

**GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-2 SECTOR)**

Dated: 11.06.2021

**MINUTES OF THE 35th MEETING OF THE EXPERT APPRAISAL
COMMITTEE**

(INDUSTRY-2 SECTOR PROJECTS)

HELD ON 02nd -03rd June, 2021

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

(i) Opening Remarks by the Chairman: The Chairman made hearty welcome to the Committee members and appreciated the efforts of the Committee. After opening remarks, the Chairman opened the EAC meeting for further deliberations.

(ii) Confirmation of minutes: The EAC, having taken note that final minutes were issued after incorporating comments received from the EAC members on the minutes of its 34th Meeting of the EAC (Industry-2) held during 28-29th April, 2021 conducted through Video Conferencing (VC), confirmed the same.

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

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

02nd June, 2021 (Wednesday)

Agenda No. 35.1

Expansion of Coal Tar Distillation Plant from 300000 to 500000 TPA and setting up of Carbon Black plant of capacity 300000 TPA by M/s Epsilon Carbon Private Limited (ECPL) located at Musinayakahalli, Taluka Sandur, District Ballari, Karnataka - (Bifurcation) Amendment in Environment Clearance regarding.

[IA/KA/IND2/204518/2021, J-11011/500/2017-IA-II(I)]

The proposal was considered in 28th Meeting of the Expert Appraisal Committee (EAC) held on 18th – 19th January, 2021. The EAC after detailed deliberations **returned the proposal in present form**. EAC suggested and the PP agreed to submit two separate proposals as follows:

- Amendment of the earlier EC issued vide F. No. J-11011/500/2017-IA-II (I) dated 10.01.2020 for M/s Epsilon Carbon Private Limited (ECPL) due to proposed changes in the products and
- New application for EC of the New Company (M/s Epsilon Advanced Materials Private Limited (EAMPL) instead of proposing bifurcation of existing EC granted to parent company i.e. M/s Epsilon Carbon Private Limited (ECPL). EAC also exempted the above project from baseline monitoring and conducting of Public Hearing to expedite the process of grant of EC.

The proposal was re-considered in 34th Meeting of the Expert Appraisal Committee (EAC) on 28-29th April, 2021. After detailed deliberations EAC recommended the amendments in EC, as proposed by the project proponent, with all other terms and conditions remain unchanged.

The Ministry has referred the case to EAC to reconsider as per earlier request of the PP. Hence, EAC in its 35th meeting held on 02-03rd June, 2021 re-considered bifurcation of existing EC as was considered first time in its 28th meeting held on 18th – 19th January, 2021.

The proposal is for amendment (bifurcation) in the Environmental Clearance granted by the Ministry vide letter dated F. No. J-11011/500/2017-IA-II (I) dated 10.01.2020 for the project Expansion of Coal Tar Distillation Plant from 300000 to 500000 TPA and setting up of Carbon Black plant of capacity 300000 TPA located at Musinayakahalli, Taluka Sandur, District Ballari, Karnataka in favour of M/s. Epsilon Carbon Private Limited (ECPL).

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

S. No	EC Conditions	Compliance status after Proposed Bifurcation																																
		Epsilon carbon Private Limited (ECPL)	Epsilon Graphite private limited (EGPL)																															
2	The Ministry of Environment, Forest and Climate Change has considered the proposal for environmental clearance to the project for expansion of Coal Tar Distillation Plant from 300000 to 500000 TPA and setting up of Carbon Black plant of capacity 300000 TPA by M/s. Epsilon Carbon Black Private Limited (ECPL) in a total area of 673870 sqm at Musinayakahalli, Taluka Sandur, District Ballari (Karnataka).	Coal Tar Distillation Plant from 300000 to 500000 TPA and setting up of Carbon Black plant of capacity 300000 TPA by M/s. Epsilon Carbon Private Limited (ECPL) in a total area of 5,25,058 sqm at Musinayakahalli, Taluka Sandur, District Ballari (Karnataka). Survey numbers 19,20, 21, 22/1, 22/2, 23, 24, 26, 27, 28/1, 28/2, 29/1, 29/2, 29/3,30/2, 31, 32/1, 32/2, 32/3, 33, 34/2, 34/3, 41, 44/1, 44/2, 45 will be belong to ECPL.	Special Graphite / Advanced carbon (Bulk Mesophase) and Anthracene Oil/ Heavy Creosote Oil will be manufactured by EGPL, at Musinayakahalli, Taluka Sandur, District Ballari (Karnataka), in total area if 1,48,812 m2. Survey Numbers 19,20, 21, 22/1, 22/2, 23, 24, 27, 45 will be belong to EGPL.																															
3	<p>Details of existing and proposed products are as under;</p> <table border="1"> <thead> <tr> <th rowspan="2">S. No.</th> <th rowspan="2">Products</th> <th colspan="3">Production Capacity (TPA)</th> </tr> <tr> <th>Existing</th> <th>Additional</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td colspan="5" style="text-align: center;">Coal Tar Distillation Section</td> </tr> <tr> <td></td> <td>Distillation Capacity</td> <td>300000</td> <td>200000</td> <td>500000</td> </tr> </tbody> </table>	S. No.	Products	Production Capacity (TPA)			Existing	Additional	Total	Coal Tar Distillation Section						Distillation Capacity	300000	200000	500000	<p>Coal Tar distillation, Carbon Black production and power plant will be belonging to ECPL after bifurcation. Detailed product list after bifurcation of EC is as following.</p> <table border="1"> <thead> <tr> <th>S. No</th> <th>Products</th> <th>Production Cap</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	S. No	Products	Production Cap				<p>Special Graphite / Advanced carbon (Bulk Mesophase) and Anthracene Oil/ Heavy Creosote Oil will be manufactured by EGPL. Detailed product list after bifurcation of EC is as following.</p> <table border="1"> <thead> <tr> <th>S. No</th> <th>Products</th> <th>Production</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>		S. No	Products	Production			
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S. No	EC Conditions				Compliance status after Proposed Bifurcation		
					Epsilon carbon Private Limited (ECPL)		Epsilon Graphite private limited (EGPL)
1	Coal Tar Pitch	153000	102000	255000	Coal Tar Distillation Section Distillation Capacity 500000 Coal Tar Pitch 255000 Zero QI/Impregnated Pitch 16000 Carbon Black Oil (CBO) 253600 Anthracene Oil/Heavy Creosote Oil 64000 Wash Oil 41500 Naphtalene 35000 NSF 33000	Capacity (TPA) 35000 Anthracene Oil/Heavy Creosote Oil 35000 Special Graphite / Advanced carbon (Bulk Mesophase) 50000	
	Zero QI/Impregnated Pitch	6000	10000	16000			
	Carbon Black Oil (CBO)	70000	183600	253600			
	Anthracene Oil/Heavy Creosote Oil	42000	57000	99000			
	Wash Oil	25500	16000	41500			
	Naphthalene	18000	17000	35000			
	NSF	33000	0	33000			
	Phenol Oil	6000	8900	14900			
	Light Oil	6000	4000	10000			
	De-hydrat	291000	192000	483000			

S. No	EC Conditions				Compliance status after Proposed Bifurcation				
					Epsilon carbon Private Limited (ECPL)		Epsilon Graphite private limited (EGPL)		
		ed coal tar				8	Phenol Oil	14900	
	11	Phenolics (Phenol, Cresols (ortho, meta, para or mixture thereof), Xylenols)	0	14900	14900	9	Light Oil	10000	
	12	Special Graphite/Advanced Graphite	0	50000	50000	10	De-hydrated coal tar	483000	
		By-product of Coal Tar Distillation Section				11	Phenolics (Phenol, Cresols (ortho, meta, para or mixture thereof), Xylenols)	14900	
	1	Neutral Sodium Phenolate (14%)	15300	10200	25500	By-product of Coal Tar Distillation Section			
	2	Ammoniacal water	90	60	150	1	Neutral Sodium Pheno	25500	
	3	Calcium	-	17340	17340				

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						Epsilon carbon Private Limited (ECPL)		Epsilon Graphite private limited (EGPL)	
		Carbon ate					late (14%)		
		Carbon Black Unit Section				2	Ammoinical water	150	
	1	Carbon Black	-	300000	300000	3	Calcium Carbonate	17340	
	2	Lean Gas/Tail Gas	-	270000 Nm ³ /hr.	270000 Nm ³ /hr.	Carbon Black Unit Section			
		Captive Power Plant					1	Carbon Black	300000
	1	Captive Power Plant	-	54 MW H	54 MW H	2	Lean Gas/Tail Gas	270000 Nm ³ /hr.	
		Captive Power Plant					1	Captive Power Plant	54 MW H
4	Total land area is 673870 sqm (Existing - 140200 sqm and additional - 533670 sqm). Industry has already developed/will develop greenbelt in an area of 33% i.e. 225228 sqm out of total area of the project. The estimated project cost is Rs. 900 crores. Total capital cost earmarked towards environmental pollution					<ul style="list-style-type: none"> Out of total plot area 5,25,058 m² will be belong to ECPL. 173144 m² (i.e. ~33% of total plot area of ECPL) greenbelt will be developed within ECPL premises. 		<ul style="list-style-type: none"> 1,48,812 m² will be transferred to EGPL after EC splitting. 52084 m² (i.e. ~35% of total plot area of EGPL) greenbelt area will be developed 	

S. No	EC Conditions	Compliance status after Proposed Bifurcation	
		Epsilon carbon Private Limited (ECPL)	Epsilon Graphite private limited (EGPL)
	control measures is Rs. 20 crores and the recurring cost (O&M) will be about Rs. 200 Lacs per annum. Total Employment will be 575 (direct & indirect) persons as direct after expansion.	<ul style="list-style-type: none"> Total capital cost earmarked towards environmental pollution control measures will be Rs. 37 crores and the recurring cost (O&M) will be about Rs. 1.5 crores per annum. Total Employment will be 710 (direct & indirect) persons. 	<ul style="list-style-type: none"> within EGPL premises. Total capital cost earmarked towards environmental pollution control measures will be Rs. 8 crores and the recurring cost (O&M) will be about Rs. 0.5 crores per annum. Total Employment will be 265 (direct & indirect) persons.
5	There are no national parks, wildlife sanctuaries, biosphere reserves, Tiger/Elephant reserves and wildlife corridors etc within 10 km distance from the project site.		
6	Total fresh water requirement estimated is 8520 cum/day, which is proposed to be met from JSW Steel water network. Effluent of 825 cum/day will be treated through existing ETP having capacity of 120 cum/day and proposed ETP of 820 cum/day. Domestic effluent shall be treated through existing STP of 25 cum/day and proposed STP of 50 cum/day. The plant will be	Total fresh water requirement shall not exceed 7686 cum/day, which will be received from M/s JSW steel water network. Effluent of 825 cum/day will be treated through existing ETP having capacity of	Total fresh water requirement shall not exceed 834 cum/day, proposed to be met from ECPL water network. Total effluent from floor washing and domestic will be treated in

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	based on Zero Liquid Discharge system. Power requirement after expansion will be 23500 KW including existing 3500 KW and will be met from JSW Network/in-house co-generation power plant based on lean tail gas. Additionally, 1 DG sets are used as standby power failure. Stack will be provided as per CPCB norms to the proposed DG sets.	<p>180 cum/day and proposed ETP of 820 cum/day. Domestic effluent shall be treated through existing STP of 25 cum/day and proposed STP of 50 cum/day. The plant will be based on Zero Liquid Discharge system.</p> <p>Power requirement after expansion will be 10000 KW which includes existing 3500 KW will be met from JSW Network/in-house co-generation power plant based on lean tail gas. Additionally, 1 DG sets are used as standby power failure. Stack will be provided as per CPCB norms to the proposed DG sets.</p>	<p>proposed STP of 25 cum/day.</p> <p>Power requirement after expansion will be 13500 KW and will be met from ECPL Network. Additionally, 1 DG sets are used as standby power failure. Stack will be provided as per CPCB norms to the proposed DG sets.</p>
7	The project/activities are covered under category A of item 4(b) (ii) 'Coal tar processing units' and 5(e) 'Petrochemical products and petrochemical based processing such as production of carbon black and electrode grade graphite' of the Schedule to the Environment impact	The project/activities are covered under category A of item 4(b) (ii) 'Coal tar processing units' and 5(e) 'Petrochemical products and petrochemical based processing	The project/activities are covered under category A of item 4(b) (ii) 'Coal tar processing units.

