)	29.6	99894 MT	Hexa methylene diisocyanate, Chloroacetyl Chloride, Methoxyacetyl Chloride, 2-Chloro-3, 3-tri fluoropropen-1,2 dimethylcyclopropane Carbonyl chloride, Acid Chloride, Cyanuric chloride	To be stored in tanks	By selling to actual user.

** Sr No 6 Inorganic Salts from Evaporation / Process – Unit will segregate & recover valuable salts (By-product) from stream & sold to end users.
***Unit will try to send maximum organic residue waste to cement industries; balance quantity will be sent to common incineration facilities/Captive Incineration. In case of capacity constraint at Common Incineration, the unit will set up captive incinerator as per CPCB guidelines.

Non Hazardous Waste Generation

S. No.	Type of Waste	Quantity Per Annum	Source of Generation	Mode of Storage and Treatment	Mode of disposal
1	Ash	119383 MT	From combustion of coal, briquettes in boilers	Store in silos in boiler area	Sale to cement industries / brick manufacturer / actual users

(xi) Public hearing may be exempted as project is located in Dahej-III estate which is covered within PCPIR region and PCPIR has received Environmental Clearance.

(xii) The details of products and capacity as under: -

Product list

Sr No	Name of product	CAS Number	Quantity – TPM			Category As per EC Notification 2006	Applicability Of prior EC as per EC Notification 2006
			Existing	Additional	Total		
(A) PESTICIDE (TECHNICAL)- EC Required – 5 (b)							
01	Cypermethrin	52315-07-8	330	170	500	5(b) – Pesticide (Insecticide)	Yes
02	Permethrin	526-45-531	100	50	150	5(b) – Pesticide (Insecticide)	Yes
0	Propanil	709-98-8	108	492	600	5(b) – Pesticide	Yes

3						(Herbicide)	
04	Safener (UPH-203-S)	99607-70-2	5	45	50	5(b) – Pesticide (Herbicide)	Yes
05	Alpha Cypermethrin	67375-30-8	30	50	80	5(b) – Pesticide (Insecticide)	Yes
	OR						
	Beta Cypermethrin	65731-84-2				5(b) – Pesticide (Insecticide)	Yes
	OR						
	Imidacloprid	138261-41-3				5(b) – Pesticide (Insecticide)	Yes
06	Bifenthrin	82657-04-3	32	118	150	5(b) – Pesticide (Insecticide)	Yes
	OR						
	Lambda Cyhalothrin	91465-08-6				5(b) – Pesticide (Insecticide)	Yes
	OR						
	Clodinofop Propargyl (UPH-203)	105512-06-9				5(b) – Pesticide (Herbicide)	Yes
	OR						
	Thiamethaxam (Star)	153719-23-4				5(b) – Pesticide (Insecticide)	Yes
07	Desmedipham (DMP)	13684-56-5	90	150	240	5(b) – Pesticide (Herbicide)	Yes
	OR						
	Phenmedipham	13684-63-4				5(b) – Pesticide (Herbicide)	Yes
	OR						
	Metribuzin	21087-64-9				5(b) – Pesticide	Yes
	OR						
	Metamitron	41394-05-2				5(b) – Pesticide	Yes
08	Aluminium Phosphide	20859-73-8	200	600	800	5(b) – Pesticide	Yes
09	Magnesium Phosphide (Fumigant)	12057-74-8	8	42	50	5(b) – Pesticide	Yes
10	Zinc Phosphide	1314-84-7	40	80	120	5(b) – Pesticide	Yes
11	Azoxystrobin	131860-33-8	--	100	100	5(b) – Pesticide	Yes
	OR						
	Trifloxystrobin	141517-21-7				5(b) – Pesticide	Yes
	OR						

	Kresoxim Methyl	143390-89-0				5(b) – Pesticide	Yes
12	Sulfosulfuron	141776-32-1	--	10	10	5(b) – Pesticide	Yes
TOTAL(A)			**943**	**1907**	**2850**		
(B) PESTICIDE INTERMEDIATES- EC Required – 5 (b)							
13	Dicloro Vinyl Acid Chloride (DVACL)	52314-67-4	300	50	350	5(b) Pesticide Intermediate	Yes
14	Metaphenoxy Benzaldehyde (MPBAD)	67-36-7	275	75		5(b) Pesticide Intermediate	Yes
15	Denatonium Benzoate	3734-33-6	1	4	5	5(b) Pesticide Intermediate	Yes
16	Meta Phenoxy Benzyl Alcohol (MPBAL)	13826-35-2	--	150	150	5(b) Pesticide Intermediate	Yes
17	Tri Phenyle Phosphate (TPPa)	115-86-6	--	40	40	5(b) Pesticide Intermediate	Yes
18	2, 4 Hydroxy Phenyl Propionic Acid	938-96-5	--	40	40	5(b) Pesticide Intermediate	Yes
	OR						
	L-2 Chloro Propionic Acid	29617-66-1				5(b) Pesticide Intermediate	Yes
19	2 Chloro Propionic Acid Chloride	598-78-7	--	40	40	5(b) Pesticide Intermediate	Yes
20	Amino Aceto Nitrile Sulphate (AANS)	5466-22-8	--	50	50	5(b) Pesticide Intermediate	Yes
21	Ammonium Carbamate (MR-17)	1111-78-0	--	200	200	5(b) Pesticide Intermediate	Yes
22	2-Chloroimidazo (1,2-a) pyridine-3-sulfamide (ASAM)	112566-17-3	2	--	2	5(f) Pesticide Intermediate	Yes

23	Hydrazide	56735-29-6	20	--	20	5(b) Pesticide Intermediate	Yes
TOTAL(B)			**598**	**649**	**1247**		
(C) PESTICIDE FORMULATION AND INORGANIC PRODUCTS – DOES NOT COVER UNDER EIA NOTIFICATION- EC not Required							
24	Liquid and / or Solid Formulation	--	300	700	1000	Formulation of Pesticide products manufacturing	Not applicable
25	Red Phosphorus	7723-14-0	80	--	80	Inorganic and sold to match box manufacturer	Not applicable
TOTAL (C)			**380**	**700**	**1080**		
TOTAL(A+B+C+D)			**1921**	**3256**	**5177**		

By-product List

S. No	By-product name	CAS Number	Quantity – TPM			Status / end use
			Existing	Additional	Total	
1	Phosphoric Acid – 100 % basis	7664-38-2	40	98.40	138.40	Is / will be sold to authorized end-users
2	Hydrochloric Acid 30 %	7647-01-0	2048	239.90	2287.90	
3	Spent Sulphuric Acid 46 %	7664-93-9	1025	140.15	1165.15	
	OR					
	Ammonium Sulphate	7783-20-2	600	86.38	686.38	
4	Phosphorus Oxychloride	10025-87-3	640	58.55	698.55	
5	Ammonium Chloride	12125-02-9	34.80	--	34.80	
6	Sodium Bromide Solution	7647-15-6	720	570.19	1290.19	
7	Sodium Sulphite Solution	7757-83-7	930	218.66	1148.70	
	OR					
	Sodium Sulphite Salt	7757-83-7	190	41.92	231.92	
	OR					
	Sodium Bi Sulphite Solution	7631-90-5	930	240.69	1170.69	
	OR					
	Sodium Bi Sulphite Solid	7631-90-5	190	48.14	238.14	
8	KCL Salt	7440-09-7	160	28	188	
	OR					
	KCL Solution	7440-09-7	900	158	1058	
9	Cu(OH)2	20427-59-2	10	1.66	11.66	
	OR					
	CuSO4	7758-99-9				
10	Sodium Sulphate	7757-82-6	160	23	183	
11	MPBAD Distillation Cut	67-36-7	20	2.25	22.25	
12	ALCL3 20 %	7446-70-0	1130	319.27	1449.27	
	OR					
	Poly ALCL3					
NEW BY-PRODUCTS						

13	Mono Chloro Benzene	68411-45-0	--	29.85	29.85	Will be sold to authorized end-users
14	Methyl Benzate	93-58-3	--	15	15	
15	Formic Acid	64-18-6	--	108.66	108.66	
16	Dimethoxy Methane	109-87-5	--	36.11	36.11	
17	Methoxy Propanol	107-98-2	--	15.16	15.16	
		TOTAL	9727.80	2479.90	12208.00	

41.3.15.2 The proposal was last considered by the EAC in its meeting held on 25-27 June, 2018, wherein the EAC, insisted for inputs, clarifications and necessary actions in respect of the following:-

- The product list contains certain pesticides or the pesticide specific intermediates having LD_{50} less than 1000 mg/kg, which are reported to be highly toxic and thus need to be deleted. The remaining products need to be reviewed for the toxicity involved and biodegradability, to revise the product list accordingly.
- Considering the safety precautions, risk assessment study should be carried out using 3-D modelling.

In response to the above observations, parawise replies submitted by the project proponent, are as under:-

S. No.	Clarifications/inputs sought by the EAC	Reply submitted by the project proponent
1.	The product list contains certain pesticides or the pesticide specific intermediates having LD_{50} less than 1000 mg/kg, which are reported to be highly toxic and thus need to be deleted. The remaining products need to be reviewed for the toxicity involved and biodegradability, to revise the product list accordingly.	PP has submitted the revised product list
2	Considering the safety precautions, risk assessment study should be carried out using 3-D modelling.	Risk assessment study report carried out using 3-D modelling report has been submitted by the project proponent

41.3.15.3 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for manufacturing pesticides technical - 104000 TPA (11 nos of products), pesticide specific intermediates - 67000 TPA (14 nos of products after excluding Isocyanate products) and the captive power plant of 55 MWPH (Phase 1 – 20 MWPH, Phase 2 - 20 MWPH & Phase 3 - 15 MWPH) by M/s UPL Ltd in a total area of 755495.16 sqm at Plot No.D-3/6, Dahej- III GIDC Industrial estate (within PCPIR region), Village Kadodara, Taluka Vagra, District Bharuch (Gujarat).

The project/activities are covered under category A of item 5(b) 'Pesticides industry and Pesticide specific intermediates'; 5(f) 'Synthetic organic chemicals industry' & 1(d) 'Thermal Power Plants' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on 13th December, 2016 with exemption from public hearing under the provisions as per Para 7 Stage III. (3) (i) (b) of the EIA Notification, 2006, as plant is located in notified Industrial Estate.

Total water requirement is estimated to be 12252 cum/day, which includes fresh water demand of 7610 cum/day proposed to be met from GIDC water supply.

Total effluent generated from different industrial operations is estimated to be 5624 KLD and shall be treated primary, secondary and tertiary treatment facilities followed by RO and MEE. 3618 KLD of treated effluents will be recycled and 2006 KLD shall be discharged into deep sea through GIDC drain.

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.

3D Computational Fluid Dynamics modelling with regards to Acrolein, Ammonia and Ethylene oxide storages has been carried out to estimate the turbulent velocity field (Realistic), evaluate risk associated with the project and to incorporate preventive and mitigation measures. Based on 3D modelling, suggested mitigiation measures include installation of gas detectors near facility to minimize the leakages and provision of separate dump tank with automatic control valve to collect the liquid in the event of any leakage. After implementation of the safety recommendation based on 3D modelling, the impact due to leakage will remain within the boundary of the site and the plant will be safe to operate.

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

- *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.*
- *The treated effluent of 3618 cum/day shall be recycled/reused to meet the requirement of different industrial operations, and the remaining treated effluent of 2006 cum/day shall be discharged to deep sea through GIDC pipeline.*
- *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.*
- *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.*
- *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.*
- *Solvent management shall be carried out as follows:*
  - *(i) Reactor shall be connected to chilled brine condenser system.*
  - *(ii) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.*
  - *(iii) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.*
  - *(iv) Solvents shall be stored in a separate space specified with all safety measures.*
  - *(v) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.*
  - *(vi) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.*

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

- *Total fresh water requirement shall not exceed 7610 cum/day to be met from GIDC water supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.*
- *Industrial/trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP/RO to meet the prescribed standards.*
- *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*
- *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.*
- *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.*
- *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.*
- *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.*
- *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.*
- *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.*
- *As committed, funds allocation for the Corporate Environment Responsibility (CER) shall be Rs.100 crores i.e.4.18% 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.*
- *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.*
- *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.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *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.41.3.16

Expansion of Soda Ash and Captive Cogeneration Power Plant at village Mithapur & Surajkaradi, Taluka Dwarka, District Devbhumi (Gujarat) by M/s Tata Chemicals Ltd - For Environmental Clearance

[IA/GJ/IND2/53444/201, J-11011/140/2016-IA II (I)]

41.3.16.1 The Project Proponent and the accredited Consultant M/s J.M. Enviro Net Pvt. Ltd. Gurugram made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the Proposed Expansion of Soda Ash and Captive Cogeneration Power Plant at Villages Mithapur & Surajkaradi, Taluka: Dwarka, District, Devbhumi Dwarka (Gujarat) by M/s Tata Chemicals Ltd.

(ii) All activities are listed at S.No. 4(e) {Soda Ash Industry} and 1(d) {Thermal Power Plant} of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iii) Ministry had earlier issued EC vide letter no. J-13011/20/2006.IA-II(T) dated 22nd May, 2006; amended on 30th May, 2007 for expansion of Captive Co-generation Power Plant in favour of M/s Tata Chemicals Ltd.

(iv) Existing land area is 231 ha (2310000 m^2) and no additional land will be required for proposed expansion.

(v) Greenbelt will be developed in an area of 33 % i.e., 131 ha (1310000 m^2) out of total area of the project.

(vi) The estimated project cost is Rs.1042.07 crores including existing investment of Rs.2977.30 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.80.79 crores and the Recurring cost (operation & maintenance) will be about Rs.16.29 crores per annum. Total Employment generation will be 4551 persons as direct & 10,262 persons indirect after expansion.

(vii) There are Marine National Park and Marine Wildlife Sanctuary are located at a distance of 2.9 km and 2.4 km respectively. Shamlasar River is flowing at a distance of 9.7 km in SE direction. Bhimgaja Rainwater Lake is at a distance of 9.7 km in SE direction. Gopi Talav is at a distance of 9.5 km in ESE direction. Arabian Sea is at a distance of 2.44 km. Gulf of Kutch is at a distance of 2.19 km.

(viii) Ambient air quality monitoring was carried out at 9 locations during (Post Monsoon Season, 2016) October to December, 2016 and the baseline data indicates the ranges of concentrations PM_{10} (36.52 to 74.21 µg/m3), PM2.5 (8.71 to 27.13 µg/m3), SO2 (4.63 to 12.40 µg/m3) and NO2 (6.55 to 15.21 µg/m3). AAQ modeling study for point source emissions indicates that the maximum incremental GLC's after the proposed expansion project would be 1.56 µg/m3, 4.19 µg/m3 and 1.39 µg/m3 with respect to PM10, SOX and NOX. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(ix) Total Sea water requirement is 30,872 m3/day for proposed expansion which will be met from existing sea water intake facility. There is no additional fresh water requirement for proposed expansion.

(x) Effluent (Treated waste water) of 2,40,000 m3/day quantity will be treated through existing facilities.

(xi) Power requirement after expansion will be 92.60 MW including existing 62.97 MW and will be met from Captive Co-generation Power Plant (Total capacity after expansion 125 MW). Existing unit has 9 DG sets of 8318 KVA capacity which are used as standby during power failure. There is no proposed DG sets.

(xii) Existing unit has 757 TPH (Steam generation capacity) Coal/Petcoke (Fuel) fired boilers. Additionally Coal/ Petcoke fired boiler of 300 TPH capacity will be installed. ESP with a stack of height 130 m will be installed to control the particulate emissions within the statutory norms of 30 mg/Nm3 for the proposed boiler.
(xiii) Details of Solid waste/ Hazardous waste generation and its management is given in EIA Report (Chapter-10, Section 10.5).
(xiv) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 17th Feb., 2018. The main issues raised during the public hearing are related to Local Employment, Environment, Health and Education.
(xv) Certified compliance report of existing EC for Captive Co-generation Power Plant is obtained from Regional office of MoEFCC vide letter no. 5-13/2000(ENV)/138 dated 23rd May, 2018.
(xvi) No litigation is pending against the project.
(xx) The details of products are as under:

S. No.	Product Details	Unit	Existing Capacity	Proposed Capacity	Total Capacity
1.	Soda Ash	TPA	10,91,000	2,25,000	13,16,000
2.	Power	MW	85	40	125
3.	Steam	TPH	757	300	1057

41.3.16.2 The proposal was earlier considered by the Expert Appraisal Committee (Industry-2) in its 39th meeting held on 26th July, 2018 and the committee after detailed deliberations sought certain details from the PP. The same has since been submitted on 28th August, 2018 with the detail as under:

Point No.	Additional Detail Sought	Reply
i.	Clarification on requirement of recommendations/clearance from wildlife angle for the Soda Ash and Captive Power Plant.	▪ Following National Park & Sanctuary falls within 10 km radius of the plant site: o Marine National Park (~2.9 km in NW direction) o Marine Sanctuary (~2.4 km in East direction) ▪ Eco-sensitive Zone of both the above mentioned protected areas has been notified *vide* MoEFCC Notification No. SO 2561 (E) dated 22nd Aug., 2013. ▪ The distance of the plant site from the notified Eco- sensitive zone is as given below: o Marine National Park Eco-Sensitive Zone (~2.7 km in NW direction) o Marine Sanctuary Eco-Sensitive Zone (~1.4 km in East direction) Since, the project site does not fall within ESZ of Marine National Park and Marine Sanctuary;therefore, wildlife clearance/recommendation is not required. However, TCL has obtained Wildlife clearance vide letter No. WLP/32/B/1813-18/2017-18 dated 01.06.2017 for discharge of treated waste water into Sea (Gulf of Kutch).

ii.	Status of forest clearance for diversion of 11.268 ha of mangrove forests, earmarked for laying of discharge pipeline.	Tata Chemicals Ltd. company has applied for clearance under Forest Conservation Act, 1980 (Proposal No.: FP/GJ/IND/33165/2018). The proposal has been recommended by the Nodal Officer, Gujarat and forwarded to State Government, Gujarat for further processing.
iii.	Impact of the project on the marine environment including marine national park/sanctuary/mangrove.	The impact of the proposed expansion on Marine National Park/Marine Sanctuary/Mangroves has been assessed by following methods: ▪ Air Pollution Impact Prediction due to proposed expansion (cumulative for Soda Ash, Captive Cogeneration Power Plant & Cement Plant) on Marine National Park, Marine Sanctuary and Mangroves has been assessed through Mathematical Modelling using AERMOD**.** Resultant concentration of air quality parameters is well within the prescribed norms. ▪ *Study on Impact of Discharge of Treated Waste Water.* Following studies have been conducted to assess the impact of proposed expansion project on marine life and sea water quality. • Marine Impact Assessment Study conducted by Central Salt and Marine Chemicals Research Institute, Bhavnagar run by Council of Scientific and Industrial Research (CSIR) in October, 2017. • Water Quality Modeling for Treated Waste Water Discharged into Sea (Mithapur Bay) conducted by M/s. Kadam Environmental Consultants, Vadodara. ▪ *Study on Impact on Biodiversity* Impact on Biodiversity has been studied and mitigation measures have also been proposed. The same has been given in Wildlife Conservation Plan; which is duly certified by CWW, Gujarat *vide* letter no. WLP/32/C/144-45/2018-19 dated 19th June, 2018.
iv.	ESZ map of Marine National Park and Marine Sanctuary.	▪ Following National Park & Sanctuary falls within 10 km radius of the plant site: • Marine National Park(~2.9 km in NW direction) • Marine Sanctuary (~ 2.4 km in East direction) ▪ Eco-sensitive Zone of both the above mentioned protected areas have been notified *vide* MoEFCC Notification No. SO 2561 (E) dated 22nd Aug., 2013. ▪ The distance of the plant site from the notified Eco- sensitive zone is as given below: • Marine National Park Eco-Sensitive Zone

		(~2.7 km in NW direction) • Marine Sanctuary Eco-Sensitive Zone (~1.4 km in East direction) A map showing location of Plant site and Marine National Park & Marine Sanctuary within 10 km radius of the plant site along with their Eco-Sensitive Zones has been Authenticated by Chief Wildlife Warden, *vide* Letter No.WLP/32/C/144-45/2018-19 dated 19th June, 2018.
v.	Details on water requirement and its source.	Additional Sea water (30,872 cum/day) will be sourced from existing sea water intake facility (Arabian Sea). However, no additional fresh water will be required for the proposed expansion project.
vi.	Changes in the existing water intake pipeline and also the effluent discharge along with the water quality parameters.	No change is proposed in existing sea water intake system. Treated Effluent is discharged in Gulf of Kutch through the existing facility as per the prescribed norms given in GPCB Consent (capacity - 2,40,000 m^3/day). However, TCL proposal for pipeline and diffuser system has already been obtained CRZ Clearance vide Letter No. 11-34/2016-IA-III dated 10th July, 2017 and Wildlife Clearance vide letter No. WLP/32/B/1813-18/2017-18 dated 01st June, 2017.

41.3.16.3 The EAC, after deliberations on the proposal and duly taking note of the information furnished by the project proponent as above, insisted for compliance status of CRZ clearance dated 1st June, 2017 granted by the Ministry for the pipeline and diffuser system for discharge of treated effluent into sea (Gulf of Kutch). The Committee also desired for a confirmation from the concerned authority regarding location of the plant vis-a-vis the CRZ as per the approved CZMP of the area, and clarification on laying of the said pipeline without obtaining Stage-I forest clearance for diversion of 11.26 ha of mangrove forest.

41.3.16.4 *The proposal was deferred for the needful on the above lines*

Agenda No.41.3.17

Synthetic organic chemicals industry (dyes & dye intermediates; bulk by M/s SNF Flopam India Pvt Ltd at Survey No.141/1/2 and 142/1 National Highway 8A, Varsana, PO: Gopalpuri, Gandhidham Kutch (Gujarat) - For Environmental Clearance

[IA/GJ/IND2/62913/2017, IA-J-11011/74/2017-IA-II(I)]

41.3.17.1 The project proponent and the accredited consultant M/s Eco Care Solutions made a detailed presentation on the salient features of the project and informed the following:-

(i) The proposal is for environmental clearance to the project Synthetic Organic Chemicals Industry (dye & dye intermediates) at 141/1/2 and 142/1 by M/s SNF Flopam India Pvt. Ltd.
(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 17th meeting and recommended Terms of References (ToR) for the Project. The ToR has

been issued by Ministry vide letter No.J-11011/74/2017/-IA.II (I) dated 07/07/2017 (In case of EC Proposal)

(iii) All are listed at S.N. 38.3.7 of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Existing land area is 2,84,615 sqm, no additionalland will be used for proposed expansion. Industry has already developed / will develop greenbelt in an area of 33 % i.e. 94,000 sqmof total area of the project. The estimated project cost is Rs. 400 Crore (Proposed) to be incurred from captive funds. Total capital cost earmarked for pollution control measures is Rs.250 Lacs and the Recurring cost (operation and maintenance) will be about Rs. 41 Lacs per annum. Total Employment will be 125 persons approx as direct & 125 persons indirect after expansion. Industry proposes to allocate Rs. 77 Lacs @ 5/2.5 % towards Corporate Social Responsibility.

(v) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. Within 10 km distance from the project site. River/ water body sang river is flowing at a distance of 9.8 km in W direction.

(vi) Ambient air quality monitoring was carried out at 8 locations during March,2017 to May,2017 and the baseline data indicates the ranges of concentrations as: PM_{10} (62.09 – 70.37 µg/m^3), $PM_{2.5}$ (30.55 – 36.04 µg/m^3), SO_2 (14.40 – 20.34 µg/m^3) and NO_2 (22.22 - 30.01 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 4.03132 µg/m^3, 8.30908 µg/$m^3$with respect to PM, Ammonia. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(vii) Total water requirement is 2945 m^3/day of which fresh water requirement of 2945 m^3/day will be met from GWSSB (Gujarat Water Supply & Sewerage Board). Effluent of 645 KL/Day quantity will be treated through in house ETP and it will be partially re-used for cooling purpose (400 m^3/day) and remaining (221 m^3/day) along with treated sewage (24 m^3/day) be used for plantation within premises. The plant will be based on Zero Liquid discharge system (if applicable).

(viii) Power requirement after expansion will be 16300 KW and will be met from PGVCL (Paschim Gujarat Vij Company Ltd.). DG sets (5 nos.) 3x550 kVA and 2x250 kVA are used as standby during power failure. Adequate stack height will be provided as per CPCB norms to the proposed DG sets.

(ix) Boiler will be installed. APCM will be not required because of the natural gas are used as a fuel with a stack of height of 12 m will be installed for controlling the particulate emissions within the statutory limit of the proposed boilers.

(x) Details of Process emissions generation and its management.

