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

Dated: 06.09.2021

MINUTES OF THE 39th MEETING OF THE EXPERT APPRAISAL COMMITTEE

(INDUSTRY-2 SECTOR PROJECTS)

HELD ON 17th - 18th August, 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 38th Meeting of the EAC (Industry-2) held during 28th - 29th July, 2021conducted 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: -

17th August, 2021 (Tuesday)

Agenda No. 39.1

Panipat Refinery Capacity Expansion from Existing 15 MMTPA to 25 MMTPA within the Existing Refinery Complex by M/S. Indian Oil Corporation Limited (IOCL) located at PR 42-128, Baholi Village,

Panipat District, Haryana - Consideration of Environment Clearance reg.

[IA/HR/IND2/220613/2018, J-11011/177/2016- IA II(I)]

The project proponent and their consultant M/s. Hubert Enviro Care System (P) Ltd, Chennai, 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 Panipat Refinery Capacity Expansion from Existing 15 MMTPA to 25 MMTPA within the Existing Refinery Complex by M/S. Indian Oil Corporation Limited (IOCL) located at PR 42-128, Baholi Village, Panipat District, Haryana.

All main products: Propylene, LPG, Naphtha, MS BS-VI, ATF, HSD BS-VI, Bitumen, RPC, Sulphur and LOBS listed at S. No. 4 (a) - "Petroleum Refining Industries" of Schedule of Environmental Impact Assessment (EIA) Notification under Category 'A', and are appraised by Central Level by Expert Appraisal Committee (EAC).

The ToR has been issued by Ministry vide letter No. IA- J-11011/177/2016-IA II(I); dated 24th August, 2018. Public Hearing for the proposed project has been conducted by Haryana State Pollution Control Board on 06.04.2021 and chaired by Deputy Commissioner, Panipat. The main issues raised during the public hearing are related to basic facilities for schools, labour facilities and crops getting damaged by neel gaye due to the green belt area of the PRPC. It was informed that no litigation is pending against the proposal.

Ministry had issued EC earlier vide letter no. J-11011/177/2016-IA-II(I) dated 26.03.2018 to the existing project in favour of M/s. Indian Oil Corporation Limited, Panipat Refinery.

The details of products and capacity are as under:

Existing & Proposed Products

S. No.	Products details	Unit	Existing Quantity	Proposed Quantity	Total Quantity
1	Propylene	TMTPA	123	554	677
2	LPG	TMTPA	438	752	1190
3	Naphtha	TMTPA	1435	407	1842
4	MS BS-VI	TMTPA	1965	1483	3448
5	ATF	TMTPA	1751	500	2251
6	HSD BS-VI	TMTPA	6932	5074	12006
7	Bitumen	TMTPA	449	41	490
8	RPC	TMTPA	884	0	884
9	Sulphur	TMTPA	200	187	387
10	LOBS	TMTPA	0	526	526

Existing & Proposed Capacities

S. No	Plant / Equipment / Facility	Units	Existing Configuration	Proposed Configuration	Final configuration after expansion
1.	CDU 1	MMTPA	7.5	-	7.5
2.	VDU 1	MMTPA	3.75	-	3.75
3.	Resid Fluidized Catalytic Cracking Unit (RDCCU)	MMTPA	0.85	-	0.85
4.	Propylene Separation Unit (PSU)	MMTPA	0.225	-	0.225
5.	Once Thru Hydrocracker Unit	MMTPA	1.9	-	1.9
6.	Continuous Catalytic Reforming Unit (CCRU)	MMTPA	0.65	-	0.65
7.	Hydrogen Generation Unit (HGU)	TMTPA	38	-	38
8.	VisbreakerUnit (VBU)	MMTPA	0.4	-	0.4
9.	Diesel Hydro Desulphurisation Unit (DHDS)	TMTPA	0.77	-	0.77
10.	Bitumen Blowing Unit (BBU)	MMTPA	0.5	-	0.5
11.	SulphurRecovery Units (SRU/SSRU)	TPD	2 *115	-	2 *115
12.	Amine Regeneration Unit	m^3/hr	400	-	400
13.	Sour Water Strippers I (Refinery)	m^3/hr	71.8	-	71.8
14.	Sour Water	m^3/hr	16	-	16

S. No	Plant / Equipment / Facility	Units	Existing Configuration	Proposed Configuration	Final configuration after expansion
	Strippers II (OHCU)				
15.	SR LPG treatment	MMTPA	0.142	-	0.142
16.	Merox: 1.FCCGasoline 2.CrackedLPG(FCC+DCU) 3.ATF/KERO	TPA	190000 200000+100000 1150000	-	190000 200000+100000 1150000
17.	Crude Distillation Unit (CDU-II)	MMTPA	7.5	-	7.5
18.	Vacuum Distillation Unit (VDU-II)	MMTPA	3.75	-	3.75
19.	Hydrocracker Unit	MMTPA	1.8 1.7	-	1.8 1.7
20.	Delayed Coker Unit	MMTPA	3.0	-	3.0
21.	Hydrogen Generation Unit (HGU –2&3)	MTPA	2*70	-	2*70
22.	Sulphur Recovery Units SRU (3,4 &5)	TPD	3 *225	-	3 *225
23.	Coker LPG Merox unit	MMTPA	0.1	-	0.1
24.	Straight Run LPG Merox unit	MMTPA	0.142	-	0.142
25.	Diesel Hydrotreating Unit (DHDT)	TMTPA	3.5	-	3.5
26.	Amine Regeneration Unit (ARU-II)	m^3/hr	410	-	410
27.	Sour Water Stripper (SWS-III)	m^3/hr	170	-	170
28.	Hydrocracker Sour Water Stripper (SWS-IV)	m^3/hr	40	-	40
29.	NSU-II	TPA	0.75	-	0.75
30.	Naptha oxygen	MTPA	400,000	-	400,000

S. No	Plant / Equipment / Facility	Units	Existing Configuration	Proposed Configuration	Final configuration after expansion
	stripping unit				
31.	Naphtha hydrotreating	MTPA	500,000	-	500,000
32.	Continuous catalyst (Platforming + Regeneration)	MTPA	500,000	-	500,000
33.	Shell sulfolane extraction unit	MTPA	152,200	-	152,200
34.	Benzene Toluene fractionation unit	MTPA	379,800	-	379,800
35.	Paraxylene Extraction unit (PAREX)	MTPA	2,025,400	-	2,025,400
36.	Xylene fractionation unit	MTPA	481,700	-	481,700
37.	Trans alkylation Disproportionate (Tatoray) unit	MTPA	360,200	-	360,200
38.	Isomerisation unit (Isomar)	MTPA	1,656,500	-	1,656,500
39.	**PTA UNITS**	MTPA	553000	-	553000
40.	PXFEEDUNIT(NSU-I)	MMTPA (BH)	1.3	-	1.3
41.	NHT	TMTPA	410	-	410
42.	PENEX	TMTPA	400	-	400
43.	RSU	TMTPA	470	-	470
44.	FCCGDU	TMTPA	370	-	370
45.	AVU	MMTPA	-	10	10
46.	State Run LPG treatment unit (SR-LPGT)	MMTPA	-	0.152	0.152
47.	VGO Hydrotreater unit	MMTPA	-	3.6	3.6
48.	Diesel hydrotreater unit	MMTPA	-	5.0	5.0
49.	Propylene Recovery unit	MMTPA	-	1.15	1.15

S. No	Plant / Equipment / Facility	Units	Existing Configuration	Proposed Configuration	Final configuration after expansion
50.	Resid Hydrocracker unit- RHCU	MMTPA	-	2.5	2.5
51.	INDMAX	MMTPA	-	2.5	2.5
52.	NHT/ CCR/ ISOM	MMTPA	-	0.95/0.625 /0.205	0.95/0.625 /0.205
53.	HGU	MMTPA	-	0.081	0.081
54.	ALKYLATION	MMTPA	-	0.67	0.67
55.	SARU	MTPD	-	185	185
56.	CDW/LOBS	MMTPA	-	0.56	0.56
57.	SRU-I/II/ TGTU	TPD	-	2*465 /930	2*465 /930
58.	SWS-I/II	TPH	-	252+180	252+180
59.	ARU	TPH	-	1256	1256
60.	MUG Compressor	MMTPA	-	0.17	0.17

Proposed Utilities Capacity

S.No.	Utility	Units	Capacity	Remarks
1	Raw water	m^3/hr	2400	
2	Cooling water from CT1 and CT2	m^3/hr	64000	
3	DM water	m^3/hr	850	
4	Suspect condensate generation	TPH	232.5	This condensate shall be treated in CPU
5	HP steam	TPH	23.5	Case1, All units running at design capacity, except SRU operating to SRU balance
6	MP steam	TPH	231.5	Case1
7	LP steam	TPH	106.3	Case1
8	HP BFW	TPH	122.3	Case1
9	MP BFW	TPH	171	Case1
10	LP BFW	TPH	14.4	Case1
11	Power	KW	222513	Case1
12	Nitrogen	Nm^3/hr	6500	
13	RLNG	Kg/hr	115116	
14	Plant air	Nm^3/hr	9450	
15	Instrumentation air	Nm^3/hr	11895	
16	ETP	m^3/hr	450	
17	Flare	Kg/hr	2191374	Design

Existing land area is 6319570.99 m^2 (1561.6 Acres). No additional land will be used for proposed expansion. Industry has already developed greenbelt in an area of 34.5 % (539 Acres) and will develop further 5.5% (86 Acres) greenbelt taking the total to 40% (since it is located in Panipat which is coming under CEPI index) i.e. 2529000 m^2 (625 Acres) out of total area of the project (1561.6 Acres). The estimated project cost is Rs.32946 Crore (30349 for P25+ 2597 Cr for PP). Total capital cost earmarked towards environmental pollution control measures is Rs. 28161.32 Lakhs and the Recurring cost (operation and maintenance) will be about Rs. 2742.74 Lakhs per annum. Total Employment will be 300 persons as direct and 480 persons as indirect after expansion. Industry proposes to allocate Rs.100 Lakhs @ of 5/2.5% towards Corporate Social Responsibility.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km radius from the project site. Water bodies: Munak Drain (adjacent to project site(W), New Delhi Branch (Western Yamuna Canal) ~0.05km(S), Main Drain No 2/Indri Drain ~0.05km(E), New Delhi Parallel Branch (Western Yamuna Canal) ~0.1km(S), Gohana Distributary ~0.1km(S), Nahar Kuna Hansi/Hanal Nadi ~0.19km(N), Madlauda Minor ~0.22km(S), Thirana Minor ~0.23km(S), Khandra Drain ~0.67km(S), Begampur Minor ~0.8km(N), Joshi Drain ~0.82km(W), Untala Minor ~1.78km(S), Phurlak Drain ~2.14km(N), Tributary Drain No 1 ~2.32km(SSW), Gagsina East Drain ~2.62(N), Rer Kalan Minor ~2.67km(WNW), Kabir Branch/Bazida Distributary ~2.7km(E), Munak Minor ~2.76km(N), Hansi Branch(Western Yamuna Canal) ~4.31km(NW), Munak Canal ~4.46km(NNW), Goli Distributary ~4.88km(NNW), Gudah Minor ~5.34km(E), Binjhaul Minor ~5.39km(SE), Pabana/Pawana Drain ~5.47km(WNW), Nohra/Nauhra Drain ~5.68km(SSE), Ganda Nala/Panipat Main Drain ~5.7km(ESE), Joshi Distributary ~5.82km(W), Kurian Minor ~5.86km(NW), Untala Drain ~6.6km(S), Mor Majra Drain ~6.81km(W), Ganda Nala ~7.11km(E), Jind Distributary ~7.13km(W), Khukrana Branch Canal ~7.21km(S), Bhalsi Minor ~7.87km(SSW), Lift Irrigation Channel ~9.7km(N) and Bhadaur Drain ~9.91km(S).

Ambient air quality monitoring was carried out at 8 locations during March 2019 to May 2019 and average baseline data indicates the ranges of concentrations as: PM_{10} (83.59 to 128 µg/m³), $PM_{2.5}$ (42.77 to 64.98 µg/m³), SO_2 (14.92 to 22.83 µg/m³) and NO_2 (27.89 to 43.71 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.89 µg/m^3, 30.52 µg/m^3 and 22.29 µg/m^3 with respect to PM, SOx, and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement is 1,62,864 m^3/day of which fresh water requirement of 98880 m^3/day will be met from Western Yamuna Canal.

Effluent of 1392 m^3/hr quantities will be treated through existing ETP of capacity 1075 m^3/hr & proposed ETP of capacity 450 m^3/hr. The quantity of 255m^3/hr of treated effluent discharged to Thirana Drain and remaining reused in the plant.

Wastewater treatment and Disposal Management as follows:

Unit	Existing (m^3/hr)	Proposed (m^3/hr)	After expansion (m^3/hr)	Disposal Method	Facility Details
Effluent	1030	362	1392	**Existing**: 255m^3/hr of treated effluent discharged to Thirana Drain and remaining reused in the plant **Proposed**: ZLD	**Existing**: Combined ETP-1 of capacity 400m^3/hr, Combined ETP-2 of capacity 400m^3/hr and Combined PX/PTA ETP of capacity 275m^3/hr **Proposed:** ETP of capacity 450m^3/hr. Sewage will be combined into the proposed ETP for treatment
Sewage	235	9	244		

Power requirement after expansion will be 397513 kVA including existing 175000 kVA where the existing is being met from Existing Gas Turbine while the proposed power of 222513 kVA will be met from Uttar Haryana Bijili Vitran Nigam Limites's. No DG set available in IOCL Panipat Refinery.

Existing unit has 2 nos of Boiler of 160 TPH & 230 TPH capacity of each, additionally 3 no. of Boiler of 160 TPH (2nos) & 230 TPH (1no) capacity is being used as standby and all are Low sulphur liquid fuel+Gas fired Boiler. Additionally, 3nos of Boiler of 300MTPH capacity of each is proposed from

which 1no will be used as standby and all proposed are Gas+Low sulphur liquid fuel fired boiler will be installed.