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	Assessment Notification, 2006, and requires appraisal/approval at central level in the Ministry.	- production of carbon black.	
8	The standard ToR for the project was granted on 27 th July 2018. Public hearing was conducted by SPCB on 5 th March 2019. Public hearing was conducted by SPCB on 5 th March 2019. The project proponent has submitted a detailed reply on the issues raised during the public hearing and their response and commitment towards the same.		
9	The proposal was considered by the Expert Appraisal Committee (Industry-2) in its meeting held on 29-31 July 2019 and 26-27 September 2019 respectively, wherein the project proponent and their accredited consultant presented the EIA/EMP report. The Committee found the EIA/EMP report to be satisfactory, complying with the ToR, and recommended the project for grant of environmental clearance.		
10. a	Necessary permission as mandated under the water (prevention & Control of Pollution) Act 1974,& the Air (Prevention & Control of Pollution) Act ,1981,as applicable from time to time, shall be obtained from the state pollution Control Board.		

S. No	EC Conditions	Compliance status after Proposed Bifurcation	
		Epsilon carbon Private Limited (ECPL)	Epsilon Graphite private limited (EGPL)
10. b	As already committed by the project proponent, Zero Liquid discharge shall be ensured and no waste/treated water shall be discharged outside the premises.		
10. c	Necessary authorization required under the hazardous & other wastes (Management & Trans Boundary Movement) Rules, 2016. Solid waste management Rules, 2016, shall be obtained & the provisions contained in the rules shall be strictly adhered to.		
10. d	National Emission standards for Petrochemicals (Basic & Intermediates) issued by the Ministry vide G S R 820 (E) dated 9th November, 2012 as amended time to time shall be followed.		
10. e	Crude Coal Tar shall be transported through dedicated pipeline from M/s JSW Coke Oven plant to the project proponent's storage tanks.	Crude Coal Tar shall be transported through dedicated pipeline from M/s JSW Coke Oven plant to the project proponent's storage tanks.	This condition not applicable for this project
10. f	No raw material / solvents prohibited by the concerned regulatory authorities from time to time shall be used.		

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10.g	To control source & 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. Bag Filter (PTFE/pulse jet) shall be installed to control the emissions.		
10.h	Total fresh water requirement shall not exceed 8520 cum/day, proposed to be met from JSW steel water network. Prior permission in this regard shall be obtained from the concerned regulatory authority before diverting the water from the quantum allotted the M/s JSW steel	Total freshwater requirement shall not exceed 7686 cum/day, proposed to be met from JSW steel water network.	Total freshwater requirement shall not exceed 834 cum/day, proposed to be met from ECPL water network.
10.i	Rainwater harvesting system shall be set in the premises & Water shall be used for various industrial purpose in the unit.		
10.j	Process effluent / any wastewater shall not be allowed to mix with the storm water .The storm water from the premises shall be collected & discharged through a separate conveyance system.		
10.k	Hazardous Chemicals shall be stored in tanks, tank farms , drums , carboys etc., Flame arrestor shall be provided on the tank farm, and solvent transfer through pumps.		

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		Epsilon carbon Private Limited (ECPL)	Epsilon Graphite private limited (EGPL)
101	The Company shall strictly comply with the rules & guidelines under Manufacture, Storage & 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		
102	Fly ash should be stored separately as per CPCB guidelines so that it may not adversely affect the air quality. Direct exposure of workers to fly ash & dust should be avoided .Brick manufacturing unit shall be set up in the premises for effective utilization of the ash.		This condition not applicable for this project
103	The Company shall under take waste minimisation measures as below:- 1.Metering & Control off quantities of active ingredients to minimise waste. 2.Reuse of by- products from the process as raw materials or as raw material substitutes in other process. 3.Use of automated filling to minimise spillage 4.Use of Close feed system into batch reactors. 5.Venting equipment through Vapour recovery system 6.Use of High pressure hoses for equipment clearing to reduce waste water generation.		

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100	The green belt of at least 5 to 10-meter width shall be developed in nearly 35% of total project area, mainly along the plant periphery, in downward wind direction, & along road sides etc. Selection of plant species shall be as per the CPCB guidelines, in consultation with the state Forest department. Green belt shall be increased with plantation of additional two rows along the existing green belt.	<ul style="list-style-type: none"> 173144 m² (i.e. ~33% of total plot area of ECPL) greenbelt is being developed within ECPL premises. 	<ul style="list-style-type: none"> 52084m² (i.e. ~35% of total plot area of EGPL) greenbelt area will be developed within EGPL premises.
100	All the commitments made to the public during public consultation / hearing shall be satisfactorily implemented.		
100	As committed Rs 10 crore shall be allocated for Corporate Environment Responsibility (CER). The CER funds shall be utilized for meeting the issues suggested during public hearing. The CER plan shall be completed before commissioning of the Expansion project.	The revised CER project cost is 7 crore	The revised CER project cost is 3 crore
100	For the DG sets, emission limits & stack height shall be in conformity with the extant regulation & CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.		
100	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.		

S. No	EC Conditions	Compliance status after Proposed Bifurcation	
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	Firefighting system shall be as per the norms.		
10.0	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the factories act .workers shall be provided with adequate safety kits/mask for protection from carbon black/coal tar dust ,if any ,occur in the factory.		
10.0	Continuous online (24*7) monitoring system for stack emission 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.		
10.0	A separate environmental cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior executive who will directly report to the head of the organization.		
10.0	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection		

S. No	EC Conditions	Compliance status after Proposed Bifurcation	
		Epsilon carbon Private Limited (ECPL)	Epsilon Graphite private limited (EGPL)
	measures shall be kept in separate account and not to be diverted for any other purpose. year wise progress of implementation of action plan shall be reported to the ministry/regional office along with the six monthly compliance report.		
1	The project proponent shall strictly comply the sector specific conditions as mentioned in the ministry's office memorandum No.22-34/2018 IA.III, dated 9 th August, 2018. the said OM is available at the ministry's website. The grant of environmental clearance is further subject to compliance of other generic condition as under:		
1. i	The project authorities must strictly adhere to the stipulations made by the state Pollution Control Board (SPCB), state Government and / or any other statutory authority.		
1. ii	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest & Climate Change. In case of deviations or alternations in the project proposal from those submitted to this ministry for clearance, a fresh reference shall be made to the ministry to assess the adequacy of conditions imposed & to add additional		

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		Epsilon carbon Private Limited (ECPL)	Epsilon Graphite private limited (EGPL)
	environmental protection measures required, if any.		
1 1. iii	The locations of ambient air quality monitoring stations shall be decided in consultation with the state Pollution Control Board (SPCB) & it shall be ensured that at least one stations each is installed in the upwind & downwind direction as well as where maximum ground level concentrations are anticipated.		
1 1. iv	The National Ambient Air Quality Emission Standards issued by the ministry vide G. S. R. No 826 (E) dated 16th November, 2009 shall be complied with.		
1 1. v	The overall noise levels in & around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc., on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules , 1989 Viz dBA (day time) & 70 dBA (night Time)		
1 1. vi	The Company shall harvest rainwater from the rooftops of the building to recharge ground water, and to utilize the same for different		

S. No	EC Conditions	Compliance status after Proposed Bifurcation	
		Epsilon carbon Private Limited (ECPL)	Epsilon Graphite private limited (EGPL)
	industrial operations within the plant.		
1 1. vii	Training shall be imparted to all employees on safety & health aspects of chemicals handling - employment & routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of Chemicals shall be imparted.		
1 1. vii i	The company shall comply with all environmental protection measures & safeguards proposed in the documents submitted to the ministry. All the recommendations made in the EIA / EMP in respect of environmental management, risk mitigation measures & public hearing shall be implemented.		
1 1i x	The company shall undertake all measures for improving socio - economic conditions of the surrounding area's activities shall be undertaken by involving local villagers, administration & other stake holders. Also eco - developmental measures shall be undertaken for overall improvement of the environment.		
1 1. x	A separate environmental management cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental		

S. No	EC Conditions	Compliance status after Proposed Bifurcation	
		Epsilon carbon Private Limited (ECPL)	Epsilon Graphite private limited (EGPL)
	Management and Monitoring functions.		
1 1. xi	The company shall earmark sufficient funds towards capital cost & recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest & Climate changes well as the State government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management / pollution control measures shall not be diverted for any other purpose		
1 1. xii	A copy of the clearance letter shall be sent by the project proponent to the concerned Panchayat, Zilla Parisad/ Municipal corporation, urban local body and the local NGO, if any, from whom suggestion / representation, if any, were received while processing the proposal		
1 1. xii i	The project Proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (Both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of		

S. No	EC Conditions	Compliance status after Proposed Bifurcation	
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	Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.		
1 1. xi v	The Environmental statement for each financial year ending 31st March in Form V as is mandated shall be submitted to the concern State Pollution Control Board as prescribed under the Environment(Protection) Rules,1986, as amended subsequently, shall also be put on the website of the company along with the status of compliances of Environmental Clearance condition and shall also be sent to respective Regional Offices of MoEF&CC by e-mail		
1 1. xv	The project proponent shall inform the public that the project has been accorded Environmental Clearance by the Ministry and copies of the Clearance letter are available with the SPCB / Committee and may also be seen at website of the Ministry at http://moef.nic.in . this shall be advertised within seven days from the date of issue of the Clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry		

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1 2	The Ministry reserves the right to stipulate additional condition, if found necessary at subsequent stages and the project proponent shall implement all the said condition in a time bound manner. The ministry may revoke or suspend the environmental clearance, if implementation of any of the above condition is not found satisfactory		
1 3	Concealing factual data or submission of false / fabricated data and failure to comply with any of the condition mentioned above may result in the withdrawal of the clearance and attract action under the provision of Environment(Protection) act, 1986		
1 4	An appeal against the Environmental Clearance shall lie with the National Green Tribunal, if preferred, within the period of 30days as prescribed under section 16 of the National Green Tribunal Act 2010		
1 5	The above conditions will be enforced intra-alia under the provision of water(Prevention and control pollution) Act 1974, the air(Prevention and control of pollution) Act 1981, the environment protection Act 1986, the hazardous waste (Management, handling and transboundary movement) rules 2016 and the public liability insurance act 1991 read with the		

S. No	EC Conditions	Compliance status after Proposed Bifurcation	
		Epsilon carbon Private Limited (ECPL)	Epsilon Graphite private limited (EGPL)
	subsequent amendments there in an also any other orders passed by the Hon'ble Supreme Court of India / High Court of Madhya Pradesh / Hon'ble NGT and any other Court of Law relating subject matter		

The Expert Appraisal Committee, after detailed deliberations **recommended** the amendments (bifurcation/part transfer) in EC, as proposed by the project proponent, with all other terms and conditions remain unchanged.

Agenda No. 35.2

Expansion of Petrochemical Complex by setting up Hydrogenated Pyrolysis Gasoline - 2nd stage & Butene-1 units by M/s Brahmaputra Cracker and Polymer Limited located at Lepetkata, Dibrugarh West, Dibrugarh, Assam - Consideration of Environment Clearance.

[IA/AS/IND2/204512/2019, J-11011/390/2006-IA-II(I)] -

The Project Proponent and the accredited Consultant M/s. Engineers India Limited made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the proposed expansion of Petrochemical Complex by setting up Hydrogenated Pyrolysis Gasoline - 2nd stage & Butene-1 units by M/s Brahmaputra Cracker and Polymer Limited located at Lepetkata, Dibrugarh West, Dibrugarh, Assam.

The project/activity is covered under category A of items 5(c) "Petrochemical Complexes" of Schedule of Environmental Impact Assessment (EIA) Notification 2006 and requires appraised at Central Level by Expert Appraisal Committee (EAC).

Standard ToR has been issued by Ministry vide letter no. J-11011/390/2006-IA-II(I) dated 22nd November, 2019 for the proposed project. Public Hearing for the proposed project has been conducted by the Pollution Control Board, Assam on 28.12.2020 Sukapha Bhawan, Barbaruah Village, and P.O. Lepetkata, District - Dibrugarh near to the petrochemical complex. The hearing was presided over by the Additional Deputy Commissioner, Dibrugarh. The main issues raised during the public hearing were related to employment generation, socio economic development, noise pollution, surface water pollution, greenbelt development, compensation amount against land acquisition. As informed, no Litigation is pending against the proposal.

MoEFCC has issued the following Environmental Clearances in favor of M/s Brahmaputra Cracker and Polymer Limited. The details of all ECs are given below.