S. No.	Stack attached to	Height of stack, m	Fuel	Fuel Consumption	APCM System	Expected Pollutant
1.	Boiler	12	Natural Gas	2200 NM^3/hour	None	PM SOx NOx
2.	D. G. Sets 3 X 550 kVA 2X 250 kVA	18	HSD	250 Lit/hour (Max)	None	PM SOx NOx
3.	Powder dissolution Vessels	12	--	--	Scrubber	PM
4.	Powder Reaction Vessels	12	--	--	Scrubber	PM
5.	Powder Dryers	12	--	--	Scrubber	PM NH_3

S. No.	Stack attached to	Height of stack, m	Fuel	Fuel Consumption	APCM System	Expected Pollutant
6.	Finish goods Tank – 1	12	--	--	None	PM
7.	Finish goods Tank – 2	12	--	--	None	PM
8.	Emulsion product line	12	--	--	Scrubber	PM
9.	Liquid production line	12	--	--	Scrubber	PM
10.	Acrylamide Raw material storage scrubber	12	--	--	Scrubber	PM
11.	Acrylamide filtration scrubber	12	--	--	Scrubber	PM
12.	Acrylamide reactor scrubber-1	12	--	--	Scrubber	NH_3
13.	Acrylamide reactor scrubber-2	12	--	--	Scrubber	NH_3
14.	Acrylamide reactor scrubber-3	12	--	--	Scrubber	NH_3
15.	Acrylamide reactor scrubber-4	12	--	--	Scrubber	NH_3
16.	Acrylamide reactor scrubber-5	12	--	--	Scrubber	NH_3
17.	Acrylamide reactor scrubber-6	12	--	--	Scrubber	NH_3

(xi) Details of Solid waste/ Hazardous waste generation and its management.

S. No.	Hazardous Waste	Category	Quantity	Management of Waste
1	Air Filter ash	35.1	20.5 MT/Year	Collection, Storage, transportation disposal at TSDF approved by board
2	Catalyst empty bags	33.1	2 MT/Year	Collection, Storage, decontamination, transportation disposal by selling to authorized recycler
3	Plastic and Glass contaminated Lab equipment	23.1	2.75 MT/Year	Collection, Storage, transportation and incineration at TSDF approved by board
4	ETP Sludge	35.3	60 MT/Year	Collection, Storage, transportation disposal at TSDF approved by board

5	Diatomite waste (spent filtration media)	36.2	50 MT/Year	Collection, Storage, transportation disposal at CHWIF

(xii) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 06/02/2018. The main issues raised during the public hearing are related to as below:

- Regarding disposal of waste water
- CSR Activities
- Job Opportunities
- Regarding greenbelt & tree plantation
- Hazardous Waste Disposal
- Air Pollution & Environment Health & Safety

(xiii) The details of products and capacity as under:

S. No	Product	Quantity (MT/year)
1	Acrylamide (100 %)	1,20,000
2	Poly Acrylamide Powder	60,000
3	Poly Acrylamide Liquid	42,000
4	Poly Acrylamide Emulsions	36,000
	Total	**2,58,000**

41.3.17.2 The proposal was earlier considered by the EAC in its meeting held on 25-27 June, 2018, wherein the EAC, desired for inputs, clarifications and necessary actions in respect of the following:

- Discrepancy in the survey no and plot area vis-a-vis the Form-1 submitted and the ToR dated 7th July, 2017.
- As per the ToR dated 7th July, 2017 and accordingly the public hearing conducted by the SPCB, was for Survey No.141/1/2 & 142/1 covering an area of 42 acres. Whereas, the present proposal involves more survey nos.139/1, 141/1/2, 142/1 & 147/1 having total area of 70 acres. As such, the said public hearing not in conformity with the EIA Notification, 2006, may not be acceptable.
- Firm commitment from the concerned regulatory authority to meet the surface water requirement of 2945 cum/day.

In response to the above observations, parawise replies submitted by the project proponent, are as under:-

S. No.	Clarifications/inputs sought by the EAC	Reply submitted by the project proponent
1.	Discrepancy in the survey no and plot area vis-a-vis the Form-1 submitted and the ToR dated 7th July, 2017.	The PP vide their letter dated 25th September, 2009 admitted discrepancy in the survey numbers and informed that TOR application and subsequent correspondence, project layout, mentioned total project area as 70.33 acre which is comprised of 42.02 acre already utilized and 28.31 acres additional land. The PP further submitted that in their application, other mention of
2	As per the ToR dated 7th July, 2017 and accordingly the public hearing conducted by the SPCB, was for Survey No.141/1/2 & 142/1 covering an area of 42 acres. Whereas, the present proposal involves more survey	

<table>
<tr><td></td><td>nos.139/1, 141/1/2, 142/1 & 147/1 having total area of 70 acres. As such, the said public hearing not in conformity with the EIA Notification, 2006, may not be acceptable.</td><td>other survey numbers is missed, however, the missed survey numbers are part of project land and needs to be considered in their EC application as mentioned in draft EIA report and all subsequent correspondence. Details of survey numbers involved in the project area, as informed by the PP are as under:
<table>
<tr><td>Survey number</td><td>Village limit</td><td>Area (acres)</td></tr>
<tr><td>141/1</td><td>Varsana</td><td>22.11</td></tr>
<tr><td>139/P</td><td>Varsana</td><td>0.19</td></tr>
<tr><td>139/P1</td><td>Varsana</td><td>0.69</td></tr>
<tr><td>147/1</td><td>Padana</td><td>19.09</td></tr>
<tr><td>138/1/P2</td><td>Padana</td><td>19.19</td></tr>
<tr><td>143/P1</td><td>Padana</td><td>6.08</td></tr>
<tr><td>139/1</td><td>Padana</td><td>2.23</td></tr>
<tr><td>140/P</td><td>Padana</td><td>0.02</td></tr>
<tr><td></td><td>Total</td><td>70.33</td></tr>
</table></td></tr>
<tr><td>3</td><td>Firm commitment from the concerned regulatory authority to meet the surface water requirement of 2945 cum/day.</td><td>The PP informed that permission for 1600 KLD obtained by their predecessor is already available with them and a fresh application for 294000 KLD has been made with the concerned authority. Additional fresh water will not be withdrawn till the receipt of permission for the same. The PP has also submitted a copy of agreement dated 25th June, 2018 entered between the Gujarat Water Supply and Sewerage Board and PP to supply 200 KLD water to the PP.
However, firm commitment from the concerned regulatory authority to meet the surface water requirement of 2945 cum/day has not been made available by the PP.</td></tr>
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41.3.17.3 During deliberations, the EAC observed that the ToR dated 7th July, 2017 and the public hearing conducted by the SPCB on 6th January, 2018, still reflect only 2 survey number 141/1/2 and 142/1 covering an area of 42 acres and as such its earlier observations were not properly addressed. Further, as desired by the Committee, the project proponent could not provide firm commitment from the concerned regulatory authority to meet the surface water requirement of 2945 cum/day.

41.3.17.4*The Committee, after deliberations, insisted for correction in public hearing proceedings to include the survey numbers 139/1 and 147/1 with the total area as 70 acres.*

The proposal was, therefore, not taken forward for the needful.

Agenda No.41.3.18

Proposed expansion of Synthetic Organic Chemicals and Coal based power plant at Survey No. 13/A1, 16, 17, 23, 67, 68, 69, 70/A, A2, Village Gondiparla, Mandal and District Kurnool (Andhra Pradesh) by M/s Sree Rayalaseema Hi-Strength Hypo Limited - Environmental Clearance

[IA/AP/IND2/50587/2016, J-11011/82/2016- IA II(I)]

43.3.18.1 The project proponent and the accredited Consultant M/s Team Labs and Consultants, made a detailed presentation on salient features of the project and informed that

(i) The proposal is for Environmental Clearance (EC) for proposed expansion of synthetic organic chemicals and coal-based co-generation power plant at Sy. No.s. 13/A1, 16, 17, 23, 67, 68, 69, 70/A, A2, Gondiparla village, Kurnool mandal and district, Andhra Pradeshby M/s. Sree Rayalaseema Hi-Strength Hypo Limited.

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 7thEAC meeting held during 28-29th April, 2016 and recommended Terms of References (TORs) for the Project. The TOR has been issued by Ministry videletter no. J-11011/82/2016 - IA II (I); dated21.06.2016.

(iii) The project/activity is covered under category A of item 5 (f) 'Synthetic Organic Chemical Industry' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry.

(iv) The PP had obtained Consent to Establish for existing capacity of Monochloro acetic acid from the State PCB vide order no. KRNL-4/PCB/ZO/C.Estt/2000-33 dated 28th April, 2000. The latest Consent to Operate was obtained vide letter no. KNL-4/APPCB/ZO-KNL/CFO/2015-1049 dated 03.09.2015 dated and it is valid till 31st March, 2020.

(v) Existing land area of 35.45 ha land will be used for proposed expansion.

(vi) Industry is already developed Greenbelt in an area of 33.85% i.e., 12 ha out of 35.45 ha of area of the project site.

(vii) The estimated project cost for proposed expansion is Rs.150 crores. Total capital cost earmarked towards environmental pollution control measures is Rs 4.34 crores and the Recurring cost (operation and maintenance) will be about Rs.1.83 crores Per annum

(viii) Total Employment will be 120 personsas direct and 75 persons indirect after expansion. Industry proposes to allocate Rs. 3.75 crores@ of 2.5 % towards Corporate Social Responsibility

(ix) No National parks, Wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. are located within 10 Km. Tungabhadra River flows at a distance of 1.8 Km in NW to SE direction.

(x) Interstate boundary between Telangana and Andhra Pradesh is at a distance of 1.2 km in northeast direction. Gadidmadugu RF is at a distance of 6 km in southeast direction. Pullaiah RF is at a distance of 9.5 km in southwest direction.

(xi) Ambient air quality monitoring was carried out at 9locations during December 2016 to February 2017 and submitted baseline data indicates that ranges of concentrations of PM10 (31 - 56 µg/m3), PM2.5 (14 - 26 µg/m3), SO_2 (9- 16 µg/m3) and NO_2 (9- 16 µg/m3) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLC_S after the proposed project would be 11.53 µg/m3, 5.79 µg/m3 and 5.89 µg/m3 with respect to $PM_{10,}$ SO_X and NO_X. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(xii) The total water requirement is 3329.5 KLD out of which 2671.5 KLD will be fresh water and 658 KLD is recycled water. The required water is drawn from Tungabhadra River through infiltration wells. The unit obtained permission to abstract water from Tungabhadra River in the order of 2482 KLD.

(xiii) Total effluent of 769.5 m^3/day will be treated through "Zero Liquid Discharge" based effluent treatment system. Wastewater from washings, DM/softener and Non-EC products of

237 m3/day sent to De-Chlorination, air stripping followed by multiple effect evaporators (MEE) and agitated thin film dryer (ATFD). Condensate from MEE and ATFD is reused for cooling towers make-up. Wastewater from boiler and cooling tower blow downs of 393 m3/day sent to primary treatment followed by ETP RO, permeate reused for cooling towers make-up, while rejects from ETP RO of 82 m3/day and pre-treatment RO rejects of 110 m3/day reused for milk of lime solution preparation for calcium hypochlorite (Non-EC product) manufacturing.

(xiv) Power requirement after expansion will be 8285 kva including existing 7535 kva and will be met from co-generation power plant of 9MW. It is proposed to install 10 MW coal-based co-generation power plant in addition to existing 6 MW coal based and 3MW bio-mass based co-generation power plants. Existing unit has 8 no.sDG sets of capacity 6 x 1010 kva, 1 x 750 kva and 1 x 725 kva, additionally 1 x 750 kva DG set is proposed as standby during power failure. Stack (height 5.5 m) will be provided as per CPCB norms to the proposed DG set of 1 x 750 kva in addition to existing DG sets stack(height 6.5 m for 6 x 1010 kva; 5.5 m for 750 kva and 5m for 725 kva) which will be used as standby during power failure.

(xv) Existing unit has 1 x 50 TPH coal/biomass fired boiler, 1 x 3 TPH husk fired boiler and proposed a 1 x 50 TPH coal fired boiler as part of expansion. Electro static precipitators and a stack with height of 55 m will be installed for controlling the Particulate emissions (within statutory limit of <50 mg/Nm3) for proposed 1 x 50 TPH and existing 1 x 55 TPH coal/biomass fired boiler respectively.

(xvi) Public Hearing for the proposed project has been conducted by the Andhra Pradesh Pollution Control Board on 29.11.2017 at 2.00 PM near the existing unit premises.

Manufacturing Capacity

S. No.	Product Name	Unit	Capacity		
			Consented	Proposed	Total
1	Mono Chloro Acetic Acid	TPD	16.7	66.8	83.5
2	Sodium Methoxide	TPD	--	20	20
3	Co-generation Power Plant (Coal based)	MW	3	10	13
4	Co-generation Power Plant (Bio-Mass)	MW	6	--	6
5	Non EC Products	TPD	747.9	--	747.9
By-Product					
1	Hydrochloric acid (30%)	TPD	19.4	77.4	96.8
2	Decanted Mother liquor*	TPD	4.4	18	22.4
3	Scrubbed Effluent from Caustic Scrubber**	TPD	15.3	60	75.3

List of Utilities

S. No	Utility	Unit	Permitted	Proposed	After Expansion
1	Coal Fired Boilers	TPH		1 x 50	1 x 50
2	Coal/Biomass Fired Boiler	TPH	1 x 50	--	1 x 50
3	Husk Fired Boiler	TPH	1 x 3	--	1 x 3
4	DG Sets *	Kva	6 x 1010 1 x 750 1 x 725	1 x 750	6 x 1010 2 x 750 1 x 725

43.3.18.2 The proposal was earlier considered by the EAC in its 35th meeting held on 27-28 March, 2018 and the EAC desired additional information. The PP has submitted the additional information vide their letter dated 3rd September, 2018 and summary of the submission made by the PP in its reply is given as under:-

S. No.	Observations	Reply furnished by the PP

<table>
<tr>
<td>1.</td>
<td>As per ToR dated 21st June, 2016 for the project, fresh water requirement was to be reduced form that earlier, envisaged of 2300.7 KLD. However, no such plan has been submitted in this regard. The committee insisted for reducing the freshwater requirement by a minimum of 450 KLD and submit the revised water scenario</td>
<td>The total fresh water required is reduced from 2300.7 KLD to 1836.5 KLD. The detailed water balance is mentioned in the following tables;
Revised Water Balance- After Expansion
<table>
<tr><th rowspan="2">Purpose</th><th colspan="2">INPUT (KLD)</th><th colspan="2">OUT PUT (KLD)</th></tr>
<tr><th>Fresh Water</th><th>Recycled Water</th><th>Loss</th><th>Effluent</th></tr>
<tr><td>MCA & Sodium Methoxide</td><td>302.5</td><td>65</td><td>258</td><td>109.5</td></tr>
<tr><td>Cogeneration Power plant</td><td>1534</td><td>381</td><td>1505</td><td>410</td></tr>
<tr><td>Total - I</td><td>1836.5</td><td>446</td><td>1763</td><td>519.5</td></tr>
<tr><td>Non-EC Products</td><td>835</td><td>212</td><td>797</td><td>250</td></tr>
<tr><td>Total - II</td><td>835</td><td>212</td><td>797</td><td>250</td></tr>
<tr><td>Gross Total (I+II)</td><td>2671.5</td><td>658</td><td>2560</td><td>769.5</td></tr>
<tr><td>Total</td><td colspan="2">3329.5</td><td colspan="2">3329.5</td></tr>
</table>
Water Balance – As per EIA
<table>
<tr><th rowspan="2">Purpose</th><th colspan="2">INPUT (KLD)</th><th colspan="2">OUT PUT (KLD)</th></tr>
<tr><th>Fresh Water</th><th>Recycled Water</th><th>Loss</th><th>Effluent</th></tr>
<tr><td>MCA & Sodium Methoxide</td><td>395.5</td><td>105</td><td>391</td><td>109.5</td></tr>
<tr><td>Cogeneration Power plant</td><td>1904</td><td>265</td><td>1759</td><td>410</td></tr>
<tr><td>Total - I</td><td>2299.5</td><td>370</td><td>2150</td><td>519.5</td></tr>
<tr><td>Non-EC Products</td><td>849</td><td></td><td>596</td><td>254</td></tr>
<tr><td>Total - II</td><td>849</td><td></td><td>596</td><td>254</td></tr>
<tr><td>Gross Total (I+II)</td><td>3149</td><td>370</td><td>2746</td><td>773</td></tr>
<tr><td>Total</td><td colspan="2">3518.5</td><td colspan="2">3518.5</td></tr>
</table>
</td>
</tr>
<tr>
<td>2.</td>
<td>Recycling of treated water and the revised water balance</td>
<td>The total recycled water is increased from 370 KLD to 658 KLD.
<table>
<tr><th rowspan="2">Purpose</th><th colspan="2">Quantity (KLD)</th></tr>
<tr><th>Effluent</th><th>Recycled Water</th></tr>
<tr><td>MCA & Sodium Methoxide</td><td>109.5</td><td>65</td></tr>
<tr><td>Cogeneration Power plant</td><td>410</td><td>381</td></tr>
<tr><td>Total - I</td><td>519.5</td><td>446</td></tr>
<tr><td>Non-EC Products</td><td>250</td><td>212</td></tr>
<tr><td>Total - II</td><td>250</td><td>212</td></tr>
<tr><td>Gross Total (I+II)</td><td>769.5</td><td>658</td></tr>
</table>
</td>
</tr>
</table>

3.	Permission for withdrawal of ground water to meet the present industrial operations, from the concerned regulatory authority/CGWA. In case of utilization of surface water from Tungabhadra river, firm commitment from the concerned regulatory agencies shall be submitted	Total water requirement is 3329.5 KLD out of which 2671.5 KLD will be fresh water and 658 KLD is recycled water. The required water is drawn from Tungabhadra River through infiltration wells. The unit obtained permission to abstract water from Tungabhadra River in the order of 2482 KLD and the application for an additional allocation of 2000 KLD is in process.

43.3.18.3 The Committee, after deliberation, noted as under:

The proposal is for environmental clearance to the project for expansion of synthetic organic chemicals from 16.7 TPD to 103.5 TPD and co-generation power plant from 9 to 19 MW by M/s Sree Rayalaseema Hi-Strength Hypo Limitedat Gondiparla village, District Kurnool (Andhra Pradesh).

The project/activity is covered under category A of item 5 (f) 'Synthetic Organic Chemical Industry' and item 1(d) of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry.

The ToR to the proposed expansion project has been granted by the MoEF&CC vide letter dated 21st June 2016. Public Hearing was conducted by the Andhra Pradesh Pollution Control Board on 29th November, 2017.

Existing land area is 35.45 ha and no additional area will be used for proposed expansion.

The total water requirement is 3329.5 KLD which includes 2671.5 KLD fresh water and 658 KLD recycled water. The required water will be drawn from Tungabhadra River through infiltration wells. The Water Resource (Reforms) Department, Government of Andhra Pradesh has accorded permission for 1482 cum per day vide letter dated 5th February, 2014 and for 100 cum per day on 12th April, 2018. In addition, the PP has also applied for additional water requirement of 2000 KLD.

Effluent of 769.5 m^3/day will be treated through Effluent Treatment plant. The plant will be based on Zero Liquid discharge system.

The unit is reported to have been established in the year 2000 i.e. prior to the enforcement of the EIA Notification, 2006, and thus there is no requirement of the prior EC for the existing operations.

Consent to Operate for the existing capacity has been obtained from the State PCB vide letter dated 3rd September, 2015, which is valid up to 31st March, 2020.

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

- *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.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*
- *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.*
- *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.*
- *Coal/lignite shall not be used as fuel in the boiler. 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.*
- *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) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.*
  - *(d) Solvents shall be stored in a separate space specified with all safety measures.*
  - *(e) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.*
  - *(f) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.*
  - *(g) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.*
- *Total fresh water requirement shall not exceed 2671.5 KLD /day to be met from Tungbhadra River through infiltration wells. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA.*
- *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.*
- *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.*
- *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.*
- *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.*
- *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.*
- *The company shall undertake waste minimization measures as below:-*
  - *(i) Metering and control of quantities of active ingredients to minimize waste.*
  - *(ii) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*
  - *(iii) Use of automated filling to minimize spillage.*
  - *(iv) Use of Close Feed system into batch reactors.*
  - *(v) Venting equipment through vapour recovery system.*

(vi) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

- *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.*
- *All the commitments made to the public during public hearing/consultation shall be satisfactorily implemented.*
- *At least 2% 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.*
- *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.*
- *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.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *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.*

Day Three - 24th September 2018 (Narmada Hall)

Agenda No.41.3.19

Agrochemical and Intermediates manufacturing plant by M/s Swarup Chemicals Pvt Ltd at Plot No. B-15 to B-22, UPSIDC, Tehsil Sandila, District Hardoi (Uttar Pradesh) - For Environmental Clearance

[IA/UP/IND2/58942/2016, J-11011/324/2016-IAII (I)]

41.3.19.1 The project proponent and the accredited consultant M/s EQMS India Pvt Ltd made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project for Proposed Agrochemical and Intermediated Manufacturing Plant at Sandila II, Plot B, 15-22, UPSIDC, Industrial area, Tehsil Sandila , Hardoi, Uttar Pradesh by M/s Swarup Chemicals Pvt Ltd.

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 14th meeting held during 27th Oct 2016 and recommended Terms of References (ToR) for the Project. The ToR has been issued by Ministry vide letter No. J-11011/324/2016 -IA-II (I) dated 31st January 2017.

(iii) All Pesticide manufacturing plants are listed at S.N. 5(b) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) The total plot area is 26930 m^2 out of which 33% will be developed as green belt. Industry will develop greenbelt in an area of i.e.5580 m^2 out of open area of the project. The

estimated project cost is Rs.15 crore. Total capital cost earmarked for pollution control measures is Rs 2 crores and the recurring cost (operation and maintenance) will be about Rs 30 Lakhs per annum. Total Employment will be total 75 persons as direct & indirect for the proposed project.

(v) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River Bahca is flowing 7.6 km from the project site,.Loni nalla and sarda canal at 2.8 and 5.2 km respectively

(vi) Ambient air quality monitoring was carried out at 8 locations during 1st October 2016 to 31st December 2016 and the baseline data indicates the ranges of concentrations as: PM_{10} (62-80 µg /m^3), $PM_{2.5}$ (32-43 µg/m^3), SO_2 (6.1-8.0 µg/m^3) and NO_2 (13.5- 17.6 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be ranges between 0.05-0.50 µg/m^3, 0.01-1.0 µg/m^3 and 0.005-0.180 µg/m^3 with respect to PM_{10}, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(vii) Total water requirement is 90 m^3/day of which will be met from ground water.

(viii) Effluent of 55 KLD will be treated through 60 KLD capacity ETP. The plant will be based on Zero Liquid discharge system (if applicable).

(ix) Power requirement after expansion will be 800 KVA during operation phase and will be met from UP State electricity Board. Proposed unit has unit has 2 DG sets of 350 KVA capacity each. Stack (height 7.5 m) will be provided as per CPCB norms to the proposed DG sets.

(x) Proposed unit has 3 TPH HSD/Rice husk fired boiler. Bag filter with a stack of height of 27.5 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3 for the proposed boilers.

(xi) Process emissions and control measures

S. No	Stack attached to	Stack Ht. (from ground) / Dia. (m)	Flow (Nm^3/hr)/ Temp. ^0C	Control equipment
1	Boiler (3TPH)	30m/ 600mm	8000/ 170	Multiple cyclone separator &bag filter
2	Process stack	11m/ 800mm	4000/ ambient	Acid/Alkali Scrubber
3	Process stack	11m/ 800mm	4000/ ambient	Acid/Alkali Scrubber
4	Process stack	11m/ 800mm	4000/ ambient	Acid/Alkali Scrubber
5	Vent for Bag filter of Dryer-1	27.5m/ 800mm	30000/70	Acid/Alkali Scrubber
6.	Vent for Bag filter of Dryer-2	27.5m/ 800mm	30000/70	Acid/Alkali Scrubber

(xii) Solid waste/ Hazardous waste generation and its management :

Solid wastes will be generated from process, effluent treatment system, maintenance of equipment and raw material consumption. Process Residue be sent to cement plants for co-incineration or will be sent to common incineration facility/TSDF. Used oil will be sold to

registered refiners or reused in plant as lubricant. ETP sludge & MEE/ATFD salt will be sent to TSDF. Discarded Containers will be sold to authorized re-conditioners.

(xiii) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 30th Dec. 2017. The main issues raised during the public hearing are related to employment, effect of the plant on the agriculture crop and the pollution load that will arise due to the Plant.