Details of process emissions generation and its management:

Existing Process Emission

S. no	Process Stack	Exit Gas Volume (Nm3/Hr) @ 25C	Emission(g/s)			
			PM (g/sec)	SO2 (g/sec)	NOx (g/sec)	CO (g/sec)
A	**Panipat refining unit**					
1	RFCC Heater	10702.17	0.0380	0.1479	0.4250	0.0851
2	RFCC Boiler	77661.33	0.2431	1.1861	3.0435	0.7904
3	AVU- 1	335341.24	1.2370	4.8774	9.8125	1.9198
B	**MCR**					
4	OHCU- Recycle gas Heater	23609.14	0.1097	0.3090	0.8758	0.1427
5	OHCU LP Section	78410.6	0.3004	1.3114	2.9498	0.5985
6	DHDS- Furnace	24562.62	0.0721	0.3572	0.8727	0.2031
7	CCRU stack- FF101, FF 102 FF 204	73167.78	0.2833	1.2237	2.5233	0.5120
8	CCRU Stack- FF 201, FF 202 FF 203	36088.83	0.1536	0.7611	1.2068	0.2640
9	CCRU Stack- FF 205	21186.13	0.0816	0.3543	0.8081	0.1685
10	VBU	21385.69	0.0766	0.4044	0.6146	0.1837
11	HGU	101595.74	0.5576	1.7731	4.0875	0.8401
C	**PR Expansion Unit**					
12	HCU Unit	42215.04	0.1867	0.5833	1.1249	0.2148
13	AVU- 2	341972.09	1.4230	5.9684	11.0780	2.7196
D	**Hydrogen Generation Unit**					
14	HGU-PDS	38499.52	0.1766	0.5039	1.2673	0.2694
15	HGU-76	140182.48	0.5775	1.9369	5.0540	1.2484
16	HGU-77	155111.13	0.7316	2.2560	5.1867	1.0362
E	**Diesel Hydrotreater Unit**					
17	DHDT-72 Heater 01	44393.26	0.1599	0.6780	1.5773	0.4095
18	DHDT-72 Heater 02	45833.96	0.1892	0.8666	1.7721	0.4956
F	**Paraxylene Aromatic Section**					
19	CCR-Heater	47019.04	0.1614	0.6839	1.2775	0.2842
20	NHT Heater	12715.52	0.0377	0.2127	0.3521	0.0809
21	Xylene Charge Heater	52943.5	0.1610	0.6546	1.5215	0.3200
22	Isomer Charge Heater	18592.5	0.0525	0.2839	0.6412	0.0710
23	Tatoray charge Heater	18392.82	0.0580	0.2407	0.6150	0.1287

S. no	Process Stack	Exit Gas Volume (Nm3/Hr) @ 25C	Emission(g/s)			
			PM (g/sec)	SO2 (g/sec)	NOx (g/sec)	CO (g/sec)
G	**Thermal Power Station**					
24	HRSG 01	146887.37	0.6218	2.0295	6.3700	0.6541
25	HRSG 02	148251.99	0.5819	1.9405	6.6619	0.6132
26	HRSG 03	159843.57	0.5093	2.6734	7.0993	0.7628
27	HRSG 04	151283.04	0.5429	2.2003	6.8771	0.6736
28	HRSG 05	158248.86	0.5495	1.9566	6.7801	0.5033
29	VHP Boiler 01	130260.73	0.5142	1.9894	5.1728	0.6629
30	VHP Boiler 02	134520.21	0.6681	2.3478	5.4824	0.6420
31	Utility Boiler 02	163531.04	0.7359	3.0921	6.5794	0.7282
H	Pur. Teraphthalic AC-Aromatic section					
32	Fired combustion preHeater	72693.78	0.3354	0.9515	2.7727	0.2312
33	Hot oil heater	73286.64	0.2463	0.7994	2.2975	0.4662
34	thermal Oxidizer	16642.03	0.0733	0.1573	0.5739	0.0794
I	**Delayed Coker Unit**					
35	DCU	13826.97	0.0679	0.2413	0.3974	0.1012
J	**MS Quality Unit**					
36	HDS (303 Heater 201) (MSQ)	63025.7	0.2495	0.7792	1.6795	0.4410
37	NHT (301 H101)	-	-	-	-	-
38	Old SRU-22/44	126752.64	-	-	-	-
39	CPP VHP-3	149983.92	-	-	-	-
40	SRU-26	126752.54	-	-	-	-
41	New SRU -57	151935.71	-	-	-	-
42	UB-1	146307.28	-	-	-	-
43	BBU Heater	-	-	-	-	-
44	BBU incinerator	-	-	-	-	-
45	NSRU	-	-	-	-	-
K	**BS-VI**	-	-	-	-	-
46	Prime G	-	-	-	-	-
47	DHDT	-	-	-	-	-
48	HGU	180000	-	-	-	-
Total (g/s)			**12.7641**	**48.7328**	**117.4312**	**19.5453**
Total (Kg/hr)			**45.95076**	**175.4381**	**422.7523**	**70.36308**

Note: Item no.37 to 48 are idle. So the emissions are not mentioned.

Proposed Process Emission

S. No	Stack details	Stack Coordinates		Stack Details					Emission per stack (g/s)			
		N	E	Height (m)	Temp (°C)	Dia. (m)	Exit Velocity (m/s)	Flue gas Flow Rate (Nm3/hr)	PM	SO_2	NOx	CO
1.	AVU (CDU/VDU)	29°29'6.07"N	76°52'11.49"E	90	165	5.3	4.76	257400	0.751	50.8	13.829	8.297
2.	VGO- HDT	29°28'52.97"N	76°52'12.69"E	65	154	3.55	3.61	89750	0.125	0.306	4.778	1.972
3.	Diesel Hydrotreater Unit	29°29'0.89"N	76°52'10.39"E	48	165	2.1	5.12	41430	0.058	0.142	2.208	0.908
4.	MS Block_Charge Heater	29°28'55.06"N	76°52'25.87"E	70	161	2.8	6	92520	0.129	0.319	4.931	2.031
5.	NHT Charge Heater	29°28'55.44"N	76°52'19.27"E	55	204	1.55	5.98	25380	0.035	0.086	1.353	0.556
6.	Naphtha Stripper reboiler Heater	29°28'57.22"N	76°52'19.86"E	50	264	1.35	6	17260	0.024	0.058	0.919	0.378
7.	CDWU_HCR Reactor Feed Heater	29°28'52.39"N	76°52'48.73"E	40	370	0.85	6	5700	0.008	0.019	0.297	0.131
8.	CDWU_DW Reactor feed Heater	29°28'49.21"N	76°52'48.75"E	40	385	0.73	6	4150	0.006	0.014	0.217	0.094
9.	CDWU_Vaccum Column Feed Furnace	29°28'51.32"N	76°52'51.05"E	50	220	1.35	6	18300	0.025	0.064	0.975	0.403
10.	Resid Hydrocracking Unit (RHCU)	29°28'52.57"N	76°52'35.96"E	70	182	2.25	5.67	53160	0.074	0.183	2.833	1.167
11.	Resid Hydrocracking Unit (RHCU)_Vaccum Heater	29°28'47.64"N	76°52'33.42"E	65	206	0.964	5.28	8630	0.012	0.031	0.469	0.206
12.	Indmax FCC_Fresh Feed Furnace	29°29'0.65"N	76°51'45.77"E	60	155	1.8	6	38500	0.053	0.133	2.050	0.844
13.	Indmax FCC_Flue Gas cooler	29°28'58.47"N	76°51'50.63"E	60	200	3.5	12	260750	3.622	3.711	6.084	7.189
14.	Sulpur recovery unit (SRU)	29°29'8.51"N	76°51'45.77"E	65	290	2.6	21.38	216570	0.037	17.889	5.464	4.925
15.	Spent Acid Recovery unit (SARU)_APH System & Stack	29°29'7.13"N	76°51'49.23"E	60	200	0.8	3.5	3850	0.005	0.047	0.233	0.094
16.	Spent Acid Recovery unit (SARU)_Decomposition furnace burner	29°29'5.73"N	76°51'52.10"E	60	80	1	8	18790	0.159	2.000	0.778	0.467
17.	Hydrogen Generation Unit	29°29'1.13"N	76°52'25.54"E	60	188	3.4	7.64	155111.13	0.732	2.256	5.186	1.036

18.	CPP Stack	29°28'56.27"N	76°52'2.03"E	90	160	3.25	17.5	871660	11.555	101.795	78.190	22.303
Total (g/s)									**17.41**	**179.853**	**130.794**	**53.001**
Total (Kg/hr)									**62.676**	**647.4708**	**470.8584**	**190.8036**

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

Solid Waste (Operation Phase):

Municipal solid waste:

S. No	Waste	Quantity (kg/day)			Collection method	Treatment / disposal method
		Existing	Proposed	After expansion		
1	Organic waste	271.89	81	352.89	Bins	Composting and used as manure for Green Belt
2	Inorganic waste	181.26	54	235.26	Bins	Disposed through authorised vendors

Existing & Proposed Hazardous Waste Management:

S. No.	Plant	Waste category	Quantity (MTPA)		Source of Waste generation	Mode of Disposal/ Facility
			Existing	Proposed		
1	DHDT	Spent Catalyst	134	175	DHDT	Disposed to SPCB authorised Recycler
2	CCR Regeneration Section	Spent Catalyst Fines	0.85	1.58	Catalyst Fines from Spent Catalyst Fines Collection Pot	Disposed to SPCB authorised Recycler
3	CCR Platforming Process Unit	Spent Catalyst	7.25	4.173	Spent catalyst from Reactors	Disposed to SPCB authorised Recycler
4	CCR Platforming	Spent Adsorbent	0.6	31.2	Net GAS Chloride Treaters Adsorbents	To TSDF/ Disposed to SPCB

S. No.	Plant	Waste category	Quantity (MTPA)		Source of Waste generation	Mode of Disposal/ Facility
			Existing	Proposed		
	Process Unit					authorised Recycler
5	CCR Platforming Process Unit	Spent Adsorbent	4.25	1.8	Fuel gas Chloride Adsorbent	To TSDF/ Disposed to SPCB authorised Recycler
6	CCR Platforming Process Unit	Spent adsorbent	0.05	1.26	LPG Chloride Treatment Adsorbent	To TSDF/ Disposed to SPCB authorised Recycler
7	CCR Platforming Process Unit	Spent Adsorbent	10.2	33.26	Debutanizer feed Chloride Treater	To TSDF/ Disposed to SPCB authorised Recycler
8	INDMAX FCC	Spent Catalyst	50	839.5	Indmax equilibrium catalyst (E-cat) is withdrawn from Indmax FCC unit.	To TSDF/ Disposed to SPCB authorised Recycler
9	Propylene Recovery unit	Spent adsorbent	10	20	Adsorbents from Propylene Driers	To TSDF/ Disposed to SPCB authorised Recycler
10	Propylene Recovery unit	Spent adsorbent	20	11	Adsorbent from Arsine Guard Bed	To TSDF/ Disposed to SPCB authorised Recycler
11	HCU/RHCU Reaction Section	Spent Catalyst	136.5	5.256	Spent catalyst withdrawn from the reactors	To TSDF/ Disposed to SPCB authorised Recycler
12	UOP Naphtha Hydrotreating Process Unit	Spent Catalyst	1.4	4.5	Spent Catalyst from Reactor	To TSDF/ Disposed to SPCB authorised Recycler

S. No.	Plant	Waste category	Quantity (MTPA)		Source of Waste generation	Mode of Disposal/ Facility
			Existing	Proposed		
13	PENEX	Spent Catalyst	1.4	2.96	Spent Catalyst From Reactor A	Disposed to SPCB authorised Recycler
14	PENEX	Spent Catalyst	10.25	1.48	Spent Catalyst From Reactor B	Disposed to SPCB authorised Recycler
15	PENEX	Spent Catalyst	5.125	0.987	Spent Catalyst From Reactor C	Disposed to SPCB authorised Recycler
16	PENEX	Spent Catalyst	4	0.312	Spent Catalyst from Methanator Reactor	Disposed to SPCB authorised Recycler
17	PENEX	Spent Adsorbent	4	0.45	Makeup Gas Chloride Treater	To TSDF/ Disposed to SPCB authorised Recycler
18	PENEX	Spent Molecular Sieve	7	3.25	Makeup Gas Driers	To TSDF/ Disposed to SPCB authorised Recycler
19	PENEX	Spent Molecular Sieve	1.19	0.595	Penex Feed Driers	To TSDF/ Disposed to SPCB authorised Recycler
20	VGOHDT	REACTOR SPENT CATALYST	NA	500	VGO REACTOR/ DIESEL OPOLISHING REACTOR	To TSDF/ Disposed to SPCB authorised Recycler
21	CDWU	Spent Catalyst	NA	3.762	HCR Reactor	Disposed to SPCB authorised Recycler
22	CDWU	Spent Catalyst	NA	3.864	DW Reactor	Disposed to SPCB

S. No.	Plant	Waste category	Quantity (MTPA)		Source of Waste generation	Mode of Disposal/ Facility
			Existing	Proposed		
						authorised Recycler
23	CDWU	Spent Catalyst	NA	3.621	HDF Reactor	Disposed to SPCB authorised Recycler
24	SR LPG Treater	Spent Catalyst	NA	3.250	Spent Catalyst from Reactor	To TSDF/ Disposed to SPCB authorised Recycler
25	SR LPG Treater	Spent Grading Bed Catalyst	NA	0.15	Spent Grading Bed Catalyst from Reactor	To TSDF/ Disposed to SPCB authorised Recycler
26	HGU (Note-1)	Spent Catalyst	4.5	1.583	Spent Catalyst from Hydrogenation Reactor	To TSDF/ Disposed to SPCB authorised Recycler
27	HGU (Note-1)	Spent Catalyst	63	21	Spent Catalyst from Predesuffurization Reactor A/B (Dechlorination)	To TSDF/ Disposed to SPCB authorised Recycler
28	HGU (Note-1)	Spent Catalyst	18.12	505.2	Spent Catalyst from Predesuffurization Reactor A/B (Removal of Sulfur compound)	To TSDF/ Disposed to SPCB authorised Recycler
29	HGU (Note-1)	Spent Catalyst	19	6.387	Spent Catalyst from Desuffurization Reactor (Removal of Sulfur compound)	To TSDF/ Disposed to SPCB authorised Recycler
30	HGU (Note-1)	Spent Catalyst	8	2.667	Spent Catalyst from Desuffurizatio	To TSDF/ Disposed to SPCB