S. No.	Project Name	MoEFCC File No.	EC issued Date
1	Petroleum Complex at Lepetkata, District Dibrugarh in Assam by M/s Reliance Assam Petrochemicals Limited (RAPL)	J-11011/61/2001-IA (II)-I	May 14,2003
2	Petroleum Complex at Lepetkata, District Dibrugarh in Assam by M/s Reliance Assam Petrochemicals Limited (RAPL) – Transfer of Environmental Clearance (EC) to GAIL	J-11011/61/2001-IA (II)-I	June 13, 2005
3	Transfer of EC from GAIL (INDIA) Limited to M/s Brahmaputra Cracker and Polymer Limited (BCPL), Lepetkata, Assam	J-11011/390/2006-IA II-(I)	September 23, 2011
4	Corrigendum to EC for GAIL LPG Recovery Lakwa Unit Modification, Compressor station & Gas Dehydration Unit (GDU) at Duliajan, newly located railway siding facility for Naptha unloading along with naphtha pipeline and C2+ liquid pipeline	J-11011/390/2006-IA II-(I)	September 23, 2011

from lakwa to Lepetkata of M/s BCPL Petrochemical Project at Lepetkata.		
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The details of products and capacity are as under:

S.No.	Product Details	Existing Quantity (TPA)	Proposed Quantity (TPA)	Total Quantity (TPA)
1.	LLDPE/HDPE	220000	-	220000
2.	Pyro Gasoline	43054	-	43054
3.	Polypropylene	60000	-	60000
4.	HPG (Hydrogenation of Pyrolysis Gasoline)	0	52000	52000
5.	Butene-1	0	10000	10000
6.	Fuel Oil	9728	-	9728
7.	Wash Oil	0	9500	9500

The total land area requirement of the proposed project is 1 Ha which is within existing petrochemical complex premises of 399.39 Ha. BCPL has already developed a greenbelt area of 95.23 Ha in the existing petrochemical complex. Proponent will develop additional greenbelt in an area of 37.04 Ha. The total greenbelt area will be 132.27 Ha which is 33.1% of the total petrochemical complex. The estimated project cost is Rs. 386.75 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 2.15 crores and the recurring cost (operation and maintenance) will be about Rs.0.8 crores per annum. Direct employment will be 20 persons & indirect employment will be 50 persons after expansion. BCPL proposes to allocate Rs. 2.90 crores towards Corporate Environment Responsibility (CER).

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River Sessa, river Burhi Dihing and river Brahmaputra are flowing at a distance of 0.6 Km in West direction, 4.9 Km in West direction and 9 km in NW direction respectively.

Ambient air quality monitoring was carried out at 8 locations during January to March 2020 and the baseline data indicates the ranges of concentrations as PM10 (65-75 µg/m³), PM2.5 (42-50 µg/m³), SO₂ (10-14 µg/m³) and NO₂ (18-24.9 µg/m³) respectively. Air quality modeling was not required as there is no stack envisaged for the proposed project. The ambient air quality concentrations are within the National Ambient Air Quality Standards (NAAQS).

Fresh water requirement for proposed expansion project will be 70 m³/hr including the intermittent use of borewell water. The water requirement of existing complex is 586 m³/hr. Total water requirement after proposed expansion of the complex will be 656 m³/hr. Water demand will be met from Burhi Dihing river and borewell (intermittent). Effluent will be treated in existing Effluent Treatment Plant inside the petrochemical complex. The treated effluent of 152 m³/hr will be discharged to Brahmaputra river through a pipeline.

Power requirement for the proposed project will be 1.2 MW and sourced from state electricity grid and existing CPP. Existing petrochemical complex has 2 DG sets of 5120 KVA capacity, additionally 01 DG set of 1000 KVA will be used as standby during power failure. Adequate Stack height will be provided as per CPCB norms to the proposed DG set. Existing petrochemical complex has 160 TPH Fuel Gas fired boiler. No additional boiler is envisaged for the proposed project.

Details of process emissions generation and its management:

There will be no SO_x emission from the proposed project as no fired heater is envisaged. For emission management, use of Fuel Gas in heater as fuel, adequate stack height, use of Low NO_x burners in heater & boiler, continuous stack monitoring, developing green belt etc. shall be carried out.

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

Hazardous solid waste like spent catalyst will be disposed off to CPCB approved recyclers. ETP sludge will be disposed off to existing bioremediation /CPCB approved recyclers.

Certified compliance report was issued by Integrated Regional Office, MoEFCC , Guwahati vide letter no. RO-NE/E/IA/AS/OR/7/355-359 dated 19/04/2021.

During deliberations, EAC desired that PP should reduce the effluent discharged to Brahmaputra River by 20% i.e. from 190 m³/hr to 152 m³/hr. PP agreed for the same. Also, directed PP to conduct 3D modeling for determining cumulative risk to the nearby environment and local people.

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be

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

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data is within NAAQ standards. The Committee has deliberated the action plan proposed by the project proponent to arrest the incremental GLC due to the project. The Committee has also deliberated on the CER plan and found to be addressing the issues in the study area. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have **recommended** for grant of environmental clearance.

The environmental clearance granted to the project/activity is strictly under the provisions of the EIA Notification 2006 and its amendments. It does not tantamount/construe to approvals/consent/ permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

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

- (i). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- (ii). Total fresh water requirement shall not exceed 656 cum/hr, proposed to be met from Burhi Dihing river and borewell (intermittent). Necessary permission in this regard shall be obtained from the concerned regulatory authority.
- (iii). Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MEF&CC. Outcome from the report to be implemented for conservation scheme.
- (iv). Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

- (v). Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.
- (vi). 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 ash from boiler shall be sold to brick manufacturers/cement industry.
- (vii). Regular VOC monitoring shall be done at vulnerable points.
- (viii). The oily sludge shall be subjected to melting pit for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit with proper leachate collection system.
- (ix). Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.
- (x). 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 cleaning etc. to reduce wastewater generation.
- (xi). The green belt of 5-10 m width shall be developed in 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xii). As per the Ministry's OM dated 30.09.2020 superseding the OM dated 01.05.2018 regarding the Corporate Environmental Responsibility, and as per the action plan proposed by the project proponent to address the socio-economic and environmental issues in the study area, the project proponent, as committed, shall provide education funds in technical training centers/ support in nearby village's schools, support in health care facilities, drinking water supply and funds for miscellaneous activities like solar street lights, battery, solar panel etc., in the nearby villages. The action plan shall to be completed within time as proposed.
- (xiii). The project proponent shall ensure 70% of the employment to the local people, as per the applicable law. The project proponent shall set up a skill development center/provide skill development training to village people.
- (xiv). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall

be set up to carry out the Environmental Management and Monitoring functions.

- (xv). 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.
- (xvi). 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. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.
- (xvii). PP to set up occupational health Centre for surveillance of the worker's health within and outside the plant on a regular basis. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (xviii). The National Emission Standards for Petrochemical (Basic & Intermediates) issued by the Ministry vide G.S.R. 820 (E) dated 9th November, 2012 as amended time to time shall be followed.
- (xix). Recommendations of mitigation measures from possible accident shall be implemented based on Risk Assessment studies conducted through 3D modeling for worst case scenarios using latest techniques.

Agenda No. 35.3

Expansion and De-bottlenecking of existing Petro-Chemical Plant by M/s Reliance Industries Limited located at Plot No. 1, Notified Industrial Area, GIDC Dahej, Bharuch, Gujarat – Re-Consideration of Environment Clearance reg.

[IA/GJ/IND2/209217/2020, J-11011/39/2016-IA II (I)]

The proposal was earlier placed before the EAC (Ind-2) in its 34th meeting held during 28th to 29th April, 2021 wherein EAC deferred the proposal and desired certain requisite information/inputs. Information desired by the EAC and responses submitted by the project proponent is as under:

S.N	ADS	Reply of PP	Observation of EAC
1.	Pre-feasibility Report submitted	The project proposal, on submission of application for	EAC found the

	<p>during grant of ToRs showed varied data when compared to EIA/EMP Report submitted at the time of EC application. The project is analyzed/studied thoroughly at PFR stage only to ensure all details of PFR and EIA match considerably. Some major discrepancies have been found in both the documents pertaining to water requirement, effluent discharge, land requirement, new product proposed at EC stage etc. These are the major parameters which need to be decided at ToR stage only and no correction/modification shall be done at EC stage.</p>	<p>EC on 3rd Feb 2020, was granted "Standard ToR" for conducting the EIA studies in 24th Feb 2020. In the meantime, the pandemic gripped the world and the country, and the EIA studies were also taken up after the situation improved.</p> <p>Engineering and technical development of the project continued during this period. It was also decided that an increase in the production of EO can be accomplished by addition of equipment to the existing EO unit.</p> <p>According to the above the project report (PFR) submitted earlier was revised and an application was made for amendment of the ToR on 2nd Dec 2020 as per the new scope of the project. The revised PFR was submitted along with the amended product and utility lists for consideration of the Ministry w.r.t our EC application to grant revised ToR. We were communicated to go ahead as per the standard ToR already granted with the changes proposed and conduct the EIA. It was also communicated that the EIA be prepared accordingly and it would be assessed accordingly during the assessment phase for grant of the EC. A screen shot of this communication dated 30th Dec 2020 was submitted.</p> <p>We would like to submit that the EIA has been prepared in these lines and submitted for appraisal.</p>	<p>explanation satisfactory .</p>
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2.	<p>Certified compliance report has certain conditions which come under "being complied" or in the process of complying reported by RO, MoEFCC. Submit the time frame and action plan for complying such conditions.</p>	<p>As per the requirements of the EIA Notification we had approached the Regional Office, Bhopal of the Ministry and the Regional Officer visited the site on 13th Jan 2021 for assessment. The compliance certificate, based on site evaluation and documentation, was submitted by the Regional Officer MoEFCC, Bhopal to the Ministry, a copy to us. The same was enclosed along with our application for EC.</p> <p>The compliance certificate issued by RO, Bhopal lists compliances in three categories i.e. "Complied, "being Complied" and "Agreed to Comply". We humbly submit and draw the attention to the fact that all the prescribed conditions in the ECs granted to DMD, till date, have been reported as complied within the ambit of these three phrases used in the compliance certificate. The detailed clarification of the interpretation of compliance is summarized as:</p> <p>"Complied" (24/38): The RO has concluded that most of the prescribed conditions have been complied as per the requirements prescribed are fulfilled by the unit.</p> <p>"Being Complied" (8/38): This seems to be another way of interpreting the compliance of requirements of prescribed conditions which are also being fulfilled. Going through the detailed observations of RO as mentioned in the compliance certificate it would be evident that we are</p>	<p>PP has submitted action plan for all the conditions depicted as "being complied" or "agreed to comply". EAC found the reply satisfactory .</p>
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		<p>complying with all the applicable conditions mentioned in the EC.</p> <p>"Agreed to Comply" (6/38): Certain conditions prescribed in the EC have been reported as agreed to comply. The EC granted in 2017 has proposals for units, some of which are yet to be implemented. The validity of this EC is up to 2024. We are considering implementation of these units after the pandemic situation improves and project implementation can be carried out without risk. Conditions applicable in such cases are reported as "Agreed to Comply".</p>	
3.	<p>Affidavit / undertaking needs to be submitted for development of 33% greenbelt as the kml file indicates more concrete area rather than proper greenbelt."</p> <p>And</p> <p>"Submit a detailed land area break up showing total built up area, machinery & utilities area, greenbelt area and proper plant layout showing the existing and proposed coverage also especially for greenbelt development.</p>	<p>The proposed expansion is within the existing DMD complex and no additional land acquisition will be done. The DMD site has an exemplary Green Belt which has been developed since inception of the unit and the green belt is now robust and mature. There have been some additional plantation drives taken up for casualty replacement and establishment of more productive species. The DMD unit has also established plantation in the neighboring settlements and along roads surrounding the complex. All these plantation efforts have resulted in an area of 203 ha being established as a green belt within and around the premises.</p> <p>We hereby undertake that the requirement of 33 % Greenbelt already established by DMD, will be maintained,</p>	<p>PP has been asked to submit an affidavit/undertaking stating that," Greenbelt has already been developed in not less than 33% area and it will be further maintained after expansion" . Also, width of greenbelt, no. of trees, nature of trees etc. shall be</p>