(xiv) The details of products and capacity as under:

S. No	Name of Product	Application	Capacity MT/Month
1	Kresoxym– Methyl	Agricultural Use	25
2	Dinotefuron	Agricultural Use	30
3	Difenthiuron	Agricultural Use	50
4	Pyriproxyfen	Agricultural Use	50
5	ZDC	Agricultural Use	100
6	Thiram	Agricultural Use	100
7	Captan	Agricultural Use	100
8	Folpet	Agricultural Use	100
9	Metam sodium	Agricultural Use	200
10	Zineb	Agricultural Use	50
	Total		905
Intermediates			
S. No	Name of Product	Application	Capacity MT/Month
11	Phthalide	Agricultural Use	100
12	N-N Dimethyl carbamoyl Chloride	Agricultural Use	50
13	N-N Dimethyl thiocarbamoyl Chloride	Agricultural &other Uses	50

41.3.19.2 The proposal was last considered by the EAC in its meeting held on 25-27 July, 2018, wherein the EAC desired for clarifications/inputs in respect of the following:

- Revised water balance for the unit conforming to Zero Liquid Discharge.
- The product list having LD_{50} less than 1000 mg/kg, which are reported to be highly toxic and thus need to be deleted. The remaining products need to be reviewed for the toxicity involved and biodegradability, to revise the product list accordingly.
- Considering the safety precautions, risk assessment study should be carried out using 3-D modelling.

In response to the above observations, parawise replies submitted by the project proponent, are as under:-

S. No.	Clarifications/inputs sought by the EAC	Reply submitted by the project proponent
1	Revised water balance for the unit conforming to Zero Liquid Discharge.	PP has submitted the same water balance with confirming Zero Liquid Discharge.
2	The product list having LD_{50} less than 1000 mg/kg, which are reported to be	PP has removed one product i.e. Ziram.

	highly toxic and thus need to be deleted. The remaining products need to be reviewed for the toxicity involved and biodegradability, to revise the product list accordingly.	
3	Considering the safety precautions, risk assessment study should be carried out using 3-D modelling.	PP has informed that safety precautions, risk assessment study using 3-D modelling is in progress.

41.3.19.3 During deliberations, the EAC noted that the replies submitted by the project proponent were actually not in line with its observations/concerns in respect of revised water balance, revision of product list vis-a-vis the LD_{50} values. The desired risk assessment study using 3D modelling was also not carried out and reported to be in progress. As such, none of the earlier observations was reported to be complied with.

Further, the Committee observed discrepancies in the procedural requirements viz. EIA/EMP report finalized in September, 2017 before the public hearing conducted by SPCB on 30th December, 2017, Final EIA/EMP documents submitted without any authenticity/covering letter, etc.

In view of the above observations, the proposal was deferred for the needful.

Agenda No.41.3.20

Expansion of Pesticide & Intermediates manufacturing unit at Plot No.3-11, A-2/1, A-2/2, A-2/6 & A-1/2, Phase-I, GIDC Industrial Estate, Vapi, District Valsad (Gujarat) by M/s UPL Limited - For Environment Clearance

[IA/GJ/IND2/71396/2016 J-11011/330/2016-IA-II (I)]

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41.3.20.1 The project proponent and the accredited Consultant M/s Eco Chem Sales & Services, made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for Expansion in Existing Production Capacity & Addition of New Pesticides & Intermediates including Pesticide formulation by M/s UPL Ltd, located at Plot Nos.3-11, A-2/1, A-2/2, A-2/6 & A-1/2, Phase-I, GIDC Notified Industrial Area, Vapi, District Valsad (Gujarat).

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 24th EAC meeting held during 14 - 16th June, 2017 for Amendment in ToR and recommended Terms of References (TORs) for the Project. The Amended TOR (exempting Public Consultation and Zero Liquid Discharge condition) has been issued by Ministry vide letter No. J-11011/330/2016-IA-II(I); dated 9thOctober, 2017. MoEF&CC issued Standard ToR letter dated 09.12.2016.

(iii) All Products are listed at S.N. 5(b) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Ministry has issued EC earlier vide letter no. J-11011/32/2007- IA-II (I) dated 23rd July, 2007 for GIDC Notified Industrial Area, Vapi unit to M/s. United Phosphorous Limited.

(v) Existing land area is 69,639 m^2 and expansion will be developed within existing plant premises hence no additional land area will be used for proposed expansion.

(vi) Industry has already developed Greenbelt/plantation in an area of 33% of the project area *i.e.* 22,999 m^2 out of which 2,691 m^2 area at project site and 20,308 m^2 at Vikram Farm, Nahuli Village.

(vii) The estimated project cost is INR 28,563.13 Lakhs excluding existing investment of INR 23,800 Lakhs. Total capital cost earmarked towards environmental pollution control measures is INR 3414.11 Lakhs and the Recurring cost (operation and maintenance) will be about INR 949.2 Lakhs per annum.

(viii) Total Employment will be 679 persons as direct & 100 persons indirect after expansion. Industry proposes to allocate Rs. 714.1 Lakhs @ of 2.5% towards Corporate Social Responsibility.

(ix) There are no National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors *etc.* within 10 km from the project site. River Daman Ganga, Kolak and Darotha is flowing at a distance of 1.30 km, 6.39 km and 3.89 km in S, NE and SW direction respectively.

(x) Ambient air quality monitoring was carried out at 9 locations during 1st December, 2016 to 28th February, 2017 and the baseline data indicates the ranges of concentrations as: PM_{10} (68.9 – 98.7 µg/m^3), $PM_{2.5}$ (34.8 - 53.7 µg/m^3), SO_2 (10.3 – 18.3 µg/m^3) and NO_2 15.6 – 24.7 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.22 µg/m^3, 2.1 µg/m^3 and 0.74 µg/m^3 with respect to PM_{10}, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(xi) Total fresh water requirement will be 5239.21 m^3/day after expansion (Existing: 3815.24 m3/day, Proposed: 1424 m3/day) and is being/will be met from GIDC water supply.

(xii) Effluent of industrial process will be segregated into three streams as high TDS stream, high COD and toxic concentrated stream and normal stream. High COD and toxic concentrated effluent is/will be treated in to Incinerator of BEIL, Ankleshwar. High TDS effluent is/will be treated in existing Multiple Effect Evaporation (MEE) System and proposed Multiple Effect Evaporation (MEE). Normal Effluent will be treated in existing ETP and Final treated effluent from the ETP confirming the CETP norms is being/will be sent for further treatment in CETP, Vapi.

(xiii) Power requirement after expansion will be 19786.27 kW including existing 9082.34 kW KVA and will be met from Dakshin Gujarat Vij Company Ltd (DGVCL). Existing unit has 1 DG set of 1250 kVA and 2 DG sets of 500 kVA each capacity, additionally 2 DG sets of 500 kVA each will be used as standby during power failure. Stack (height 15.5 m) will be provided as per CPCB norms.

(xiv) Existing unit has 10 TPH, 8 TPH, 5 TPH and 23 TPH FO/NG, FO/NG, FO/NG and Imported coal fired boiler, respectively. Electrostatic precipitator with a stack height of 55 m as per CPCB norms has been installed to Coal fired boiler for controlling flue gas emission *i.e* PM, SO_2 and NO_x within the statutory limit of 150 mg/Nm^3, 100 ppm and 50 ppm.

(xv) Details of Process emissions generation and its management given below:

Existing Process Emission

S. No.	Stack attached to	Stack height (m)	Air Pollution Control system
1.	Pesticide plant – 1 reactor	12	Water scrubber followed by Caustic scrubber
2.	Pesticide plant – 2 reactor	12	Water scrubber followed by Caustic scrubber
3.	Pesticide plant – 2 & Permerthrin (Stand by scrubber)	12	Water/Alkali Scrubber
4.	ALP plant firing chamber	30	Mist Eliminator & Water scrubber
5.	MPBAD plant reaction vessel & Bromine recovery system	22	Sodium Thiosulphate absorber for Br_2 recovery and Caustic scrubber
6.	DVACL PLANT (TCBACl reactor)	22	Alkali Scrubber
7.	DVACL plant (DVACl reactor)	22	Water scrubber followed by Alkali Scrubber
8.	DVACl plant (Storage and Recovery System)	22	Alkali Scrubber
9.	DVACl plant (Fugitive emission)	22	Alkali Scrubber
10.	ASAM	12	Water scrubber followed by Alkali Scrubber
11.	ZnP plant reactor	12	Mist Eliminator with Koch Filter
12.	Lambda Cyhalothrin	12	Alkali Scrubber
13.	Metribuzin	12	Water/Alkali scrubber (Sodium Thiosulphate absorber)

Additional Process emission after expansion

S. No.	Stack attached to	Stack height (m)	Air Pollution Control system
1.	ALP plant firing chamber	30	Vet Scrubber with Mist Eliminator
2.	DVACL PLANT (TCBACL reactor)	30	Alkali Scrubber
3.	DVACL plant (DVACL reactor)	30	Water/Alkali Two stage Scrubber

S. No.	Stack attached to	Stack height (m)	Air Pollution Control system
4.	DVACL plant (storage and Recovery System)	30	Alkali Scrubber
5.	ZnP plant reactor	30	Mist Eliminator with Koch filter
6.	Pesticides Plant-1 reactor	30	Water /Alkali Two stage Scrubber
7.	MPBAD plant Bromine recovery & plant reactor	30	Water /alkali Scrubber
8.	ETP scrubber	30	Caustic Scrubber
9.	MPBAL flare and scrubber	30	Caustic Scrubber
10.	Metribuzin	30	Caustic Scrubber
11.	Kresoxim Methyl	30	Caustic Scrubber
12.	Multiproduct plant stack	30	Caustic Scrubber

(xvi) Details of Solid waste/ Hazardous waste generation and its management as listed below:

S.No.	Waste Type	Quantity	Proposed	Total	Mode of Disposal
		Waste Generation			
1.	ETP waste	544.417 TPM	144.00 TPM	688.417 TPM	Collection, storage, transportation, disposal at Vapi Green Enviro Limited /BEIL-Ankleshwar.
2.	Used oil	4.197 kl/m	6.356 kl/m	10.553 kl/m	Collection, storage, transportation, disposal by selling to registred reprocessors.
3.	Discarded Bag/ Containers	42052 Nos./Month	63724 Nos./Month	105776 Nos./Month	Collection, storage, Decontamination & recycle or sold to scrap operators
4.	Oil/ Grease from ETP	0.468 TPM	0.709 TPM	1.177 TPM	Collection, storage, transportation, disposal by incineration at Vapi Green Enviro Limited / BEIL-Ankleshwar.
5.	Spent Filter Material	3 TPM	4.546 TPM	7.546 TPM	Collection, storage, transportation, disposal at Vapi Green Enviro Limited / BEIL-Ankleshwar.
6.	MEE Salt	760 TPM	714 TPM	1474 TPM	Collection, storage, transportation, disposal at TSDF- Vapi Green Enviro

					Limited / BEIL-Ankleshwar.
7.	Sludge of wet Scubber	4.197 kl/m	6.36 kl/m	10.557 kl/m	Collection, storage, transportation, disposal at TSDF- Vapi Green Enviro Limited / BEIL-Ankleshwar.
8.	Used Batteries	3 Nos./Month	5 Nos./Month	8 Nos./Month	Collection, storage, transportation, disposal by selling to registred reprocessors.
9.	Process Inorganics waste	30.8 TPM	30 TPM	60.8 TPM	Collection, storage, transportation, disposal at TSDF- Vapi Green Enviro Limited / BEIL-Ankleshwar.
10.	Al,Mg,Zn Hydroxide waste	2.608 TPM	9.000 TPM	11.608 TPM	Collection, storage, transportation, disposal at TSDF- Vapi Green Enviro Limited / BEIL-Ankleshwar.
11.	Distillation residue	681.343 TPM	710.540 TPM	1391.880 TPM	Collection, storage, transportation, disposal by incineration at TSDF- Vapi Green Enviro Limited / BEIL-Ankleshwar.
12.	Spent Solvent	22.917 TPM	34.730 TPM	57.647 TPM	Collection, storage, transportation, disposal by incineration at TSDF- Vapi Green Enviro Limited / BEIL-Ankleshwar.
13.	Waste/Residue Containing Pesticide	0.795 TPM	1.205 TPM	2.000 TPM	Collection, storage, transportation, disposal by incineration at TSDF- Vapi Green Enviro Limited / BEIL-Ankleshwar.
14.	Aqueous High COD Effluent	500 KL/M	800 KL/M	1300 KL/M	Sent to BEIL Incinerator for Incineration.
15.	Expired or off specification products	2.400 TPM	3.636 TPM	6.036 TPM	Collection, storage, transportation, disposal by incineration at TSDF- Vapi Green Enviro Limited / BEIL-Ankleshwar.
16.	Fly Ash	550.000 TPM	2000.000 TPM	2550.000 TPM	Send to authorized End User and brick manufacturers.
17.	STP Sludge	---	10.00 TPM	10.00 TPM	Will be used as manure within the premises.

(xvii) Public Consultation was exempted considering the project site being in Industrial area.

(xviii) The Status of compliance of earlier EC was obtained from Regional Office Bhopal vide Letter No. 5-4/2010(Parya)/945 dated 28.08.2017 and submitted to MoEF&CC, Delhi.

(xix) No any litigations pending against the expansion project.

(xx) The existing and proposed products:

Existing Product List

S. No.	Products	Quantity (TPA)
	Pesticide Technical	
1.	Cypermethrin (Insecticide)	3960
2.	Permethrin (Insecticide)	1200
3.	Propanil (Herbicide)	1296
4.	Safener (UPH-203 S) (Herbicide)	60
5.	Alpha Cypermethrin (Insecticide) **OR**	360
	Beta Cypermethrin (Insecticide) **OR**	
	Imidacloprid (Insecticide)	
6.	Bifenthrin (Insecticide) **OR**	384
	Lambda Cyhalothrin (Insecticide) **OR**	
	Clodinafop Propargyl (UPH – 203) (Herbicide) **OR**	
	Thiomethoxam (STAR) (Insecticide)	
7.	Desmedipham (DMP) (Herbicide) **OR**	1080
	Phenmedipham (PMP) (Herbicide) **OR**	
	Metribuzin **OR**	
	Metamitron	
8.	Aluminum Phosphide	2400
9.	Magnesium Phosphide	96
10.	Zinc Phosphide	480
	Pesticide Intermediates	
1.	2-Chloroimidazo [1,2-a] pyridine-3-sulfamide (ASAM)	24
2.	Dichloro Vinyl Acid Chloride (DVACL)	3600
3.	Metaphenoxy Benzaldehyde (MPBAD)	3300
4.	Hydrazide	240
5.	Denatonium Benzoate	12
	Pesticide Formulation and inorganic products (does not cover under EIA notification)	
1.	Liquids and/or Solids Formulation	3600
2.	Red Phosphorus	960

Proposed Products and their Capacities for Expansion

S. No.	Products	Quantity (TPA)
	Pesticide Technical	
1.	Cypermethrin (Insecticide)	2040
2.	Permethrin (Insecticide)	600
3.	Propanil (Herbicide)	5904
4.	Safener (UPH-203 S) (Herbicide)	540
5.	Alpha Cypermethrin (Insecticide) **OR**	600
	Beta Cypermethrin (Insecticide) **OR**	
	Imidacloprid (Insecticide)	
6.	Bifenthrin (Insecticide) **OR**	1416
	Lambda Cyhalothrin (Insecticide) **OR**	

S. No.	Products	Quantity (TPA)
	Clodinafop Propargyl (UPH – 203) (Herbicide) **OR**	
	Thiomethoxam (STAR) (Insecticide)	
7.	Desmedipham (DMP) (Herbicide) **OR**	1800
	Phenmedipham (PMP) (Herbicide) **OR**	
	Metribuzin **OR**	
	Metamitron	
8.	Aluminum Phosphide	7200
9.	Magnesium Phosphide	504
10.	Zinc Phosphide	960
11.	Azoxystrobin **OR**	1200
	Trifloxystrobin **OR**	
	Kresoxim Methyl	
12.	Sulfosulfuron	120
	Pesticide Intermediates	
1.	Dichloro Vinyl Acid Chloride (DVACL)	600
2.	Metaphenoxy Benzaldehyde (MPBAD)	900
3.	Denatonium Benzoate	48
4.	Meta Phenoxy Benzyl Alcohol (MPBAL)	1800
5.	Triphenyle Phosphate (TPPA)	480
6.	2,4 Hydroxy Phenyl Propionic Acid **OR** L-2 Chloro Propionic Acid	480
7.	2- Chloro Propionic Acid Chloride	480
8.	Amino Aceto Nitrile Sulphate (AANS)	600
9.	Ammonium Carbamate (MR 17)	2400
	Pesticide Formulation and inorganic products (does not cover under EIA notification)	
1.	Liquids and/or Solids Formulation	8400

List of By-Products

S. No.	By Products	CAS Number	Exiting	Proposed	Total
			TPM		
1.	Phosphoric Acid (100% basis)	7664-38-2	40	98.40	138.40
2.	Hydrochloric Acid 30%	7647-01-0	2048	239.90	2287.90
3.	Spent Sulfuric Acid (46%)	7664-93-9	1025	140.15	1165.15
	OR				
	Ammonium Sulfate	7783-20-2	600	86.38	686.38
4.	Phosphorous Oxychloride	10025-87-3	640	58.55	698.55
5.	Ammonium Chloride	12125-02-9	34.80	Nil	34.80
6.	Sodium Bromide solution	7647-15-6	720	570.19	1290.19

S. No.	By Products	CAS Number	Exiting	Proposed	Total
			TPM		
7.	Sodium Sulfite Solution	7757-83-7	930	218.66	1148.70
	OR				
	Sodium Sulfite salt	7757-83-7	190	41.92	231.92
	OR				
	Sodium Bi sulfite Solution	7631-90-5	930	240.69	1170.69
	OR				
	Sodium Bi Sulfite (solid)	7631-90-5	190	48.14	238.14
8.	KCl salt	7440-09-7	160	28.00	188.00
	OR				
	KCl Sol	7440-09-7	900	158.00	1058.00
9.	$Cu(OH)_2/CuSO_4$	20427-59-2 / 7758-99-8	10	1.66	11.66
10.	Sodium Sulfate	7757-82-6	160	23.00	183.00
11.	MPBAD distillation Cut	67-36-7	20	2.25	22.25
12.	$AlCl_3$ 20%/ Poly $AlCl_3$	7446-70-0	1130	319.27	1449.27
13.	Mono Chloro Benzene	68411-45-0	Nil	29.85	29.85
14.	Methyl Benzate	93-58-3	Nil	15.00	15.00
15.	Formic Acid	64-18-6	Nil	108.68	108.68
16.	Dimethoxy methane	109-87-5	Nil	36.11	36.11
17.	Methoxy Propanol	107-98-2	Nil	15.16	15.16
		Total	**9,727.80**	**2,479.90**	**12,208.00**

41.3.20.2 The proposal was last considered by the EAC in its meeting held on 26-28 February, 2018, wherein the EAC expressed their concerns over higher PM_{10} & $PM_{2.5}$ values and thus existing baseline air quality not conducive to allow proposed expansion of the unit. Also, there being no adequate space for green belt/plantation within the plant, effluent treatment not adhering to the ZLD condition and the action taken report on the observations of the Regional Office not examined by the RO for its adequacy/efficacy, the Committee was not agreed to take

the proposal forward for the present. The Committee, after deliberations, preferred for a site visit by 2-3 of its members to examine admissibility of the proposed expansion of the project.

In response to the above observations, PP has submitted the point wise reply as under:

S. No.	Clarifications/inputs sought by the EAC/Ministry vide letter dated 18th June, 2018	Reply submitted by the project proponent
1	Stringent mitigating measures to minimize the incremental concentration of air pollutants (mainly PM10 and PM2.5) to the extent possible due to the proposed industrial operations.	Mitigation measures for reducing PM_{10} and$PM_{2.5}$ levels in ambient air at project site are proposed as under: • Stringent mitigating measures to minimize concentration of PM-10 and PM-2.5 to the extent possible due to proposed industrial operations by preventive and control measures. • Appropriate air pollution control systems - process scrubbers / dust collectors / bag filters / Electrostatic Precipitator in order to control process emissions from our industrial operations. • Closed handling system for solid / powder products. • Using good-quality imported coal only. • Electrostatic Precipitator shall be followed by an additional water scrubber with stack height of 55 m. • Coal storage is in closed shed. • Closed coal conveyer system together with water sprinklers to minimize dust emissions. • Fly ash to be collected pneumatically in SILO. • Online continuous monitoring system for stack emission from Boilers and Power Plant for PM. • Regular work place monitoring to ensure the efficiency of our air pollution control measures. • No new coal fired boiler in our expansion project. Only LDO based Thermic Fluid Heater (TFH) 3 Nos. shall be provided in the expansion project. **Control of dusting in vehicle movement area** We have considered following measures in

		order to control PM (1) Wide RCC Roads developed in entire complex (2) The Tires of all vehicles entering and leaving the plant area are cleaned (3) We use vacuum sweeping machine to collect dust lying on RCC road as part of housekeeping (4) We are maintaining green belt in our unit and surrounding areas (5) We have considered additional green belt of 1225 Sq M during this monsoon season, surrounding our unit Mitigation measures for reducing PM_{10} and$PM_{2.5}$ levels in ambient air at industrial estate would be as under: (a) The Unit shall develop local air quality management plan in consultation with Vapi Industries Association/SPCB and implement the same to achieve desired standards. (b) Vapi Industries Association is taking up various measures to reduce air pollution. Roads in surrounding villages are being provided concreting or converted to tarred roads. (c) Paver Blocks are being provided within the industrial estate. (d) Common Parking Area for trucks and tankers being provided with impervious flooring within industrial estate. (e) Vapi Industries Association and Notified Area Authority are carrying out massive tree plantation in the estate during this monsoon season.
2	Plan for green belt/plantation within the plant.	PP has submitted that approximately 24509 m^2 (35 % of total plot area) as green belt at the plant location including surrounding boundary area and planned for 1225 m^2 during this monsoon which is already started.
3	Effluent treatment not adhering to ZLD condition.	The project proponent informed that the EAC has recommended for amendment/correction in the TOR from ZLD

		condition. The PP also submitted that they already taken few initiatives for reduction of water consumption. Same initiatives will be continued after proposed expansion also.
4	Examination of the action taken report by the concerned Regional Office of the Ministry on their earlier observations.	The project proponent has also submitted the copy of updated action taken cum compliance report dated 5th July, 2018 issued by the Regional office at Bhopal.

41.3.20.3 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for expansion of pesticides and pesticide specific intermediates manufacturing unit from the present capacity of 1541 TPM to 4477 TPM by M/s UPL Ltd in a total area of 69,639 sqm 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).

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

The standard ToR for the project was granted on 9th December, 2016, followed by amendment dated 9th October, 2017 in respect of exemption from public hearing and the treated effluent to be discharged to the CETP in place of ZLD envisaged earlier.

Total water requirement is estimated to be 5880.21 m^3/day, of which estimated fresh water demand is 5239.21 m^3/day (Existing-3815.21 m^3/day, Proposed-1424 m^3/day), which will be further reduced to 3640 m3/day is to be met from GIDC water supply

Industrial effluent will be segregated into high TDS stream, high COD and toxic concentrated stream and normal stream. High COD and toxic concentrated effluent will be treated the Incinerator of BEIL, Ankleshwar. High TDS effluent will be treated in Multiple Effect Evaporation. Normal effluent will be treated in existing ETP, and the effluent from the ETP of 2647 m3/day will be sent for further treatment in the CETP at Vapi.

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 EAC found the additional details submitted by the project proponent satisfactory and in order.

Ministry had earlier issued EC vide letter dated 23rd July, 2007 for expansion of pesticides unit up to the production capacity of 1539.83 TPM (Technical grade-942.83 TPM, Pesticide intermediates-597 TPM) to M/s United Phosphorous Limited. The monitoring report on compliance status of EC conditions has been forwarded by the Regional Office at Bhopal vide their letter dated 28th August, 2017 and the updated action taken cum compliance report vide letter dated 5th July, 2018. The proposed site visit could not be undertaken as Regional office of the Ministry has recently inspected the site on 27th April, 2018.

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

- *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.*
- *The treated effluent of 2647 cum/day shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, to take it to the CETP at Vapi for further treatment.*
- *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.*
- *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.*
- *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.*
- *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) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.
  (d) Solvents shall be stored in a separate space specified with all safety measures.
  (e) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
  (f) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
  (g) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- *Total fresh water requirement shall not exceed 3640cum/day to be met from GIDC water supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.*
- *Industrial/trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP/RO to meet the prescribed standards.*
- *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*
- *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.*
- *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.*
- *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.*
- *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.*
- *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.