S. No.	Plant	Waste category	Quantity (MTPA)		Source of Waste generation	Mode of Disposal/ Facility
			Existing	Proposed		
					n Reactor (Deep Desuffurizatio n)	authorised Recycler
31	HGU (Note-1)	Spent Catalyst	25	9.4	Spent Catalyst from Prereformer A/B	To TSDF/ Disposed to SPCB authorised Recycler
32	HGU (Note-1)	Spent Catalyst	8	5.883	Spent Catalyst from Reformer	To TSDF/ Disposed to SPCB authorised Recycler
33	HGU (Note-1)	Spent Catalyst	30	10.107	Spent Catalyst from High Temp Shift Reactor	To TSDF/ Disposed to SPCB authorised Recycler
34	HGU (Note-1)	Spent Catalyst	24	16.883	Spent Catalyst from Low Temp Shift Reactor	To TSDF/ Disposed to SPCB authorised Recycler
35	HGU (Note-1)	Catalyst Support Material (Ceramic balls)	16	5.6	Spent Support Material from Reactors,Prer eformer, Reformer & Shift Reactors	To TSDF/ Disposed to SPCB authorised Recycler
36	HGU (Note-1)	Catalyst Support Material (Aluminiu m balls)	28	9.79	Spent Support Material from Reactors,Prer eformer, Reformer & Shift Reactors	To TSDF/ Disposed to SPCB authorised Recycler
37	HGU /PSA (Note-1)	Spent Adsorbent	250	51.938	Spent Adsorbent from PSA	To TSDF/ Disposed to SPCB authorised Recycler
38	SRU	Spent Catalyst	36.8	53.5	Claus reactors	To TSDF/ Disposed to

S. No.	Plant	Waste category	Quantity (MTPA)		Source of Waste generation	Mode of Disposal/ Facility
			Existing	Proposed		
						SPCB authorised Recycler
39	TGTU	Spent Catalyst	15	11.34	Reactor	To TSDF/ Disposed to SPCB authorised Recycler
40	SRU/TGTU	Catalyst Support Material (Ceramic/alumina balls)	8	11.4	Claus and TGTU reactors	To TSDF/ Disposed to SPCB authorised Recycler

Note-1: All data for HGU are preliminary for proposed case. Data given has been prorated from BS VI Panipat HGU data. Data shall be confirmed after getting data from the selected

Details of Certified compliance report submitted by RO, MoEF&CC officials done on 10-05-2021 and the compliance of EC recommendations was certified. Status of compliance is Partially Complied. ATR has been submitted to RO, MoEF&CC on 07.05.2021 depicting compliance.

After detailed deliberations, the committee sought following additional information for further consideration of the proposal:

- The emission concentrations of different stack is mentioned in g/sec, which is required to be converted in mg/Nm^3 w.r.t gas/liquid fuel type of boiler, furnace, power plant, FCC generators. The emission norms are prescribed in mg/Nm^3 and fuel used by the refinery is mixed fuel. Accordingly, the concentration of PM, SOX, NOX, CO, H_2S of the stack should be mentioned in mg/Nm^3.

- Further sulphur content in liquid fuel in % is not mentioned and recovery of sulphur in % in terms of capacity (Tonnes/day) is required.

- As the plant is located in NCR zone, what extra precaution have been taken by the unit to reduce further air pollution in NCR area.

- Existing List of Hazardous emissions in work environment including Hydrogen Sulfide, the levels (annual average) in micrograms, Additional hazardous emissions following additional,

plant, technology, raw material use and waste, Medical surveillance using Biological monitoring, Results of Bio monitoring.

- Compliance report of recommendations given by the committee constituted by Hon'ble NGT comprising of members of NEERI & CPCB.

- Total pollution load generated in terms of sulphur dioxide emissions & mitigating measures for the same along with standby sulphur recovery unit in case of failure of any SRU to avoid acid rain in the surrounding areas.

- No effluent shall be discharged in any of drains which may lead to pollution in river Yamuna.

- As per policy of government, 10% of H_2 shall be produced by the PP through Green Hydrogen route.

The proposal was accordingly <u>DEFERRED</u> for the needful.

<u>Agenda No. 39.2</u>

Expansion of Sugar Factory from 4,900 TCD to 10,000 TCD & Co-gen Plant from 14 MW to 32 MW with establishment of 100 KLPD Molasses based Distillery & 3 MW Captive Power Plant (CPP) by M/s. Aayan Multitrade LLP, (Unit -1) (AMLLP), located at Samasherpur, Tal: Nandurbar, Dist: Nandurbar, Maharashtra - Consideration of Environment Clearance reg.

[IA/MH/IND2/152638/2020, IA-J-11011/116/2020-IA-II(I)]

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 environmental clearance to the project for Expansion of Sugar Factory from 4,900 TCD to 10,000 TCD & Co-gen Plant from 14 MW to 32 MW with establishment of 100 KLPD Molasses based Distillery & 3 MW Captive Power Plant (CPP) by M/s. Aayan Multitrade LLP, (Unit -1) (AMLLP), located at Samasherpur, Tal: Nandurbar, Dist: Nandurbar, Maharashtra.

As per the provisions of "EIA Notification No. S.O. 1533 (E)" dated 14.09.2006; as amendments thereto; the proposed expansion of Sugar Factory, Co-gen Plant & Establishment of Distillery comes under Category 'B', Item No. 5(j), & 5(g) respectively but applicability of general condition i.e. interstate boundary is located within 5 Km study area, the project is appraised at Center Level by Expert Appraisal Committee (EAC).

The ToR has been issued by Ministry vide letter No. IA- J-11011/116/2020-IA II (I) dated 28th June, 2020 for Establishment of 100 KLPD Molasses based Distillery & 3 MW Captive Power Plant (CPP) & vide letter No. J-11011/173/2020-IA II (I) dated 21st September, 2020 for Expansion of Sugar Factory from 4,900 TCD to 10,000 TCD & Co-gen Plant from 14 MW to 32 MW. Combine Public Hearing for expansion of Sugar Factory & Co-gen Plant & Establishment of Distillery was conducted by Maharashtra Pollution Control Board on 02.11.2020 and chaired by Additional District Magistrate, Nandurbar. No any specific issues were raised during public hearing. Only concerns were raised w.r.t. employment generation, green belt, usage of raw material, CSR activities & Plot Nos. etc. It was informed that no litigation is pending against the proposal.

The details of products and capacity are as under:

Industrial unit	**Product& By-product**	**Quantity** (MT/M)		
		Existing	**Expansion/Proposed**	**Total**
Sugar Factory (Expansion)	**Capacity**	**(4900 TCD)**	**(5100 TCD)**	**(10000 TCD)**
	Products			
	Sugar (11%)	16170	16830	33000
	By-products			
	Molasses (4.75%)	6983	7268	14250
	Bagasse (32%)	47040	48960	96000
	Press Mud (4%)	5880	6120	12000
Co-Gen (Expansion)	**Electricity (MW)**	14 MW	18 MW	32 MW
Distillery (Establishment)	**Products**			
	Ethanol/ ENA/ RS	-	3000 KLPM	3000 KLPM
	By-Products			
	Fusel Oil	-	5.7	5.7
	Carbon Di-oxide (CO_2)	-	2,250	2,250

Total plot land area is 7,40,844 M^2. Existing built-up area 1,22,313 M^2; additional built-up for proposed project will be 55,816 M^2. Industry has already developed green belt 1,90,835 M^2 (26% out of total plot area). Under proposed activity additional Green Belt 60,000 M^2 (8% out of total plot area) will be developed. After proposed, the total Green Belt area would be 2,50,835 M^2 which accounts for 34% of total plot area. The estimated project cost is Rs. 384.26 Crores including existing investment of Rs. 142.01 Crores. The distillery will be operated for 330 days. Total

capital cost earmarked towards environmental pollution control measures under proposed project will be Rs. 67.45 Crores and the Recurring cost (operation and maintenance) will be about Rs. 6.25 Crores per annum. Total Employment will be 352 persons as direct & indirect after proposed project. Industry proposes to allocate Rs.300 Lakh @ of 1.2% towards Corporate Social Responsibility.

There are no national parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 Km Study Area. Tapi River is flowing at a distance of 4.5 Km from North to East direction.

Ambient air quality monitoring was carried out at 8 locations during December- 2019 – January 2020 – February 2020 and submitted baseline data indicates that ranges of concentrations of PM_{10} (49.40 -62.20 µg/M^3), $PM_{2.5}$(13.50 – 23.60 µg/M^3),SO_2 (10.10 – 13.90 µg/M^3) and NOx (13.00 – 17.00 µg/M^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 0.516 µg/M^3 for PM_{10} (towards North side), 0.087 µg/m^3 for $PM_{2.5}$ (towards North side), 5.30 for SO_2 µg/m^3 (towards North side) and 0.611 µg/m^3 NO_x(towards North side). The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement after establishment of distillery as well as Sugar Factory & Cogen expansion project will be 7,307 CMD. Out of which 313 CMD will be fresh water taken from Tapi River.

Total trade effluent generated from expansion activity of Sugar Factory & Co-gen Plant @718 M^3/Day will be treated through existing Effluent Treatment Plant (ETP) comprising of Primary, Secondary & Tertiary Treatment units. Treated effluent will be reused for green belt development in own factory premises.

The process effluent generated from proposed 100 KLPD Molasses based Distillery would be in the form of raw spent wash to the tune of 800 M^3/Day which would be concentrated in Multiple Effect Evaporator (MEE) and the conc. Spent wash @ 160 MT/D (1.6 KL/KL of alcohol) would be blended with bagasse or coal and burnt in proposed 28 TPH incineration boiler. Other effluents viz. spent lees @ 138 M^3/D, MEE condensate @ 640 M^3/D and allied effluents @ 45 M^3/D will be treated in proposed CPU under Distillery. Treated effluent from CPU will be reused in process and boiler makeup, thereby achieving Zero Liquid Discharge (ZLD) for Distillery.

Power requirement for distillery establishment & Sugar Factory after expansion will be 10 MW which will be met from own co-gen plant in premises. Existing unit has one DG set having 320 KVA capacity. Additionally, two D.G. Sets of 1010 KVA each will be installed. DG sets to be used as standby during power failure. Stack (height 3 M) will be provided as per CPCB norms to the proposed D.G.Set.

Existing units has 32 TPH, 32 TPH & 160 TPH bagasse fired boiler (Under Sugar Factiory & Co-gen Plant expansion existing 32 TPH 2 boilers will be removed. Additionally, 28 TPH Spentwash & Bagasse/Coal fired Incineration Boiler will be installed. ESP with a stack of height of 72 M will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3 for the boiler.

Details of process emissions generation and its management:

The CO_2 generation shall take place in fermenters of the distillery. CO_2 to the tune of 75 MT/Day shall be released from 100 KLPD distillery plant. CO_2 shall be compressed, bottled and supplied to manufacturers of beverages.

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

Details of Solid waste generated & its management

No.	Industrial Unit	Type	Quantity (MT/M)		Disposal
			Existing	After Expansion	
1	Distillery	Boiler Ash	---	1410	Brick/Cement Manufacturer
		Yeast Sludge	---	540	Burnt in Incineration Boiler
		CPU Sludge	----	24	
2	Sugar Factory	ETP Sludge	12	25	Used as Manure
		Boiler Ash (Bagasse)	1575	1440	Manure / Brick manufacture

Details of Hazardous waste generated & its management

No.	Category	Quantity (KL/Year)		Disposal
		Existing	After Expansion	
1	5.1- Used Oil	7.5	10	Give to CHWTSDF
2	33.1- Empty Containers	--	25 No./Year	Authorized Party

No any hazardous waste will be generated from distillery unit.

Details of Certified Consent Condition Compliance Report issued by RO; MPCB HQ, Mumbai – Visit of RO, MPCB HQ, Mumbai & Report has been issued from MPCB vide letter No BO/JD(WPC)/PH/B-21057-FTS-0093 dated 17.05.2021 for 4,900 TCD Sugar Factory & 14 MW Co-gen Plant.

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have

examined the proposal submitted by the Project Proponent in desired form along with 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). 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 water requirement after establishment of distillery as well as Sugar Factory & Cogen expansion project will be 7,307 CMD. Out of which 313 CMD will be fresh water taken from Tapi 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.

(iv). The spent wash/other concentrates shall be treated by concentration followed by incineration.

(v). CO_2 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. Firefighting 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 adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places. Out of the total project area, 20% shall be allotted solely for parking purposes.

(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.

Agenda No. 39.3

Expansion of 150 KLPD Molasses Distillery to 400 KLPD Molasses/ Cane Syrup Distillery by M/s. Gangamai Industries and Constructions Ltd. located at Najik Babulgaon, Post- Rakshi, Tal.: Shevgaon, Dist.: Ahmednagar, Maharashtra - Consideration of Environment Clearance.

[IA/MH/IND2/222423/2021, J-11011/14/2015-IA II (I)]

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 environmental clearance to the project for Expansion of 150 KLPD Molasses Distillery to 400 KLPD Molasses/ Cane Syrup Distillery by M/s. Gangamai Industries and Constructions Ltd. located at Najik Babulgaon, Post- Rakshi, Tal.: Shevgaon, Dist.: Ahmednagar, Maharashtra.

As per the provisions of "EIA Notification No. S.O. 1533 (E)" dated 14.09.2006; the proposed expansion activity is scheduled under (Schedule

5(g), Category A published by MoEFCC; New Delhi. Further, as per amendment in 2006 notification vide No.: S.O 980(E) dated 2nd March 2021, the expansion of distilleries manufacturing Ethanol for use as fuel for blending shall be appraised as Category B2 project. Accordingly, distillery expansion from 150 to 400 KLPD is to be appraised as B2 category project at Centre level by Expert Appraisal Committee (EAC).