		<p>including areas within and immediately outside / adjoining our premises. The layout of the plant is submitted.</p> <p>Land Use at DMD site</p> <table border="1"> <thead> <tr> <th>S I · N o ·</th> <th>Details</th> <th>Ar ea (H a)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Process plants and utilities including the present proposal for expansion</td> <td>31 0</td> </tr> <tr> <td>2</td> <td>Open areas (May be used for further expansion) and roads</td> <td>10 5</td> </tr> <tr> <td>3</td> <td>Greenbelt:</td> <td>20 3</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total</td> <td>61 8</td> </tr> </tbody> </table>	S I · N o ·	Details	Ar ea (H a)	1	Process plants and utilities including the present proposal for expansion	31 0	2	Open areas (May be used for further expansion) and roads	10 5	3	Greenbelt:	20 3	Total		61 8	<p>submitted in the affidavit/undertaking. PP has submitted the same and EAC has found it satisfactory.</p>
S I · N o ·	Details	Ar ea (H a)																
1	Process plants and utilities including the present proposal for expansion	31 0																
2	Open areas (May be used for further expansion) and roads	10 5																
3	Greenbelt:	20 3																
Total		61 8																
4.	Action plan for maximum recycle / reuse of wastewater instead of discharging in the sea.	<p>Presently DMD generates total effluent 65,087 m³/day, out of which 25,335 m³/day is recycled / reused within the complex and remaining 39,752 m³/day is discharged into deep sea. Thus, around 40% of the treated effluent is being utilized / recycled. The proposed expansion will generate additional 2,500 m³/day of effluent which is proposed to be totally reused. It can be seen that DMD has already implemented actions for reuse / recycle of effluent to the extent possible and will not increase the discharge quantity to sea after the proposed expansion.</p>	<p>EAC deliberated the issue and found the reply addressing the concerns of the Committee.</p>															
5.	The Toposheet of study area / coastal	This point was communicated by the Ministry prior to the	EAC found the report															

	area was also not attached.	meeting and the toposheet of the study area was submitted prior to meeting.	satisfactory .
6.	Plagiarism certificate has not been included in EIA Report.	This point was communicated by the Ministry prior to the meeting and the plagiarism certificate of the EIA study was submitted prior to meeting. The certificate shows that only 9% of the study is plagiarized which is on account of the earlier EIA reports for the same site and the format of the report which is standardized.	EAC found the reply satisfactory .
7.	It is also noticed that the consultant M/s ERM India Pvt. Ltd has not properly handled the proposal. There is a need to do proper corrections and modify the EIA report and present the proposal before this EAC in subsequent meeting.	M/s ERM is a consultant approved by NABET and is thus qualified to conduct the EIA study for this category of Industry. As clarified in point # 1 above there was a change in the scope by additional product and water requirement. The same was brought to the attention of the Ministry with amended ToR. However as suggested by the Ministry, the EIA studies were conducted in line with the revised proposal wherein there were changes made on account of the scope (Additional product) and the utilities requirements. We would like to submit that the EIA report submitted is in compliance to the requirements of the Ministry. We therefore request the EAC to consider the EIA which is in line with the scope submitted to the Ministry in Dec 2020.	EAC found the reply satisfactory .

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

The proposal is for environmental clearance to the project for Expansion

and De-bottlenecking of existing Petro-Chemical Plant by M/s Reliance Industries Limited located at Plot No. 1, Notified Industrial Area, GIDC Dahej, Bharuch, Gujarat.

All Petrochemical Complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics) are listed at S.N.5(c) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The standard ToR for category 5(c) has been issued by Ministry vide letter No. J-11011/39/2016-IA II(I); dated 24th February, 2020. Public hearing is not applicable to the project as the proposed expansion and debottlenecking is located in GIDC notified industrial area. It was also informed that no litigation pending against the proposal.

Ministry had issued EC earlier vide letter no. J-11011/39/2016-IA-II(I); dated 3rd April, 2017 to the existing project for Expansion & Debottlenecking of Petrochemical Plant of Dahej Manufacturing Division (DMD) at Tehsil Vagra, District: Bharuch, Gujarat in favor of M/s. Reliance Industries Ltd.

The details of products and capacity are as under:

Plant	Products/ By-Products	Existing Quantity (MTPA)	Proposed Quantity (MTPA)	Total Quantity (MTPA)
Ethane Propane Recovery Unit (EPRU)	Ethane/ Propane	6,50,000	0	6,50,000
Gas Cracker Unit (GCU)	Ethylene	7,00,000	0	7,00,000
	Propylene	1,60,000	0	1,60,000
	Mixed C4+	47,450	0	47,450
	RARFS (Pyrolysis Gasoline)	54,750	0	54,750
	Fuel Oil	40,000	0	40,000
	Tar Residue	5,472	0	5,472
Vinyl Chloride Monomer (VCM)	Ethylene Dichloride (EDC)	5,88,000	0	5,88,000
	Vinyl Chloride Monomer (VCM)	15,60,000	0	15,60,000
	Light Ends	15,600	0	15,600
	HCl	1,56,000	36,000	1,92,000
Polyvinyl Chloride	Polyvinyl Chloride (PVC)	15,60,000	0	15,60,000

Plant	Products/ By-Products	Existing Quantity (MTPA)	Proposed Quantity (MTPA)	Total Quantity (MTPA)
Chlorinated Polyvinyl Chloride	Chlorinated Polyvinyl Chloride (PVC)	70,000	0	70,000
Chlor-Alkali	Chlorine	1,87,000	0	1,87,000
	Caustic Soda	2,21,000	0	2,21,000
	Sodium Hypochlorite	11,000	0	11,000
	Dilute H ₂ SO ₄	4,600	0	4,600
	HCl	15,000	0	15,000
	Hydrogen, New	0	4,000	4,000
Ethylene Oxide (EO) / Ethylene Glycol (EG)	EO	50,000	100,000	150,000
	EG	3,08,350	0	3,08,350
	Di Ethylene Glycol	30,550	0	30,550
	Tri Ethylene Glycol	1,270	0	1,270
	PEG	19,850	0	19,850
	TEG Bottom	2,880	0	2,880
	CO ₂ , New	0	90,000	90,000
High Density Poly Ethylene (HDPE)	HDPE-I/II	2,40,000	0	2,40,000
	UHMW-PE	2,500	0	2,500
Ethylene Vinyl Acetate (EVA)	Ethylene Vinyl Acetate (EVA)	15,000	0	15,000
Purified Terephthalic Acid (PTA)	PTA	30,00,000	0	30,00,000
	Crude Benzoic Acid Mix	60,000	0	60,000
Polyethylene Terephthalate (PET)	PET	10,00,000	0	10,00,000
Polyester Complex	Polyester Complex Polyester Staple Fibre (PSF) Polyester Fibre Yarn (PSY)	8,00,000	0	8,00,000
Ethylene Oxide Derivatives	Pure Ethylene Oxide	2,00,000	0	2,00,000
	Ethanol Amines	60,000	0	60,000
	Glycol Ethers	60,000	0	60,000
	Glycol Ether Acetates	30,000	0	30,000

Plant	Products/ By-Products	Existing Quantity (MTPA)	Proposed Quantity (MTPA)	Total Quantity (MTPA)
	Ethoxylates - Ethylene Oxides Condensates	2,00,000	0	2,00,000
Acrylic Acid and Esters	Crude Acrylic Acid	1,60,000	0	1,60,000
	Glacial Acrylic Acid/ High Purity Acrylic Acid	40,000	0	40,000
	Butyl Acrylate	1,20,000	0	1,20,000
	Ethyl Acrylate	20,000	0	20,000
	Methyl Acrylate	20,000	0	20,000
	Acrylate (2EHA)	40,000	0	40,000
Phenols	Phenol	2,50,000	0	2,50,000
	Acetone	1,55,000	0	1,55,000
Ethane Storage Tank	Ethane Storage Tank	90,000 Tons	0	90,000 Tons
Ethylene Dichloride (EDC), New	Ethylene Dichloride (EDC), New	0	5,00,000	5,00,000
	Light Ends, New	0	500	500
	HCl, New	0	23,800	23,800
Co-polyester/ PET-G, New	Co-polyester / PET-G, New	0	2,00,000	2,00,000
	CHDM, New	0	50,000	50,000
	Methanol, New	0	15,000	15,000
Gas Based		195 MW	0	195 MW
Coal Based		270 MW	0	270 MW

Existing land area is 61,80,000 m², No additional land will be used for proposed expansion. Industry has already developed greenbelt in an area of 33 % i.e., 20,30,000 m² out of total area of the project. The estimated project cost is Rs. 5,150 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 105 crores and the Recurring cost (operation and maintenance) will be about Rs. 10 crores per annum. Total Employment will be ~50 persons after expansion. The company proposes to allocate INR 6.5 crores towards Corporate Environment Responsibility.

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: Narmada Estuary is flowing at a distance of ~0.75 km in south direction.

Ambient air quality monitoring was carried out at 10 locations during 28th December, 2019 to 19th March, 2020 and the baseline data indicates the ranges of concentrations as: PM10 (41.5 – 81.3 µg/m³), PM2.5 (16.5 – 43.8 µg/m³), SO₂ (8.4 – 16.2 µg/m³) and NO₂ (11.2 – 20.6 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.27 µg/m³, 7.93 µg/m³ and 12.85 µg/m³ with respect to PM10, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

The existing water requirement for DMD petrochemical complex is ~1,86,315 m³/day (~40.9 MGD). It includes freshwater requirement 1,60,980 m³/day and recycle water is 25,335 m³/day. After proposed expansion and debottlenecking of DMD petrochemical complex, the water requirement will increase to 2,10,315 m³/day (~46.2 MGD) that will be met from ~1,82,480 m³/day freshwater and recycled water ~27,835 m³/day. Source will be GIDC water supply and supply from Vadodara Irrigation Division. The wastewater generated from the proposed expansion (~2,500 m³/day) will be reused /recycled. Total Effluent of 67,587 m³/day quantity will be treated through existing ETP. Therefore, no increase in wastewater discharge quantity and will remain the same as the present quantity (~39,752 m³/day).

Power requirement after expansion will be 250 MW including existing 220 MW and will be met from Captive power Plant (CPP). Existing unit has 16 DG sets of varying capacity, additionally 5 DG sets are proposed. All DG Sets are for emergency purpose only. Stack will be provided as per CPCB norms to the proposed DG sets. Existing unit has 8 boilers, 4 on solid fuel (coal and biomass) and 4 on mixed fuel (gas and/or liquid).

Details of Process emissions generation and its management:

S.N.	Stack attached to	Stack Identity	Stack Height (m)	Air Pollution Control Measure (APCM)	Expected Pollutants	GPCB Permissible Limit (mg/Nm ³)
Flue gas stacks						
1.	EDC Plant	Incinerator	65	HCl Scrubber, Chlorine absorbers, Low NOx burners	PM SO ₂ NO _x CO Cl ₂ HC HCl VCM	5 40 250 50 10 15 30 6.6
Process stacks						
2.	CHDM Plant	CHDM	30	Low NOx burners	PM SO ₂ NO _x CO	5 50 250 100
3.	Regenerative Thermal Oxidiser (RTO) in EO/EG unit	RTO	30	Low NOx burners	PM SO ₂ NO _x CO	5 50 250 100
4.	Co-Polyesters/PET-G Unit	CoP/PE T-G	30	Low NOx burners	PM SO ₂ NO _x CO	5 50 250 100

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

S.N.	Description	Category	Existing Permission (MTPA)	Quantity after expansion (MTPA)	Present Management Practices
1	Oil from wastewater treatment	1.7 / 1	1,060	1,300	Collection storage, treatment and disposal to registered re-refiners
2	Spent Catalyst from various units and	1.6 / 1	486	500	Collection, Storage, Treatment and Disposal at own / common TSDF/ sell to approved recyclers or

S.N	Description	Category	Existing Permission (MTPA)	Quantity after expansion (MTPA)	Present Management Practices
	Molecular Sieve / alumina dessicant				reprocessing / at Co-processing facility
3	Chemical Sludge from Waste water treatment	35.3/1	3,500	4,500	Collection, Storage, Treatment and Disposal at own/Common TSDF / Co-processing facility
4	ETP sludge containing polymeric constituents	35.3/1	300	400	Collection, Storage, Treatment and Disposal at own/Common TSDF - Incineration facility / for Co-processing facility
5	Used or Spent oil	5.1/1	325	400	Collection, Storage, Treatment and Disposal by selling to registered approved recyclers / reprocessors / Co-processing facility / co-processing in captive power plants
6	Waste residue containing oil*	5.2/1	So ever generated (600)	So ever generated (1,000)	Collection, storage, treatment and disposal at common incineration facility at RIL VMD / RIL HMD / Co-processing facility in captive coal based power plant
7	Process Residues (Residue from VCM)	22.2/1	63,250	63,250	Collection, storage, treatment and disposal at own / common