- *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.*
- *As committed, funds allocation for the Corporate Environment Responsibility (CER) shall be 2.5 % 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.*
- *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.*
- *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.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *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.41.3.21

Expansion of Bulk drugs unit with change in capacity from 3376.4 TPA to 5783.84 TPA at Plot no. A-1/A, A-1/B, A-1/C, A-2/B, A-2/C, A-2/D, C8-3/C, C8- 3/A, C-7/2, Kudikadu Village, SIPCOT Cuddalore, district Cuddalore, Tamil Nadu by M/s Strides Shasun Limited - For Environmental Clearance

[IA/TN/IND2/58794/2016, J-11011/326/2016-IA II (I)]

41.3.21.1 The project proponent and the accredited consultant M/s Hubert Enviro Care Systems (P) Ltd made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project for expansion of bulk drug manufacturing unit from 3376.40 TPA (53 Products) to 5783.84 TPA (77 Products) at by M/s Strides Shasun Limited at Plot No. A-1/A, A-1/B, A-1/C, A-2/B, A-2/C, A-2/D, C8-3/C, C8- 3/ A, C-7/2, SIPCOT Industrial Complex, Village Kudikadu, District Cuddalore (Tamil Nadu).

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) and recommended Standard Terms of References (ToR) for the Project. The ToR has been issued by Ministry vide letter No.J-11011/326/20l6-1A.II (I) dated 29th April, 2017.

(iii) All the projects located inside the notified industrial areas are listed at S.N 5(f) of schedule to the Environment Impact Assessment (EIA) Notification under category 'B', However due to unavailability of SEIAA, Tamil Nadu and NGT order against appeal No:123 of 2016 (SZ) (THC) dated: 01.08.2016, project appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) SEIAA, Tamil Nadu had issued EC earlier vide letter No. SEIAA /TN/F.774/EC/5(f)/12/2014 dated 24th June, 2014. SEIAA has also issued EC vide letter dated 1st February, 2016 for expansion from further amended dated 4th April, 2016 the existing project of M/s Strides Shasun Limited.

(v) Existing land area is 72896.02 m^2. 5260.92 m^2 more land will be required for proposed expansion. Industry has already developed green belt in an area of 33 % i.e. 25839.216 m^2 out of total area of the project.

(vi) The estimated project cost is Rs.75 crores excluding existing investment of Rs.348.84 crores. Total capital cost earmarked towards environmental pollution control measures is Rs18.31Crores and the recurring cost (operation and maintenance) will be about Rs.7.37Crores per annum.

(vii) Total Employment will be 525 persons as direct &175 persons indirect after expansion. Industry proposes to allocate Rs.5.2 crores @ of 6.97% towards Corporate Social responsibility.

(viii) There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reservesand Wildlife Corridors etc. within 10 km distance from the project site. River/water body details are as under:-

S. No	Water bodies	Distance (~km)	Direction
1	Sri Vethhveshwara Temple Pond	≈8.97	N
2	Soithikuppam Sea Shore	≈2.24	E
3	Uppanar River	≈0.60	E
4	Kamnarapettai Pond	≈1.71	WNW
5	Sathankuppam Lake	≈6.55	WNW
6	SenthamaraiKulam	≈6.39	NNW
7	Gadilam River	≈6.00	NNE

(ix) Ambient air quality monitoring was carried out at eightlocations during March to May 2017 and the baseline data indicates the ranges of concentrations asPM_{10} (60.28 - 64.79µg/m³), $PM_{2.5}$ (26.10-31.23µg/m³), SO_2 (9.26-12.56µg/m³) and NO_2 (25.29 - 30.00µg/m³). AAQ modeling study for source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.399 µg/m³, 0.05 µg/m³and 3.35 µg/m³with respect to PM, SO_2 and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(x) Total water requirement is 1123m^3/day of which fresh water requirement of 610 m3/day will be met from SIPCOT, Cuddalore.

(xi) Effluent of 570KLD (520 KLD Trade effluent + 50 KLD domestic sewage) quantities will be treated through Zero Liquid Discharge 520 KLD & 50 KLD through STP. Treated water from STP reused for green belt.

(xii) Power requirement after expansion will be 5500 kVA including existing 4500 kVA and will be met from TANGEDCO (Tamil Nadu Generation and Distribution Corporation Limited. Existing unit has 4 DG sets of 2 x 1000 kVA + 2 x 1500kVA capacity, additionally 1x 1500 kVA and 1 x 1000 kVA capacity DG Sets are used as standby during power failure. Stack

(height20m from above Ground level) will be provided as per CPCB norms to the proposed DG sets.

(xiii) Existing unit has1 no. of 12 TPH, 1No. of 6 TPH and 1 No of 10 TPH Bio-briquette fired Boiler. One more Bio-briquette fired boiler of 16 TPH capacity will be installed. Bag filter with a stack of height of 42 m will be installed to control the particulate emissions within the statutory normsfor the proposed boilers.

(xiv) Details of process emissions generation and its management are as under:

S. No.	Process Scrubber Details	Existing	Proposed	After expansion	Stack height in meter from (AGL)
1	Acid scrubbers	3	5	8	20
2	Activated carbon filter	2	5	7	20
3	Mercaptan	1	--	1	27
Total		6	10	16	--

(xv) Details of Solid waste/hazardous waste generation and its management are as under:-

Solid waste management:

S. No.	Details of Waste	Quantity(kg/ Month)			Method of Disposal
		Existing	Proposed	Total	
1	Packing material	30	5	35	Sold to recyclers
2	Food waste from canteen	7	1	8	Treated in organic waste convertor and used as manure
3	Garden waste	10	0	10	
4	Fly (T/day) Ash/Ash/Coal/Briquette	1	2.76	3.76	Used for ETP Sludge stabilization and excess will be disposed to Brick manufacturer

Hazardous waste management:

S. No	Type of waste	Quantity (TPA)			Storage/disposal
		Exiting	Proposed	Total	
1	Used or Spent oil (KL/A)	60	0	60	Disposed through Authorized recyclers
2	Waste or residue containing oil (TPA)	12	0	12	Disposed through cement industry/GEPIL (Gujarat Enviro Protection Infrastructure Limited)
3	Process residues and wastes) (KL/A)	500	0	500	Disposed through cement industry/GEPIL (Gujarat Enviro Protection Infrastructure Limited)

4	Spent Carbon (TPA)	60	0	60	Disposed through Authorized recyclers
5	Off specification products (TPA)	10	2	12	Disposed through cement industry / GEPIL (Gujarat Enviro Protection Infrastructure Limited)
6	Spent Solvents (KL)	19000	-7000	12000	Disposed through cement industry/GEPIL (Gujarat Enviro Protection Infrastructure Limited)
7	Chemical containing residue arising from decontamination (KL/A)	200	0	200	Treated in ETP
8	Empty barrels/containers/liners contaminated with hazardous chemicals/waste (No.s/A)	2500	200	2700	Disposed through Authorized recyclers
9	Chemical Sludge from wastewater treatment (Salt from ATFD)(TPA)	870	330	1200	Disposed to TSDF, Gummidipoondi/ or Cement Industry/ GEPIL (Gujarat Enviro Protection Infrastructure Limited) after in-house stabilization
10	Chemical Sludge from wastewater treatment (ETP sludge from centrifuge) (TPA)	1700	600	2300	Disposed through TSDF/cement industry / GEPIL (Gujarat Enviro Protection Infrastructure Limited)
11	Spent carbon or filter medium (TPA)	12	0	12	Disposed through TSDF/cement industry/GEPIL (Gujarat Enviro Protection Infrastructure Limited)

(xvi) The project is located inside the SIPCOT Notified Industrial Area. Public hearing is exempted under the provisions as per Para 7 (i) III Stage (3)(i)(b) of the EIA Notification, 2006.

(xvii) Existing EC obtained vide Letter No. SEIAA /TN/F.774/EC/5(f)/12/2014 dt.24.06.2014 & certified compliance report by Ro, MoEF vide: Report No. EP.12.8/Mis-I/ROCHN/2014/7 dated: 02.02.2015

(xviii) No litigation is pending against the proposal.

(xix) The details of products and capacity as under:

No of products existing	53 nos
No of products removed from Existing products mix	15 nos
No of products retained from existing product mix	38 nos
No of new products proposed	39 nos
Total no of products after expansion	77 nos
Quantity of existing products	3376.4 TPA
Quantity retained in the existing product mix	2303.8 TPA
Quantity increased within the retained product mix	2976.0 TPA
Quantity of new products proposed	504.04 TPA
Total quantity of products after expansion	5783.84 TPA

S. No	Name of the Product	Existing	Additional	Total	Remarks
		Qty(T/A)			
1	Allyl Isopropyl urea	0	5	5	New Product
2	Aloigliptone	1	-1	0	Removed
3	Apreptant	1	1	2	Increased
4	Atorvastatin	0	5	5	New Product
5	Azelaic acid	0	1	1	New Product
6	Benzarone	2	8	10	Increased
7	BepotastineBesilate	0	3	3	New Product
8	Blonanserin	0	0.5	0.5	New Product
9	Carisoprodol	40	0	40	No change in the product and quantity
10	CD-6051(A-49)	10	-10	0	Removed
11	Cebrazalone	0	5	5	New Product
12	Celecoxib	20	10	30	Increased
13	Chlorophenesin	144	-139	5	Reduced
14	Cinacalcet Hydrochloride	1	0	1	No change in the product and quantity
15	CKE	36	-32	4	Reduced
16	ClopidogrelBisulphite	1.2	-1.2	0	Removed
17	ClopidogrelNapsylate	1.2	-1.2	0	Removed
18	Cobicistat	0	12	12	New Product
19	Colesevelam	50	100	150	Increased
20	Cycloserine	2	18	20	Increased
21	DabigatranEtexilateMesylate	3	-1	2	Reduced
22	Dexlanzoprzole	1	0	1	No change in the product and quantity
23	Dextropolisterix	0	10	10	New Product
24	DextromethorphanHBr	10	30	40	Increased
25	DimethylFumarate	0	2	2	New Product

26	Doxycline	2	-2	0	Removed
27	Effavirenz	0	30	30	New Product
28	Elvitegravire	0	12	12	New Product
29	Emtricitabine	0	30	30	New Product
30	EsomeprazoleMagnesium	0	10	10	New Product
31	Flurbiprofen/SFlurbiprofen	0	30	30	New Product
32	Gabapentine and its intermediates	150	850	1000	Increased
33	Ibu and Intermediate Aldehyde	1700	1225	2925	Increased
34	Ibulysinate	0	20	20	New Product
35	Ibuprofen	400	-400	0	Removed
36	IbuSodium	50	-30	20	Reduced
37	Imidafenacin	0	2	2	New Product
38	Indapamide	10	-9	1	Reduced
39	Isradipine	1	-0.9	0.1	Reduced
40	Ketoprofen	24	-18	6	Reduced
41	Lamvudine	0	1	1	New Product
42	LanthanumCarbonate	10	20	30	Increased
43	Lanzoprazole	0	1	1	New Product
44	Leviteracetam	50	-20	30	Reduced
45	Loratidine	2	-2	0	Removed
46	Loxoprofen	50	-49	1	Reduced
47	LurasidoneHCl	1	1	2	Increased
48	Meprobamate	2	-1	1	Reduced
49	Methohexital	0	0.54	0.54	New Product
50	Methylthioniniumchloride	250	-250	0	Removed
51	MilnacipranHCl	0	1	1	New Product
52	Mirabegron	0	5	5	New Product
53	Montelukas Sodium	1	-1	0	Removed
54	Moxiflaxacin	5	-5	0	Removed
55	Nabumutone	10	62	72	Increased
56	Nevarapine	0	1	1	New Product
57	Nizatidine	6	18	24	Increased
58	Olanzapine	1	0	1	No change in the product and quantity
59	Olmestartat	1	-1	0	Removed
60	PantaprazoleSodium	10	-9	1	Reduced
61	PentosanPolysulfate	0	1	1	New Product
62	Phexphynadine	25	-25	0	Removed
63	Pindolol	0	2	2	New Product
64	Pitavastatin	1	-0.8	0.2	Reduced
65	Posaconazole	0	5	5	New Product

66	Pregabalin	50	10	60	Increased
67	QuinaprilHydrochloride	0	1	1	New Product
68	RantidineHClFormII	50	370	420	Increased
69	Rebamipide	0	50	50	New Product
70	Ridanehydrobromide	0	10	10	New Product
71	Rifaximin	0	3	3	New Product
72	Rivaroxaban	1	4	5	Increased
73	Roflumilast	1	0	1	No change in the product and quantity
74	Rosigiltazone	1	-1	0	Removed
75	Rosuvastatin Calcium	1	9	10	Increased
76	S+ IbuProfen	0	20	20	New Product
77	SapropterinHCl	1	-0.5	0.5	Reduced
78	SevHCl	40	-16	24	Reduced
79	Sev carbonate	50	100	150	Increased
80	Sofosbovir	0	12	12	New Product
81	SumatriptanSuccinate	2	-2	0	Removed
82	TAF	0	60	60	New Product
83	Tenofovir	10	140	150	Increased
84	Terizidone	0	3	3	New Product
85	Ticagrelor	0	5	5	New Product
86	Ursodiol	0	6	6	New Product
87	Valacyclovir	0	12	12	New Product
88	Venlafaxine HCl	60	-20	40	Reduced
89	VilazadoneHCl	0	5	5	New Product
90	VX-950	24	-24	0	Removed
91	Zidovidine	0	120	120	New Product
92	Zileuton	0	2	2	New Product
		3376.4	2407.44	5783.84	

41.3.21.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for expansion of bulk drug manufacturing unit from the present capacity of 3376.40 TPA (53 Products) to 5783.84 TPA (77 Products) by M/s Strides Shasun Limited (Formerly M/s Shasun Pharmaceuticals Ltd) in a total area of 78156.94 sqm at Plot No.A-1/A, A-1/B, A-1/C, A-2/B, A-2/C, A-2/D, C8-3/C, C8- 3/ A, C-7/2, SIPCOT Industrial Complex, Village Kudikadu, District Cuddalore (Tamil Nadu).

The project/activities are covered under category B of item 5(f) 'Synthetic organic chemicals industry' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at State level. However, in view of the NGT order dated 1st August, 2016 in Appeal No.123 of 2016 (SZ)(THC) in the matter of 'Puduchery Environment Protection Association Vs Union of India & othrs' and due to non-existence of SEIAA in the State of Tamil Nadu for the present, the project was appraised at Central Level by the sectoral Expert Appraisal Committee (EAC).

The ToR for the project was granted on 29th April, 2017. Public hearing was exempted as per the provision contained in para 7 (i) III Stage (3)(i)(b) of the EIA Notification, 2006.

Total water requirement is estimated to be 1123 cum/day of which fresh water requirement is 610 cum/day proposed to be met from SIPCOT water supply.

Process effluent of 570 cum/day will be treated through ETP. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge. Treated water from STP will be used for green belt.

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. Issues raised during the public hearing have been duly addressed by the project proponent.

SEIAA Tamil Nadu had earlier issued EC vide letter dated 24th June, 2014 in favour of M/s Shasun Pharmaceuticals Ltd for the pharmaceutical multiproduct facility involving change in production capacity from 3384.74 TPA (25 products) to 3376.40 TPA (53 products) in an area of 7.29 ha in the said SIPCOT Industrial Estate. Later, SEIAA Tamil Nadu vide letter dated 1st February, 2016 granted environmental clearance to the project for expansion of pharmaceutical multiproduct facility from 3376.40 TPA (53 products) to 5783.84 (77 products), which was amended on 4th April, 2016. The monitoring report on compliance status of EC conditions (EC dated 24th June, 2014) has been forwarded by the Regional Office at Chennai vide their letter dated 2nd February, 2015, which was found to be satisfactory.

NGT vide order dated 1st August, 2016 in Appeal No.123 of 2016 (SZ)(THC) in the matter of 'Puduchery Environment Protection Association Vs Union of India & othrs' has set aside the EC granted by SEIAA dated 4th April, 2016 amending the EC given on 1st February, 2016, and directed the project proponent to approach the Ministry for grant of EC, as and when if such application is made by the project proponent.

The project proponent has informed that they have changed the name of the company from M/sStrides Shasun Limited to M/s Solara Active Pharma Science Limited.

Consent to Operate has been obtained from the Tamil Nadu PCB vide letter dated 7th August, 2017, which is presently valid up to 31st March, 2019.

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.

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

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

- *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.*
- Bio-briquette shall be used as fuel in the boiler in any case, *Coal/lignite shall not be used as fuel in the boiler. 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.*
- *Solvent management shall be carried out as follows:*
  (o) Reactor shall be connected to chilled brine condenser system.
  (p) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
  (q) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.
  (r) Solvents shall be stored in a separate space specified with all safety measures.
  (s) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
  (t) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
  (u) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- *Total fresh water requirement shall not exceed* 610 cum/day *to be met from* SIPCOT water supply*. Prior permission in this regard shall be obtained from the concerned regulatory authority.*
- *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.*
- *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.*
- *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.*
- *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.*
- *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.*
- *The company shall undertake waste minimization measures as below:-*
  (xiii) Metering and control of quantities of active ingredients to minimize waste.
  (xiv) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
  (xv) Use of automated filling to minimize spillage.
  (xvi) Use of Close Feed system into batch reactors.
  (xvii) Venting equipment through vapour recovery system.
  (xviii) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- *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.*

- *At least 1% 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.*
- *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.*
- *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.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *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.41.3.22

Modernization cum expansion of Urea Plant from 1500 TPD to 1800 TPD (Urea Prilling-1200 MTPD, Urea Granulation-600 MTPD), Atmospheric Ammonia Storage Tank of 5000 MT and augmentation of utilities (Captive Power Generation) by M/s Zuari Agro Chemicals Ltd at Zuarinagar, Sancoale Village, Mormugao Taluka, South Goa District (Goa) - For Environmental clearance

[IA/GA/IND2/59274/2015, J-11011/186/2015-IA II (I)]

41.3.22.1 The project proponent and the accredited Consultant M/s Kadam Environmental Consultants, made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for modernization of the Urea Manufacturing facility by Installation of Urea Granulation Unit, Atmospheric Ammonia Storage Tank, Gas Turbine + HRSG by M/s. Zuari Agro Chemicals Limited and located at Zuarinagar, Sancoale Village, Mormugao Taluka, South Goa District, GOA. The project is to conform with the various policy notifications issued by the Department of Fertilizers, Ministry of Chemicals & Fertilizers, Government of India viz. the New Urea Policy (NUP)-2015 vide Notification No.: 12012/1/2015-FPP dated 25th May, 2015, the New Investment Policy (NIP)-2012, Pooling of Gas for Fertilizer (Urea) Sector-2015 with the objective of maximizing indigenous Urea production, promoting energy efficiency in Urea production and rationalizing subsidy burden on the Government.
(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 44th EAC meeting held during 20-21st July, 2016 and recommended Terms of References (ToR) for the Project. The ToR has been issued by Ministry vide letter no. J-11011/186/2015-IA II (I) dated 18th February, 2016.
(iii) All products are listed at S.N.5(a) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).
(iv) Ministry has issued EC earlier vide letter no. J-11011/217/2008-IA II (I); dated 1st September, 2009 for Revamp of Ammonia Plant for changeover of feedstock and fuel from Naphtha to NG/RLNG and reduction of specific energy consumption along with debottlenecking the capacity of ammonia-urea plants, changeover of fuel from FO to NG/RLNG in the utility boiler as also debottlenecking the capacity of NPK plant A & B alongwith product mix change at Zuari Nagar, Goa to M/s Zuari Industries Ltd.

(v) No additional land will be used for proposed modernization. The proposed facilities will be located within the existing Factory Boundary Wall. Infact, there is a reduction in FAR/FSI about 8000 m^2. Industry will increase its greenbelt cover within the boundary wall of existing Factory complex from 10.2 % to 20% of area of the project. The greenbelt cover outside the factory complex accounts for approximately 50% of the entire land property of ZACL, Goa.

(vi) The estimated project cost for modernization unit is INR 788.60 crores. Total capital cost earmarked towards environmental pollution control measures is INR 10.35 Crores and the Recurring cost (operation and maintenance) will be about INR 0.91 Crores per annum.

(vii) Total Employment will be 80-100 Persons as direct & 100-150 persons indirect during the operational lifecycle of proposed modernization project.

(viii) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Zuari Estuary is at a distance of 2.25 Km in SE direction.

(ix) Ambient air quality monitoring was carried out at Six (6) locations during March, 2016 to May, 2016 and submitted baseline data indicates the ranges of concentrations as: PM_{10} (40-91 $\mu g/m^3$), $PM_{2.5}$ (16-38 $\mu g/m^3$), SO_2 (8-10.7 $\mu g/m^3$), NO_x (10-19.5 $\mu g/m^3$) and NH_3 (20-47.7 $\mu g/m^3$). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.57 $\mu g/m^3$, 0.08 $\mu g/m^3$, 1.39 $\mu g/m^3$ and 0.851 $\mu g/m^3$ with respect to PM_{10}, SO_2, NO_x& NH_3. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(x) Total raw water requirement for the overall complex after the modernization is 7,650 m^3/day and will be met from the existing pipeline sourcing from Water Resource Department (WRD) Supply, Govt. of Goa. Post modernization the Raw Water Consumption is reduced by over 2000 m^3/day. Total effluent generated from the overall complex, 2,305 KLD which will be treated in existing ETP, STP & RO Facilities. Post modernization, the effluent generation is reduced by 220 KLD. The Factory will continue to treat the Effluent streams and reuse/recycle the same within the Factory Complex and hence maintain the status of Zero Liquid Effluent Discharge Plant.

(xi) Additional 2 MW Power requirement after modernization will be will be met from a combination of New GTG based Captive Power Plant and the existing unit of 1 DG set of 6 MW capacity. The Factory also has a sanctioned load of 6250 KVA from the Grid. No additional DG sets are required. Adequate Stack height 30 m is provided as per CPCB norms to various existing DG set will be used as standby during power failure.

(xii) Existing unit has 3 x 70 TPH NG fired utility boilers as part of the existing Captive Power Plant (STG based). Adequate stack height of 30-45 m is installed for controlling the Particulate emissions. However, this STG based Captive Power Plant would be decommissioned and replaced with the new GTG Based CPP (GT + HRSG). No new utility boiler is required for the modernization unit. Process steam / Drive steam will be sourced from existing Process Waste Heat Boilers and the new HRSG.

(xiii) Details of Proposed Process emissions generation and its management is tabulated as below:

Stack No.	Stack attached to	Proposed APCM	Stack Height (m)	Remarks / Technical Specification
Proposed Flue Gas Stack attached to Boiler / Furnace				
1	GT+ HRSG stack	Dry Low NO_x burners.	30	-
Proposed Various Other Stacks/vent of reactors, process, vessel				
1	Urea Granulation Plant	Wet Scrubber	40	Sampling location and platform shall be made
Proposed Flare Stack				

1	Flare Stack attached to AAST	--	43	Pilot burners will fire natural gas. Flaring capacity of 1,039 Kg/hr

(xiv) Details of Solid waste/ Hazardous waste generation and its management.

S. No.	Waste Name	Cat	Quantity (MTPA)			Details of Storage Facility	Mode of Transportation	Disposal Method
			Existing	Proposed	Total			
1	Spent catalyst	18.1	117	0	117	Partly stored in closed, labeled steel vessel and partly in MS drums with closed lids. Stored in dedicated closed shed area away from normal operating area.	Stored in MS Drums and transported by Trucks dedicated to handle Hazardous waste.	To recycler registered with CPCB and having valid authorization of SPCB.
2	Chemical sludge from waste water treatment	34.3	45	0	45	The sludge after drying in SDBs is totally recycled to NPK-A & NPK-B plants along with filler for process use.	-	Recycled within premises.
3	Furnace oil tank cleaning residue and washing water & sludge	3.1	250	Very less quantity almost negligible	250	Stored in leak proof MS drums with closed lids. Stored in dedicated closed shed area away from normal operating area.	Stored in MS Drums and transported by Trucks dedicated to handle Hazardous waste.	To recycler registered with CPCB and having valid authorization of SPCB.
4	Used/Spent Oil	5.1	35		35			

(xv) Public Hearing for the proposed project has been conducted by the Goa Pollution Control Board on 11th July, 2016. The main issues raised during the public hearing are related to disposal of waste water via deep sea discharge, which was clarified by ZACL that the pipeline has been maintained and monitored as per the mandate of the High Court of Bombay and the directions of the Pollution Control authorities. However it is pertinent to note that though this pipeline exists, it is maintained strictly for emergency situations and till date the Company has maintained its position as a Zero Effluent Discharge Plant since 1990.

(xvi) Details of Certified compliance report submitted by RO, MoEF&CC. (In case of EC Proposal): ZACL has received Environmental Clearances from MoEFCC, New Delhi F. No. J-

11011/217/2008-IA-II (I) dated 01/09/2009. Site visit was carried out by RO-MoEFCC (Southern zone), Bangalore on 15th November, 2017. Certified Monitoring & Compliance report was received vide letter no. EP/12.1/232/GOA.