Standard ToR and public Hearing conduction is not applicable as the project falls under category B2 as per OM dated 2nd March, 2021. It was informed that no litigation is pending against the project.

Ministry has issued EC earlier vide letter No. J-11011/14/2015-IA II (I) dated 7th January, 2020 to the existing 150 KLPD Molasses based Distillery in favor of Gangamai Industries and Constructions Ltd.

The details of products and capacity are as under:

Industrial Unit	**Product**	**Quantity**		
		Existing- 150 KLPD	**Expansion- 250 KLPD**	**Total 400 KLPD**
Distillery Unit	Rectified Spirit (RS)/ ENA	150	--	150
	Ethanol	150	250	400
	Fusel Oil	0.24	0.4	0.64

Total plot land area is 3,30,661 M^2. Existing built-up area 1,79,501 M^2; additional built-up for proposed project will be 836 M^2. Industry has already developed green belt 1,01,818 M^2 (38% out of total plot area). The estimated project cost is Rs.143.6 Crores including existing investment of Rs.113.6 Crores. The distillery will be operated for 330 days. Total capital cost earmarked towards environmental pollution control measures under proposed project will be Rs. 1 Crores and the Recurring cost (operation and maintenance) will be about Rs.0.28 Crores per annum. Total Employment will be 25 persons as direct & indirect after proposed project. Industry proposes to allocate Rs.37 Lakh @ of 1 % towards Corporate Social Responsibility.

There is a Jaykwadi bird sanctuary at a distance of 6 KM from GIACL Site. Jaykwadi bird sanctuary ESZ got finalized vide MoEFCC Notification No. SO-2202 E on 12.07.2017. GIACL site is located at 5.51 Km from ESZ & do not come in the ESZ. Godavari River is flowing at a distance of 13 Km from North to East direction.

Total water requirement after proposed project will be 3971 CMD. Out of which 696 CMD will be fresh water taken from Jayakwadi dam.

The process effluent generated after expansion of 400 KLPD Molasses/Cane Syrup based Distillery would be in the form of raw

spentwash to the tune of 3200 M^3/Day which would be concentrated in Multiple Effect Evaporator (MEE) and the conc. spentwash @ 638 MT/D (1.6 KL/KL of alcohol) would be blended with bagasse or coal and burnt in existing 40 TPH incineration boiler. Other effluents viz. spent lees @ 548 M^3/D, MEE condensate @ 2552 M^3/D and allied effluents @ 98 M^3/D will be treated in CPU under Distillery. Treated effluent from CPU will be reused in process and boiler makeup, thereby achieving Zero Liquid Discharge (ZLD) for Distillery.

Power requirement for proposed project will be 2300 KW which will be procured from own Co-Gen Plant. No additional DG set will be installed under expansion of project.

Existing distillery has 40 TPH Incineration boiler. ESP with a stack of height of 81 is installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3 for the boiler.

Details of process emissions generation and its management:

The CO_2 generation shall take place in fermenters of the distillery. CO_2 to the tune of 363 MT/Day shall be released from 400 KLPD distillery plant. CO_2 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	Boiler Ash	--	4650	used for brick manufacturing in own premises / supplied to outside parties.
		Yeast Sludge	750	2520	Used as manure

No any Hazardous waste is generated from Distillery.

Details of certified compliance report submitted by RO, MoEF& CC. – Visit of RO, MoEFCC, Nagpur was conducted on 23.06.2021 and RO report received on 19.07.2021. Report on compliance to non- complied conditions observed by RO submitted on 19.07.2021

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed from 150 to 400 KLPD will be for manufacturing of fuel ethanol only.

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 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 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 EMP report is in compliance of the PFR. The Committee 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). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity from 150 to 400 KLPD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(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). 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.

(iv). Total water requirement after proposed project will be 3971 CMD. Out of which 696 CMD will be fresh water taken from Jayakwadi dam. 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.

(v). The spent wash/other concentrates shall be treated by concentration followed by incineration.

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

(vii). 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.

(viii). 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.

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

(x). 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.

(xi). 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.

(xii). 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.

(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 be completed within time as proposed.

(xiv). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places. Out of the total project area, 20% shall be allotted solely for parking purposes.

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

(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. 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.

(xvii). 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.

Agenda No. 39.4

Proposed 300 KLPD Grain Based Ethanol Plant by M/s. Buttar Biofuels Private Limited located at Village Butter Seviyan, Tehsil Baba Bakala, District Amritsar, Punjab - Consideration of Environment Clearance.

[IA/PB/IND2/220924/2021, IA-J-11011/301/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. J.M. EnviroNet Pvt. Ltd. made a detailed presentation on the salient features of the project.

The proposal is for environmental clearance to the project for Proposed 300 KLPD Grain Based Ethanol Plant by M/s. Buttar Biofuels Private Limited located at Village Butter Seviyan, Tehsil Baba Bakala, District Amritsar, Punjab.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

Standard ToR and public Hearing conduction is not applicable as the project falls under category B2 as per OM dated 16th June, 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

Units	Capacity	Product
Grain based Ethanol plant	300 KLPD	Ethanol (Biofuel)

Total project area is 3.52 hectares (35200 m^2). The land is owned by Rana Sugars Limited and it has been leased to its sister concern Buttar Biofuels Private Limited for installation of new 300 KLPD Grain based Ethanol Plant. The land for proposed ethanol plant by Buttar Biofuels Private Limited is already industrial as it is part of sugar mill of Rana Sugars Limited who has leased their land for installation of ethanol plant. Industry will develop greenbelt in an area of 33% i.e. 1.17 ha (11700 m^2) out of total area of the project. The estimated project cost is Rs. 90 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 15.0 Crores and the Recurring cost (operation and maintenance) will be about Rs. 1.5 Crore per annum. No. of working days will be 350 days/annum. Total Employment will be 150 persons (Permanent 125 & temporary 25) during operation phase. Industry proposes to allocate Rs.180 lakhs @2 % of total project cost towards Social developmental activities.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors, Reserved Forests (RF)/ Protected Forests (PF) lies within 10 km radius of the project site. Minor/Distributaries i.e. Dhardeo Distributary (~ 1 km North West Direction), Athwal Distributary (~ 2.5 km ESE Direction), Sobraon Branch – Upper Bari Doab Canal (~ 1.8 km ESE Direction), Vadala Distributary (~1.8 South Direction), Riarki Distributary (~8 km ESE Direction), Tangra Distributary (~6.5 km NNW Direction), Patti Nala (~8.5 km NW Direction) & Khilchian Drain (~2.5 km NW Direction) are found within 10 km radius.

Total water requirement for the Grain based Ethanol Plant will be 3235

KLPD out of which 2035 KLPD will be recycled in plant operations. Hence, the fresh water requirement for the project will be 1200 KLPD (Process: 900 m^3/day [3KL/KL] + Utilities & Cooling tower: 260 m^3/day + Domestic: 40 m^3/day) which will be sourced from groundwater.

Effluent of 1780 m^3/day will be treated through state of art CPU/Effluent Treatment Plant (Membrane based Process Plant) of 2000 KLPD capacity. The plant will be based on Zero Liquid discharge system.

Power requirement for Ethanol plant is 6.0 MW, which will be sourced from existing Co-Generation Power plant of 34 MW & 10.2 MW of adjacent sugar mill due to interlinked project. Unit will be having D.G. Sets of 2 x 1000 kVA which will be used as standby during power failure. Adequate Stack height (6.5 m) will be provided as per CPCB norms.

Existing adjacent sugar mill have two boilers of 120 TPH & 50 TPH. Steam & Power requirement for the proposed project will be sourced from these boilers hence no new boiler is proposed. ESP with a stack height of 65 m for 120 TPH boiler and 50 m for 50 TPH boiler is already installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm3.

Details of process emissions generation and its management:

CO2 (220 TPD) generated during the fermentation process will be recovered by CO2 Scrubbers and sold to authorized vendors.

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

- Solid waste from the grain-based operations generally comprises of fibres and proteins in the form of DDGS (165 TPD), which will be ideally used as poultry & fish feed. Yeast sludge will be sent to the sludge drying beds or may be added to the wet cake.
- Used oil & grease (1 KL/Annum) generated from plant machinery/gear boxes as hazardous waste will be sold out to the CPCB authorized recyclers.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed of 300 KLPD will be for manufacturing of fuel ethanol only.

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 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

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 EMP report is in compliance of the PFR. The Committee 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). As per OM dated 16th June, 2021, project falls in category B2 and the proposed capacity of 300 KLPD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(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). 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.

(iv). Total water requirement for the Grain based Ethanol Plant will be 3235 KLPD out of which 2035 KLPD will be recycled in plant operations. Hence, the fresh water requirement for the project will be 1200 KLPD (Process: 900 m3/day [3 KL/KL] + Utilities & Cooling tower: 260 m^3/day + Domestic: 40 m3/day) which will be sourced from groundwater. 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.

(v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.

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

(vii). 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.

(viii). 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.

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

(x). 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.

(xi). 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.

(xii). 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.

(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 be completed within time as proposed.

(xvii). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places. Out of the total project area, 20% shall be allotted solely for parking purposes.

(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.

Agenda No. 39.5

Proposed Grain Based 120 KLPD Distillery along with Cogeneration Biomass based Captive Power Plant of 4.0 MW by M/s. JVS Biofuel Pvt. Ltd. located at Village-Jatwar, Block-Shahzadpur, Tehsil-Naraingarh, Distt.-Ambala, Haryana - Consideration of Environment Clearance.

[IA/HR/IND2/221249/2021, IA-J-11011/303/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Grass Roots Research & Creation India (P) Ltd. made a detailed presentation on the salient features of the project.

The proposal is for environmental clearance to the project for Proposed Grain Based 120 KLPD Distillery along with Cogeneration Biomass based Captive Power Plant of 4.0 MW by M/s. JVS Biofuel Pvt. Ltd. located at Village-Jatwar, Block-Shahzadpur, Tehsil- Naraingarh, Distt.-Ambala, Haryana.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

Standard ToR and public Hearing conduction is not applicable as the project falls under category B2 as per OM dated 16th June, 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

S. No.	Product Details	Proposed Quantity
1.	Grain Base Distillery	120 KLPD
2.	Co-Generation Power Plant (30 TPH)	4.0 MW

Total land area is 5.70 Ha Industry will develop greenbelt in an area of 33 % of total plot area i.e., 1.88 Ha out of total area of the project. The estimated project cost is Rs 100 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs 500 lacs and the Recurring cost (operation and maintenance) will be about Rs 106 lacs per annum. Total Employment will be 120 persons as direct & indirect due to the project. Industry proposes 2.5% of company profit towards Corporate Social Responsibility.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Balrali Nadi is flowing at a distance of 2.2 km in ESE direction.

Ambient air quality monitoring was carried out at 8 locations during 01.02.2021 to 25.02.2021 and the baseline data indicates the ranges of concentrations as: PM10 (64.9 - 97.8 µg/m3), PM2.5 (34.4 – 50.9 µg/m3), SO2 (5.1 – 7.6 µg/m3) and NO2 (11.6 – 19.8 µg/m3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.37µg/m3, 0.36µg/m3 and 2.16µg/m3 with respect to PM10, Sox and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

One Time Total water requirement for the project will be 3563 KLD which will be further reduced through recycling & reuse of 2,095 KLD. 444 KLD fresh water demand is @3.7KL of water/KL of Ethanol. The total fresh water demand for proposed project will be 652 KLD which

will be sourced from ground water. The applications for permission of withdrawal of ground water has been submitted to CGWA vide application no - 20-3/20360/1/HR/IND/2021 dated 22.07.2021.
Effluent of 1,010 KLD quantity will be treated through 1,200 KLD ETP. The plant will be based on Zero Liquid discharge system.

Power requirement will be 3815 KW/h and will be met from in house CPP. 2 DG sets of 500 kVA capacity are used as standby during power failure. Stack (height 30m) will be provided as per CPCB norms to the proposed DG sets.

1 x 30 TPH fired boiler will be installed. ESP and bag filter with a stack of height of 70 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3 for the proposed boilers.

Details of process emissions generation and its management:

CO_2 generated during fermentation process will be collected, purified, liquefied and sold to vendors.

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

Type of Waste	Quantity (TPA)	Storage	Utilization/ Disposal
DDGS – (by product) (Dried distillers' grains with soluble)	28,050	Covered shed	Sold as Cattle Feed, Poultry & Fisheries
Ash from CPP	6,600	Silo	Disposed to brick/cement manufacturing plants
Waste papers/Boxes	6	Covered shed	to recyclers
Used Oil	1.5 KL	HDPE drums in covered shed	Given to authorized re-cycler
Spent Resin from DM Plant	0.45	HDPE drums in covered shed	Given to authorized re-cycler

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed of 120 KLPD will be for manufacturing of fuel ethanol only.

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 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 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 EMP report is in compliance of the PFR. The Committee 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). As per OM dated 16th June, 2021, project falls in category B2 and the proposed capacity of 120 KLPD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(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). 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.

(iv). The total fresh water demand for proposed project will be 652 KLD which will be sourced from ground water. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority. No ground water recharge shall be permitted within the premises.

(v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. Bio-composting shall not be allowed. Ash generated shall be used for brick manufacturing within industrial premises.

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

(vii). 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.

(viii). 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.

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

(x). 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.

(xi). 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.

(xii). 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.

(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 be completed within time as proposed.

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

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

(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. 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.

(xvii). 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.

Agenda No. 39.6

Proposed Grain Based Ethanol Plant having installed capacity 190 KLD and 5MW Co-generation plant by M/s Firozpur Green Energy Private Limited located at Village- Lakho ke Behram, Tehsil- Guruhar Sahai, District- Ferozepur, Punjab - Consideration of Environment Clearance.

[IA/PB/IND2/223638/2021, IA-J-11011/306/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Chandigarh Pollution Testing Laboratory, made a detailed presentation on the salient features of the project.

The proposal is for environmental clearance to the project for Proposed Grain Based Ethanol Plant having installed capacity 190 KLD and 5MW Co-generation plant by M/s Firozpur Green Energy Private Limited located at Village- Lakho ke Behram, Tehsil- Guruhar Sahai, District- Ferozepur, Punjab.