S.N	Description	Category	Existing Permission (MTPA)	Quantity after expansion (MTPA)	Present Management Practices
	production)				incinerator/co-processing facility
	Process Residues (from Co-polyesters / PET-G plant)	22.2/1	0	34,600	Also incinerate 140 MT/Month from RIL-VMD and send 180 MT/Month to RIL-HMD
8	Empty barrels / containers / liners contaminated with hazardous chemicals / wastes (Discarded Containers)	33.1/1	450	550	Sell as scrap after decontamination / given to approved decontamination facility
9	Bags / liners contaminated with hazardous chemicals / wastes (Bags / Liners)	33.1/1	61	70	Collection storage, and disposal by selling to authorised vendors for recycling / incineration facility / co-processing facility / co-processing in captive coal based power plant
10	Sludge and filters contaminated	3.3/1	So ever generated (500)	So ever generated (600)	Collection, storage, treatment and disposal at TSDF / sell to authorised vendors for recycle /

S.N	Description	Category	Existing Permission (MTPA)	Quantity after expansion (MTPA)	Present Management Practices
	nated with oil				reprocessing / incineration facility / co-processing facility / co-processing in captive coal-based power plant
11	Spent Carbon	36.2/1	So ever generated (500)	So ever generated (600)	Collection, storage, treatment and disposal at common incineration facility / sell to authorised vendors for recycle / reprocessing / incineration facility / co-processing facility / co-processing in captive coal-based power plant
12	Spent ion exchange resin	35.2/1	So ever generated (500)	So ever generated (600)	Collection, storage, treatment and disposal at own / common TSDF / sell to authorised vendors for recycle / reprocessing / co-processing facility / co-processing in captive coal-based power plant
13	Spent Solvent (Degraded Dowtherm)	20.2/1	216	300	Collection, storage, treatment and disposal at TSDF for incineration / sell to authorised vendors for recycle / reprocessing / co-processing facility / co-processing in captive coal-based power plant
14	Cargo / Tank Residue Washing Water	3.1/1	100	100	Collection, storage, transportation, treatment and disposal at common TSDF for incineration

S.N	Description	Category	Existing Permission (MTPA)	Quantity after expansion (MTPA)	Present Management Practices
	and Sludge containing chemical				/ sell to authorised vendors for recycle / reprocessing / co-processing facility / co-processing in captive coal based power plant
15	Cargo / Tank Residue and Sludge containing chemical	3.2/1	100	100	Collection, storage, transportation, treatment and disposal at common TSDF for incineration / sell to authorised vendors for recycle / reprocessing / co-processing facility / co-processing in captive coal based power plant
16	Bilge Water Containing oil from Ships	3.4/1	100	100	Collection, storage, transportation, treatment and disposal by treatment at ETP/ at common TSDF for incineration / sell to authorised vendors for recycle / reprocessing / co-processing facility / co-processing in captive coal based power plant

Certified EC Compliance report has been issued by RO, MoEFCC, Bhopal vide file no. 5-20/2020(Env)/239 and 18-A-21/2015(SEAC)/238 dated 24th March, 2021.

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with the report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the report. If any part of data/information submitted is found to be false/

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

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data is within NAAQ standards. The Committee has deliberated the action plan proposed by the project proponent to arrest the incremental GLC due to the project. The Committee has found the additional information submitted by the project proponent to be satisfactory and addressing the issues raised by the Committee. The Committee has also deliberated on the CER plan and found to be addressing the issues in the study area. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have **recommended** for grant of environmental clearance.

The environmental clearance granted to the project/activity is strictly under the provisions of the EIA Notification 2006 and its amendments. It does not tantamount/construe to approvals/consent/ permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

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

- (i). The company shall conduct 3D modeling for determining risk at individual & cumulative level, safety aspects related to detectors/regulators shall also be included and action taken report shall be submitted to the Ministry within nine (09) months.
- (ii). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- (iii). Total fresh water requirement shall not exceed 24,000 m³/day, proposed to be met from GIDC water supply and supply from Vadodara Irrigation Division. Necessary permission in this regard shall be obtained from the concerned regulatory authority.

- (iv). Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MEF&CC. Outcome from the report to be implemented for conservation scheme.
- (v). Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- (vi). Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.
- (vii). Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- (viii). Regular VOC monitoring shall be done at vulnerable points.
- (ix). The oily sludge shall be subjected to melting pit for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit with proper leachate collection system.
- (x). Oil catchers/oil traps shall be provided at all possible locations in rain/storm water drainage system inside the factory premises.
- (xi). 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 cleaning etc. to reduce wastewater generation.
- (xii). The green belt of 5-10 m width shall be developed in 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.
- (xiii). As per the Ministry's OM dated 30.09.2020 superseding the OM dated 01.05.2018 regarding the Corporate Environmental Responsibility, and as per the action plan proposed by the project proponent to address the socio-economic and environmental issues in the study area, the project proponent, as committed, shall provide education funds in technical training centers/ support in nearby village's schools, support in health care facilities, drinking water supply and funds for miscellaneous activities like solar street lights, battery, solar panel etc., in the nearby villages. The action plan shall to be completed within time as proposed.
- (xiv). The project proponent shall ensure 70% of the employment to the local people, as per the applicable law. The project proponent shall set up a

skill development center/provide skill development training to village people.

- (xv). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- (xvi). The 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.
- (xvii). 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. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.
- (xviii). PP to set up occupational health Centre for surveillance of the worker's health within and outside the plant on a regular basis. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (xix). The National Emission Standards for Petrochemical (Basic & Intermediates) issued by the Ministry vide G.S.R. 820 (E) dated 9th November, 2012 as amended time to time shall be followed.
- (xx). Recommendations of mitigation measures from possible accident shall be implemented based on Risk Assessment studies conducted through 3D modeling for worst case scenarios using latest techniques.

Agenda No. 35.4

Expansion of Grain Based Distillery from 120 to 240 KLPD and Co-Generation Power Plant from 3.5 to 8.0 MW by M/s Globus Spirits Limited located at Plot no. B7, Industrial Park, Panagarh, Tehsil Ausgram-II, District Purba Bardhaman, West Bengal - Amendment of Environment Clearance.

[IA/WB/IND2/209328/2021, J- 11011/337/2013-IA II(I)]

The proposal is for amendment in the Environmental Clearance granted by the Ministry vide letter J-11011/337/2013-IA-II(I) dated 22nd March, 2021 for the project Expansion of Grain Based Distillery from 120 to 240 KLPD and Co-Generation Power Plant from 3.5 to 8.0 MW at Plot no. B7, Industrial Park, Panagarh, Tehsil Ausgram-II, District Purba Bardhaman, West Bengal in favour of Globus Spirits Limited.

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

Particulars	As per granted ECs dated 22.03.2021	After Amendment
Plot No.	B7	B7 & B5B/B
Total Plant Area	7.61 ha (18.81 acres)	9.63 ha (23.81 acres)
Total Greenbelt Area	2.25 hectares (6.3 acres)	2.91 ha (7.20 acres)
Latitude	23°26'07.04" to 23°26'20.42"N	23°26'04.54" to 23°26'20.42"N
Longitude	87°30'47.12" to 87°30'56.45"E	87°30'44.39" to 87°30'56.45"E

With this amendment there will be no change in capacity as granted by MoEFCC, New Delhi vide F. No. J-11011/337/2013 – IA - II (I) dated 22nd March, 2021. Also, with the proposed amendment only adjacent 5 acres area which is also a part of industrial area bearing Plot no. B5B/B will be added to existing plant area of 18.81 acres. Thus, after the proposed amendment the total plant area will be 23.81 acres. 33% of the increased plant area i.e. 33% of 5 acres will be earmarked as greenbelt and plantation.

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be revised/read as	Justification/ reasons
1.	Para 5 (Page 2) of EC vide letter no. J-11011/337/2013 – IA - II (I) dated 22 nd March, 2021	Existing land area is 7.61 ha (18.81 acre). No additional land will be required as proposed expansion will be done within the existing plant premises. Industry has already	Existing land area is 7.61 ha (18.81 acre). 2.02 ha (5 acres) additional land will be required for construction of Ethanol storage tanks, parking of vehicles and new administrative office. The additional land is adjacent to existing land and is in industrial	Company intends to actively participate in the Ethanol Blending Programme of GOI in view of huge demand of ethanol for mixing in petroleum thus is desirous of manufacturing ethanol so as to supply it to the petroleum

		developed greenbelt in an area of 33% i.e. 2.25 hectares (6.3 acres) out of total area of the project and the same will be maintained and made dense in future.	area. Total land will be 9.63 ha (23.81 acre). Industry has already developed greenbelt in an area of 33% i.e. 2.25 hectares (6.3 acres) out of total existing area of the project and the additional 0.66 ha will be developed under greenbelt. Thus, total greenbelt area will be 2.91 ha after adding additional area.	industry. Company proposes to construct Ethanol storage area and its parking area separately thus has got allocated additional land adjacent to the existing plant area which is also a part of industrial area.
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After detailed deliberations EAC **recommended** the amendments in EC, as proposed by the project proponent, with all other terms and conditions remain unchanged mentioned as below:

(i) **Para 5** shall be read as, "Existing land area is 7.61 ha (18.81 acre). 2.02 ha (5 acres) additional land will be required for construction of Ethanol storage tanks, parking of vehicles and new administrative office. The additional land is adjacent to existing land and is in industrial area. Total land will be 9.63 ha (23.81 acre). Industry has already developed greenbelt in an area of 33% i.e. 2.25 hectares (6.3 acres) out of total existing area of the project and the additional 0.66 ha will be developed under greenbelt. Thus, total greenbelt area will be 2.91 ha after adding additional area."

Agenda No. 35.5

Proposed Grain based Distillery (120 KLPD) along with Co-generation Power Plant (5 MW) by Globus Spirits Limited located at Village Olda, Post Baharogora, District Singhbhum, Jharkhand - Extension of Validity of Environmental Clearance [IA/JH/IND2/209268/2021, J-11011/171/2012-IA-II(I)]

The proposal is for extension of validity of the Environmental Clearance granted by MoEFCC, New Delhi vide letter no.J-11011/171/2012-IA.II(I) dated 22nd September, 2014 for the project, "Proposed Grain based Distillery (120 KLPD) along with Co-generation Power Plant (5 MW) by M/s.

Globus Spirits Limited located at Village Olda, Post Baharogora, District Singhbhum, Jharkhand.”

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

S. No.	EC issued by MoEF&CC	Period of Extension	Justification/ reasons
1.	F. No. J- J- 11011/171/2012-IA.II(I) dated 22 nd September, 2014	03 years	<p>The company could not implement the EC within the validity period due to some commercial issues in arranging finances for the project. Now, Government has announced their policy for financing such projects with interest subvention and also the company has adequate resources to set up the plant. Thus, as an initiative to contribute for ongoing Ethanol Blending Programme by Government of India, the company now intends to implement the above-mentioned project.</p> <p>Therefore, as per EIA notification dated 14th Sept., 2006, we hereby request you to grant Extension in Validity of Environmental Clearance for 3 years for implementation of the project. The company assures after obtaining extension in EC, work will start at ground level to commission the plant at the earliest which will be helpful in generation of employment and economic growth of the nearby area.</p>

The Expert Appraisal Committee (EAC), after detailed deliberations **recommended** the extension in EC validity and **validity of existing EC will be extended for 3 years i.e. till 21st September, 2024**, as proposed by the project proponent, with all other terms and conditions remain unchanged.

3rd June, 2021 (Thursday)

Agenda No. 35.6

Expansion of Molasses Based Distillery Unit from 60 KLPD TO 120 KLPD, Sugar cane crushing from 10,000 TCD TO 15,000 TCD and Cogeneration Power Plant from 45 MW to 80 MW at Village Beerangaddi and Hunshyal PG, Taluka: Gokak, District: Belgaum, Karnataka state, by M/s. Satish Sugars Ltd. –Amendment in Environment Clearance regarding.

[IA/KA/IND2/211952/2021, J-11011/341/2012-IA II(I)]

The proposal is for amendment in the Environmental Clearance granted by the Ministry of Environment, Forest and Climate Change (MOEF&CC), New Delhi vide letter no. letter J-11011/341/2012-IA-II(I) dated 16.10.2019 for the expansion of molasses Based Distillery Unit from 60 KLPD TO 120 KLPD, Sugar cane crushing from 10,000 TCD TO 15,000 TCD and Cogeneration Power Plant from 45 MW to 80 MW at Beerangaddi village and Hunshyal PG, Gokak taluka, Belgaum district, Karnataka in favour of M/s. Satish Sugars Ltd.