(xvii) The details of products and capacity:

S. No.	Plant	Capacity(MTPD)		
		(Existing)	(Proposed)	(Post-Modernization)
1	Urea	1,500 (All Prilling)	-300 (Prilling) + 600 (New Granulation Plant)	1,200 (Prilling)+ 600 (Granulation) = 1,800
2	Complex Fertilizers produced in NPK A Plant	1,600	0	1,600
3	Complex Fertilizers produced in NPK B Plant	1,600	0	1,600
4	Ammonia	1,050	0	1,050
5	Horton Sphere Ammonia Storage tank	3,000 (1+1)	Atmospheric Ammonia Storage Tank 1 X 5,000	Atmospheric Ammonia Storage Tank 1 X 5,000
6	Gas Turbine	0	25 MW	25 MW
7	Heat Recovery Steam Generator	0	Generation of MP Steam (37 Kg/Cm^{2}g) - Capacity (Unfired/with supplementary firing) = 50 /70 MT/hr	Generation of MP Steam (37 Kg/Cm^{2}g) - Capacity (Unfired/with supplementary firing) = 50 /70 MT/hr

(Proposed Project will not include 30 TPH Fertilizer Blending Unit for Customized NPK Production. – due to Notification of amendment in FCO,1985 (Customized NPK Fertilizers) by DAC,C& FW dated 24th January, 2018).

41.3.22.2 The proposal was earlier considered by the EAC in its meetings held on 26-29 December, 2016, 28-29 September, 2017 and 24-26 April, 2018. The Committee in its last meeting opined that the project actually involves increase in production of Urea from the present capacity of 1500 TPD to 1800 TPD, along with installation of Ammonia storage tank of 1x5000 MT (replacing the existing storage facilities), gas turbine of 25 MW and Heat recovery steam generator. The said project/activities are proposed to be implemented in the area covered under the CRZ regulations.

The Committee further noted that bulk of the project area lies between 200 m-500 m from the HTL, classified as CRZ-III, as per the approved Coastal Zone Management Plan of the area. The said activities/facilities are also proposed in that CRZ-III area only, which are not permissible under the extant provisions of the CRZ Notification, 2011.Accordingly, the proposal not found admissible in terms of the statutory provisions, was not recommended.

41.3.22.3 In response to the above observations and the proposed expansion of Urea plant of capacity 600 TPD not allowed at the given location in CRZ area, it is now planned to shift the same out side the CRZ area within the factory boundary. In this regard, the project proponent has submitted the report dated July, 2018 prepared by one of the authorised agencies M/s Institute of Remote Sensing, Anna University, based on the GPS survey for demarcation of

HTL, LTL and the CRZ areas on 1:4000 scale map. It has been concluded that the revised location of Urea granulation section falls outside the CRZ area. The said report also confirms that the ecologically sensitive areas like mangroves, sand dunes, turtle breeding sites are not in vicinity of the proposed site.

Regarding proposed Atmospheric Ammonia Storage Tank (AAST) of 5000 MT (Double walled double integrity) replacing the existing Horton Sphere facility of 2x3000 MT, it has been claimed that the same is permissible at the given location in CRZ area as per the provisions contained in section 3(ii)(b) of the CRZ Notification, 2011.

In view of the revised scope of the project due to change in location of the proposed urea granulation unit outside the CRZ area, and request by the project proponent for reconsideration, the proposal was again taken to the EAC after consulting the CRZ Division.

41.3.22.4 During deliberations, the EAC noted the following:-

The proposal is for environmental clearance to the project for expansion cum modernization of the Urea Plant by installation of 600 MTPD urea granulation unit, 1x5000 MT Ammonia Atmospheric Storage Tank, CPP of 25 MW (Gas Turbine &Medium Pressure HRSG) by M/s Zuari Agro Chemicals Ltd in an area of 95 acreslocated at Zuarinagar, Sancoale Village, Mormugao Taluka, South Goa District (Goa).

The project is aimed at augmenting the resource efficiency (energy consumption per tonne of Urea reducing from the present of 6.65 to 5.50 GCal), conservation of natural resources (raw water consumption from 10135 to 7650 cum/day), abatement of pollution loads (weighted average dust emissions from Urea Plant reducing from 90 to 60 mg/Nm^3), minimizing risk and thus enhanced safety, reduction in FAR/FSI and higher nutrient use efficiency of granular urea.In case of utilities, existing STG captive power plant with 3 Nos. HP boilers (3x70 TPH), shall be replaced with GTG & HRSG and thus migrating from high to low steam to power ratio type CPP to accrue significant energy savings. Also, the project will continue to be compliant with Zero Liquid Discharge and thus meeting the statutory norms under the Environment (Protection) Rules, 1986.

The project/activity is covered under category A of item 5(a) 'Chemical Fertilizer' of the Schedule to the Environment Impact Assessment Notification, 2006 and requires appraisal at central level by the sectoral Expert Appraisal Committee in the Ministry.

The ToR for the project was granted on 18th February, 2016, and the public hearing was conducted by the SPCB on 11th July, 2016. The main issues raised during the public hearing are related to disposal of waste water via deep sea discharge. The project proponent informed that though the pipeline exists, the plant is maintaining Zero Effluent Discharge since 1990.

Total water requirement after modernization is estimated to be 7,650 cum/day, to be met through the existing pipeline supply from Water Resource Department (WRD), Govt. of Goa.

Total effluent generated from different industrial operations is estimated to be 2,305 cum/day, which will be taken to the Effluent Treatment plant, STP & RO for treatment. The treated water shall be recycled to supplement the water requirement in the factory complex. There will be no discharge of treated/untreated waste water from the unit, and thus conforming to Zero Liquid Discharge.

The Goa Coastal Zone Management Authority (GCZMA) has recommended the project for grant of environmental clearance from CRZ perspective vide letter dated 30th November, 2017, subject to strict compliance of certain cnditions.

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. Issues raised during the public hearing have been duly addressed by the project proponent.

Earlier, the Ministry had issued environmental clearance on 1st September, 2009 for 'Revamp of Ammonia Plant for changeover of feedstock and fuel from Naptha to NG/RLNG and reduction of specific energy consumption along with debottlenecking the capacity of ammonia-urea plants, changeover of fuel from FO to NG/RLNG in the utility boiler as also debottlenecking the capacity of NPK plant A & B alongwith product mix change'. Themonitoring report on compliance status of EC conditions, forwarded by the Ministry's Regional Office at Bangalore after conducting site visit on 15th November, 2017 is found to be satisfactory.

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

- *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.*
- *All the terms and conditions stipulated by the Goa CZMA while recommending the project from CRZ angle vide letter dated 30th November, 2017, shall be strictly adhered to.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*
- *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms of 50 mg/Nm^3 for particulate matter and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.*
- *To meet the present water requirement of 7650 cum/day, prior permission shall be obtained from the concerned regulatory Authority viz. the State Water Resource Department (WRD), Government of Goa.*
- *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.*
- *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.*
- *The project proponent 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.*
- *The project proponent shall undertake waste minimization measures such as: -*
  - *(a) Metering and control of quantities of active ingredients to minimize waste.*
  - *(b) Use of high pressure hoses for equipment clearing to reduce wastewater generation.*
  - *(c) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*
  - *(d) Use of automated filling to minimize spillage.*
  - *(e) Use of Close Feed system into batch reactors.*
  - *(f) Venting equipment through vapour recovery system.*

- *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.*
- *All the commitment made regarding issues raised during the Public Hearing/consultation meeting held on 11th July, 2016 shall be satisfactorily implemented*
- *At least 0.50% 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.*
- *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.*
- *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.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *Transportation of raw materials/products should be carefully performed using GPS enabled vehicles.*
- *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.*

41.4 Any Other

Agenda No.41.4.1

Exploratory Drilling (24 additional wells) in On-shore PEL Block L-II of Cauvery Basin Tamil Nadu by M/s Oil And natural Gas Corporation- For Amendment in EC

[IA/TN/IND/22816/1910, J-11011/2/2011-IA.II(I)]

41.4.1.1 The proposal is for amendment in the environmental clearance granted by the Ministry vide letter no J-11011/2/2011-1A II (1) dated 21.08.2013 for the project "Exploratory drilling in onshore PEL Block L-II of Cauvery Basin., Located at Nagapattinam, Thanjavur, Thiruvarur and PudukkottaiTamilnadu in favour of M/s ONGC Ltd.

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

S. No	Para of EC issued by MoEFCC	Details as per the EC	To be revised/read as	Justification/reasons

1	2.0 Sl.no 10	Exploratory location under Proposal B-CY-WVDR-1. Coordinates Lat $10^0 24' 03.88766''$ N Long $79^0 04' 45.13311''$ E. Taluk :Thiruvonam	Exploratory location under Proposal NVAB Coordinates Lat $10^0 21' 33.88''$ N Long $79^0 08' 09.66''$ E. Taluk :Alangudi	Earlier, based on the Data/Maps available at the time of application, the Taluks were given. However, as per the actual ground stacking the Taluks of 4 exploratory wells are getting changed as these wells are close to the border of Taluks. The revised drilling locations are within 10 km of the earlier proposed locations.
2	2.0 Sl.no 13	Exploratory location under Proposal B-CY-NKK-4 Coordinates Lat $10^0 37' 06.58527''$ N Long $79^0 30' 42.17503''$ E. Taluk :Mannargudi	Exploratory location under Proposal NKKAE. Coordinates Lat $10^0 36' 07.20''$ N Long $79^0 32' 47.00''$ E. Taluk :Thiruthuraipoondi	Earlier, based on the Data/Maps available at the time of application, the Taluks were given.However, as per the actual ground stacking the Taluks of 4 exploratory wells are getting changed as these wells are close to the border of Taluks. The revised drilling locations are within 10 km of the earlier proposed locations.
3	2.0 Sl.no 14	Exploratory location under Proposal B-CY-NVDR-3. Coordinates Lat $10^0 26' 53.2''$ N Long $79^0 06' 31.65''$ E. Taluk :Karambakudi	Exploratory location under Proposal VDAD Coordinates Lat $10^0 26' 58.417''$ N Long $79^0 06' 27.26''$ E. Taluk :Gandarvakkottai	Earlier, based on the Data/Maps available at the time of application, the Taluks were given.However, as per the actual ground stacking the Taluks of 4 exploratory wells are getting changed as these wells are close to the border of Taluks. The revised drilling locations are within 10 km of the earlier proposed locations.

4	2.0 Sl.no 21	Exploratory location under Proposal B-CY-PD-4. Coordinates Lat 10^0 36' 42.99"N Long 79^0 35' 02.94"E. Taluk :Needamangalam	Exploratory location under Proposal PDAC Coordinates Lat 10^0 36' 42.99"N Long 79^0 35' 02.94"E. Taluk :Mannargudi	Earlier, based on the Data/Maps available at the time of application, the Taluks were given.However,as per the actual ground stacking the Taluks of 4 exploratory wells are getting changed as these wells are close to the border of Taluks. The revised drilling locations are within 10 km of the earlier proposed locations.

41.4.1.*3* *The EAC, after deliberations agreed for amendment in the environmental clearance dated 21st August, 2013 for change in locations of three exploratory drilling wells (S. No. 10, 13 and 21) as proposed by the project proponent.*

Agenda No.41.4.2

Addition of Carbon black Manufacturing facility in existing plant at Village Paddhar, Taluka Bhuj, District Kuchchh by M/s Balkrishna Industries Limited - For amendment in EC

[IA/GJ/IND2/63420/2017, IA-J-11011/162/2017-IA-II(I)]

41.4.2.1 The proposal is for amendment in the environmental clearance granted by the Ministry vide letter dated 8th January, 2018 for the project addition of Carbon Black manufacturing facility in the existing plant located at Village Paddhar Taluka Bhuj District Kutch in favour of M/s Balkrishna Industries Limited.

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

S. No	Para of TOR / EC issued by MoEF&CC	Details as per the EC	To be revised/ read as	Justification/ reasons
1	2 & 13	The Ministry of Environment, Forest & Climate Change has examined the proposal for Environment Clearance to the project "Carbon Black	Specific plot numbers may be deleted.	We did not show specific plot number but had provided a list of survey nos which covered the existing Tire & Tube Plant, Captive Power Plant and the proposed Carbon Black Plant.

		Manufacturing Unit" of Capacity 11,500 TPM in a total area 12,12,560 m^2 at Plot No 470,544/1,545/1, 555 at village Paddhar, Taluka Bhuj, District Kutch (Gujarat)		
2	3	Total Land area is 12,12,560 m^2. Industry has already developed greenbelt in an area of 4,00,144m^2, thus covering 33 % of the total project area.	Total plot area is 12, 12,560 m^2, project proponent intends to develop greenbelt in an area of 4,00,144 m^2, equivalent to 33% of the total project area.	We had developed area 3,34,727 m^2(27%) till November 2017 and committed that we will develop the remaining green belt area of 69,420 m^2 (6%) in next monsoon after completing construction activities. We have developed Green Belt Area of 3,57,727 m^2 (29 %) as of Aug 2018.
3	13-f	Solvent management shall be carried out as follows	Requested that this condition may be deleted.	This condition is not applicable as no solvent will be used in Carbon Black Plant.
4	13-i	Hazardous chemical shall be stored in tanks, tanks farm, drums, carboys etc. Flame Arresters shall be provided on tank farm and solvent transfer through pumps.	The word "solvent transfer through pumps" may be deleted.	This condition is not applicable as we will not be using solvent. The statutory provision of MSIHC Rules 1989 will be follows scrupulously.
5	13-l (V)	Venting equipment through vapour recovery system	Venting equipped should be equipped with suitable dust control and scrubbing system	Ventury Scrubbers are being installed in each reactor as equipment for vapour recovery system. Similarly de-dusting systems are also being installed at Elevator and silos.
6	13-s	Raw materials storage should	Raw Material storage should	1. Carbon Black is a continuous process plant.

		notexceed 3 days at any point of time	not exceed 45 days at any point of time	2. Inventory of 3 days would be totally inadequate 3. CBFS requirement – 21,500 MT/Month 4. Mostly imported from USA – Transit time 45 days. 5. The lead time from placement of Purchase Order till delivery is minimum 60 days 6. Stoppage of operation due to unavailability of CBFS may create recurring hazards. 7. Hence onsite RM storage permission for 45 days may please be considered.

41.4.2.*3* *The EAC during deliberations asked for verification of survey Nos from the concerned regulatory authority.The proposal was deferred for the needful on the above lines.*

Agenda No.41.4.3

Technical Pesticide Intermediate and Specialty Chemicals Manufacturing Plant at Plot No. 905/1, Jhagadia Industrial Estate Jhagadia,District Bharuch (Gujarat) by M/s Anupam Rasayan India Ltd (Unit-3) - For Amendment in EC

[IA/GJ/IND2/26815/2013, J-11011/22/2014-IA-II(I)]

41.4.3.1 The proposal is for amendment in the environmental clearance granted by the Ministry vide letter dated 3rd July, 2015 for proposed pesticides, pesticide specific intermediates and specialty chemicals manufacturing plant in favour of M/s Anupam Rasayan India Ltd (Unit-3) at Plot No. 905/1, Jhagadia Industrial Estate, Jhagadia, District Bharuch (Gujarat).

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

S. No.	Point of EC issued by MoEFCC, New Delhi	Details as per the EC	To be revised	Justification/Reasons
1.	Condition No. 02	List of Products	We want to add 86 Nos. of products in list of products. And production capacity will be remain same as per existing EC.	As per market demand, we want add these products. Please refer Annexure-1.
2.	A. Specific Condition - Condition	ESP shall be provided for coal/briquette	Company want to add 15 MT coal fired Boiler in	For justification of 15 MT Boiler, we would like to explain that instead of 30.0

	No. ii	fired boiler to control particulate matter. Continuous air emission monitoring system to be installed from the stack. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/GPCB guidelines.	place of 10 MT Coal fired Boiler and 1 additional boiler 15 MT/Hr and 4 No. of Thermopack – 500 U.	MT total we will install first 15 MT Boiler first and then on additional requirement another 15 MT Boiler & third system of 15 MT we want to keep as stand- By. Water input quantity may increase but without increase in Waste Water qty. Please refer Annexure-2.
3.	A. Specific Condition - Condition No. viii	The gaseous emission from DG Set shall be dispersed through adequate height as per CPCB Standard. Acoustic enclosure shall be provided to the DG Set to mitigate the noise pollution.	Company will dismantle existing old DG Sets - 500 KVA x 2 Nos. Companies want to Install total of 3 nos. of DG Set and capacity of DG Set-1: 1250 KVA DG Set-2: 1000 KVA DG Set-3: 750 KVA.	For justifications of Multiple Units of DG- Sets , we would like to explain that single unit when runs on partial load then we waste more fuel, more energy. But if we install multiple Units and run as per requirement we optimize the consumption of Fuel and thus shaving Energy to a great extent.
4.	A. Specific Condition - Condition No. xi	Total Water consumption from GIDC water supply shall not exceed 115 m^3/Day and prior permission shall be obtained from the competent authority.	Total water consumption from GIDC water supply shall 300 m^3/Day after addition of new Coal fired boilers. Water consumption will increase by 15 m^3/Day.	Due to addition of new coal fired boilers = 15 MT/Hr, Water consumption will increase by 15 m^3/Day. So water consumption (285 m^3/Dayto300 m^3/Day**)**. Waste water will remain same as per existing EC. i.e (202 KL/Day)
5.	A. Specific Condition - Condition No. xii.	Industrial effluent generation shall not exceed 181 m^3/Day.	Disposal of treated effluent will be sent to NCT-Jhagadia New Pipeline lead to	Company has obtained membership of M/s Narmada Clean Tech (NCT) with booked Load of 202.0 KLD, to discharge treated effluent

		Effluent shall be segregated into High COD /High TDS and low COD/TDS effluent stream. High COD/TDS effluent stream shall be evaporated in MEE. Low COD/TDS effluent stream shall be treated in ETP. Treated effluent, condensate and recover water shall be treated and recycled/reused within factory premises.	Marine discharge in to deep sea at Kantyajal.	into deep sea through new pipeline. Moreover, NCT Jhagadia as well as NCT New pipeline now is under operational mode as Gujarat Pollution Control Board- (GPCB) Gandhinagar has rewarded NCT with valid Consolidated Consent & Authorization as AWH- 83798 dated 27/01/2017 – Validity up to 16/05/2021. Membership of NCT is attached as Annexure -3.
6.	A. Specific Condition - Condition No. xvii	The company shall obtain Authorization for collection, Storage and disposal of hazardous waste under the Hazardous waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and amended as on date for management of Hazardous Wastes and prior permission from GPCB shall be obtained for disposal of solid/hazardous waste in the TSDF.	Quantity of Hazardous waste will not increase due to addition of new products but no. of by-products and quantity will increase which are incorporated in hazardous waste as per Hazardous waste Rules-2016.	No. of by-products and quantity will increase which are incorporated in hazardous waste as per Hazardous waste Rules-2016. Please refer Annexure-4.

		Measures shall be taken for fire fighting facilities in case of emergency. Membership of TSDF for hazardous waste shall be obtained.		

ANNEXURE – 1

REVISED LIST OF PRODUCTS ALONG WITH PRODUCTION CAPACITY

S. No.	Name of Product	CAS NO.	LD50	Existing Capacity (MT/Month)	Additional Capacity (MT/Month)	Total after EC Amendment (MT/Month)
Group - 1 (Insecticides) - 450 MT/Month						
A.	**Intermediates**					
1	Meta Phenoxy Benzaldehyde (MPBAD)	52315 - 06 - 7	1222 mg/kg	**450**	**000**	**450**
2	Cypermethric Acid Chloride (CMAC)	52314 - 67 - 7	Data Not Available			
3	Lambda Cyhalothric Acid Chloride (TFP Acid Chloride)	72748-35-7	300 mg/kg			
4	Meta Phenoxy Benzyl Alcohol (MPBAL)	13826-35-2	1496 mg/kg			
5	2-Chloro 5-Chloromethyl Pyridine (CCMP)	70258-18-3	Data Not Available			
B.	**Synthetic Pyrethroids**					
6	Cypermethrin (T) & Beta, Zeta, Theta etc Isomers (T)	71697-59-1	>5000 mg/kg			
7	Alphacypermethrin (T)	67375-30-8	500 mg/kg			
8	Deltamethrin (T)	52918-63-5	9.36 mg/kg			
9	Permethrin (T)	52645-53-1	383 mg/kg			
10	Lambda Cyhalothrin (T)	91465-08-6	56 mg/kg			
11	Bifenthrin (T)	82657-04-3	>2000 mg/kg			
12	Tefluthrin (T)	79538-32-2	148 mg/kg			
13	Transfluthrin (T)	118712-89-3	>5000 mg/kg			

14	Cyfluthrin & Beta Isomers (T)	68359-37-5	12.5 mg/kg			
15	Cyphenothrin (T) & its [1R-Trans-isomer]	39515-40-7	148 mg/kg			
16	Dimefluthrin (T)	271241-14-6	Data Not Available			
17	Fenpropathrin (T)	39515-41-8	18 mg/kg			
18	Cycloprothrin (T)	63935-38-6	>5000 mg/kg			
19	Flumethrin (T)	69770-45-2	>20 mg/kg			
20	Acrinathrin (T)	101007-06-1	>5000 mg/kg			
21	Etofenprox (T)	80844-07-01	>2000 mg/kg			
22	Flucythrinate (T)	70124-77-5	67 mg/kg			
C. Neo Nicotinoid/ Thiazole / Nitro Guanidine						
23	Imidacloprid (T)	138261-41-3	410 mg/kg			
24	Acetamiprid (T)	135410-20-7	146 mg/kg			
D. Carbamate / Phenyl Ether /Benzoyl Phenyl Urea/Phenyl Pyrazole/ Oxadiazine						
25	Fenoxycarb (T)	72490-01-8	16800 mg/kg			
26	Pyriproxifen (T)	95737-68-1	>5000 mg/kg			
Total Production of Groups - 1 (Insecticides)				**450**	**000**	**450**
Group - 2 (Herbicides) - 600 MT/Month						
A. Amide / Nitro phenyl Ether Herbicides						
27	Fomesafen (T)	72178-02-0	>5000 mg/kg	**600**	**000**	**600**
28	Halosafen (T)	77227-69-1	Data Not Available			
29	Napropamide (T)	15299-99-7	4680 mg/kg			
30	Quinclorac	84087-01-4	>2000 mg/kg			
31	Bromobutide	74712-19-9	>5000 mg/kg			
B. Anilide / Pyridine / Aryloxyphenoxypropionic Herbicides						
32	Metamifop (T)	256412-89-2	>2000 mg/kg			
33	Picolinafen (T)	137641-05-5	>5000 mg/kg			
34	Chlorazifop (T) & Chlorazifop Propargyl (T)	60074-25-1 & 72880-52-5	Data Not Available			
35	Clodinafop &	114420-	300 mg/kg			

	Clodinafop Propargyl (T)	56-3 & 105512-06-9				
36	Cyhalofop & Cyhalofop Butyl (T)	122008-78-0 & 122008-85-9	>5000 mg/kg			
37	Diclofop (T) & Diclofop Methyl (T)	40843-25-2 & 51338-27-3	523 mg/kg			
38	Fenoxaprop (T) & Fenoxaprop P Ethyl (T)	95617-09-7& 71283-80-2	>5000 mg/kg			
39	Fluazifop (T) & Fluazifop P Butyl	69335-91-7 & 79241-46-6	2910 mg/kg			
40	Haloxyfop (T) & Haloxyfop Methyl	69806-34-4 & 72619-32-0	>5000 mg/kg			
41	Quizalofop (T) & Quizalofop Ethyl (T)	76578-12-6 & 76578-14-8	>2000 mg/kg			
42	Cloquintocet Mexyl (T)	99607-70-2	>2000 mg/kg			
43	Quizalofop-P-Tefuryl	119738-06-6	1012 mg/kg			
44	Haloxyfop Ethoxy Ethyl (Etotyl)	87237-48-7	518 mg/kg			
45	Flufenacet	142459-58-3	589 mg/kg			
46	Diflufenican	83164-33-4	2150 mg/kg			
47	Cloransulam-Methyl	220899-03-6	>5000 mg/kg			
C. Phenyl Ether /Phenoxy Carboxylic Acid / Pyridine / Nitro Phenyl Ether						
48	Acifluorfen (T)	50594-66-6	2128 mg/kg			
49	Aclonifen (T)	74070-46-5	>5000 mg/kg			
50	Chlomethoxyfen (T)	32861-85-1	>10000 mg/kg			
51	Fluoroglycofen (T)	77501-90-7	1480 mg/kg			
52	Lactofen (T)	77501-63-4	>5000 mg/kg			
53	Oxyfluorfen (T)	42874-03-3	>2150 mg/kg			