As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, a special provision in the EIA Notification, 2006-(Schedule 5 (ga), Category B2) is made, wherein for all applications made for Grain based distilleries with Zero Liquid Discharge producing ethanol; solely to be used for Ethanol Blended Petrol Programme of the Government of India shall be considered under B2 Category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

Standard ToR and public Hearing conduction is not applicable as the project falls under category B2 as per OM dated 16th June, 2021. It was informed that no litigation is pending against the project.

The details of products and capacity are as under:

S. No.	Particular	Units	Capacity
1.	Ethanol	**KLD**	**190**
2.	Liquified Carbon-Dioxide (CO_2)	**TPD**	**174**
3.	Power requirement	**MW**	**5**

This is a new project. Total land area of the proposed project is 15.68 acres or 6.0222 hectares of 60222m^2**.** Greenbelt will be developed in 21044 sqmt which is about 34.97 % of the total project area. A total of 3155 trees will be planted. Plantation will be done in Phase- wise manner in two years. Local tree species like Mulberry, Neem, Darek, Bungania and False Ashok will be planted. For which Rs.20.00 Lakhs under EMP cost is allocated. The estimated project cost is Rs. 175.81 Cr. Total capital cost earmarked towards environmental pollution control measures is Rs. 11.2 Cr. and recurring cost will be about Rs. 2 Cr. per annum. The proposed project shall generate direct employment about 210 persons.

There are no national parks, wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors etc. within 10km distance from project site. Sutlej River is about 11 Km towards West.

Baseline Environmental Studies:

<table>
<tr><td>Period</td><td>May, 2021</td></tr>
<tr><td>AAQ parameters at Project Site</td><td>PM10 = 79.6µg/m^3
PM2.5 = 39.3 µg/m^3
SO2 = 6.6 µg/m^3
NO2 = 31.2 µg/m^3
CO = 0.61 mg/m^3
NH3= ND
O3= 34.2 6µg/m^3
C6H6 = ND
BaP= ND
Lead= ND
Nickel=ND
Arsenic=ND</td></tr>
<tr><td>AAQ modeling (Incremental GLC)</td><td>The maximum predicted GLC for 24 hourly average concentrations after the proposed project site shall be 1.07ug/m^3. The maximum predicted concentration of PM_{10} after unit operation will be 80.67 ug/m^3 which is below the prescribed standard of 100 ug/m^3.</td></tr>
<tr><td>Ground water quality at Project Site</td><td>pH- 7.36
Total Dissolved Solid- 298.
Total Hardness: 278 mg/l
Calcium- 46.4
Magnesium-36.6
Total Alkalinity- 280
Chloride-19.8
Sulphate-20.4
Iron-0.10
Heavy metals are within the limits.</td></tr>
<tr><td>Noise levels at Project Site</td><td>
<table>
<tr><th>S. No.</th><th>Sub Locations</th><th>Day Time</th><th>Night Time</th></tr>
<tr><td>1</td><td>North Side</td><td>69.6</td><td>58.6</td></tr>
<tr><td>2.</td><td>South Side</td><td>70.2</td><td>57.2</td></tr>
<tr><td>3.</td><td>East Side</td><td>71.4</td><td>59.9</td></tr>
<tr><td>4.</td><td>West Side</td><td>69.8</td><td>52.4</td></tr>
</table>
</td></tr>
<tr><td>Flora and fauna</td><td>No Schedule-I species were found during study period.</td></tr>
</table>

The total water requirement of the project is estimated at 2139 KLD. Fresh water requirement is estimated as to be 570.7 KLD. Fresh water consumption per ton of ethanol produced= 570.7/190=3 KL/KL of ethanol capacity. The daily requirement of water will be met through the Tube well. PWRDA application is provided.

Sr. No.	Source for which water is required	Quantity (KLD)
1.	Fresh water for liquification	153.70
2.	Water to be used in liquification process from various sections such as spent lees,thin slop,MEE condensate CPU treated wastewater	881.30
3.	Fresh Water for boiler	192
4.	Fresh Water for vacuum Pumps and pump sealing	50
5.	Fresh Water for fermenter Washing	25
6.	Washing of Plate heat Exchanger / Floor washing	70 (50 KLD fresh water + 20 KLD boiler blow down)
7.	Fresh Water for DM Plant / MGF / ACF /re-generation and back washing	100
8.	Treated wastewater for CO2 washing	142
9.	Treated wastewater required as make up in the Cooling Tower	300
10	Treated wastewater to be used for ash quenching and sprinkling	50
11.	Treated wastewater for irrigation of green belt to be developed in 33% area	175
12.	TOTAL	**2139 KLD**
13.	Wastewater to be reused directly	**901.3 KLD**
14.	Wastewater to be reused after treatment in ETP	**667KLD**
15.	Fresh water requirement	**2139-(901.3+667) =570.7 KLD**

Effluent of 667 KLD will be treated through ETP of 900 KLD capacity. Thin slop 630 KLD will be fed to MEE of capacity 700 KLD The proposed plant will be based on Zero Liquid discharge system.

The power requirement will be 3200 KWH, which will be sourced from the 5.0 MW Co-Generation Power Plant. Unit has 33KV HT connection. Surplus power will be exported to State Grid. One boiler of 40TPH capacity will be installed. Rice husk@ 260TPD will be used as fuel. ESP attached with a stack height of 55m height will be equipped with the boiler to conc. of particulate matter within prescribed standards. To control emission from boiler, ESP will be installed. Green belt around the periphery and within the premises will be developed.

Details of process emissions generation and its management:

CO2 generated during fermentation process will be sold to authorized vendors.

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

Solid waste generation		
Source of Solid Waste generation	**Total Quantity**	**Disposal Method**
Grain Fermentation & Distillation	83.34 TPD (DDGS)	Sale as cattle feed
Boiler	46 TPD (Fly ash)	Will be sent to Cement/ Brick Manufacturing unit
Hazardous Waste		
Used Oil	2Kl/A	will be re-used in house as lubricant or given to authorized recyclers for final disposal

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed of 190 KLD will be for manufacturing of fuel ethanol only.

After detailed deliberations, EAC desired that the revised water balance plan should be submitted where fresh water usage shall not exceed three (03) KL/KL for production of alcohol. PP has submitted the same as desired by EAC.

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 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 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 EMP report is in compliance of the PFR. The Committee 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). As per OM dated 16th June, 2021, project falls in category B2 and the proposed capacity of 190 KLD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(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). 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.

(iv). Total water requirement for the Grain based Ethanol Plant will be 2139 KLD out of which 1568.3 KLD will be recycled in plant operations. Hence, fresh water consumption per ton of ethanol produced= 570.7/190=3 KL/KL of ethanol capacity and will be met through the Tube well. Extraction of ground water shall not be allowed without obtaining prior permission of CGWA/concerned authority. No ground water recharge shall be permitted within the premises.

(v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.

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

(vii). 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.

(viii). 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.

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

(x). 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.

(xi). 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.

(xii). 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.

(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 be completed within time as proposed.

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

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

(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. 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.

(xvii). 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.

Agenda No. 39.7

Proposed Expansion of Distillery capacity from 120 KLPD to 700 KLPD and captive power Plant capacity from 5 MW to 16 MW by M/s. Nirani Sugars Limited located at Malapur Village, Kulali Road, Mudhol Taluk, Bagalkot District, Karnataka - Consideration of Environment Clearance.

[IA/KA/IND2/220064/2021, J-11011/130/2008-IA II(I)]

The Project Proponent and the accredited Consultant M/s. Samrakshan, made a detailed presentation on the salient features of the project.

The proposal is for environmental clearance to the project for Proposed Expansion of Distillery capacity from 120 KLPD to 700 KLPD and captive power Plant capacity from 5 MW to 16 MW by M/s. Nirani Sugars Limited located at Malapur Village, Kulali Road, Mudhol Taluk, Bagalkot District, Karnataka.

All Distillery projects are listed at S. No. 5 (g) of Schedule of Environment Impact Assessment (EIA) and as per as per the EIA Notification 2006 and amendment vide Notification S.O 2339(E) dated 16.06.2021 the proposal is to be appraised as B2 category and appraised at Central Level by Expert Appraisal Committee (EAC) with condition that the project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme.

Standard ToR and public Hearing conduction is not applicable as the project falls under category B2 as per OM dated 2nd March, 2021 & 16th June, 2021. It was informed that litigation is pending against the project.

MoEF&CC, had issued EC earlier vide letter no. F. No. J-11011/130/2008-IA II (I) dated 4.12.2009 to the existing Distillery unit for manufacture of Rs. 114 KLPD or ENA 111 KLPD capacity.

The details of products and capacity are as under:

Sl. No.	**Particular**	**Existing capacity**	**Proposed capacity**	**Scenario after expansion**
1.	Distillery unit	120 KLPD **RS / ENA** using C-heavy molasses	580 KLPD **Ethanol using** • C-heavy 200 KLPD **Or** • B-Heavy molasses 255 KLPD **Or** • Sugar syrup 580 KLPD	700 KLPD **Ethanol using** • Sugar syrup 700 KLPD **Or** • C Molasses 290 KLPD **Or** • B-Heavy molasses 345 KLPD **Or** RS/ENA using C - Heavy molasses 120 KLPD
2	Captive power plant	5 MW	11 MW	16 MW

Existing land area of distillery unit is 105218 m^2 (26 Acres), additional 36421.7 m^2 (9 Acres) land will be used for proposed expansion. Industry has already developed greenbelt in an area of 33 % i.e., 34398.3 m^2 out of total area of the project 105218 m^2. Additional 12019.16 m^2 land area is earmarked in additional land of 36421.7 m^2 to develop greenbelt area. The estimated project cost is Rs. 513.82 Crores including existing investment of Rs. 105.32 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 27.695 Crores and the Recurring cost (operation and maintenance) will be about Rs. 0.656 Crores per annum. Total Employment will be 245 persons, out of this the direct employment is 180 persons & indirect is 65 persons after expansion. Industry proposes to allocate Rs. 3.08 Crores @ of 0.75 % towards 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 Ghataprabha is flowing at a distance of 2.3 km in South of the industry.

Baseline ambient air quality monitoring is not carried out since the project is to be appraised as B2 category as per the Notification of MoEF&CC, S.O 2339(E) dated 16.06.2021. However, ambient air quality monitoring is carried out by the industry as per the conditions of the Consent issued by KSPCB. The monitoring data during June 2021 indicate PM_{10} (66.98 $\mu g/m^3$), $PM_{2.5}$ (37.29 $\mu g/m^3$), SO_2 (4.82 $\mu g/m^3$) and NOx (9.83 $\mu g/m^3$).

Total water requirement is as under;

a. Distillery water requirement is as in the table below;

		Water requirement in KLD			
Sl. No.	Particulars	Existing with C-molasses (Ethanol 120 KLPD)	Proposed with C-molasses (Ethanol -290 KLPD)	Proposed with B-Heavy (Ethanol -345 KLPD)	Proposed with sugar syrup/ juice (Ethanol -700 KLPD)
I	Freshwater				
1	Process (Molasses/ syrup dilution)	447	1449	1073	1478
	Fresh water for RO/DM Plant (permeate used for boiler makeup)	270	626	626	866
	Cooling water	1200	450	1375	1400
	Lab and washing	50	60	60	60
	Domestic	5	15	15	15
	Total	1972	2600	3149	3819
II	Reuse/Recycle water				
2	Reuse from existing Distillery CPU for Process (Molasses/syrup dilution)	448	-	-	-
	Reuse from proposed Distillery PCTP for Process (Molasses/syrup dilution	-	460	1252	1190

3	Cooling tower makeup distillery from existing CPU	272	-	-	-
	Cooling tower makeup distillery from proposed PCTP	-	1247	1011	1425
	Total	720	1707	2263	2615
	Grand Total (I + II)	2692	4307	5412	6434

Fresh water is met from Ghataprabha River flowing at a distance of about 2.5 km in southern direction from project site. Department of Water Resource Organization, Government of Karnataka has permitted the project proponent to draw 128 MCFT per year (9930 KLD).

Wastewater generated from the distillery is as in the table below;

Quantity of Wastewater from process and Utilities						
Sl. No.	**Particulars**	**Unit**	**C-Heavy molasses at 120 KLPD**	**C-Heavy molasses at 290 KLPD**	**B-Heavy molasses at 345 KLPD**	**Sugarcane syrup at 700 KLPD**
From Process						
1	Raw Spent wash	KLD	720	1740	860	1820
2	Concentrated spent wash	KLD	300	696	452	360
3	Spent lees	KLD	300	471	510	745
For Utilities						
4	DM reject	KLD	-	50	50	60
5	Boiler blowdown	KLD	10	15	15	20
6	RO Reject	KLD	30	-	-	-
7	Cooling tower bleed	KLD	50	307	408	370
8	Lab & washings	KLD	50	60	60	60
9	Domestic Sewage	KLD	3	10	10	10
Total Wastewater Generation		KLD	1463	3349	3575	5265

The spent wash from the distillery with respect to per KL of ethanol produced is as in the table below;

Sl. No.	Raw Material	Spent wash generation & disposal per KL/KL of Ethanol			
		C-molasses 90 KLPD	C-molasses 290 KLPD	B Heavy molasses 345 KLPD	Sugar syrup 700 KLPD
1	Raw spent wash generation	720	1740	860	1820
	Raw spent wash generation KL/KL of Ethanol	8	6	2.49	2.6
2	After concentration spent wash quantity	300	696	452	360
	Specific spent wash generation in KL/KL of Ethanol	3.3	2.4	1.31	0.51

Mode of treatment of distillery spent wash, spent lees & other utility effluents are as under:

- Spent wash generated will be concentrated in MEE and concentrated spent wash will be used as fuel in incineration boilers of 32 TPH (existing) and 80 TPH (proposed) to produce steam for distillery unit and excess steam is used to generate captive power using steam turbines.
- Industrial effluents shall be treated in existing CPU and proposed process condensate treatment plant (PCTP). Treated effluent will be recycled back to cooling tower makeup and molasses dilution. PCTP rejects will be taken to MEE. The new 2000 KLD CPU shall be provided cater for the treatment of lean effluent.
- The distillery plant will be based on Zero Liquid discharge system.