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

Sl . No	Para of EC issued by MoEF& CC	Details as per EC	To be revised as	Justification	Remarks of EAC
1	Page No 3 Point. 10, Sub Point (iv)	Concentrate d spent wash shall be incinerated and not to be released in open space.	Raw spent wash shall be forwarded for bio- methanati on followed by concentrat ion in MEE	The management has decided to adopt drying technology for spent wash treatment instead of spent wash incineration. The spent wash	Amendment is accepted as proposed omitting the line "Distillery shall be operated for 330 days."

			<p>& concentrated spent wash shall be dried to form powder in Dryer.</p> <p>Distillery shall be operated for 330 days.</p>	<p>powder fetches good revenue and offers value addition along with 100% Bio-organics recycling. Thus, spent wash drying is a proven & successful technology giving good results.</p>	
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The Expert Appraisal Committee noted that Ministry vide O.M dated 25.03.2019 notified that there shall be no requirement for amendment in the existing ECs to increase number of working days for the distilleries adopting incineration boilers or a combination of bio-composting and the incineration for the end treatment of spent wash to achieve ZLD and conforming to SOP formulated by CPCB. Further, it was also noted that the same notification mentions that such projects may be permitted to operate throughout the year without any change in the production capacity as per the ECs issued to such projects. In the view of the above, EAC asserted that part of amendment mentioning operational days of distillery is not required. After detailed deliberations EAC **recommended** the amendment in EC, with all other terms and conditions remain unchanged mentioned as below:

(ii) Page No 3 Point. 10, Sub Point (iv) shall be read as, "Raw spent wash shall be forwarded for bio-methanation followed by concentration in MEE & concentrated spent wash shall be dried to form powder in Dryer."

Agenda No. 35.7

Sugarcane Juice/Molasses based Distillery Unit (100 KLPD; RS/ENA/Ethanol) of M/s Bannari Amman Sugars Ltd. at village Kolundampattu, Tehsil Thandarampattu, District Tiruvannamalai, Tamil Nadu- Extension in Environment Clearance reg.

[IA/TN/IND2/212299/2021, IA/TN/IND2/212299/2021]

The Proposal is for extension in the Environmental Clearance granted by the Ministry vide letter J-11011/709/2008 IA II(I) dated 23rd May, 2014 for the project Sugarcane Juice/Molasses based Distillery Unit (100 KLPD;

RS/ENA/Ethanol) located at village Kolundampattu, Tehsil Thandarampattu, District Tiruvannamalai, Tamil Nadu in favour of M/s Bannari Amman Sugars Ltd.

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

S.no	EC issued by MoEF&CC	Details as per the EC	To be revised/ read as	Justification / reasons
1	Environmental Clearance issued earlier via F. No. J-11011/709/2008 IA II(I) dated 23 rd May, 2014	As per Ministry's S.O. 1141(E) dated 29 th April 2015, validity of Environment Clearance shall be 7 years from the date of issue. Hence, validity of EC is till 22 nd May 2021.	Request for extension of the validity of the EC for 3 years.	Due to financial challenges, the company was unable to set up the distillery unit. The Government is encouraging ethanol blending with fuel, so the company proposed to set up Distillery Unit.

The Expert Appraisal Committee, after detailed deliberations **recommended** for extension of the validity of EC vide letter J-11011/709/2008 IA II(I) dated 23rd May, 2014 till 22nd May, 2024 with all other terms and conditions remain unchanged.

Agenda No. 35.8

Expansion of 45 KLPD Molasses based Distillery to 105 KLPD Molasses / Sugarcane Juice based Distillery by M/s. Yedeshwari Agro Products Ltd. located at Gat No. 119, 120, Pavansoot Nagar, at Anandgaon (Sarni), Post. Jawalban, Tal.: Kaij, Dist.: Beed, Maharashtra–Re-consideration of Environment Clearance.

[IA/MH/IND2/202888/2017, J-11011/175/2015-IA II (I)]

The proposal was earlier placed before the EAC (Ind-2) in its 33rd meeting held during 7th to 8th April, 2021 wherein EAC deferred the proposal and desired certain requisite information/inputs. Information desired by the EAC and responses submitted by the project proponent is as under:

S.N	ADS	Reply of PP	Observation of EAC
1.	Action Plan for Greenbelt Development constituting no. of species to be planted along with their names and proper time-frame.	Under existing set up, 3.1 Ha area is earmarked for Green belt which is 17% of Total Plot Area, (No. of Trees: 1102), Under the expansion of distillery project, additional Green Belt be developed on an area of about 3.36 Ha which accounts for 18% of Total Plot Area, After the additional Green Belt, total Green Belt will be 6.55 Ha i.e. 35% of Total Plot Area. During discussions, the Hon. Committee Members directed to start implementation of the Green Belt immediately while undertaking appropriate densification of existing Green Belt as well as plantation of new trees as per the guidelines. Detailed Green Belt Plan was submitted and it is committed that same will be implemented by 31 August 2021.	EAC deliberated the issue and found the reply addressing the concerns of the Committee .
2.	Proper air pollution control equipment i.e. ESP shall be installed details regarding same	Wet Scrubber provided as Air Pollution Control (APC) Equipment to the existing 70 TPH Bagasse fired Boiler in the Sugar Factory & Co-gen Plant will be replaced by Electrostatic Precipitator (ESP) as the new APC Equipment. Type and design of the ESP set up will be finalized after detailed engineering. The existing boiler has been provided with OCMS (Online Continuous Monitoring System) which is connected to CPCB & MPCB Servers.	EAC deliberated the issue and found the reply addressing the concerns of the Committee .
3.	Parking area shall be paved and action plan to develop the same with time frame.	Internal Roads & Parking Area will be provided with proper treatment through "WBM" Paving on which coarse and fine asphalt layers will be applied so as to make the entire surface completely resistant to generation of fugitive dust emissions. Surface treatment &	EAC deliberated the issue and found the reply addressing the concerns of

		Asphalting to the internal roads & parking area in the Sugar Factory will be completed by 31 st October 2021, i.e. before commencement of the next crushing season (2021-2022). Further, as presented during discussion, all the requisite facilities of sanitation & rest rooms have already been provided at the industry site.	the Committee .
4.	Action plan for rainwater harvesting shall be submitted where ground water recharge shall not be done instead of this, storage pond shall be constructed Details regarding location and dimensions for storing rainwater its proper utilization within plant activities shall be submitted.	Industry has already adopted certain measures of Rain Water Harvesting (RWH) System. Under the Distillery expansion project, full fledged RWH System shall be implemented. RWH Plan has been prepared which takes in to account both roof top and surface harvesting. The rainwater endowment is estimated for rooftop, green belt, parking, road & open space area in the Industry premises. Calculations are made for annual rainwater yield. Detailed RWH Plan, locations of the proposed storage tanks & photographs of existing RWH system have been submitted.	EAC deliberated the issue and found the reply addressing the concerns of the Committee .

The Project Proponent and the Accredited Consultant M/s. Equinox Environments (I) Pvt. Ltd. made a detailed presentation on the salient features of the project.

The proposal is for grant of Environmental Clearance (EC) to the project Expansion of 45 KLPD Molasses based Distillery to 105 KLPD Molasses / Sugarcane Juice based Distillery by M/s Yedeshwari Agro Products Ltd. (YAPL) located at gat No. 119 & 120, Pavansoot Nagar, At.: Anandgaon (Sarni), Post. Jawalban, Tal.: Kaij, Dist.: Beed, Maharashtra State.

All Molasses based distilleries >100 KLPD are listed at S.N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification dated

14.9.2006 and as amended on 13.6.2019 under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The Standard ToRs has been issued by Ministry vide letter No. No.J-11011/175/2015-IA II (I) dated 20th February, 2020 for Expansion of 45 KLPD Molasses based Distillery to 105 KLPD Molasses / Sugarcane Juice based Distillery. Public hearing for expansion project was conducted on 11.02.2021 at Yedeshwari Agro Products Ltd. (YAPL), Gat No. 119, 120, at Pavansoot Nagar, Anandgaon (Sarni), Post. Jawalban, Tal. Kaij, Dist. Beed, Maharashtra and chaired by the District Collector, Beed. The main issues raised during public hearing were related to greenbelt development, manufacturing of products harmful to environment and disposal, pollution related to this expansion, source of raw material, benefits to local people & employment generation, by-product produced, method used for alcohol production, spent wash disposal, rainwater harvesting & skill development program for local youths shall be undertaken. It was informed that no litigation is pending against the proposal.

Ministry has issued EC earlier vide letter no.J-11011/175/2015-IA II (I) dated 13th September, 2017 to the existing 45 KLPD molasses based Distillery Unit in favor of Yedeshwari Agro Products Ltd. (YAPL).

The details of products and capacity are as under:

Industrial Unit	Product	Unit	Quantity		
			Existing	Expansion	Total
Distillery (45-105 KLPD)	RS/ Extra Neutral Alcohol (ENA)/ Ethanol	KLPM	1,350	1,800	3,150
	By-products				
	CO ₂	MT/M	1,020	1,410	2,430
	Fusel Oil	MT/M	2.7	6.0	8.7

Total plot land area is 1,87,200 M². Existing built-up area 72,414.35 M²; additional built-up for distillery expansion is 2,000 M². Industry has already developed Green Belt in an area of 31,824 M² (17% out of total plot area). Moreover, additional Green Belt area of 33,696 M² (18% out of total plot area) will be developed. After expansion of distillery, the total Green Belt area would be 65,520 M² which accounts for 35% of total plot area. The estimated project cost is Rs. 184.45 Crores including existing investment of Rs. 139.45 Crores. The distillery will be operated for 330 days. Total capital cost earmarked towards environmental pollution control measures under distillery is Rs. 35.25 Crores and the Recurring cost (operation and maintenance) will be about Rs. 2.98 Crores per annum. Total Employment will be 40 persons as direct & indirect after expansion project. Industry proposes to allocate Rs.150 Lakh @ of 3.3% towards Corporate Environmental Responsibility.

There are no national parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 Km Study Area. Manjara River is flowing at a distance of 8 Km from West to East direction.

Ambient air quality monitoring was carried out at 8 locations during Oct.- Nov.- Dec.- 2019 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (49.5–64.4 µg/M³), PM_{2.5}(13.1 – 23.7µg/M³),SO₂ (14.2 – 22.5 µg/M³) and NO_x (16.6 – 31.6 µg/M³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 0.26 µg/M³ for PM₁₀ (towards South-West side), 0.073 µg/m³ for PM_{2.5} (towards South-West side), 3.14 for SO₂ µg/m³ (towards South-West side) and 0.651 µg/m³ NO_x(towards South-West side). The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement after expansion of Distillery project will be 1367 CMD. Out of which 66 CMD will be fresh water taken from Manjara River. The process effluent generated after expansion from 105 KLPD distillery would be in the form of raw spent wash to the tune of 840 M³/Day. Here, raw spent wash from proposed 60 KLPD distillery operations @ 480 M³/Day will be concentrated in Multi Effect Evaporator (MEE) and will be incinerated in proposed 22 TPH incineration boiler thereby achieving ZLD. Further, raw spent wash from existing 45 KLPD distillery operations @ 360 M³/Day will be primarily treated in bio-methanation plant followed by concentration in MEE and shall also be incinerated in incineration boiler thereby discontinuing existing composting operations. Other effluents to be generated from 105 KLPD distillery operations will be in the form of spent lees, cooling & boiler blow down, MEE condensate, lab & wash will be to the tune of 881 CMD. Same will be treated in CPU and shall be recycled in process.

Power requirement for distillery after expansion will be 1.4 MW which will be procured from own co-gen plant. No additional DG set will be installed under expansion of project. Existing unit has 8 TPH Biogas/ Furnace Oil fired boiler. Additionally, 22 TPH Spent wash & Bagasse/Coal fired Incineration Boiler will be installed. ESP with a stack of height of 72 M installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm³ for the boiler.

Details of process emissions generation and its management:

The CO₂ generation shall take place in fermenters of the distillery. CO₂ to the tune of 81 MT/Day shall be released from 105 KLPD distillery plant. CO₂ shall be compressed, bottled and supplied to manufacturers of beverages.

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

No.	Industrial Unit	Type	Quantity (MT/M)		Disposal
			Existing	After Expansion	
1	Distillery	Yeast Sludge	300	540	

		CPU Sludge	7.2	30	Burnt in Incineration Boiler
		Boiler Ash(Coal / Bagasse +Sp.wash)	-	1020	Given to Brick / Cement Industry

Details of Hazardous waste

No any hazardous waste will be generated from distillery unit.