54	Dicamba (T)	1918-00-9	1039 mg/kg			
55	Fluoroxypyr-Meptyl	81406-37-3	>5000 mg/kg			
56	Picloram	1918-02-1	2892 mg/kg			
57	Triclopyr – Butotyl	64700-56-7	2140 mg/kg			
D. Triazinone Herbicides I D / Cyclohexane Oxime						
58	Metamitron (T)	41394-05-2	1447 mg/kg			
59	Metribuzine (T)	21087-64-9	1100 mg/kg			
60	Clethodine (T)	99129-21-2	1360 mg/kg			
61	Imazamethabenz	100728-84-5	>5000 mg/kg			
62	Imazamox	114311-32-9	>5000 mg/kg			
63	Imazapyr	81334-34-1	>5000 mg/kg			
64	Imazethapyr	81335-77-5	>5000 mg/kg			
65	Benoxacor	93730-04-2	5000 mg/kg			
66	Phenmedipham	13684-63-4	4000 mg/kg			
67	Desmedipham	13684-56-5	9600 mg/kg			
Total Production of Group - 2 (Herbicides)				**600**	**000**	**600**
Group – 3 (Fungicides) - 500 MT/Month						
A. Conazole Fungicide						
68	1,2,4 Triazole	288-88-0	1320.39 mg/kg	**500**	**000**	**500**
69	3- Methyl 1,2,4 Triazole	7170-01-6	Data Not Available			
70	Difenoconazole (T)	119446-68-3	1453 mg/kg			
71	Azaconazole (T)	60207-31-0	308 mg/kg			
72	Bromuconazole (T)	116255-48-2	365 mg/kg			
73	Epoxiconazole (T)	133855-98-8	>5000 mg/kg			
74	Etazonazole (T)	84625-61-6	>320 mg/kg			
75	Hexaconazole (T)	79983-71-4	2189 mg/kg			
76	Penconazole (T)	66246-88-6	2125 mg/kg			
77	Propiconazole (T)	60207-90-	1517			

		1	mg/kg			
78	Tebuconazole (T)	107534-96-3	3352 mg/kg			
79	Fenfuconzole (T)	114369-43-6	>2000 mg/kg			
80	Ipconzole (T)	125225-28-7	1338 mg/kg			
81	Metconzole (T)	125116-23-6	1459 mg/kg			
82	Tetraconazole (T)	112281-77-3	>500 mg/kg			
83	Cyproconazole (T)	94361-06-5	1020 mg/kg			
84	Prothioconazole (T)	178928-70-6	>6200 mg/kg			
85	Fluquinconazole (T)	136426-54-5	112 mg/kg			
86	Myclobutanil (T)	88671-89-0	1600 mg/kg			
87	Imazalil (T)	35554-44-0	227 mg/kg			
88	Triadimenol (T)	55219-65-3	700 mg/kg			
89	Triadimefol (T)	43121-43-3	363 mg/kg			
90	Triticonazole (T)	131983-72-7	>2000 mg/kg			
91	Etoxazole	153233-91-1	>5000 mg/kg			
92	Metrafenone	220899-03-6	>5000 mg/kg			
B. Strobilurin / Methoxyacrylate / Carbanilate / Amide / Fungicides						
93	Dimoxystrobin (T)	149961-52-4	>5000 mg/kg			
94	Kresoxim Methyl (T)	143390-89-0	5000 mg/kg			
95	Trifloxystrobin (T)	141517-21-7	>5000 mg/kg			
96	Flufenoxy Strobin (T)	918162-02-4	Data Not Available			
97	Picoxystrobin (T)	117428-22-5	>5000 mg/kg			
98	Triclopyricarb (T)	902760-40-1	Data Not Available			
99	Azoxy Strobin (T)	131860-33-8	>5000 mg/kg			
100	Metominostrobin (T)	133408-50-1	Data Not Available			
101	Fluoxastrobin (T)	361377-29-9	>5000 mg/kg			
102	Orysastrobin (T)	248593-	2460			

		16-0	mg/kg			
103	Pyraclostrobin (T)	175013-18-0	>5000 mg/kg			
104	Fenoxanil (T)	115852-48-7	300 mg/kg			
105	Cymoxanil (T)	57966-95-7	960 mg/kg			
106	Flutolanil	66332-96-5	10000 mg/kg			
C. Acylamino / Anilide / Aromatic Fungicides / Quinoline / Dicarboxymale / Oxazole						
107	Metalaxyl (T)	57837-19-1	566 mg/kg			
108	Benalaxyl (T)	71626-11-4	4200 mg/kg			
109	Clorothalanil (T)	1897-45-6	10000 mg/k			
110	Fluazinam (T)	79622-59-6	>5000 mg/kg			
111	Quinoxyfen (T)	124495-18-7	5000 mg/kg			
112	Famoxadone (T)	131807-57-3	>5000 mg/kg			
113	Paclobutrazol	76738-62-0	1300 mg/kg			
Total Production of Group - 3 (Fungicides)				**500**	**000**	**500**
Group – 4 AMINO DIPHENYL ETHER / PHENOXY COMPOUNDS - 300 MT/Month						
114	2-Amino-2', 4'-Dichloro Diphenyl Ether (Y)	56966-48-4	Data Not Available	**300**	**000**	**300**
115	2-Amino - 2'- Methyl Diphenyl Ether (Red Ether)	3840-18-4	100 mg/kg			
116	Amino Resorcine Di Ortho Cresyl Ether	73637-04-4	Data Not Available			
117	2-Amino Di Phenyl Ether (Ortho Amino Di Phenyl Ether/2 - PA)	2688-84-8	212 mg/kg			
118	4-Amino Di Phenyl Ether	139-59-3	1100 mg/kg			
119	4-Amino 4'- Methyl Di Phenyl Ether (4-PP)	41295-20-9	Data Not Available			
120	2- Amino 2', 4, 4'- Tri Chloro Di Phenyl Ether (Benzinamide, 5-Chloro-2-2 (2,4-Dichloro Phenoxy) / Tade)	56966-52-0	Data Not Available			
121	4- Amino 2', 4' Di Chloro Di Phenyl Ether (OD Amino)	14861-17-7	Data Not Available			
122	4, 4'- Di Amino Di Phenyl Ether	101-80-4	725 mg/kg			

123	3, 4' - Di Amino Di Phenyl Ether	2657-87-6	Data Not Available			
124	2- Amino -4- Chloro Di Phenyl Ether (PHD Ether)	93-67-4	Data Not Available			
125	4- Amino -2, 4' -Di Chloro Di Phenyl Ether (GE/Aminophene)	14861-17-7	Data Not Available			
126	2- Amino - 4' - Chloro Di Phenyl Ether	93-67-4	Data Not Available			
127	2- Amino -4'- Chloro -4 -Trifluoromethyl Di Phenyl Ether (ACTM)	349-20-2	Data Not Available			
128	4 - Amino - 4' - Chloro Di Phenyl Ether (PPNA)	101-79-1	Data Not Available			
129	1, 2- Bis (2- Amino Phenoxy) Ethane	85233-19-8	Data Not Available			
130	1, 2-Bis (4-Amino Phenoxy) Ethane	6052-10-4	Data Not Available			
131	4-Amino-4'-Nitro Diphenyl Ether	6149-33-3	300 mg/kg			
132	2-Amino-2',4 -Dichloro Diphenyl Ether	56966-48-4	300 mg/kg			
133	2-Amino-4,4'-Dichloro Diphenyl Ether (PD Amino)	121-27-7	Data Not Available			
134	2-(4-Nitro Phenoxy) Ethanol	16365-27-8	Data Not Available			
135	1,4-Bis (4-Amino Phenoxy) Benzene	3491-12-1	Data Not Available			
136	1,3-Bis (4-Amino Phenoxy) Benzene	2479-46-1	1378 mg/kg			
137	1,3-Bis (3-Amino Phenoxy) Benzene	10526-07-5	Data Not Available			
138	1,2-Bis (2-Methyl Phenoxy) Ethane	53223-37-3	Data Not Available			
139	1,2-Bis (3-Methyl Phenoxy) Ethane	54914-85-1	Data Not Available			
140	1,2-Bis (4-Methyl Phenoxy) Ethane	98155-65-8	Data Not Available			
141	5-Amino-2,2',3-Trichloro-4-Nitro-Diphenyl Ether	118353-04-1	Data Not Available			
142	2-Amino -4,4'-Dichloro Diphenyl Ether-2'-Sulfonic Acid / Sodium Salt	42293-27-6	Data Not Available			
143	4,4'-Dihydroxy Diphenyl Ether	1965-09-9	Data Not Available			
144	2-Hydroxy-4,4'-	3380-30-1	Data Not			

	Dichloro Diphenyl Ether		Available			
145	2-Hydroxy-2,4,4'-Trichloro Diphenyl Ether	3380-34-5	3700 mg/kg			
146	4-Hydroxy-2',4'-Dichloro Diphenyl Ether	40843-73-0	300 mg/kg			
147	2-Chloro-4-(4-Chlorophenoxy) Acetophenone/4-Acetyl-3,4'-Dichloro Diphenyl Ether	119851-28-4	Data Not Available			
148	2-Acetyl-2',4,4'-Trichloro Diphenyl Ether	211125-94-9	Data Not Available			
149	4,4' Dimethyl Diphenyl Ether	1579-40-4	2600 mg/kg			
150	4,4'-Dicarboxy Diphenyl Ether	2215-89-6	Data Not Available			
151	Diphenyl Ether	101-84-8	2450 mg/kg			
152	4-Hydroxy Diphenyl Ether / 4-Phenoxy Phenol	831-82-3	2450 mg/kg			
153	5 Chloro-6-(2,3 Dichloro Phenoxy)-2-Methyl thio -1H Benzimidazole /Triclabendazole	68786-66-3	8000 mg/kg			
154	3,4'-Dimethyl Diphenyl Ether	51801-69-5	Data Not Available			
155	3-Phenoxy Toluene	3586-14-9	2509 mg/kg			
156	2,4-Bis[4-(2-ethylhexyloxy)-2-hydroxyphenyl]-6-(4-methoxyphenyl)-1,3,5-triazine/ Bemotrizinol.	187393-00-6	>2000 mg/kg			
157	2,2'-Methylenebis-[6-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol]	103597-45-1	>2000 mg/kg			
158	1-(4-tert-Butylphenyl)-3-(4-methoxyphenyl)-1,3-propanedione	70356-09-1 / 87075-14-7	>16000 mg/kg			
159	2-Hydroxy-4-methoxybenzophenone	131-57-7	7400 mg/kg			
160	2-Ethylhexyl 4-methoxycinnamate	5466-77-3	9600 mg/kg			
161	2-Cyano-3,3-diphenyl-	6197-30-4	>2000			

	2-propenoic acid 2-ethylhexyl ester		mg/kg			
162	Bis(2-ethylhexyl) 4,4'-(6-(4-tert-butylcarbamoyl) anilino)-1,3,5-triazine-2,4-diyldiimino) dibenzoate	154702-15-5	>2000 mg/kg			
163	4,4',4"-(1,3,5-Triazine-2,4,6-triyltriimino)-tris-benzoic acid tris-(2-ethylhexyl) ester	88122-99-0	>5000 mg/kg			
164	2-(Bromomethyl)-2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-Methyl-1,3-Dioxolane	873012-43-2	>5000 mg/kg			
165	2-[3-(Trifluoromethyl) Phenoxy] Nicotinic Acid	36701-89-0	>5000 mg/kg			
Total Production of Group - 4				**300**	**000**	**300**
Group - 5 Specialty Phenols/ Specialty Chloro Phenol - 500 MT/Month						
166	2, 3-Dichloro Phenol	576-24-9	2376 mg/kg	**500**	**000**	**500**
167	2, 5-Dichloro Phenol	583-78-8	580 mg/kg			
168	3, 4-Dichloro Phenol	95-77-2	1685 mg/kg			
169	3, 5-Dichloro Phenol	591-35-5	2389 mg/kg			
170	3-Mehtyl Phenol (m-Cresol)	108-39-4	242 mg/kg			
171	3- Chloro Phenol	108-43-0	570 mg/kg			
172	3-Nitro Phenol	554-84-7	328 mg/kg			
173	4-(2- Methoxy Ethyl) Phenol	56718-71-9	Data Not Available			
174	Anisole	100-66-3	120-32-1			
175	2,3 Dichloro Anisole	1984-59-4	Data Not Available			
176	2,5 Dichloro Anisole	1984-59-4	Data Not Available			
177	4-Bromo-2-Chloro Phenol	3964-56-5	Data Not Available			
178	4-Bromo 2, 5 Dichloro Phenol	1940-42-7	1350 mg/kg			
179	4-Fluoro Phenol	371-41-5	Data Not Available			
180	2-Fluoro Phenol	367-12-4	Data Not Available			
181	O-Benzyl-p-Chloro Phenol	120-32-1	1700 mg/kg			
182	O-Cyano Phenol	611-20-1	500 mg/kg			
183	P-Chloro-m-Cresol	59-50-7	1830			

			mg/kg			
184	P-Chloro-m-Xylenol	88-04-0	3830 mg/kg			
185	Dichloro-m-Xylenol	133-53-9	Data Not Available			
186	Dichlorophene	97-23-4	3830 mg/kg			
187	Bromochlorophene	15435-29-7	3700 mg/kg			
188	5 - Chloro-2-Amino Phenol	28443-50-7	Data Not Available			
189	4-Chloro-2-Amino Phenol	95-85-2	690 mg/kg			
190	4,6-Dichloro-2-Amino Phenol	527-62-8	Data Not Available			
191	3, 4, 5 Tri Methoxy Toluene	6443-69-2	Data Not Available			
192	4-Bromo Anisole	104-92-7	3800 mg/kg			
193	Ortho Nitro Phenol	88-75-5	334 mg/kg			
194	Para Fluoro Anisole	459-60-9	3700 mg/kg			
195	2- Chloro 4-Fluoro Phenol	1996-41-4	3120 mg/kg			
196	Ortho Fluoro Phenol (2-Fluoro Phenol)	367-12-4	537 mg/kg			
197	Ortho Fluoro Anisole (2-Fluoro Anisole)	321-28-8	3700 mg/kg			
198	4-Nitro-M-Cresol	2581-34-2	1200 mg/kg			
199	3-Hydroxy Benzotrifluoride	98-17-9	57 mg/kg			
200	1-(4-chlorophenyl)-4,4-dimethyl-3-pentanone	66346-01-8	3145 mg/kg			
201	Resorcinol / 1,3 Benzenediol / Meta Di Hydroxy Benzene	108-46-3	3010 mg/kg			
202	Meta Amino Phenol	591-27-5	1924 mg/kg			
Total Production of Group - 5				**500**	**000**	**500**
Group – 6 Amino Benzoic Esters / Aliphatic Esters - 250 MT/Month						
203	3-Amino-4-Methyl Benzoic Acid Methyl Ester	18595-18-1	Data Not Available	**250**	**000**	**250**
204	3-Amino 4-Methyl Benzoic Acid Isopropyl Ester (AMBI)	21447-47-2	300 mg/kg			
205	3-Amino 4-Methyl Benzoic Acid (2' - Chloro Ethyl Ester) (AMBC)	2458-12-0	Data Not Available			

206	5-Amino-2-Methyl Benzene Sulphonic Acid Phenyl Ester	1089339-15-0	Data Not Available			
207	Benzene Sulphonic Acid 3-Amino Phenyl Ester	13653-18-4	Data Not Available			
208	2-Cyano-3,4,5,6-Tetrachloro Benzoic Acid Methyl Ester	5358-06-5	Data Not Available			
209	Benzene Sulphonic Acid 2-Methyl-5-Nitrophenyl Ester	85896-03-3	Data Not Available			
210	Bisphenol - A (Amino Benzene Sulfonate)	68015-60-1	Data Not Available			
211	2-Amino-3-Chloro Benzoic Acid Methyl Ester	77820-58-7	Data Not Available			
212	3,6-Dichloro-2-Hydroxybenzoic Acid	3401-80-7	300 mg/kg			
213	1-Methyl-2-(Phenoxy Phenoxy) Ethanol	134227-44-4	Data Not Available			
214	1-(4-Phenoxyphenoxy)-2-propanol	57650-78-9	Data Not Available			
215	2,2,3,3-Tetramethyl Cyclopropane Carboxylic Acid	15641-58-4	Data Not Available			
216	2,6 Difluoro α-Oxo Benzene Acetic Acid	132115-70-9	Data Not Available			
217	2,6 Difluoro Benzonitrile	1897-52-5	Data Not Available			
218	2,6 Difluoro Benzamide	18063-03-1	3299 mg/kg			
219	2,6 Dichloro Benzonitrile	1194-65-6	2710 mg/kg			
220	3,4-Difluoro Benzonitrile	64248-62-0	Data Not Available			
221	2,6 Di Chloro Benzoxazole	3621-82-7	980 mg/kg			
222	Trimethyl Orthoformate	149-73-3	5000 mg/kg			
223	Triethyl Orthoformate	122-51-0	7060 mg/kg			
224	Sodium Methoxide	124-41-4	1682 mg/kg			
225	Sodium Ethoxide	141-52-6	3450 mg/kg			
226	2 – Amino 3-Chloro Benzoic Acid Methyl Est	77820-58-7	980 mg/kg			
227	2- Nitro-5-Chloro-4-Meth Benzoic Acid Iso Propyl Ester	1204518-43-3	Data Not Available			

228	N-(2-Hydroxypropyl)-2-Picolylamine	68892-16-0	Data Not Available			
Total Production of Group - 6				**250**	**250**	**250**
Group - 7 Amino Compounds / Hydrogenation Compounds - 200 MT/Month						
229	3-Amino-4-Chloro Benzoic Acid	2840-28-0	Data Not Available	**200**	**000**	**200**
230	3-Amino-4-Methyl Benzoic Acid	2458-12-0	Data Not Available			
231	3-Amino-4-Chloro Benzotrifluoride	121-50-6	Data Not Available			
232	3-Amino Benzotrifluoride	98-16-8	480 mg/kg			
233	2-Chloro-1,4 - Phenylene Diamine (2,5 DCPPD)	615-66-7	Data Not Available			
234	2, 5-Dichloro-1, 4-Phenylene Diamine	6393-01-7	Data Not Available			
235	2-Chloro-5-Methyl-1, 4 - Phenylene Diamine	5307-03-9	Data Not Available			
236	2, 5-Dimethyl – 1, 4 – Phenylene Diamine	6393-01-7	Data Not Available			
237	3, 4-Diamino Toluene	496-72-0	73 mg/kg			
238	2, 3-Dichloro Aniline	608-27-5	>200 mg/kg			
239	2, 5-Dichloro Aniline	95-82-9	1600 mg/kg			
240	3, 4-Dichloro Aniline	95-76-1	545 mg/kg			
241	3, 5-Dichloro Aniline	626-43-7	Data Not Available			
242	3-Iso Propoxy Aniline	41406-00-2	Data Not Available			
243	5-Amino Benzimidazole –2-One	95-23-8	Data Not Available			
244	6-Methyl-5-Amino Benzimidazolone	67014-36-2	Data Not Available			
245	2, 4, 5 Tri Chloro Aniline	636-30-6	2975 mg/kg			
246	Ortho Toluidine	95-53-4	2400 mg/kg			
247	Meta Toluidine	108-44-1	417 mg/kg			
248	Para Toluidine	106-49-0	356 mg/kg			
249	Aniline	62-53-3	1500 mg/kg			
250	2,4,6-Trichloro Aniline	634-93-5	820 mg/kg			
251	Para Fluoro Aniline	371-40-4	471 mg/kg			
252	4-Fluoro N-Isopropyl Aniline	70441-63-3	>5000 mg/kg			
253	2,4-Dichloro-3,5-Dinitrobenzotrifluoride	29091-09-6	3167 mg/kg			
254	2,4-DiFluro Aniline	367-25-9	356 mg/kg			
255	2-Bromo-4-Fluoro	1003-98-1	>2000			

	Aniline		mg/kg			
256	Bis (Nonylphenyl) Amine	36878-20-3	>2000 mg/kg			
257	2,6 Dichloro Aniline	608-31-1	3167 mg/kg			
258	Ortho Fluoro Aniline (2-Fluoro Aniline)	348-54-9	356 mg/kg			
259	2-Phenyl-2-Propanamine	585-32-0	Data Not Available			
260	2-Anilino-3-Methyl-6-(di n-butyl amino) Fluoran	89331-94-2	2400 mg/kg			
261	2,3-Dichloro-6-Nitroaniline	65078-77-5	435 mg/kg			
262	4- Fluoro N-Hydro Acetyl N-Isopropyl Aniline. (FIA Hydroxy)	54041-17-7	Data Not Available			
263	N-Methoxy-1-(2,4,6-Trichlorophenyl) Propan-2-Amine	1228284-78-3	820 mg/kg			
264	1- Amino 2,4,6 Trichloro Benzene/ 2,4,6 Tri Chloro Aniline	634-93-5	Data Not Available			
265	2,3,4,5,6 Penta Chloro Pyridine	2176-62-7	Data Not Available			
266	3,7 Di Chloro 8- Methyl Quinoline	84086-96-4	Data Not Available			
267	2,4-Difluoro Aniline	367-25-9	480 mg/kg			
268	2,6- Difluoro Aniline	5509-65-9	128 mg/kg			
269	1,2-Di Fluoro Benzene	367-11-3	Data Not Available			
270	2-Amino Benzotrifluoride	88-17-5	Data Not Available			
271	3 – Amino Benzotrifluoride	98-16-8	480 mg/kg			
272	4 – Amino Benzotrifluoride	455-14-1	128 mg/kg			
273	Ortho Phenylene Diamine	95-54-5	510 mg/kg			
274	Meta Phenylene Diamine	108-45-2	280 mg/kg			
275	Para Phenylene Diamine	106-50-3	80 mg/kg			
276	3,4-Difluoro Benzonitrile	64248-62-0	Data Not Available			
Total Production of Group - 7				**200**	**000**	**200**
Group – 8 Acetylated Compounds -200 MT/Month						
277	2, 4-Dichloro Acetophenone	937-20-2	Data Not Available	**200**	**000**	**200**
278	2, 5-Dichloro Acetophenone	2476-37-1	Data Not Available			
279	4 – Fluoro	403-29-2	Data Not			

	Acetophenone		Available			
280	2, 4-Dichloro-5-Fluoro Acetophenone	704-10-9	>2000 mg/kg			
281	4-Fluoro Phenacyl Chloride	403-26-2	Data Not Available			
282	2, 4-Dichloro Phenacyl Chloride	4252-78-2	50-300 mg/kg			
283	2, 4-Dichlorobuterophenone	66353-47-7	980 mg/kg			
284	2,6 Difluoro Acetophenone	13670-99-0	Data Not Available			
285	3- Hydroxy Acetophenone	121-71-1	Data Not Available			
286	3-Nitro Acetophenone	121-89-1	3250 mg/kg			
287	3-Amino Acetophenone	99-03-6	1870 mg/kg			
Total Production of Group - 8				**200**	**000**	**200**
Group – 9 Nitro Compounds - 200 MT/Month						
288	6-Nitro-3, 4-Dichloro Aniline	6641-64-1	Data Not Available	**200**	**000**	**200**
289	4-Nitro-2, 5-Dichloro Aniline	6627-34-5	2820 mg/kg			
290	2-Nitro-4-Methyl Aniline	89-62-3	Data Not Available			
291	4-Nitro-2, 5-Dimethyl Aniline	3460-29-5	Data Not Available			
292	4-Nitro-5-Chloro-2-Methyl Aniline	13852-51-2	Data Not Available			
293	4-Nitro-2, 5-Dichloro Phenol	5847-57-4	Data Not Available			
294	4-Nitro-2, 3-Dichloro Phenol	39183-17-0	Data Not Available			
295	6-Nitro-2, 4-Dichloro Phenol	609-89-2	Data Not Available			
296	2-Nitro-4-Chloro-Phenol	89-64-5	Data Not Available			
297	5-Nitro Salicylic Acid	96-97-9	Data Not Available			
298	3-Nitro - Para Toluic Acid	96-98-0	Data Not Available			
299	3-Nitro-4-Chloro-Benzotrifluoride	121-17-5	1075 mg/kg			
300	Nitro Benzene	98-95-3	349 mg/kg			
301	2,5 - Dichloro Nitro Benzene	89-61-2	1000 mg/kg			
302	2,3 - Dichloro Nitro Benzene	3209-22-1	381 mg/kg			
303	3,4 - Dichloro Nitro Benzene	99-54-7	>500 mg/kg			
304	2- Nitro Toluene	88-72-2	891 mg/kg			