Power requirement after expansion will be 16 MW to the Distillery unit and will be met from captive power plant of 16 MW capacity. Existing plant has 1 No. 1000 KVA capacity DG set. Stack of 30 m AGL height is provided as per CPCB norms to the DG set.

Existing distillery unit has 32 TPH incinerator boiler with fuel as concentrated spent wash supported with coal (70:30). ESP with stack of 68 m height is installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3 for the proposed boilers. Additional 80 TPH incineration boiler with ESP and 90 m AGL stack height is proposed as APC measure.

Details of process emissions generation and its management:

During fermentation 673 TPD of CO_2 is estimated to be released. The CO_2 which is liberated in fermentation is scrubbed in water with the help of CO_2

scrubber and sent to CO_2 plant for production of liquefied CO_2 used for commercial purpose.

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

Solid waste generation and its management

SI. No.	Details of the Solid waste	Quantity in MT/month (existing)	Quantity in MT/Month (Proposed)	Quantity in MT/month (After expansion)	Mode of disposal
	Distillery plant				
1	Yeast sludge	144	435	579	Sold to farmers as manure
2	Fly Ash	1440	2580	4020	Sold to brick manufacturers and to farmers as manure.
3	Bottom Ash	1500	2400	3900	

Hazardous waste generation and its management

Waste category	Hazardous waste	Quantity	Method of handling
5.1	Used Oil	0.050 KL/Annum	Used oil is reused for lubrication purpose for factory machineries during the season
5.2	Oil-soaked cotton waste	0.025 MT/A	Oil-soaked cotton waste is burnt in boilers.
5.2	Oil filters	01 No.	

Certified compliance report submitted by Joint Director of MoEF & CC, Regional Office, Bangalore with respect to the earlier EC conditions indicate that the Status of compliance is 'Satisfactory' vide File No. EP/12.1/674/ KAR.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed from 120 KLPD to 700 KLPD will be for manufacturing of fuel ethanol only.

A compliant is filled by Karnataka State Pollution Control Board for an alleged violation of Section 25 & 26 of the Water (Prevention and Control of Pollution) Act, 1974, at **JMFC, Mudhol, Bagalkot District** for non-installation of online continuous monitoring emission and effluent, operating the industry without consent to operate and making discharge of effluent in excess of standard stipulated. Case is reported to have been posted for final orders.

At present all the conditions stipulated in earlier EC's and CTO's have been complied with. The KSPCB is regularly renewing the consents. The present consent is valid up to 30.06.2021 the same is extended for 3 months in view of covid pandemic.

After detailed deliberations, EAC stated that PP shall not start construction work until court case gets cleared and obtaining prior permission from SPCB. Also, EAC directed the PP to use fresh water at 3.7 KL/KL of alcohol produced irrespective of raw material used. Accordingly, fresh water requirement shall not exceed 2590 KLPD (3.7 KL/KL).

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 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 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 EMP report is in compliance of the PFR. The Committee 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). As per OM dated 16th June, 2021, project falls in category B2 and the proposed capacity from 120 KLPD to 700 KLPD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(ii). No construction work shall be started prior to final direction of court. After disposal of court case, construction work shall start after obtaining prior permission from SPCB.

(iii). 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.

(iv). 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.

(v). Total fresh water requirement shall not exceed 2590 KLPD (3.7 KL/KL) for any kind of row material use and will be sourced from Ghataprabha River. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard, and renewed from time to time.

(vi). The spent wash/other concentrates shall be treated by concentration followed by incineration. Ash generated shall be used for brick manufacturing in factory premises.

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

(viii). 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.

(ix). 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.

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

(xi). 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.

(xii). 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.

(xiii). 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.

(xiv). 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.

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

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

(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. 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.

(xviii). 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.

Agenda No. 39.8

Proposed expansion of sugarcane crushing capacity from 10000 TCD to 15000 TCD to augment the requirement of sugarcane syrup/juice as raw material during sugarcane crushing season and to expand the Distillery capacity from 300 KLPD to 600 KLPD for production of Ethanol and captive power plant from 5 MW to 8 MW under EBP programme by M/s. Shri Sai Sugars Ltd., located at Survey Nos. 144, 145, 146, 147, 148, 149, 150 & 151 of Maigur Village and Survey Nos. 238 & 239 of Hipparagi Village, Jamakhandi Taluk, Bagalkot District, Karnataka - Consideration of Environment Clearance.

[IA/KA/IND2/219708/2021, J-11011/277/2010-IA II(I)]

The Project Proponent and the accredited Consultant M/s. Samrakshan, made a detailed presentation on the salient features of the project.

The proposal is for environmental clearance to the project for Proposed expansion of sugarcane crushing capacity from 10000 TCD to 15000 TCD to augment the requirement of sugarcane syrup/juice as raw material during sugarcane crushing season and to expand the Distillery capacity from 300 KLPD to 600 KLPD for production of Ethanol and captive power plant from 5 MW to 8 MW under EBP programme by M/s. Shri Sai Sugars Ltd., located at Survey Nos. 144, 145, 146, 147, 148, 149, 150 & 151 of Maigur Village and Survey Nos. 238 & 239 of Hipparagi Village, Jamakhandi Taluk, Bagalkot District, Karnataka.

All Distillery and Sugar Projects are listed at Sl. No. 5(g) & 5(j) of Schedule of Environment Impact Assessment (EIA) Notification respectively under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC). As per the MoEF&CC Notification S.O. 2339(E), dated 16th June, 2021, the proposal is to be appraised as B2 Category under EBP Programme.

Standard ToR and public Hearing conduction is not applicable as the project falls under category B2 as per OM dated 2nd March, 2021 & 16th June, 2021. It was informed that no litigation is pending against the project.

MoEF&CC had issued prior Environment Clearance vide letter no. J-11011/277/2010-IA-II(I) dated 15th February 2015 to the sugar complex (sugar plant 5,000 TCD; Co-generation plant,30 MW; molasses-based Distillery plant 120 KLPD. Further SEIAA Karnataka, had issued EC earlier vide No. SEIAA:6:IND:2015 dated 19.10.2015 to the existing project

Sugar Plant 10000 TCD, Cogeneration plant 65 MW, Captive power generation 5 MW and MoEF & CC had issued prior Environment Clearance vide letter no. J-11011/277/2010-IA-II(I) dated 4th February 2021 to the existing Distillery unit for increasing the capacity of ethanol production from 120 KLPD to 300 KLPD capacity and captive power plant from 5 MW to 8 MW capacity.

The details of products and capacity are as under:

Sugar plant expansion

Sl. No.	Product details	Configuration as per EC 2015	Configuration as per EC 2021	Proposed expansion	Total quantity
1.	Sugarcane crushing unit TCD	10000	-	5000	15000
	Cogeneration unit MW	65	-	-	65

Distillery Expansion

Plant capacity	Existing as per EC 2015	EC sought for proposed expansion		
	RS/ ENA/ethanol from C-Heavy molasses	Ethanol from C Heavy molasses	Ethanol from B - Heavy molasses	Ethanol from Sugarcane syrup
120 KLD Existing (as per EC 2015)	120	120	120	-
180 KLD under installation (as per EC 2021)	-	180	180	300
300 KLD proposed	-	140	-	300
Production scenario after expansion	120	**440**	**300**	**600**
				All units in KLD

Note: *Any one of the raw material is used at a time*.

Existing land area of Sugar, Cogeneration & Distillery complex is 6,75,400 m^2 out of which 75,100 m^2 is of distillery plant area and 6,00,300 m^2 is Sugar Cogeneration plant area. Proposed expansion will be within the existing premises. Industry has already developed greenbelt in an area of 34.8 % i.e., 234800 m^2 out of total area of the project. The existing project cost is Rs.785.27 Crores. Proposed additional investment is Rs.266.55 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 37.01 Crores and the Recurring cost (operation and maintenance) will be about Rs. 2.53 Crores per annum. Total Employment will be 978 persons, out of this the direct employment is 493 persons & Indirect is 485 persons after expansion. Industry proposes to allocate Rs.1.1 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 Krishna is flowing at a distance of 3.6 km in NE of the industry.

Baseline ambient air quality monitoring is not carried out since the project is to be appraised as B2 category as per the Notification of MoEF&CC S.O. 2339(E), dated 16.06.2021. However, ambient air quality monitoring is carried out by the industry as per the conditions of the Consent issued by KSPCB. The monitoring data during February 2021 indicate PM_{10} 82.9 $\mu g/m^3$, $PM_{2.5}$ 34.15 $\mu g/m^3$, SO_2 7.52 $\mu g/m^3$ and NO_x 15.26 $\mu g/m^3$.

Total water requirement is as under;

Fresh water requirement for Sugar & co-gen plant is 1065 KLD. The condensate water generated from sugar plant is treated and reused for sugar plant requirement and cooling tower.

Distillery water requirement is as in the table below;

Sl. No.	**Particulars**	**Existing (KLD)**	**Proposed scenario after expansion (KLD)**			
	Feed stock (any one of the raw materials will be used at a given time)	C Heavy molasses 120 for RS/ENA	C Heavy molasses 120 for RS/ENA	B Heavy molasses 300	C Heavy molasses 440	Cane syrup 600
1	Fresh water for process	505	505	917	972	1290
	Fresh water for boiler	545	545	545	620	620
	Cooling tower makeup	-	-	-	645	-
	Domestic water requirement	16	20	20	20	20
	Total Fresh	1066	1066	1482	2257	1930

	water quantity					
2	Reuse from distillery CPU	1197	1197	2148	3230	3030
3	Total water requirement	2263	2267	3630	5487	4960

Fresh water will be met from Krishna River located at about 3.6 km in North East direction from project site. (Permission to draw 4.5 MLD (4500 KLD) is issued by Krishna Bhagya Jala Nigama Niyamita, G.O.K)

A. Effluent from the sugar plant process is 981.51 KLD it is treated in ETP of 1000 KLD Capacity. The sugar plant condensate 2397.25 KLD is treated in CPU of capacity 2400 KLD and partly used for cooling tower make up and partly for the process. The excess condensate of 303.25 KLD is mixed with treated sugar plant effluent and used on land for irrigation.

B. Wastewater generated from the distillery is as in the table below;

Sl. No.	Particulars	Existing (KLD)	After expansion (KLD)			
		C Heavy Molasses 120 KLD	C Heavy Molasses 120 KLD	B Heavy 300 KLD	C Heavy 440 KLD	Sugar cane syrup 600 KLD
1	Raw spent wash	960	960	1885	2640	3300
2	Concentrated spent wash	240	240	411	448	150
3	Spent lees	300	300	360	688	720
4	Total Condensate	720	720	1474	2192	1850
5	Boiler blowdown	10	10	10	20	20
6	Cooling tower bleed	127	127	254	270	380

The spent wash from the distillery with respect to per KL of alcohol produced is as in the table below;

Sl No	Description	Raw spent wash generation		Conc. Spent wash	
		KLD	KL/KL ethanol	KLD	KL/KL ethanol
1	120 KLPD using C Heavy Molasses	960	8	240	2

2	300 KLPD using B Heavy Molasses	1885	6.28	411	1.37
3	440 KLPD using C Heavy molasses	2640	6	448	1.01
4	600 KLPD using sugarcane syrup	3300	5.5	150	0.25

Mode of treatment of distillery spent wash, spent lees & other utility effluents are as under:

- The spent wash concentrated in MEE and the concentrate will be incinerated.
- The MEE condensate, spent lees, R.O. rejects, cooling tower bleed, lab washings is treated in 3 stage R.O and CPU of 1500 KLD Capacity and reused in cooling tower makeup and process for molasses dilution.
- The distillery plant effluent management will be based on Zero Liquid discharge system.
- Domestic sewage of 14.6 KLD from sugar plant and 16 KLD from Distillery plant is treated in septic tank and soak pit.

Power requirement after expansion will be 43.28 MW including existing sugar cogeneration plant and Distillery power requirement and will be met from sugar Cogeneration plant of 65 MW and for distillery plant from distillery captive power plant of 8 MW capacity. Existing unit has 2 D.G sets of 1x1250 kVA & 1X625 kVA capacities is provided with stack height of 30m & 8m AGL respectively as per consent conditions.

Existing unit has boilers as under;

Existing Air pollution Sources	**Proposed Air Pollution sources after expansion**	**Fuel**	**Emission Std prescribed by KSPCB particulate matter mg/Nm^3**	**APC equipment and stack ht in m**
150 TPH (sugar plant)	160 TPH Sugar plant + partially Distillery)	Bagasse	150	ESP and chimney of height – 85 m AGL
2X50 TPH Boiler (Sugar Plant)	2x65 TPH Boiler (Sugar plant)	Bagasse	150	ESP and Wet scrubber and chimney of height – 70 m AGL

52 TPH incineration boiler (distillery Plant)	60 TPH incineration boiler (distillery Plant)	Bagasse + Conc. Spent Wash	150	ESP and chimney of height – 85 m AGL
1250 kVA DG set	-	HSD	CO 150 NO_x710ppmv PM 75	Acoustic enclosure & 30 m AGL (Each)
625 kVA	-	HSD	-	Stack of height 8 m above roof and acoustics.

Details of process emissions generation and its management:

During fermentation 577 KLPD of CO_2 is estimated to be released. CO_2 will be scrubbed and bottled in CO_2 plant present in project premises.