Certified compliance report has been obtained on 22.12.2020 from RO, MoEFCC, Nagpur and visit was conducted on 25.02.2020. Action taken report for non- complied conditions observed by RO submitted on 02.04.2021.

After detailed deliberations, EAC desired certain commitments regarding greenbelt development in 33% area and parking area shall be developed in 20% area out of total area of plant site. PP submitted the undertaking in compliance of the above.

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

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data is within NAAQ standards. The Committee has deliberated the action plan proposed by the project proponent to arrest the incremental GLC due to the project. The Committee has found the additional information submitted by the project proponent to be satisfactory and addressing the issues raised by the Committee. The Committee has also deliberated on the CER plan and found to be addressing the issues in the study area. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have **recommended** for grant of environmental clearance.

The environmental clearance granted to the project/activity is strictly under the provisions of the EIA Notification 2006 and its amendments. It does not tantamount/construe to approvals/consent/ permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

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

- (i). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- (ii). The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises.
- (iii). Total fresh water requirement for the proposed project will be 66 CMD fresh water which will be met from Manjara River. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises. Ground water monitoring shall be done regularly and report is to be submitted to concerned authorities regularly.
- (iv). The spent wash/other concentrates shall be incinerated.
- (v). CO₂ generated from the process shall be bottled/made solid ice and utilized/sold to authorized vendors.
- (vi). Occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (vii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.
- (viii). 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.

- (ix). Process organic residue and spent carbon, if any, shall be sent to Cement other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.
- (x). 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.
- (xi). 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. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map.
- (xii). As per the Ministry's OM dated 30.09.2020 superseding the OM dated 01.05.2018 regarding the Corporate Environmental Responsibility, and as per the action plan proposed by the project proponent to address the socio-economic and environmental issues in the study area, the project proponent, as committed, shall provide education funds in technical training centers/ support in nearby village's schools, support in health care facilities, drinking water supply and funds for miscellaneous activities like solar street lights, battery, solar panel etc., in the nearby villages. The action plan shall be completed within time as proposed.
- (xiii). There shall be 20% parking space out of total area of plant site which shall be earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.
- (xiv). Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- (xv). 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.
- (xvi). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-

fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

35.9. Any other items with the permission of the Chair.

Agenda No. 35.9.1

Clarification of applicability of Environmental Clearance for production of the Bitumen Emulsions - 50,000 MTA, Modified Bitumen - 36,000 MTA and Road bond - 1000 MTA the Bitumen Emulsions - 50,000 MTA, Modified Bitumen - 36,000 MTA and Road bond - 1000 MTA from Bitumen by M/s. Hindustan Colas Private Limited located at Malkapuram VPT Industrial Zone in Visakhapatnam, Andhra Pradesh.

Observations and Recommendation of the EAC in 31st & 33rd EAC (Industry -2) meeting held on 3rd March, 2021 & 07-08th April, 2021 respectively:

In 31st meeting, EAC deliberated on the proposal and clarified that prior Environmental Clearance is required for the production of Bitumen Emulsions, Modified Bitumen and Road bond from Bitumen. Further, EAC decided that the activity falls under category 4(a) [Petroleum Refining Industry] of Schedule of EIA Notification, 2006.

Subsequently, query was raised by competent authorities, where the matter was again discussed during 33rd EAC meeting and members deliberated that PP shall be asked to submit the case in order to understand the environmental impact implications in terms of chemical & physical process that is involved in conversion of bitumen to bitumen emulsions etc. The proposal was again considered in 35th EAC meeting where PP was asked to represent the above query in the form of presentation.

PP submitted following information:

HINCOL had constructed emulsion & modified bitumen plant in the year 2005 on the plot adjacent to HPCL refinery after obtaining consent to establish from APPCB in Sept. 2001. HINCOL operated the old plant till Aug. 2019 by obtaining & renewing consents from time to time from APPCB. HPCL Visakh Refinery Modernisation Project necessitated the relocation of HINCOL in nearby plot subleased by HPCL. HINCOL constructed and commissioned in a new Plant Dec 2019 with all statutory permissions and approvals including consent to establish & consent to operate from APPCB.

APPCB initially issued Consent to Establish in May 2018 and subsequently Consent to Operate Oct 2019 after careful scrutiny of the documents & site visits.

HINCOL applied for renewal of the consent for next 5 years and paid necessary fees. PP were then called to attend the CFO Committee Meeting held on 23.10.2020 at APPCB Zonal Office, Vizag where the Hon'ble Committee after scrutinizing CFO renewal application sought certain clarifications about Products & manufacturing process and Applicability of Environmental Clearance to which PP responded by giving relevant facts.

PP informed them that their Operations and Activities doesn't come under purview of Environmental Clearance as per provisions of EIA Notification 2006 and its amendments thereof as per the Schedule of List of Projects requiring Prior Environmental Clearance.

Hon'ble JCEE have directed PP to submit the clarification obtained from the Competent Authority i.e., MoEF&CC, GoI regarding the applicability of Environmental Clearance for production of Bitumen emulsions, Modified Bitumen and Road Bond within 2 months so as to renew our CFO order, failing to which CFO will be rejected.

MANUFACTURING PROCESS:

The main raw material in manufacturing process is bitumen which is the last residue in the fractional distillation of Crude Petroleum with a flash point of 220°C minimum and is non-volatile. Bitumen is treated as an unclassified product as per the OISD (Oil Industry Safety Directorate, Govt. of India) Standard. Bitumen is manufactured in Petroleum Refinery only and we procure it for manufacturing of Emulsion and modified bitumen. We don't have any refining process in our plant. Bitumen or Bitumen Emulsions neither pose a safety nor a pollution hazard.

HINCOL has mainly two product lines – bitumen emulsion & modified bitumen. Manufacturing of bitumen emulsion involves mixing of bitumen and water using emulsifiers & other additives. This mixing is achieved by passing through a colloidal mill at high speed. The colloidal mill breaks the bitumen in very small globules and an emulsion of bitumen in water is produced.

The entire manufacturing process is automatic and computer controlled and it does not involve physical handling of any products. The process does not involve any chemical reactions; consequently, there is no process emission either in air or water. Since the production plant consists of all close circuit pipelines, there is no spillage of any products. The finished product is either sent through bulk tankers or filled in 200 kg capacity drums for dispatch to work sites. Emulsion is stored, handled and applied at ambient temperature at the road construction sites unlike hot bitumen resulting in reduction in emission of burnt fuel.

Modified Bitumen manufacturing process involves simple mechanical mixing. The modifier i.e. Polymers/ Crumb Rubber which is in powder form is added in the required percentage to Ordinary Bitumen. The mixture is agitated in the tank with the help of agitators for a period of 8 -10 hrs leading to preparation of Modified Bitumen. The entire process is carried out in a closed-circuit at atmospheric pressure with no chemical reactions but just physical mixing / blending. Consequently, there is no any process emission either to air or water.

The finished good is maintained at a temperature of 140-160 deg. Centigrade and is filled in bulk tankers for dispatch to work sites.

Manufacturing process of bitumen emulsion and modified bitumen does not involve generation of any liquid effluent & thus Zero Liquid Discharge (ZLD) processes.

Bitumen is heated using high efficiency thermic fluid heaters using a cleaner low sulphur fuel (LDO). Emission of flue gases are discharged through 30-meter-tall stack. Environmental monitoring is carried out periodically & the emission levels are well within the norms prescribed by Pollution Control Board.

Manufacturing Emulsion involves emulsification of hot Bitumen & other components using a colloidal mill in closed circuit with automation. Manufacturing Modified Bitumen involves simple heating & blending of Bitumen & components in tanks in closed circuit with automation. No refining process, whatsoever is involved in the manufacturing of these Products. Hence, there is no pollution hazard envisaged. Plants are small down-stream units processing Bitumen from Refinery and Capex of < Rs 50 Crs and EIA notification is not applicable. The key raw material for this Plant is Bitumen which is the last residue from Refinery having a flash point of above 220 C and not volatile. The Project has robust systems to protect the site from any Pollution or Safety hazard with suitable automation & best-in-class equipment. This Project is a mere resitment of an existing Plant in same area. Consent to Establish & Consent to Operate for the old unit were given since 2005 until dismantling in 2019. Even for new Project, APPCB has given Consent to Establish & Consent to Operate and the query was raised during renewal. The company has given suitable clarifications. HINCOL has not violated PCB guidelines in 26 years & assure the Hon'ble EAC that all conditions of Consent to Establish & Operate will be complied with.

After detailed deliberations, EAC found that the data presented is not adequate to take any decision regarding requirement of EC. Therefore, committee desired to provide information regarding:

- i. Instrumentation diagram/P & ID diagram clearly showing every stage of process and representing micro details related to process.
- ii. Mass balance/Energy balance of the process involved.

- iii. Environmental implications consisting of emissions, effluents, solid waste, hazardous waste, other pollutants envisaged from each unit of the process involved.
- iv. Mitigation measures as per the environmental impacts identified in form of emissions, effluents, solid & hazardous waste etc.
- v. Pollution load due to increase in traffic and transportation of vehicles.

The information provided by PP will be circulated to all EAC members for further deliberation/discussion in the upcoming EAC meetings.

Agenda No. 35.9.2

Issues related to EBP proposals

The Government of India notified the National Policy on Biofuels – 2018 (NPB–2018) on 4.06.2018 wherein, under the Ethanol Blended Petrol (EBP) Program, an indicative target of 20% blending of ethanol in petrol by 2030 was laid out. Ethanol produced from sugarcane, grains etc. via fermentation and distillation process can be mixed with gasoline to form different blends. Blending of ethanol allows petrol based engine to more completely combust the fuel, resulting in fewer emissions and thereby reducing the occurrence of environmental pollution. Further, ethanol blended petrol (EBP) programme is aimed to promote the use of alternative and environment friendly fuels and to reduce import dependency for energy requirements.

Later, on the directions of Committee of secretaries an inter-ministerial committee of experts was constituted under the Chairmanship of Additional Secretary, NITI Aayog comprising representatives of all the stake holders. Subsequently, the committee released a report finalizing a clear roadmap of year-wise ethanol blending targets for the next 10 years and the various policy implications of the plan. It was decided that in the interest of environmental sustainability, making ethanol available on a pan-India basis and sharing the benefits of EBP widely, measures to promote production from non-sugarcane sources, food grains, especially maize and second generation sources may be promoted through suitable pricing mechanisms. It has suggested few areas that needs to be addressed for expediting environmental clearances for ethanol producing units. Further, Department of Food and Public Distribution has also requested the Ministry to rectify some areas of concern for streamlining the EC process. In this regard, EAC has deliberated on the following topics:

Recommendation of Committee of Experts: Due to technological developments grain based distilleries & molasses based distilleries (which are using incineration boilers) are zero liquid discharge; thus, net pollution is either minimum or negligible. Therefore, such projects (up to 100 KLD for molasses-based distilleries and 200 KLPD for non-molasses-based distilleries) with modern technologies can be categorized as B2 in place of B1 projects.

In this regard EAC has deliberated on the above cited subject emphasizing whether all distilleries can be considered at MoEFCC at central level for Grant of Environmental Clearance and whether such projects can be given relaxation for Public Hearing. The deliberations of EAC are as follows:

1. It was noted that earlier distilleries were categorized under item "5 g" of MoEFCC Notification No. S.O. 1533 (E) dated 14.09.2006 which was later amended vide Notification No. 1960 (E) dated 13.06.2019 with Molasses distilleries mentioned under "5 g (i)" & all other distilleries (using raw materials as cane juice, syrup, grain etc.) under "5 g (ii)".

2. As per the provisions in Notification No. 1960 (E) dated 13.06.2019, all molasses distilleries with capacities equal to or less than 100 KLPD and other distilleries with capacities of 200 KLPD or less, require to obtain Environment Clearance (EC) from the State Governments (through SEAC & SEIAA committees). Similarly, those above 100 KLPD (for molasses distilleries) and 200 KLPD (for grain based distilleries) shall obtain EC from EAC of MoEFCC; Govt. of India. It has come to notice that very long time is taken by the State Governments in granting ECs to distilleries due to following facts-

a. At state level, the ToRs are granted mostly after consideration of the Form I & allied details of the distillery proposal submitted by Project Proponent (PP) only after physical or virtual (VC) meetings conducted before the SEAC followed by approval of the SEAC decision in subsequent SEIAA meeting. Thus, a PP gets TORs for his distillery project after meetings & decisions from 2 different committees. It has been reported that a time period from 1 to 3 months is taken at the state level till the ToRs are issued to distillery proposals.

b. The above procedure is again repeated during grant of EC after submission of final EIA Report by the PP. Here again, PP faces two committees and two to three months' time is taken till EC is granted after submission of the proposal by PP.

c. It was observed that there is no uniformity in structure & contents of points stated in ToRs by different States/ UTs. On the contrary, MoEFCC has practice of granting Standard ToRs, online, that to in a single day after submission of Form I (complete in all respects).

d. Due to presence of the 2 committees namely SEAC & SEIAA at state level; the PP has to face two meetings (ToRs & EC) to get clearance for his proposal which consumes not only considerable time but also incurs substantial cost due to evaluation & scrutiny fees, charged by some State Governments, which are based on capital investment of the project.