305	3 - Nitro Toluene	99-08-1	1072 mg/kg			
306	4 - Nitro Toluene	99-99-0	1960 mg/kg			
307	1,3 - Dinitro Benzene	99-65-0	59.5 mg/kg			
308	3,5 - Dinitro Benzoic Acid	99-34-3	1800 mg/kg			
309	4- Chloro – 3,5 – Dinitro Benzoic Acid	1930-72-9	50 mg/kg			
310	Para Fluoro Nitro Benzene	350-46-9	250 mg/kg			
311	Ortho Fluoro Nitro Benzene	1493-27-2	Data Not Available			
312	2,4-Difluoro Nitro Benzene	446-35-5	200 mg/kg			
Total Production of Group - 9				**200**	**000**	**200**
Group - 10 TRICLOSAN / DICLOSAN /AMINO HYDROXY ETHER /HP 100 - 150 MT/Month						
313	HDC HP 100 (TINOSAN HP -100) (Formulated 2-Hydroxy-4-4 Dichloro Diphenyl Ether) (30% Solution)	3380-30-1	Data Not Available	**150**	**000**	**150**
314	Resorcinol Di (Beta - Hydroxy Ethyl) Ether	112-40-9	Data Not Available			
315	Phenofen	40843-73-1	Data Not Available			
Total Production of Group - 10				**150**	**000**	**150**
Group – 11 Chlorinated Compounds / Carbonyl Chlorides -500 MT/Month						
316	Chloro Benzene	108-90-7	1100 mg/kg	**500**	**000**	**500**
317	Ortho Dichloro Benzene & Para Dichloro Benzene	95-50-1 & 106-46-7	500 mg/kg			
318	1,3 Di Chloro Benzene	541-73-1	1062 mg/kg			
319	Ortho Chloro Toluene & Para Chloro Toluene	95-49-8 & 106-43-4	2350 mg/kg			
320	2,4 – Dichloro Toluene	95-73-8	2400 mg/kg			
321	Ortho Chloro Phenol & Para Chloro Phenol	95-57-8 & 106-48-9	40 mg/kg			
322	2,4 Dichloro Phenol	120-83-2	47 mg/kg			
323	2,6 Di Chloro Phenol	87-65-0	2940 mg/kg			
324	N- Valeroyl Chloride	638-29-9	900 mg/kg			
325	4- Nitro Benzoyl Chloride	122-04-3	900 mg/kg			
326	3- Nitro Benzoyl Chloride	121-90-4	2460 mg/kg			
327	4- Chloro Benzoyl	122-01-0	900 mg/kg			

	Chloride					
328	4- Methyl Benzoyl Chloride	874-60-2	900 mg/kg			
329	2,4 Di Chloro Benzoyl Chloride	89-75-8	900 mg/kg			
330	2- Methoxy -5- Bromo - 6- Methyl Benzoyl Chloride	38256-93-8	Data Not Available			
331	Terephthaloyl Chloride	100-20-9	2500 mg/kg			
332	4- Chloro Butyryl Chloride	4635-59-0	1350mg/kg			
333	Pivaloyl Chloride	3282-30-2	638 mg/kg			
334	Propargyl Chloride	624-65-7	Data Not Available			
Total Production of Group - 11				**500**	**000**	**500**
Group – 12 Oxidation Compounds - 100 MT/Month						
335	Para Nitro Benzoic Acid	62-23-7	1960 mg/kg			
336	Ortho Chloro Benzoic Acid	118-91-2	2300 mg/kg			
337	Para Chloro Benzoic Acid	74-11-3	1170 mg/kg			
338	2,4 Di Chloro Benzoic Acid	2736-23-4	Data Not Available			
339	Para Toluic Acid	99-94-5	2340 mg/kg			
Total Production of Group - 12				**100**	**000**	**100**
Total Production of all Groups (from 1 to 12)				**3950**	**0000**	**3950**

By-product					
Sr No	**By Products**	**CAS No**	**Existing Capacity MT/ Month**	**Additional Capacity MT/ Month**	**Total after EC Amendment (MT/Month)**
1.	Sodium Sulphite Solution & Salt	7757-83-7	3696	8455	12151
2.	Potassium Chloride Solution & Salt	7447-40-7	50	1307	1357
3.	Sodium Bi Sulphite S-olution & Salt	7631-90-5	247	9527	9774
4	Sodium Bromide Solution & Salt	7647-15-6	507	2331	2838
5.	Potassium Bromide Solution & Salt	7758-02-3	214	399	613
6.	Aluminium Chloride Solution (20–28%)	7446-70-0	255	2354	2609
7.	Sulphuric Acid (60 - 70%)	7664-93-9	4911	4658	9569
8.	Sodium Chloride Solution & Salt	7647-14-5	578	958	1536
9.	Ammonium Sulphate Solution & Salt	7783-20-2	16	75	91
10.	Sodium Sulphate solution & Salt	7757-82-6	482	2864	3346
11	Sodium Fluoride Solution & Salt	7681-49-4	14	78	92
12	Potassium Fluoride Solution & Salt	7789-23-3	100	0	100
13	Ammonium Chloride	12125-02-9	85	260	345
14	Dilute HCl (30%)	7647-01-0	0	4273	4273
15	Hydrogen Bromide HBr (25-28%)	10035-10-	0	3904	3904

		6			
16	Phosphorous oxychloride ($POCl_3$)	10025-87-3	0	133	133
17	Phosphoric Acid	7664-38-2	0	1175	1175
18	Sodium Acetate	127-09-3	0	109	109
19	Ammonia	7664-41-7	0	1334	1334
20	Sodium Hypochlorite (NaOCl 8-10%) Solution	7681-52-9	0	386	386
TOTAL			**11,155**	**44,580**	**55,735**

41.4.3.*3* *The EAC, after detailed deliberations and especially in view of the EC issued by the Ministry in 3rd July, 2015, insisted for monitoring report on compliance status of the conditions stipulated in the environmental clearance dated 3rd July, 2015 from the concerned Regional Office of the Ministry. The Committee desired to take the proposal forward after the certified compliance report is received.*

The proposal is therefore, deferred for the needful on the above lines.

Agenda No.41.4.4

Expansion of Pesticide Manufacturing Unit at Plot No. 8104, 8109, 8110, 8111 & 268/1, Sachin GIDC Estate, Tehsil & District Surat, Gujarat by M/s Anupam Rasayan India Ltd. (Unit-1) - For Amendment in EC

[IA/GJ/IND2/75324/2015, J-11011/357/2013 IA II (I)]

41.4.4.1 The proposal is for amendment in the Environmental Clearance granted by the Ministry vide letter dated: 3rd July, 2015 for expansion of Pesticide technical, Pesticide intermediates and proposed expansion of specialty chemical manufacturing unit in favour of M/s Anupam Rasayan India Ltd (UNIT- 1) at plot No. 8104, 8106, 8109, 8110, 8111 & 268/1, Sachin, GIDC Estate, Sachin, District Surat (Gujarat).

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

S. No.	Point of EC issued by MoEFCC, New Delhi	Details as per the EC	To be revised	Justification/Reasons
1	Condition No. 02	Plot Addition	We want to add Plot No. 8106 in our existing premise.	Plot No. 8106 is adjoining plot to plot No. 8104, so we have purchased it and merge with our existing unit. Addition of Industrial Plot 8106 to 8104,8109,8110,8111 & 268/1 & final address to be amended as Anupam Rasayan India Ltd, -- Unit-1 Plot No: 8104, 8106, 8109, 8110, 8111 & 268/1).

2.	Condition No. 02	List of Products	We want to add 73 Nos. of products in list of products. And production capacity will be remain same as per existing EC.	As per market demand as well as customers need, we want to add these new products. Revised Product list is given in Annexure-1.
3	A. Specific Condition - Condition No. ii	ESP shall be provided for coal/briquette fired boiler to control particulate matter. Continuous air emission monitoring system to be installed from the stack. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/GPCB guidelines.	Company couldn't install the coal based boiler of 6MT/Hr. So ESP is not provided till the date. Now company will install the gas based boiler -8 MT/Hr. Also company want to add Thermo pack -400 U x 2 Nos., Thermo Pack -250 U x 5 Nos.	Justification is given in Annexure-2.
4.	A. Specific Condition - Condition No. viii	The gaseous emission from DG Set shall be dispersed through adequate height as per CPCB Standard. Acoustic enclosure shall be provided to the DG Set to mitigate the noise pollution.	Company will dismantle existing old DG Set – 500 KVA & 125 KVA. Companies want to install 2 nos. of DG Set and capacity of DG Set-1: 1250 KVA and DG Set-2: 2000 KVA.	Justification is given in Annexure-2.
5.	A. Specific Condition - Condition No. xi	Total Water consumption from GIDC water supply shall not exceed 228 m^3/Day and prior permission shall be obtained from the competent authority.	Total water consumption from GIDC water supply shall 342.9 m^3/Day after additional of new gas fired boiler. Water consumption will increase 21.885 m^3/Day.	Due to additional of new gas fired boiler, Water consumption will increase by 21.885 m^3/Day. So water consumption (321.015 m^3/Dayto342.9 m^3/Day**)**. Waste water will be same as per the existing EC.
6.	A. Specific Condition -	The company shall obtain	Quantity of Hazardous waste	No. of by-product and quantity will increase which are

	Condition No. xvii	Authorization for collection, Storage and disposal of hazardous waste under the Hazardous waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and amended as on date for management of Hazardous Wastes and prior permission from GPCB shall be obtained for disposal of solid/hazardous waste in the TSDF. Measures shall be taken for firefighting facilities in case of emergency. Membership of TSDF for hazardous waste shall be obtained.	will not increase due to addition of new products but no. of by-product and quantity will increase which are incorporated in hazardous waste as per Hazardous waste Rules-2016.	incorporated in hazardous waste as per Hazardous waste Rules-2016. Please refer Annexure-3.
7.	A. Specific Condition - Condition No. xii.	Industrial effluent generation shall not exceed 181 m^3/Day. Effluent shall be segregated into High COD /High TDS and low COD/TDS effluent stream. High COD/TDS effluent stream shall be evaporated in MEE. Low COD/TDS effluent stream shall be treated in ETP. Treated	Low COD/TDS effluent stream (29.985 m^3/Day) shall be treated in ETP. Treated effluent shall be discharged into CETP for further treatment after conforming to discharge norms. And High COD/High TDS effluent stream (50 m^3/Day) shall be sent to Common MEE facility, M/s. MEPPL, Sachin for	In case of In-house MEE system goes under non-operational mode. Membership certificate of Common MEE Facility, M/s. MEPPL, Sachin is referred as annexure-4.

		effluent shall be discharged into CETP for further treatment after conforming to discharge norms. Condensate and recover water shall be treated and recycled/reused within factory premises.	further treatment after primary treatment. Low COD/TDS effluent stream (60 m^3/Day) shall be treated in ETP. Treated effluent shall be reused in plant premises.	

ANNEXURE – 1

REVISED LIST OF PRODUCTS ALONG WITH PRODUCTION CAPACITY

Sr. No.	Name of Product	CAS NO.	LD50 (mg/Kg)	Existing Capacity as Per EC (MT/Month)	Additional Capacity (MT/Month)	Total after EC Amendment (MT/Month)
Group - A (Herbicides)				**500**	**00**	**500**
A. Amide / Nitro Phenyl Ether Herbicides						
1	Fomesafen (T)	72178-02-0	>5000 mg/kg			
2	Halosafen (T)	77227-69-1	2000 mg/kg			
3	Napropamide (T)	15299-99-7	4680 mg/kg			
4	Quinclorac	84087-01-4	>2000 mg/kg			
5	Bromobutide	74712-19-9	>5000 mg/kg			
B. Anilide / Pyridine / Aryloxyphenoxypropionic Herbicides						
6	Metamifop (T)	256412-89-2	>2000 mg/kg			
7	Picolinafen (T)	137641-05-5	>5000 mg/kg			
8	Chlorazifop (T) & Chlorazifop Propargyl (T)	60074-25-1&72880-52-5	1200 mh/kg			
9	Clodinafop & Clodinafop Propargyl (T)	114420-56-3&105512-06-9	300 mg/kg			
10	Cyhalofop & Cyhalofop Butyl (T)	122008-78-0& 122008-85-9	>5000 mg/kg			
11	Diclofop (T) & Diclofop Methyl (T)	40843-25-2&51338-27-3	523 mg/kg			
12	Fenoxaprop (T) &	95617-09-	>5000			

	Fenoxaprop P Ethyl (T)	7&71283-80-2	mg/kg			
13	Fluazifop (T) & Fluazifop P Butyl	69335-91-7&79241-46-6	2910 mg/kg			
14	Haloxyfop (T) & Haloxyfop Methyl	69806-34-4&72619-32-0	>5000 mg/kg			
15	Quizalofop (T) &Quizalofop Ethyl (T)	76578-12-6&76578-14-8	>2000 mg/kg			
16	Cloquintocet Mexyl (T)	99607-70-2	>2000 mg/kg			
17	Quizalofop-P-Tefuryl	119738-06-6	1012 mg/kg			
18	Haloxyfop Ethoxy Ethyl (Etotyl)	87237-48-7	518 mg/kg			
19	Flufenacet	142459-58-3	589 mg/kg			
20	Diflufenican	83164-33-4	2150 mg/kg			
21	Cloransulam-Methyl	220899-03-6	>5000 mg/kg			
C. Phenyl Ether /Phenoxy Carboxylic Acid / Pyridine / Nitro Phenyl Ether						
22	Acifluorfen (T)	50594-66-6	2128 mg/kg			
23	Aclonifen (T)	74070-46-5	>5000 mg/kg			
24	Chlomethoxyfen (T)	32861-85-1	>10000 mg/kg			
25	Fluoroglycofen (T)	77501-90-7	1480 mg/kg			
26	Lactofen (T)	77501-63-4	>5000 mg/kg			
27	Oxyfluorfen (T)	42874-03-3	>2150 mg/kg			
28	Dicamba(T)	1918-00-9	1039 mg/kg			
29	Fluoroxypyr-Meptyl	81406-37-3	>5000 mg/kg			
30	Picloram	1918-02-1	2892 mg/kg			
31	Triclopyr – Butotyl	64700-56-7	2140 mg/kg			
D. Triazinone Herbicides I D / Cyclohexane Oxime						
32	Metamitron (T)	41394-05-2	1447 mg/kg			
33	Metribuzine (T)	21087-64-9	1100 mg/kg			
34	Clethodine (T)	99129-21-2	1360 mg/kg			

35	Imazamethabenz	100728-84-5	>5000 mg/kg			
36	Imazamox	114311-32-9	>5000 mg/kg			
37	Imazapyr	81334-34-1	>5000 mg/kg			
38	Imazethapyr	81335-77-5	>5000 mg/kg			
39	Benoxacor	93730-04-2	5000 mg/kg			
40	Phenmedipham	13684-63-4	4000 mg/kg			
41	Desmedipham	13684-56-5	9600 mg/kg			
Total Production of Groups - A (Herbicides)				**500**	**000**	**500**
	Group - B (Fungicides)					
A. Conazole Fungicide						
42	1,2,4 Triazole	288-88-0	1320.39 mg/kg	**375**	**000**	**375**
43	3- Methyl 1,2,4 Triazole	7170-01-6	1250 mg/kg			
44	Difenoconazole (T)	119446-68-3	1453 mg/kg			
45	Azaconazole (T)	60207-31-0	308 mg/kg			
46	Bromuconazole (T)	116255-48-2	365 mg/kg			
47	Epoxiconazole (T)	133855-98-8	>5000 mg/kg			
48	Etazonazole (T)	84625-61-6	>320 mg/kg			
49	Hexaconazole (T)	79983-71-4	2189 mg/kg			
50	Penconazole (T)	66246-88-6	2125 mg/kg			
51	Propiconazole (T)	60207-90-1	1517 mg/kg			
52	Tebuconazole (T)	107534-96-3	3352 mg/kg			
53	Fenfuconzole (T)	114369-43-6	>2000 mg/kg			
54	Ipconzole (T)	125225-28-7	1338 mg/kg			
55	Metconzole (T)	125116-23-6	1459 mg/kg			
56	Tetraconazole (T)	112281-77-3	>500 mg/kg			
57	Cyproconazole (T)	94361-06-5	1020 mg/kg			
58	Prothioconazole (T)	178928-	>6200			

		70-6	mg/kg			
59	Fluquinconazole (T)	136426-54-5	112 mg/kg			
60	Myclobutanil (T)	88671-89-0	1600 mg/kg			
61	Imazalil (T)	35554-44-0	227 mg/kg			
62	Triadimenol (T)	55219-65-3	700 mg/kg			
63	Triadimefol (T)	43121-43-3	363 mg/kg			
64	Triticonazole(T)	131983-72-7	>2000 mg/kg			
65	Etoxazole	153233-91-1	>5000 mg/kg			
66	Metrafenone	220899-03-6	>5000 mg/kg			
B. **Strobilurin / Methoxyacrylate / Carbanilate / Amide / Fungicides**						
67	Dimoxystrobin (T)	149961-52-4	>5000 mg/kg			
68	Kresoxim Methyl (T)	143390-89-0	5000 mg/kg			
69	Trifloxystrobin (T)	141517-21-7	>5000 mg/kg			
70	Flufenoxy Strobin (T)	918162-02-4	5000 mg/kg			
71	Picoxystrobin (T)	117428-22-5	>5000 mg/kg			
72	Triclopyricarb(T)	902760-40-1	5000 mg/kg			
73	Azoxy Strobin (T)	131860-33-8	>5000 mg/kg			
74	Metominostrobin (T)	133408-50-1	5000 mg/kg			
75	Fluoxastrobin (T)	361377-29-9	>5000 mg/kg			
76	Orysastrobin (T)	248593-16-0	2460 mg/kg			
77	Pyraclostrobin (T)	175013-18-0	>5000 mg/kg			
78	Fenoxanil (T)	115852-48-7	300 mg/kg			
79	Cymoxanil (T)	57966-95-7	960 mg/kg			
80	Flutolanil	66332-96-5	10000 mg/kg			
C. Acylamino / Anilide / Aromatic Fungicides / Quinoline / Dicarboxymale / Oxazole						
81	Metalaxyl (T)	57837-19-1	566 mg/kg			
82	Benalaxyl (T)	71626-11-4	4200 mg/kg			

83	Clorothalanil (T)	1897-45-6	10000 mg/k			
84	Fluazinam (T)	79622-59-6	>5000 mg/kg			
85	Quinoxyfen (T)	124495-18-7	5000 mg/kg			
86	Famoxadone (T)	131807-57-3	>5000 mg/kg			
87	Paclobutrazol	76738-62-0	1300 mg/kg			
Total Production of Group - B (Fungicides)				**375**	**000**	**375**
Group - C (AMINO DIPHENYL ETHER / PHENOXY COMPOUNDS)						
88	2-Amino-2', 4'-Dichloro Diphenyl Ether (Y)	56966-48-4	1524 mg/kg	**333**	**000**	**333**
89	2-Amino - 2'- Methyl Diphenyl Ether (Red Ether)	3840-18-4	100 mg/kg			
90	Amino Resorcine Di Ortho Cresyl Ether		2000 mg/kg			
91	2-Amino Di Phenyl Ether (Ortho Amino Di Phenyl Ether/2 - PA)	2688-84-8	212 mg/kg			
92	4-Amino Di Phenyl Ether	139-59-3	1100 mg/kg			
93	4-Amino 4'- Methyl Di Phenyl Ether (4-PP)		1250 mg/kg			
94	2- Amino 2', 4, 4'- Tri Chloro Di Phenyl Ether (Benzinamide, 5-Chloro-2-2(2,4-Dichloro Phenoxy)/Tade)	56966-52-0	1100 mg/kg			
95	4- Amino 2', 4' Di Chloro Di Phenyl Ether (OD Amino)	14861-17-7	2000 mg/kg			
96	4, 4'- Di Amino Di Phenyl Ether	101-80-4	725 mg/kg			
97	3, 4' - Di Amino Di Phenyl Ether	2657-87-6	2350 mg/kg			
98	2- Amino -4- Chloro Di Phenyl Ether (PHD Ether)	93-67-4	2000 mg/kg			
99	4- Amino -2, 4' -Di Chloro Di Phenyl Ether (GE/Aminophene)	14861-17-7	1758 mg/kg			
100	2- Amino - 4' - Chloro Di Phenyl Ether	93-67-4	2000 mg/kg			
101	2- Amino -4'- Chloro -4 -Trifluoromethyl Di Phenyl Ether (ACTM)	349-20-2	1345 mg/kg			
102	4- Amino - 4' - Chloro	101-79-1	2000			

	Di Phenyl Ether (PPNA)		mg/kg			
103	1, 2- Bis (2- Amino Phenoxy) Ethane	85233-19-8	2485 mg/kg			
104	1,2-Bis(4-Amino Phenoxy) Ethane	6052-10-4	2000 mg/kg			
105	4-Amino-4'-Nitro Diphenyl Ether	6149-33-3	300 mg/kg			
106	2-Amino-2',4 -Dichloro Diphenyl Ether	56966-48-4	300 mg/kg			
107	2-Amino-4,4'-Dichloro Diphenyl Ether (PD Amino)	121-27-7	2000 mg/kg			
108	2-(4-Nitro Phenoxy) Ethanol	16365-27-8	2000 mg/kg			
109	1,4-Bis(4-Amino Phenoxy) Benzene	3491-12-1	1450 mg/kg			
110	1,3-Bis(4-Amino Phenoxy) Benzene	2479-46-1	1378 mg/kg			
111	1,3-Bis(3-Amino Phenoxy) Benzene	10526-07-5	690 mg/kg			
112	1,2-Bis(2-Methyl Phenoxy) Ethane		7580 mg/kg			
113	1,2-Bis(3-Methyl Phenoxy) Ethane	54914-85-1	7580 mg/kg			
114	1,2-Bis(3-Methyl Phenoxy) Ethane	54914-85-1	7580 mg/kg			
115	5-Amino-2,2',3-Trichloro-4-Nitro-Diphenyl Ether	118353-04-1	200 mg/kg			
116	2-Amino -4,4'-Dichloro Diphenyl Ether-2'-Sulfonic Acid/Sodium Salt	42293-27-6	2000 mg/kg			
117	4,4'-Dihydroxy Diphenyl Ether	1965-09-9	561 mg/kg			
118	2-Hydroxy-4,4'-Dichloro Diphenyl Ether	3380-30-1	4000 mg/kg			
119	2-Hydroxy-2,4,4'-Trichloro Diphenyl Ether	3380-34-5	3700 mg/kg			
120	4-Hydroxy-2',4'-Dichloro Diphenyl Ether		300 mg/kg			
121	2-Chloro-4-(4-Chlorophenoxy) Acetophenone/4-Acetyl-3,4'-Dichloro Diphenyl Ether	119851-28-4	2000 mg/kg			
122	2-Acetyl-2',4,4'-Trichloro Diphenyl		5000 mg/kg			

	Ether					
123	4,4’ Dimethyl Diphenyl Ether		2600 mg/kg			
124	4,4’-Dicarboxy Diphenyl Ether	2215-89-6	5000 mg/kg			
125	Diphenyl Ether	101-84-8	2450 mg/kg			
126	4-Hydroxy Diphenyl Ether / 4-Phenoxy Phenol	831-82-3	2450 mg/kg			
127	5 Chloro-6-(2,3 Dichloro Phenoxy)-2-Methyl thio -1H Benzimidazole /Triclabendazole	68786-66-3	8000 mg/kg			
128	3,4’-Dimethyl Diphenyl Ether	51801-69-5	7940 mg/kg			
129	3-Phenoxy Toluene	3586-14-9	2509 mg/kg			
130	2,4-Bis[4-(2-ethylhexyloxy)-2-hydroxyphenyl]-6-(4-methoxyphenyl)-1,3,5-triazine/ Bemotrizinol.	187393-00-6	>2000 mg/kg			
131	2,2'-Methylenebis-[6-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol]	103597-45-1	>2000 mg/kg			
132	1-(4-tert-Butylphenyl)-3-(4-methoxyphenyl)-1,3-propanedione	70356-09-1 / 87075-14-7	>16000 mg/kg			
133	2-Hydroxy-4-methoxybenzophenone	131-57-7	7400 mg/kg			
134	2-Ethylhexyl 4-methoxycinnamate	5466-77-3	9600 mg/kg			
135	2-Cyano-3,3-diphenyl-2-propenoic acid 2-ethylhexyl ester	6197-30-4	>2000 mg/kg			
136	Bis(2-ethylhexyl) 4,4'-(6-(4-tert-butylcarbamoyl) anilino)-1,3,5-triazine-2,4-diyldiimino) dibenzoate	154702-15-5	2000 mg/kg			
137	4,4',4"-(1,3,5-Triazine-2,4,6-triyltriimino)-tris-benzoic acid tris-(2-ethylhexyl) ester	88122-99-0	>5000 mg/kg			
138	2-(Bromomethyl)-2-[2-chloro-4-(4-chlorophenoxy)phenyl]-	873012-43-2	>5000 mg/kg			