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

Solid waste and its management

Sl. No.	Type of solid waste	Quantity generated after expansion MT/month	Disposal
	Sugar Plant and Co-gen plant		
1.	Bagasse	135000	Used as boilers fuel
2.	Boiler Ash	1110	Sold to brick manufacturers / given to farmers to use it as soil conditioner
3.	Press mud	12000	Used to generated biogas
4.	Sludge ETP	2	Used as manure for gardening
5.	Lime grit	18	Used for land filling in low laying areas.
	Distillery Plant		
1.	Yeast Sludge	450	Sold to farmers to produce manure
2.	Fly Ash	3220	Sold to brick manufacturers / given to farmers to use it as soil conditioner
3.	Bottom Ash	317	

Hazardous waste generation and its management

Waste category	Hazardous waste generated	Quantity	Method of handling
5.1	Used Oil	0.125 KL/A	Used oil is reused for lubrication purpose for factory machineries during the season
5.2	Oil-soaked cotton waste	0.050 MT/A	Oil-soaked cotton waste is burnt in boilers.
5.2	Oil filters	05 Nos	

Joint Director of MoEF&CC, Regional Office, Bangalore has visited the project site on 04.11.2020. CCR is issued. Bangalore RO, MoEF&CC has issued certified compliance report for the project vide File No. EP/12.1/2014-15/14/Kar/589 dated 16.11.2020. Status of compliance is 'Satisfactory'.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed from 300 KLPD to 600 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations, it was informed to the EAC that PP has approached Ministry for expansion from 300 KLD to 600 KLD without achieving production capacity of 300 KLD granted in the previous EC dated 04.02.2021 and has not submitted CCR for the same.

In this regard PP has informed that industry has not yet initiated the expansion from 120 KLD to 300 KLD and the distillery is operating with the production capacity of 120 KLD, CCR has also been submitted for the same.

Subsequently, EAC mentioned that considering the importance of EBP programme, the proposal may be recommended and Ministry may take a decision whether expansion may be granted without achieving previous EC production capacity.

Further, it was noted in CCR dated 16.11.2020 that PP has yet to spend Rs. 34.45 crores earmarked for Corporate Environmental Responsibility. PP has agreed to appropriate the unspent amount within 5 years.

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 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 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 EMP report is in compliance of the PFR. The Committee 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). As per OM dated 16th June, 2021, project falls in category B2 and the proposed capacity from 300 KLPD to 600 KLPD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(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). 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.

(iv). Fresh water requirement for Sugar & co-gen plant is 1065 KLD. Proposed fresh water requirement for C Heavy molasses (120 for RS/ENA) is 1066 KLPD, B Heavy molasses (300 KLPD) is 1482, C Heavy molasses (440 KLPD) is 2257 KLPD and Cane syrup (600 KLPD) is 1930 KLPD and will be met from Krishna 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.

(v). The spent wash/other concentrates shall be treated by concentration followed by incineration.

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

(vii). 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.

(viii). 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.

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

(x). 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.

(xi). 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.

(xii). 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.

(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 be completed within time as proposed. In addition to the existing CER proposed, PP shall also spend Rs. 34.45 crore which was earlier earmarked for CER but remained unspent.

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

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

(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. 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.

(xvii). 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.

18th August, 2021 (Wednesday)

Agenda No. 39.9

Additional Exploratory Drilling of 8 Wells in NELP-VI Block, KG Offshore, Andhra Pradesh- M/S OIL AND NATURAL GAS CORPORATION LIMITED- Extension in Environment Clearance reg.

[IA/AP/IND2/220244/2021, J-11011/541/2007-IA II(I)]

The Proposal is for extension in the Environmental Clearance granted by the Ministry vide letter No J/11011/541/2007-IA II (I) dated 23rd July 2014 for the project additional Exploratory Drilling of 8 Wells in NELP-VI Block, KG Offshore, Andhra Pradesh in favour of M/S Oil and Natural Gas Corporation Limited.

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/11011/541/2007-IA II (I) dated 23rd July 2014.	As per Ministry's S.O. 1141(E) dated 29th April 2015, validity of Environment Clearance shall be 7 years from the date of issue. Further, Ministry vide its S.O 221(E) dated 18th January 2021 notified that the period from the 1st April, 2020 to the 31st March, 2021 shall not be considered for the purpose of calculation of the period of validity of prior Environmental Clearances granted due to outbreak of COVID-19. Hence the validity of the EC shall be 22nd July, 2022.	Request for extension of the validity of the EC for there (03) years.	EC was obtained for drilling 8 exploratory wells out of which 4 wells were successfully completed. The remaining 4 locations could not be taken up as the Geological & Geophysical studies are under progress to analyze the prospectivity of the area. These locations are positioned for probing the deeper levels wherein high pressure and high temp constraints exist. Additional studies are in progress to analyze the risk and firming up of

				these locations.

The Expert Appraisal Committee, after detailed deliberations **recommended** for extension of the validity of EC vide letter J/11011/541/2007-IA II (I) dated 23rd July 2014 till 22nd July, 2025 with all other terms and conditions remain unchanged.

Agenda No. 39.10

Conversion of 37 Exploration Wells & laying of Associated Flowlines, Involving Construction of Well Manifold at Tripura State by M/s Oil and Natural Gas Corporation Limited - Consideration of Environment Clearance reg.

[IA/TR/IND2/210752/2007, J-11011/635/2007-IA II (I)]

The Project Proponent and the accredited Consultant M/s. Eco Chem Sales & Services (ECSS) – Surat, made a detailed presentation on the salient features of the project.

The proposal is for environmental clearance to the project conversion of 37 Exploration Wells & laying of Associated Flowlines, Involving Construction of Well Manifold at Tripura State by M/s Oil and Natural Gas Corporation Limited.

All Offshore and onshore oil and gas exploration, development & production proposals are listed at S.N. 1(b)of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

The project proposal was considered by the Expert Appraisal Committee (Industry-2) and recommended Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No. J-11011/60/2017-IA.II(I); dated 31st May 2017 and amended ToR date 20th December 2018.

Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 30/09.2020 & 06/11/2020 at Sepahijala District, 10/02/21 at Gomati District, 18/02/21 at South Tripura District, 20/02/21 at North Tripura District, 23/02/2021at West Tripura District. PP has submitted that all the Public Hearings have been presided by Additional District Magistrate & Collector of their respective districts. The main issues raised during the public hearing are related to Social issues like provision of local employment, passenger shed, maintenance of anganwadi centres, drinking water facilities, solar street lights, Provision of computers to school, maintenance of road etc. No Litigation is pending against the proposal.

PP has informed that old exploration projects covered under different

environment clearance, drilling operations were completed, and in some of the wells sufficient indications of hydrocarbons were noticed while drilling, the wells were tested by perforation in the production casing. M/s ONGC has obtained environmental clearance for 37 wells which they are going to be converted onto development under the following ECs:

1. F. No. J-11011 / 41 / 2010- 1A II(I) dated 04.01.2011
2. F.No. J-11011 / 213 / 2008- 1A II(I) Dated 11.06.2008
3. F.No. J-11011 / 401 / 2006- 1A II(I) Dated 22.09.2008
4. F.No. J-11011 / 635 / 2007- 1A II(I) Dated 22.10.2007
5. F.No. J-11011 / 636 /2007- 1A II(I) Dated 22.10.2007
6. F.No. J-11011 / 633 / 2007- 1A II(I) Dated 22.10.2007

The details of products and capacity are as under:

S. No.	Product	Quantity	Unit
1.	Natural Gas	6	Million standard cubic feet per day (MMSCFD)

The total land acquired for 37 wells will be 62.9 ha *i.e.* 1.7 ha for the proposed project. M/s ONGC will develop area as social forestry/Plantation by having consultation with the Forest department. The estimated project cost is Rs. 313.76 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 0.371 Crores and the Recurring cost (operation and maintenance) will be about Rs. 0.1346 Crores per annum. Total Employment will be 30 persons as direct during construction. Industry proposes to allocate Rs. 0.2215 Crores towards Corporate Environment Responsibility to address the issues raised during public hearings.

PP informed that there is Clouded Leopard National Park which is in Sipahijala Wildlife Sanctuary at 5.57 km from the ROBB Well. Final ESZ of Sipahijala Wildlife Sanctuary has been notified by MoEFCC to an extent of 10 metres to 50 metres. Unakoti Reserve forest at 10 km in North West direction and Deo Reserve forest at 10 km in South direction from well (KHBJ & KHBE). River Haora at 1.35 km in South East direction from Well (KUAC), River Gongor at 5.00 km in West from Well (RODJ), River Gomati at 1.00 km in South West direction from Well (SDAC), River Salda at 2.79 km in South direction from Well (RODJ), River Muhuri at 0.60 km in Southy from Well (GOAK), River Juri at 4.96 km in North direction from Well (KHBJ & KHBE).

Ambient air quality monitoring was carried out at 10 locations during 1st October 2018 to 31th December 2018 and the baseline data indicates the ranges of concentrations as: PM_{10} (37.6 – 74.3 µg/m^3), $PM_{2.5}$ (18.3 – 35.9 µg/m^3), SO_2 (3.8 – 8.6 µg/m^3) and NOx (10.9 – 20.9 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum

incremental GLCs after the proposed project would be 0.25 µg/m^3, 0.18 µg/m^3 and 0.54 µg/m^3 with respect to PM_{10}, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Proposed project does not involve drilling activity so there will not be need of fresh water for the conversion of wells into development wells. Hence no additional load on water sources of Tripura State. Water will be sourced from open market through water tanker if required. Effluent (Produced water) of 0-25 KLD/well quantity will be treated through Mobile ETP and treated effluent is disposed in effluent disposal wells below 1000 Mtrs.

Power requirement for the production will be 62 kVA and will be met from State electricity board. The rated capacity of the DG sets are having capacity 62 kVA during production. Stack (height 9 m for 62 kVA DG. Set) will be provided as per CPCB norms to the proposed DG sets.

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

Waste oil shall be generated in minute quantity which will be disposed as per as per Hazardous Waste Rule 2016 and its amendment.

PP has informed that all the ECs granted on the proposed site have been expired. However, Monitoring reports of the ECs that have been granted earlier in the proposed area has been submitted by PP issued by Regional Office, Shillong.

Monitoring report of EC vide letter J-11011/635/2007-IA-II (I) dated 22. 10. 2007 based on site visit on 22.04.2014 noted following remarks:

i. Waste pits have not been provided without leachate collection system as stipulated in G.S.R.546 (E) dated 30th August, 2005 (specific condition No. ii).
ii. The project authorities could not provide a copy membership of common TSDF for the disposal of drill cuttings and hazardous waste. Copy of authorization or membership of TSDF has not been submitted to this Regional Office. Project authorities have not also created secured landfill at the site as per design of the approved by CPCB for disposal of drill cuttings and hazardous waste as stipulated (specific condition No. v).
iii. ADAH have not been properly restored. Earth filling is done without artificial plantation, removal of cement concrete, brick debris etc. (specific condition No. xv).
iv. Project authorities are required to prepare a detailed plan for development of gas fields before going for commercial production for gas bearing wells viz., ADAK (Fig.2), ADAM (Fig.3) & ROAW and obtain fresh clearance from the Ministry as stipulated (specific condition No. xvii).

v. A separate Environment Management Cell equipped with full-fledged laboratory facilities has not been setup as stipulated (general condition No. vii).
vi. Details of funds for implementation of EC conditions could not be provided (general condition No. viii)
vii. Monitored data has been submitted without statistical interpretation as stipulated (general condition No. ix)

Monitoring report of EC vide letter J-11011/636/2007-IA-II (I) dated 22. 10. 2007 based on site visit on 24.04.2014 noted following remarks:

i. Waste pits have not been provided without leachate collection system as stipulated in G.S.R.546 (E) dated 30th August, 2005 (specific condition No. i).
ii. The project authorities could not provide a copy membership of common TSDF for the disposal of drill cuttings and hazardous waste. Copy of authorization or membership of TSDF has not been submitted to this Regional Office. Project authorities have not also created secured landfill at the site as per design of the approved by CPCB for disposal of drill cuttings and hazardous waste as stipulated (specific condition No. iv).
iii. Project authorities have gone ahead with commercial extraction of gas without obtaining fresh clearance from Ministry as stipulated (specific condition No. xvi).
iv. No monitoring data of RSPM, SPM, SO2, NOx, HC & VOC from DG sets and from flare stack, no record could be made available during monitoring as stipulated (general condition No.ii).
v. No monitoring data of noised could be made available during monitoring as stipulated (general condition No.v).
vi. A separate Environment Management Cell equipped with full-fledged laboratory facilities has not been setup as stipulated (general condition No. vi).
vii. Details of funds for implementation of EC conditions could not be provided (general condition No. viii)
viii. Monitored data has been submitted without statistical interpretation as stipulated (general condition No. ix)

Monitoring report of EC vide letter J-11011/633/2007-IA-II (I) dated 22. 10. 2007 based on site visit on 23.04.2014 noted following remarks:

i. Waste pits have not been provided without leachate collection system as stipulated in G.S.R.546 (E) dated 30th August, 2005 (specific condition No. ii).
ii. The project authorities could not provide a copy membership of common TSDF for the disposal of drill cuttings and hazardous waste. Copy of authorization or membership of TSDF has not been submitted to this Regional Office. Project authorities have not also created secured landfill at the site as per design of the approved by CPCB for disposal of drill cuttings and hazardous waste as stipulated (specific condition No. v).

iii. It is observed during monitoring that GOAJ have not been properly restored. Earth filling is done without artificial plantation, removal of cement concrete, brick debris etc. (specific condition No. xv).
iv. Project authorities are required to prepare a detailed plan for development of gas fields before going for commercial production for gas bearing wells viz., TMD, SDAC, GSF (Fig.3), GOAB (Fig.4) &GOAG and obtain fresh clearance from the Ministry as stipulated (specific condition No. xvii).
v. No monitoring data of RSPM, SPM, SO2, NOx, HC & VOC from DG sets and from flare stack, could be made available during monitoring as stipulated (general condition No. iii).
vi. No monitoring data of noised could be made available during monitoring as stipulated (general condition No.v).
vii. A separate Environment Management Cell equipped with full-fledged laboratory facilities has not been setup as stipulated (general condition No. vi).
viii. Details of funds for implementation of EC conditions could not be provided (general condition No. viii)
ix. Monitored data has been submitted without statistical interpretation as stipulated (general condition No. ix)

Monitoring report of EC vide letter J.13011/213/2008-IA.II (I) dated 11th June 2008 based on site visit on 02.02.2012 noted following remarks: Overall, the implementation of conditions laid down in the Environment Clearance, are poor. Some of the points discussed with the project authorities who need prompt action at their end include:

i. Diesel based power gensets of 1225 KVA were operated in the sites, with no acoustic enclosures provided to these units
ii. The project authorities have to comply with the stipulation regarding drill cutting and drilling fluids for onshore drilling operation as per the guidelines notified vide GSR (E) dated 30th August 2005 by providing leachate collection and treatment facility.
iii. Site restoration should include landscaping the existing drilling sites so that it looks as similar as possible to the pre-drilling landscape, by restoring vegetation and/or previous land use and
iv. Authorization for disposal of drill cuttings and solid wastes from SPCB should be obtained as stipulated.
v. The project authorities have not informed the Regional Office as well as the Ministry, the date of financial closure and final approval of the project (release of the exploratory well by the competent authority) and the date of commencing the land development works, which is in violation of general stipulation XI.