3. EAC is of the opinion that there is a considerable difference (including certain relaxations) in conditions of EC granted by the State Govt. when compared with those in the EC awarded by MoEFCC. This is mainly because the policies & decision by EAC of MoEFCC are more rational, logical & beneficial from the view of environmental management & pollution control aspects. This is true, especially when consideration comes to conditions

like - attaining ZLD in the project operation, discouraging the usage of coal, non-conventional energy utilization promotion, water use & effluent minimization through process optimization in light of the norms set by the Ministry etc.

4. It is emerged that during decision of making on grant of EC there is superior knowledge, exposure, experience with the members of EAC when compared with that of the SEAC & SEIAA members.

5. The SEAC & SEIAA committees mostly handle all project sectors for grant of ToRs & ECs due to which a long queue of pending proposals (comprising of Industries, Mining, Construction, Irrigation, Chemicals & Petrochemicals etc.) is often met at the various States which again take long time in decision making and granting of the permissions.

6. As far as the distilleries are concerned, MoEFCC has entrusted the EC responsibility to EAC (Industry -2) which dedicatedly handles all such projects with faster consideration and mostly ECs are granted in the first go. This is possible due to efficient & expeditious screening, scrutiny & evaluation of the proposals by IA Section of Ministry before putting up the projects for consideration by EAC. Due to this protocol and as two EAC meetings are conducted every month, there is no any pendency towards consideration and grant of EC to distillery proposals by MoEFCC.

7. In light of the policy of Govt. of India towards blending of Ethanol with Petrol & Diesel (up to 20% by Year 2025), manufacturing of Ethanol should get tremendous acceleration to meet Ethanol demand of 9,000 Million Liters / Year (present manufacturing is of 3500 Million Liters/Yr.) by 2025 for blending . To make this happen, more & more distilleries with big capacities (100 to 300 KLPD) should come in to operation within short span. This only can be achieved if the time required in grant of EC is reduced considerably from present day practice (6-8 months for EC where Public Hearing is required for Cat. A & Cat. B1 Projects).

8. Also, the Public Hearing (PH) procedure for distilleries needs reconsideration in light of enhancing setting up of new distillery projects / expanding capacities of existing ones. This is because when the PH is required to be conducted after grant of ToRs then minimum of 2 months are consumed in the overall process. One month is spent in the compulsory paper notice publishing protocol. Also, making necessary preparations before the actual PH event like submission of application by PP to concerned SPCB, forwarding of PH order by SPCB to District Magistrate, getting appointment of DM/ADM, preparation of MoM after PH and getting approval of the Panel Members on it consumes almost one month. In fact, when the distilleries are to be totally ZLD projects with spentwash treatment & disposal methodologies like Incineration, Powder making, Potash Recovery etc. as per the latest policies of the MoEFCC, there should not be any concern of the local residents towards the new distillery projects. Social grievances and need for compliances (if any) could be effectively handled through implementation of CSR activities, which must be brought forward by the individual industry & duly captured by the accredited consultants preparing EIA reports. The Ministry & State Govt.

could further impose their views and give additional inputs for proper & speedy implementation of CSR which subsequently could be reviewed & evaluated by the Ministry's Regional Offices after submission of six monthly compliance reports by the industry to them. In case of expansion of existing distilleries, the earlier performance of existing units could be certified by the SPCBs where any social problems / issues are there w.r.t. manufacturing operations, environmental management practices or any other things. The PH; if exempted for all Distillery Projects (Cat. A & B1) demanding either establishment or expansion, straight away 2 months' period will be saved.

Considering the above facts, EAC affirmed that all the distillery projects conforming to ZLD through spentwash treatment & disposal methodologies like Incineration, Powder making, Potash Recovery etc may be considered at central level and such projects may be given relaxation for public hearing.

Representation from Indian Sugar Mills Association: EACs are rejecting bio-composting and insisting only on incineration to burn the spent wash. They stated that bio-composting is a globally accepted system for disposal of waste of sugar mill and distillery and it has been successfully implemented for several decades in India. It also mentioned that CPCB has also issued Standard Operating Procedure (SOP), under which bio-composting is allowed, provided that the bio-composting area is fully or partly covered.

EAC made a detailed deliberation on the bio-composting process. The following points emerged during the discussion:

S.No	Description	Features	Remarks of EAC
1.	Type of Reaction	<ul style="list-style-type: none"> Aerobic chemical degradation resulting into exothermic process causing loss of moisture in spentwash through evaporation. Organic Matter is degraded thereby reduction of original C/N ratio of 30-35 to 17-20. 	<ul style="list-style-type: none"> Solids content in Spentwash & Pressmud and maintaining requisite moisture in the substrate under composting are very important parameters controlling rate & success of the composting process. Process operators often fail to recognize this and the composting

			<p>process faces severe</p> <ul style="list-style-type: none"> • Limitations which results in inefficient operations.
2.	Process time	<ul style="list-style-type: none"> • 6 to 8 weeks (very long period) 	<ul style="list-style-type: none"> • Extremely long time is taken for completion of the composting of spentwash & pressmud. • This is due to very slow kinetics of biochemical reactions involved during degradation of the organic matter through microbial actions
3.	Filler Material	<ul style="list-style-type: none"> • Pressmud (PM) required as Filler Material • PM: Spentwash Proportion (Ratio) of 1:2 to 1:2.5 	<ul style="list-style-type: none"> • PM availability limits the composting seriously & skilled supervision is required for composting process parameters. • Complete automation is not possible. • For standalone distilleries composting is not possible as Sugar Factory backup for PM is not present.
4.	Bio-methanation of spentwash	<ul style="list-style-type: none"> • Composting process is hampered if bio-methanated spentwash is utilized. It is due to loss of organics during spentwash digestion (BOD is 	<ul style="list-style-type: none"> • Bio-methanation of spentwash is not advisable if it is to be used in composting as the total solids get

		<p>reduced by about 80%).Less organics means less speed of degradation reactions resulting into lesser temperatures in composting substrates and the final compost moisture remains high (50-60%) with less C/Nratios. It results in the lower quality of the manure.</p>	<p>reduced by half.</p>
5.	Capital cost	<ul style="list-style-type: none"> • Compost yard about the size 6-12 Acres is required for 45-100 KLPD distillery with R.C.C. Surfacing above WBM base is required along with side drains in RCC channels for leachate collection. Also leachate tank of R.C.C is essential. • The 30-Days capacity Spentwash Storage Tank is also required to be in RCC with HDEP Linings underneath and it involves huge investment. 	<ul style="list-style-type: none"> • Making entire RCC surface is extremely costly and also requires periodic maintenance for damage repairs due to acidic nature of raw spentwash if used. • The accidental leakages, runoffs and discharges from the tanks cause severe threat to environment • Land availability and its cost are high.
6.	Pollution potential of surrounding area	<ul style="list-style-type: none"> • Very high due to Seepage, leakage and infiltration of spentwash from yard and tank owing to improper constructional practices & inefficient O&M of the infrastructure 	<ul style="list-style-type: none"> • Extremely efficient operation & skilled supervision is required which is often not possible in the sugar factory & distillery

		<p>involved.</p> <ul style="list-style-type: none"> • Nuisance of odor, flies, mosquito & rodents is common • Due to huge area of operation; littering of raw materials and failure to control process parameters result into very bad aesthetics. 	<p>complexes.</p>
7.	Product quantity and variability	<ul style="list-style-type: none"> • Compost in bulk quantities is generated with low to medium selling cost. • Shelf Life is generally less (1to2 Months) due to high moisture of 30% to 50% 	<ul style="list-style-type: none"> • Uniform product quality is never possible due to lack of consistency and uniformity in the process operations. • Process standardization is not achieved.
8.	Adoption of Process	<ul style="list-style-type: none"> • Almost all earlier distilleries till 2015 adopted the Composting. But now, most of them have switched over to either Spentwash Incineration or Powder Making. 	

Further, it was observed that there is problem of mismanagement and malpractices associated with spentwash handling and disposal in bio composting. EAC has also opined that complete ZLD is usually not possible due to mass balance associated with filler materials & spentwash coupled with the attitude of Project Proponents towards dealing with long process time involved in composting. Considering the above facts, EAC held by its stance on preferring spentwash incineration or powder making to bio composting.

Representation from DFPD: Shri Vivek Shukla, Director (Sugar) has made a presentation on the aspects of the pollution load on environment caused by grain based distilleries vis-à-vis molasses based distilleries and requested Ministry to consider all the grain based distillery projects at central level exempting Public hearing for expediting EC process under EBP.

It was informed that grain based ethanol plants dedicated for ethanol blended petrol (EBP), having ZLD system and carrying out production of DDGS (dried distillers grain with solubles) as a by-product, would have less pollution. BOD concentration of condensate generated from DDGS producing ethanol plants has less BOD (<1000 mg/l, which shall be treated in condensate polishing unit and used within the process), compared to plants producing ethanol without DDGS as by-product. Further, he has also presented complete process description of grain based distilleries and molasses based distilleries and concluded that pollution load on environment is minimal in grain based distilleries.

Therefore, in the light of EBP, he requested Ministry to consider the proposals of grain based distilleries to be categorized as B2 and to be appraised at central level exempting Public hearing. As stated in the earlier discussion, EAC informed that distillery projects adhering to ZLD through spentwash treatment & disposal methodologies like Incineration, Powder making, Potash Recovery etc may be considered at central level and such projects may be given relaxation for public hearing and can be categorized as B2 for expediting EC process.

EAC after deliberations, also agreed on the above line and told Director(Sugar), let his department take up this case with MoEFCC at appropriate level.

Agenda No. 35.9.3

Regarding discussion on OM dated 28th May, 2021 issued by MoEFCC related with "Providing the inputs/criteria for siting of industries – reg."

Member secretaries of various sectors were requested to place the matter in the forthcoming EAC meeting regarding inputs/comments for siting of industries in respect of projects or activities dealt by their concerned sector of IA division w.r.t. rivers, water bodies, habitation and other surface features for taking the policy decision regarding the siting criteria.

Matter was discussed by Member Secretary with a brief regarding note & OM provided by Policy Division. After detailed deliberations, EAC decided that the siting criteria and data shall be collected from each State committee and boards, Central Pollution Control Board (CPCB), various departments like irrigation department also and collected information shall be presented to EAC so that they can deliberate on the matter and decide their views.

Agenda 35.9.4

Discussion on Standardization/Optimization of conditions w.r.t. Standard Terms of Reference (ToR).

It was decided that the presentation showing the entire Standard ToR related to nine (09) activities in Industry –II shall be circulated among members and their comments shall be incorporated. After incorporation of

comments from all EAC members, modified/upgraded presentation shall be discussed in upcoming scheduled meeting.

The meeting ended with thanks to the Chair.

GENERAL CONDITIONS FOR ENVIRONMENTAL CLEARANCE

- (i) No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- (ii) The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
- (iii) The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- (iv) The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- (v) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
- (vi) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- (vii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance

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

- (viii) The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.
- (ix) The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at <https://parivesh.nic.in/>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.
- (x) The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.
- (xi) This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

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

S. No.	Name and Address	Designation
1.	Dr. J. P. Gupta	Chairman
2.	Sh. R. K. Singh	Member
3.	Shri Ashok Agarwal	Member
4.	Dr. Y. V. Rami Reddy	Member
5.	Dr. T. Indrasena Reddy	Member
6.	Shri S. C. Mann	Member
7.	Dr. T. K. Joshi	Member
8.	Dr. J. S. Sharma	Member
9.	Shri Dinabandhu Gouda, CPCB	Member
10.	Shri Sanjay Bist	Member
11.	Sh. Ashok Kr. Pateshwary, Director, MoEFCC	Member Secretary
MoEFCC		
12.	Dr. Mahendra Phulwaria	Scientist 'C'
13.	Sh. Kanaka Teja	Research Assistant
14.	Ms. Meetika Gupta	Research Associate