	4-Methyl-1,3-Dioxolane					
139	2-[3-(Trifluoromethyl) Phenoxy] Nicotinic Acid	36701-89-0	>5000 mg/kg			
Total Production of Group - C				**333**	**000**	**333**
Group -D Specialty Phenols						
140	2, 3-Dichloro Phenol	576-24-9	2376 mg/kg	**250**	**000**	**250**
141	2, 5-Dichloro Phenol	583-78-8	580 mg/kg			
142	3, 4-Dichloro Phenol	95-77-2	1685 mg/kg			
143	3, 5-Dichloro Phenol	591-35-5	2389 mg/kg			
144	3-Mehtyl Phenol (m-Cresol)	108-39-4	242 mg/kg			
145	3- Chloro Phenol	108-43-0	570 mg/kg			
146	3-Nitro Phenol	554-84-7	328 mg/kg			
147	4-(2- Methoxy Ethyl) Phenol	56718-71-9	2000 mg/kg			
148	Anisole	100-66-3	1203 mg/kg			
149	2,3 Dichloro Anisole	1984-59-4	2000 mg/kg			
150	2,5 Dichloro Anisole	1984-59-4	2000 mg/kg			
151	4-Bromo-2-Chloro Phenol	3964-56-5	1550 mg/kg			
152	4-Bromo 2,5 Dichloro Phenol	1940-42-7	1350 mg/kg			
153	4-Fluoro Phenol	371-41-5	293 mg/kg			
154	2-Fluoro Phenol	367-12-4	250 mg/kg			
155	O-Benzyl-p-Chloro Phenol	120-32-1	1700 mg/kg			
156	O-Cyano Phenol	611-20-1	500 mg/kg			
157	P-Chloro-m-Cresol	59-50-7	1830 mg/kg			
158	P-Chloro-m-Xylenol	88-04-0	3830 mg/kg			
159	Dichloro-m-Xylenol	133-53-9	3830 mg/kg			
160	Dichlorophene	97-23-4	3830 mg/kg			
161	Bromochlorophene	15435-29-	3700			

		7	mg/kg			
162	5 - Chloro-2-Amino Phenol	28443-50-7	590 mg/kg			
163	4-Chloro-2-Amino Phenol	95-85-2	690 mg/kg			
164	4,6-Dichloro-2-Amino Phenol	527-62-8	1750 mg/kg			
165	3,4,5 Tri Methoxy Toluene	6443-69-2	1600 mg/kg			
166	4-Bromo Anisole	104-92-7	3800 mg/kg			
167	Ortho Nitro Phenol	88-75-5	334 mg/kg			
168	Para Fluoro Anisole	459-60-9	3700 mg/kg			
169	2- Chloro 4-Fluoro Phenol	1996-41-4	312 mg/kg			
170	Ortho Fluoro Phenol (2-Fluoro Phenol)	367-12-4	537 mg/kg			
171	Ortho Fluoro Anisole (2-Fluoro Anisole)	321-28-8	3700 mg/kg			
172	4-Nitro-M-Cresol	2581-34-2	1200 mg/kg			
173	3-Hydroxy Benzotrifluoride	98-17-9	57 mg/kg			
174	1-(4-chlorophenyl)-4,4-dimethyl-3-pentanone	66346-01-8	3145 mg/kg			
Total Production of Group - D				**250**	**000**	**250**
	Group -E Amino Benzoic Esters					
175	3-Amino-4-Methyl Benzoic Acid Methyl Ester	18595-18-1	2000 mg/kg	**250**	**000**	**250**
176	3-Amino 4-Methyl Benzoic Acid Isopropyl Ester (AMBI)	21447-47-2	300 mg/kg			
177	3-Amino 4-Methyl Benzoic Acid(2' - Chloro Ethyl Ester) (AMBC)	2458-12-0	2000 mg/kg			
178	5-Amino-2-Methyl Benzene Sulphonic Acid Phenyl Ester		Data Not Available			
179	Benzene Sulphonic Acid 3-Amino Phenyl Ester	13653-18-4	Data Not Available			
180	2-Cyano-3,4,5,6-Tetrachloro Benzoic Acid Methyl Ester		Data Not Available			
181	Benzene Sulphonic Acid 2-Methyl-5-		Data Not Available			

	Nitrophenyl Ester					
182	Bisphenol - A (Amino Benzene Sulfonate)		Data Not Available			
183	2-Amino-3-Chloro Benzoic Acid Methyl Ester	77820-58-7	Data Not Available			
184	3,6-Dichloro-2-Hydroxybenzoic Acid	3401-80-7	300 mg/kg			
185	1-Methyl-2-(Phenoxy Phenoxy) Ethanol		Data Not Available			
186	1-(4-Phenoxyphenoxy)-2-propanol	57650-78-9	Data Not Available			
187	2,2,3,3-Tetramethyl Cyclopropane Carboxylic Acid	15641-58-4	Data Not Available			
188	2,6 Difluoro α-Oxo Benzene Acetic Acid	132115-70-9	Data Not Available			
189	2,6 Difluoro Benzonitrile	1897-52-5	Data Not Available			
190	2,6 Difluoro Benzamide	18063-03-1	3299 mg/kg			
191	2,6 Dichloro Benzonitrile	1194-65-6	2710 mg/kg			
192	3,4-Difluoro Benzonitrile	64248-62-0	Data Not Available			
193	2,6 Di Chloro Benzoxazole	3621-82-7	980 mg/kg			
Total Production of Group - E				**250**	**000**	**250**
		Group - F Amino Compounds				
194	3-Amino-4-Chloro Benzoic Acid	2840-28-0	Data Not Available	**167**	**000**	**167**
195	3-Amino-4-Methyl Benzoic Acid	2458-12-0	Data Not Available			
196	3-Amino-4-Chloro Benzotrifluoride	121-50-6	Data Not Available			
197	3-Amino Benzotrifluoride	98-16-8	480 mg/kg			
198	2-Chloro-1,4 - Phenylene Diamine (2,5 DCPPD)	615-66-7	Data Not Available			
199	2, 5-Dichloro-1, 4-Phenylene Diamine	6393-01-7	Data Not Available			
200	2-Chloro-5-Methyl-1, 4 - Phenylene Diamine	5307-03-9	Data Not Available			
201	2, 5-Dimethyl – 1, 4 – Phenylene Diamine	6393-01-7	Data Not Available			
202	3,4-Diamino Toluene	496-72-0	73 mg/kg			
203	2,3-Dichloro Aniline	608-27-5	>200			

			mg/kg			
204	2, 5-Dichloro Aniline	95-82-9	1600 mg/kg			
205	3, 4-Dichloro Aniline	95-76-1	545 mg/kg			
206	3, 5-Dichloro Aniline	626-43-7	Data Not Available			
207	3-Iso Propoxy Aniline	41406-00-2	Data Not Available			
208	5-Amino Benzimidazole –2-One		Data Not Available			
209	6-Methyl-5-Amino Benzimidazolone	67014-36-2	Data Not Available			
210	2,4,5 Tri Chloro Aniline	636-30-6	2975 mg/kg			
211	2,4,6-Trichloro Aniline	634-93-5	2400 mg/kg			
212	Para Fluoro Aniline	371-40-4	417 mg/kg			
213	4-Fluoro N-Isopropyl Aniline	70441-63-3	356 mg/kg			
214	2,4-Dichloro-3,5-Dinitrobenzotrifluoride	29091-09-6	1500 mg/kg			
215	2,4-DiFluro Aniline	367-25-9	820 mg/kg			
216	2-Bromo-4-Fluoro Aniline	1003-98-1	Data Not Available			
217	Bis (Nonylphenyl) Amine	36878-20-3	>5000 mg/kg			
218	2,6 Dichloro Aniline	608-31-1	3167 mg/kg			
219	Ortho Fluoro Aniline (2-Fluoro Aniline)	348-54-9	356 mg/kg			
220	2-Phenyl-2-Propanamine	585-32-0	Data Not Available			
221	2-Anilino-3-Methyl-6-(di n-butyl amino) Fluoran	89331-94-2	>2000 mg/kg			
222	2,3-Dichloro-6-Nitroaniline	65078-77-5	Data Not Available			
223	4- Fluoro N-Hydro Acetyl N-Isopropyl Aniline. (FIA Hydroxy)	54041-17-7	Data Not Available			
224	N-Methoxy-1-(2,4,6-Trichlorophenyl) Propan-2-Amine	1228284-78-3	Data Not Available			
225	1- Amino 2,4,6 Trichloro Benzene/ 2,4,6 Tri Chloro Aniline	634-93-5	2400 mg/kg			
226	2,3,4,5,6 Penta Chloro Pyridine	2176-62-7	435 mg/kg			
227	3,7 Di Chloro 8- Methyl	84086-96-	Data Not			

	Quinoline	4	Available			
228	2,4-Difluoro Aniline	367-25-9	820 mg/kg			
229	2,6- Difluoro Aniline	5509-65-9	Data Not Available			
230	1,2-Di Fluoro Benzene	367-11-3	Data Not Available			
231	2-Amino Benzotrifluoride	88-17-5	Data Not Available			
232	3 – Amino Benzotrifluoride	98-16-8	480 mg/kg			
233	4 – Amino Benzotrifluoride	455-14-1	128 mg/kg			
Total Production of Group - F				**167**	**000**	**167**
			Group - G Acetylated Compounds			
234	2, 4-Dichloro Acetophenone	937-20-2	Data Not Available	**167**	**000**	**167**
235	2, 5-Dichloro Acetophenone	2476-37-1	Data Not Available			
236	4 – Fluoro Acetophenone	403-29-2	Data Not Available			
237	2,4-Dichloro-5-Fluoro Acetophenone	704-10-9	>2000 mg/kg			
238	4-Fluoro Phenacyl Chloride	403-26-2	Data Not Available			
239	2,4-Dichloro Phenacyl Chloride	4252-78-2	50-300 mg/kg			
240	2,4-Dichlorobuterophenone	66353-47-7	980 mg/kg			
241	2,6 Difluoro Acetophenone	13670-99-0	Data Not Available			
242	3- Hydroxy Acetophenone	121-71-1	Data Not Available			
243	3-Nitro Acetophenone	121-89-1	3250 mg/kg			
244	3-Amino Acetophenone	99-03-6	1870 mg/kg			
Total Production of Group - G				**167**	**000**	**167**
			Group - H Nitro Compounds			
245	6-Nitro-3,4-Dichloro Aniline		Data Not Available	**167**	**000**	**167**
246	4-Nitro-2,5-Dichloro Aniline	6627-34-5	2820 mg/kg			
247	2-Nitro-4-Methyl Aniline	89-62-3	Data Not Available			
248	4-Nitro-2,5-Dimethyl Aniline	3460-29-5	Data Not Available			
249	4-Nitro-5-Chloro-2-Methyl Aniline	13852-51-2	Data Not Available			

250	4-Nitro-2,5-Dichloro Phenol	5847-57-4	Data Not Available			
251	4-Nitro-2,3-Dichloro Phenol	39183-17-0	Data Not Available			
252	6-Nitro-2,4-Dichloro Phenol	609-89-2	Data Not Available			
253	2-Nitro-4-Chloro-Phenol	89-64-5	Data Not Available			
254	5-Nitro Salicylic Acid	96-97-9	Data Not Available			
255	3-Nitro - Para Toluic Acid	96-98-0	Data Not Available			
256	3-Nitro-4-Chloro-Benzotrifluoride	121-17-5	1075 mg/kg			
257	Para Fluoro Nitro Benzene	350-46-9	250 mg/kg			
258	Ortho Fluoro Nitro Benzene	1493-27-2	Data Not Available			
259	2,4-Difluoro Nitro Benzene	446-35-5	200 mg/kg			
Total Production of Group - H				**167**	**000**	**167**
Group - I Hydrogenation Compounds						
260	3,5-Dichloro Aniline	626-43-7	Data Not Available	**84**	**00**	**84**
261	2- Amino Diphenyl Ether	2688-84-8	212 mg/kg			
262	2,5 Dichloro Aniline	95-82-9	1600 mg/kg			
263	2,3 Dichloro Aniline	608-27-5	>8047 mg/kg			
264	3,4-Dichloro Aniline	95-76-1	545 mg/kg			
Total Production of Group - I				**84**	**00**	**84**
Group - J TRICLOSAN / DICLOSAN /AMINO HYDROXY ETHER /HP 100						
265	HDC HP 100 (TINOSAN HP -100) (Formulated 2-Hydroxy-4-4 Dichloro Diphenyl Ether) (30% Solution)	3380-30-1	Data Not Available	**170**	**000**	**170**
266	Resorcinol Di (Beta - Hydroxy Ethyl) Ether		Data Not Available			
267	Phenofen	40843-73-1	Data Not Available			
Total Production of Group - J				**170**	**000**	**170**
Total Production				**2463**	**000**	**2463**

41.4.4.*3* *The EAC after detailed deliberations, recommended (except point No.2 i.e. Product list) for amendment in the environmental clearance dated 3rd July, 2015 as proposed by the project proponent. The Committee also suggested the project proponent to apply for change in product mix as per the Ministry's Notification dated 23rd November, 2016.*

Agenda No.41.4.5

Expansion of existing ethylene capacity with new product diversification at Tehsil Sutahata -1, Haldia, District East Medinipur, West Bengal by M/S Haldia Petrochemicals Limited - For Amendment in EC

[IA/WB/IND2/67219/2016, IA/WB/IND2/54367/2016]

41.4.5.1 The proposal is for amendment in the environmental clearance granted by the Ministry vide letter dated 20th March, 2018 for Expansion of Naptha cracking facility and petrochemical products at Tehsil Sutahata-1, Haldia, District East Medinipur, West Bengal in favour of M/s Haldia Petrochemicals Limited.

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

S. No.	Para of ToR/EC issued by MoEFCC	Details as per the EC	To be revised/read as	Justification/ reasons
7 (3rd paragraph, 4th line)	Existing unit has one emergency DG set of 800 KVA capacity and no additional DG sets are proposed.	The capacity of the existing emergency DG sets has been incorrectly mentioned in the ToR.	Existing unit has one emergency DG set of 1500 KVA capacity and no additional DG sets are proposed.	The capacity of the emergency DG set installed at the plant is of 1500 KVA.
11 (iv)	Necessary authorization required under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, Solid Waste Management Rules, 2016shall be obtainedand the provisions contained in the Rules shall be	The industry has been mandated to obtain authorization and implement Solid Waste Management Rules, 2016.	Necessary authorization required under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016and the provisions contained in the Rule shall be strictly adhered to.	We would request for a clarificationon the applicability of the Solid Waste Management Rules, 2016 to a plant like HPL. According to the Rule No. 2 (Application) of SWM Rules 2016, "these rules shall apply to every urban local body, outgrowths in urban agglomerations, census town as declared by the Registrar General and Census Commissioner of India, notified areas, notified industrial townships, areas under the control of Indian Railways, airports, airbases, ports and

	strictly adhered to.			harbours, defence establishments, special economic zones, State and Central Government organisations, places of pilgrims, religious and historical importance as may be notified by respective State Government from time to time and to every domestic, institutional, commercial and any other non-residential solid waste generator situated in the areas except industrial waste, hazardous waste, hazardous chemicals, bio-medical wastes, e-waste, lead-acid batteries and radioactive waste that are covered under separate rules framed under the Environment (Protection) Act, 1986."
11 (v)	Environmental Standards for Petroleum Oil Refinery dated 18th March, 2008 and Environmental Standards for Petrochemical (Basics and Intermediates) dated on 9th November, 2012 and its amendments from time to time shall be followed.	The Facility has been mandated to follow the Environmental Standards for Petroleum Oil Refinery, dated 18th March 2008, and Environmental Standards for Petrochemical (Basics and Intermediates) dated on 9th November, 2012 and its amendments from time to time.	Environmental Standards for Petrochemical (Basics and Intermediates) dated on 9thNovember, 2012 and its amendments from time to time shall be followed.	HPL does not have a petroleum oil refinery, hence the Environmental Standards for Petroleum Oil Refinery dated 18th March, 2008 may not be applicable for the Facility.
11 (vi)	To control source and fugitive emissions, suitable	It was mentioned in the ToR that the boiler would be of	To control source and fugitive emissions, suitable	Primarily, the CFBC boiler would be operated on imported and domestic coal in the ratio of 70:30 only. Depending on availability,

	pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Multi-cyclone followed by bag filter shall be provided to the DCU Coke based CFBC boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.	coal based boiler.	pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Multi-cyclone followed by bag filter shall be provided to the DCU Coke as well as Coal basedCFBC boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.	Petroleum coke from a nearby refinery may be used as a supplementary fuel, after ensuring full compliance with the emission norms.
11 (viii)	Process effluent/ any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.	It has been mandated to route the storm water drain through the guard pond.	Process effluent/ any wastewater shall not be allowed to mix with storm water.	The Plant was commissioned in 2000 and started commercial production since 2001. It is to be noted that previous Environmental Clearances of the Plant for 420 KTA, 520 KTA and 700 KTA of Ethylene capacity, duly granted by MoEFCC did not provide condition of passing the storm water drain through guard pond. So, as part of present Plant design, the Process Effluent reaches the Waste Water Treatment Plant (WWTP) through underground/aboveground network of channels/pipelines. After physical, chemical and biological treatment, the treated effluent (clarifier

				outlet) is stored in two Guard Ponds (Capacity: 4,000 cu.m each) and is subsequently discharged after being mixed with the Cooling Tower Blowdown (CTBD) and DM Plant Regeneration Effluent into the Green Belt Canal (GBC). Hydrocarbon handling and storage areas in the Plant have been provided with dyke walls with two valve drain pits as per standard engineering practices. Storm water accumulated from within the dyke walls can be sent to WWTP through the underground Oily Water System (OWS). In non-hydrocarbon handling areas, the storm water drains are open channel and have a wide network depending on the available slopes in the entire Complex. The storm water drains on the eastern side of the Complex is connected to the natural ponds wherein rainwater is harvested (one of the long term action points of Comprehensive Environment Pollution Abatement Action Plan as per directives of WBPCB dated 22.11.2010) As per the initial design/layout of the Plant, duly approved by the statutory authorities, there is no provision of rerouting the entire storm water drain network through the guard ponds of the WWTP. As an additional safety measure, six sluice gates were installed in the storm water channel at different locations in the Complex to

				handle any emergency situation. Regular monitoring of the quality of various effluents, treated effluent and storm water is carried out by a third party laboratory, duly accredited by MoEFCC, WBPCB and NABL. Over past eighteen years of commercial operations of our Complex, no major incident has occurred with regard to non-conformance of quality of treated effluent or storm water with respect to the statutory limits. Considering the above, a request is made to waive off the condition of "storm water drain should be passed through Guard Pond".
11 (xv)	At least 2.5 %of the total project cost shall be allocated for Enterprise Social Commitment based on Public Hearing issues. Item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.	As per ToR, a total of 2.5% of the total project cost is to be allocated towards Enterprise Social Commitment.	To be provided by the Committee after assessment.	As per the Clause No. 6 (II) of Corporate Environment Responsibility (CER), (a recent office memorandum of MoEFCC vide F. No. 22-65/2017-IA III dated 01 May, 2018), for every capital investment/additional capital investment of >Rs. 1000 Crores to <=Rs.10000 crores for a Brownfield Project, the maximum percentage of fund allocation for the CER would be 0.25 % of additional capital investment. As per our understanding, the Enterprise Social Commitment (ESC) and Corporate Environment Responsibility (CER) provisionsare identical in nature and therefore it is requested to revise the figure of % of investment towards CER as mentioned in the EC.

41.4.5.*3* *The EAC, after detailed deliberations, found no merit in the proposal, hence not recommended for amendment in the environmental clearance.*

Agenda No.41.4.6

Floating Storage Unit (FSU)/Floating Storage and Regasification Unit (FSRU) based Liquefied Natural Gas (LNG) Terminal at Hooghly Estuary, West Bengal by M/s Bengal Concessions Private Limited - For Amendment in ToR

[IA/WB/IND2/69588/2017, IA-J-11011/472/2017-IA-II(I)]

41.4.6.1 The proposal is for amendment in the terms of reference granted by the Ministry vide letter dated 16th November, 2017 for the project LNG Regasification Terminal in Hooghly River located at Kukrahati, East Medinipur district, West Bengal in favour of M/s Bengal Concessions Private Limited.

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

S. No.	Para of ToR issued by MoEF& CC	Details as per the ToR	To be revised/ read as	Justification/ reasons
1	-	Project area approx. 37 acres	Project area increased to approx. 45 acres	Additional Onshore storage is required to cater to anticipated higher Natural Gas demand in West Bengal and Bangladesh
2	-	LNG storage and regasification terminal with maximum capacity of 4 MMTPA	LNG storage and regasification terminal with maximum capacity of 5 MMTPA	Anticipated higher Natural Gas demand in West Bengal and Bangladesh
3	-	Dock with lock gate system	600 m long Jetty with trestle(s)	As per advice of KoPT.

41.4.6.3The EAC noted that Standard ToR was granted on 16thNovember, 2017 to M/s Bengal Concessions Private Limited based on the information provided in the Pre Feasibility Report (PFR) and Form-1, which included a dock based LNG Terminal with a maximum capacity of 4 MMTPA. The Project Proponent has now submitted a modified PFR and Form I with the following salient changes (a) Jetty based LNG Terminal instead of a dock based terminal (b) Land area increased from 37 acres to 45 acres and (c) Additional LNG Storage of 2 X 20,000 m3 on land (d) Terminal capacity increased from 4 MMTPA to 5 MMTPA.

41.4.6.4 *The EAC after detailed deliberations, reiterated that the TOR issued on 16th November 2017 shall remain applicable for the modified project description.*

Agenda No.41.4.7

Development Drilling of 27 wells & conversion of 37 Exploration Wells & laying of associated flow lines, involving construction of Well Manifold at Kunjaban & Sundalbari and Pipelineby M/s Oil and natural Gas Corporation Ltd- For amendment in ToR

[IA/TR/IND2/62594/2017, IA-J-11011/60/2017-IA-II(I)]

41.4.7.1 The proposal is for amendment in the Terms of Reference granted by the ministry vide letter dated 31st May, 2017 for the project Development Drilling of 27 wells & conversion of 37 Exploration Wells into Development Wells & laying of associated flow lines, involving construction of well manifold at Kunjaban & Sundalbari & Pipeline at District North Tripura by M/s ONGC Ltd."Located at Tripura State in favour of M/s ONGC Ltd., Tripura Asset, Agartala.

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

S. No.	Para of ToR issued	Details as per the ToR	To be revised/read as	Justification / reasons
1.	2.0 (A)-i of TOR No. - J-11011/60/2017-IA.II (I), Dt. – 31st May 2017	A. Additional ToR i. Public hearing to be conducted and issues raised & commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.	A. Additional ToR i. Public hearing is exempted under Para No. 7(ii) of the EIA Notifications, 2006.	In Para (A)-I of 21.7.2 of minutes of 21st EAC (Industry-2) meeting held on 27th – 29th March, 2017, it was mentioned that A. Additional ToR i. Public hearing is exempted under Para No. 7(ii) of the EIA Notifications, 2006. But, in TOR No. - J-11011/60/2017-IA.II (I), Dt.-31st May 2017, exemption on conducting public hearings was not mentioned. In the year 2015, public hearings were carried out in 5 districts of Tripura namely West Tripura, Sepahijala, Khowai, South Tripura & Gomati districts for obtaining EC for 30 Dev. Wells &Gojalia GCS, but public hearing of only Gomati district was considered valid. Others declared as invalid, reason being, not presided by competent authority (i.e. DM/ADM level officer). Accordingly public hearings were re-conducted in the year 2017in four districts namely West Tripura, Sepahijala, Khowai& South Tripura. In view of above, it was requested to grant exemption from conducting public hearing in all

				five districts namely West Tripura, Sepahijala, Khowai, South Tripura & Gomati Districts where public hearings were conducted in 2017 (In Gomati District public hearing was conducted once again on 26.10.2016). Only public hearing to be conducted in North Tripura District. Accordingly, it is requested for amendment in ToR.

41.4.7.3 *The EAC after detailed deliberations, recommended for exemption from public hearing as proposed by the project proponent.*

List of the Expert Appraisal Committee (EAC-Industry-2)

S. No.	Name and Address	Designation
1	Dr. J. P. Gupta	Chairman
2.	Sh. R.K.Singh	Member
3	Prof. J.R. Mudakavi	Member
4	Shri Sanjay Bist	Member
5	Prof. (Dr.) Y.V. Rami Reddy	Member
6	Smt. Saloni Goel	Member
7	Shri S.K. Srivastava	Member Secretary