During deliberations, EAC observed that there were several non-compliances and partial compliances as per Monitoring reports. PP has given no response on action taken on the remarks raised. After detailed deliberations, EAC desired additional information/commitments related to:

- Action taken report on the non-compliances and partial compliances raised in Monitoring reports.
- Compliance details of EC letter No J-11011/401 /2006- 1A II(I) dated 22.09.2008 and EC letter No. J-11011 / 41 / 2010- 1A II(I) dated 04.01.2011
- Proposed CER fund allocated of 22.15 lakhs to resolve issues raised is very low. PP shall increase the amount to be spent on resolving PH issues and shall incorporate them in CER funds in EMP.
- Details of process emissions generation and its management
- Proposed well No 23 in ROAW is located in forest land as per Monitoring report of EC J-11011/635/2007-IA-II (I) dated 22. 10. 2007. Discrepancy regarding applicability of Forest Clearance shall be clarified.

The proposal was accordingly <u>DEFERRED</u> for the needful.

<u>Agenda No. 39.11</u>

Integrated expansion of sugar plant from 5,000 TCD to 10,000 TCD, Distillery unit from 65 KLPD to 400 KLPD using C-heavy molasses / B-heavy molasses / sugar syrup / grains as feedstock and a new Captive power plant capacity of 8 MW under Ethanol blended with Petrol (EBP) program at Bagalkot, Karnataka by M/s MRN Cane Power (India) Limited- Consideration of Environment Clearance.

[IA/KA/IND2/222242/2021, IA-J-11011/312/2021-IA-II(I)]

The Project Proponent and the Accredited Consultant M/s. Samrakshan made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project integrated expansion of sugar plant from 5,000 TCD to 10,000 TCD, Distillery unit from 65 KLPD to 400 KLPD using C-heavy molasses / B-heavy molasses / sugar syrup / grains as feedstock and a new Captive power plant capacity of 8 MW under Ethanol blended with Petrol (EBP) program at Bagalkot, Karnataka by M/s MRN Cane Power (India) Limited.

The project/activities are covered under category A of item 5 (g) 'Distilleries' and 5 (j) Sugar Industry of the Schedule to the EIA, 2006 and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC). The proposal has been submitted under the Ministry's EIA Notification, 2006 amendments vide Notification no. S.O. 345(E) dated 17th January 2019 & extension of notification S.O. 750(E) dated 17th February 2020, S.O 980(E) dated 2nd March, 2021. Accordingly, the proposal shall be appraised as category 'B2' project. It was informed that no litigation is pending against the proposal.

Ministry had issued EC earlier vide letter No. F. No. J-11011/411/2014-IA II (I) dated 29.08.2016 to the existing project for setting up of integrated industry with Sugar unit of 5000 TCD, Co-generation Power Plant of 35 MW and Distillery unit of 65 KLD capacity in favour of M/s. MRN Cane Power (India) Limited.

The details of products and capacity are as under:

Sl. No.	Unit Type	Existing Production	Proposed expansion	Scenario after expansion
1	Sugar Plant	5000 TCD	5000 TCD	**10000 TCD** sugar cane crushing capacity
2	Co-generation plant	35 MW	-	**35 MW** Co-generation plant
3	Distillery	65 KLD distillery unit Raw material is C-Heavy molasses	335 KLD distillery unit Raw material is C-Heavy molasses / B-Heavy molasses / Sugar syrup / Grains	The operating scenarios are: A. 400 KLPD Ethanol **[OR]** B. 65 KLPD RS/ENA + 335 KLPD Ethanol Raw material is C-Heavy molasses / B-Heavy molasses / sugar syrup / Grains
4	Captive power attached to distillery	-	8 MW	To install a new Captive Power Plant of **8 MW** capacity

Existing land area is 503710 m^2 (124 Acres 19 Guntas) ; Out of which land converted for industrial use is 412450 m^2 (101 Acres 37 Guntas) and remaining 91260 m^2 (22 Acres 22 Guntas) is agricultural land used for R&D. Proposed expansion shall be within the existing land available for industrial use. Industry has already developed greenbelt in an area of 33 % i.e., 137800 m^2 (34 Acres 02 Guntas) out of total area of the project The estimated project cost is Rs. 830.47 crores including existing investment of Rs. 590.47 crores. Total capital cost earmarked towards environmental pollution control measures after expansion is Rs. 41.92 crores and the recurring cost (operation and maintenance) shall be Rs. 0.93 crores per annum. Total employment shall be 372 persons as direct & 66 persons indirect after expansion. Industry proposes to allocate Rs 2.4 crores towards Corporate Environment Responsibility.

There are no national parks, wild life sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wild life Corridors etc. within 10 km distance from the project site. River Malaprabha is flowing at a distance of 6 km in South direction.

Baseline ambient air quality monitoring is not carried out since the project is to be appraised as B2 category as per the Notification of MoEF & CC no. S.O. 2339(E) dated 16.06.2021. However, ambient air quality monitoring is carried out by the industry as per the conditions of the Consent issued by KSPCB. The monitoring data during December 2020 indicate PM10 (86.02 µg/m3), PM2.5 (41.28 µg/m3), SO2 (6.74 µg/m3) and NOX (13.09 µg/m3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 3.58 µg/m3, 1.48 µg/m3 and 0.95 µg/m3 with respect to PM10, SO2 and NOx respectively. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement in Sugar & Co-Generation Plant and distillery unit is given in the Table below and fresh water shall be met from Malaprabha River:

(a) Fresh water requirement by Sugar & Co-Generation plant:				
Sl. No.	**Particular**	**Fresh Water in KLD**	**Recycled water in KLD**	**Total Water Requirement in KLD**
1	Sugar Plant of 10000 TCD & Co-Gen Plant of 35 MW	660	1710	**2370**

(b) Fresh water requirement by Distillery Unit & Captive Power Plant:					
Scenario	**Combination of production in 400 KLPD Distillery**	**Fresh Water**		**Recycled Water in KLD**	**Total Water Requirement in KLD**
		in KLD	**kL/kL of Ethanol**		
1	Using C-Heavy Molasses	1404	3.51	2245	**3649**
2	Using B-Heavy Molasses	1255	3.14	2402	**3657**
3	Using sugar syrup	946	2.37	2594	**3540**
4	Using Grains	1090	2.73	2495	**3585**
(c) Domestic Use (Sugar & Co-gen plant: 10 KLD ; Distillery: 10 KLD) **= 20 KLD**					
(d) Gardening = 40 KLD					

Domestic Sewage of 8 KLD form Sugar plant and 8.5 KLD from Distillery unit shall be treated in septic tank followed by soak pits.

In Sugar & Co-Generation Plant: Excess condensate water generated from sugarcane process is 1166 KLD. The other effluents viz. process cooling tower blowdown of 770 KLD, Co-Gen cooling tower blowdown of 195 KLD, Boiler blowdown of 70 KLD and DM regenerated of 184 KLD shall be treated in Sugar plant CPU of 2400 KLD capacity. Treated water from CPU shall be reused for process makeup, Co-Gen CT makeup and remaining quantity along with sugar process effluent of 453 KLD treated in the sugar ETP of 1000 KLD capacity shall be used for greenbelt development and for agriculture on land of 22 acres owned by the company director.

In Distillery Unit & Captive Power Plant: The raw spent wash of 2400 KLD (6 kL/kL of Alcohol) generated from C-Heavy / B-Heavy / Syrup shall be stored in spent wash lagoons and shall be concentrated by evaporation in MEE. Concentrated Spent wash generated from distillery using C-Heavy Molasses shall be 713 KLD (1.78 kL/kL of Alcohol) or B-Heavy Molasses of 612 KLD (1.53 kL/kL of Alcohol) or Syrup of 408 KLD (1.02 kL/kL of Alcohol) and shall be used as fuel in the incineration boiler.

Raw spent wash 2400 KLD (6 kL/kL of Alcohol) generated from distillery using grain as feedstock shall be treated in decanter and thin slop of 1448 KLD (3.62 kl/KL of Alcohol) shall be sent to drier to produce DDGS.

Condensate from MEE and spent lees shall be treated along with other lean effluents viz., DM regenerate, boiler blowdown, cooling tower bleed, Lab washings, Scrubber in distillery CPU. The existing distillery CPU of 1470 KLD shall be upgraded to 2500 KLD capacity after expansion. The treated water from distillery CPU shall be recycled to process, cooling tower makeup and CO_2 scrubber. ZLD concept shall be followed in distillery unit.

Power requirement after expansion shall be 16 MW and 4.5 MW for sugar plant and distillery unit respectively and shall be met from Co-Generation plant and Captive power plant. Existing unit has one 1250 kVA DG set and no DG set is proposed in expansion proposal. In the existing sugar plant, there is **one 165 TPH** Co-Gen Boiler using Bagasse as fuel with ESP and a stack of height 85 m as APC measure. For the distillery, **one 52 TPH** incinerator boiler using Concentrated spent wash supported with Bagasse as fuel is attached to Bag filter and a stack of height 85 m. Existing APC are sufficient for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3 even after expansion.

Details of process emissions generation and its management:

CO_2 from fermentation shall be recovered by a dedicated CO_2 bottling plant.

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

Solid waste	Quantity in T/Day	Mode of disposal
Bagasse	3200	Used as fuel in boilers.
Press mud	360	Raw material for composting.
Boiler ash – Co-gen	35 – 45	Boiler ash to be handed over to fertilizer industry for value addition to fertilizer
Boiler ash – Distillery	5 – 10	
ETP sludge	5 – 10	
Yeast Sludge	45 – 50	
Lime sludge	10 – 12	Used for land filling.
DDGS	325 – 328	Sent to cattle feed.

Details of Certified compliance report submitted by RO, MoEF&CC. Bangalore RO, MoEF & CC has issued certified compliance report for the project vide File No. EP/12.1/2016-17/04/KAR/110 dated 19.01.2021. Status of compliance is **'Satisfactory'**.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion of 335 KLPD will be for manufacturing of fuel ethanol only.

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 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 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 EMP report is in compliance of the PFR. The Committee 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). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 335 KLPD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the

ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(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). The project proponent will treat and reuse the treated water within the integrated industry and no waste or treated water shall be discharged outside the premises.

(iv). Total fresh water requirement for the integrated industry shall not exceed be 2124 KLPD which shall be met from Malaprabha river. Prior permission shall be obtained from the concerned regulatory authority/Irrigation division in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises. Rainwater shall be collected in storage ponds and utilized for plant activities. Ground water monitoring shall be done regularly and report is to be submitted to concerned authorities regularly.

(v). The spent wash shall be concentrated by evaporation in MEE and and shall be used as fuel in the incineration boiler.

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

(vii). 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.

(viii). 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.

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

(x). 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.

(xi). 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.

(xii). 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.

(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 be completed within time as proposed.

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

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

(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. 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.

(xvii). 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.

Agenda No. 39.12

Proposed 200 KLPD Grain based Distillery for Ethanol along with 10 MW Co-generation power plant at Dalmia Bharat Sugar and Industries Limited, Grain Distillery Unit-Jawaharpur, Village

Jawaharpur, Tehsil Misrikh, District Sitapur, Uttar Pradesh by M/s. Dalmia Bharat Sugar and industries Limited - Consideration of Environment Clearance.
[IA/UP/IND2/223850/2021, J- 11011/341/2006- IA II(I)]

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

The proposal is for environmental clearance to the project proposed 200 KLPD Grain based Distillery for Ethanol along with 10 MW Co-generation power plant at Dalmia Bharat Sugar and Industries Limited, Grain Distillery Unit-Jawaharpur, Village Jawaharpur, Tehsil Misrikh, District Sitapur, Uttar Pradesh by M/s. Dalmia Bharat Sugar and industries Limited.

The project proposal is applied for environment clearance as it does not require ToR & Public Hearing is exempted as per EIA notification 2006 and its amendment vide gazette notification of MoEF&CC vide no 750-E dated 17th February 2020 and SO- 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

All grain based fuel ethanol plants are listed at S.N. 5(ga) ii of Schedule of Environmental Impact Assessment (EIA) Notification and amendment vide no SO- 2339 dated 16th June 2021 under category 'B-2' and appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity are as under:

Units	**Capacity**	**Product**
Grain based Distillery	200 KLPD	Ethanol (Biofuel)
Co-Generation Power Plant	10 MW	Power

Total plant area is 7.5 ha (75000 m^2) and it has already been owned and possessed by the company falling within the premises of existing industrial setup. Earlier the company was using 9 hectares land for bio-composting, which was no more required for bio-composting in view of the company had switched over to incineration technology for treatment of spent wash for its existing distillery. Industry will develop greenbelt in an area of 33% i.e. 2.48 ha (24800 m2) out of total area of the project.

The estimated project cost is Rs.120.0 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 20.0 Crores and the Recurring cost (operation and maintenance) will be about Rs. 2.0 Crore per annum. Total Employment will be 100 persons (Permanent 50& temporary 50) during operation phase. Industry proposes to allocate Rs. 76.181Lakhs @0.635 % of total project cost towards Social developmental activities.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. There are 2 Reserved Forests (RF) and 7 Protected Forests (PF) within 10 km radius. Rivers, i.e. SaunriNadi (~7.5 km in South direction), Beta Nadi

(~8.0 km in South direction) and Sarayan River (~8.5 km in ENE direction) are flowing within 10 km radius. Distributary/Nala/Branch i.e.Kaimahra Distributary (~1.0 km in SE direction), Arthana Distributary (~2.0 km in West direction), Ramkot Distributary (~4.5 km in NNE direction), Sitapur Branch (~5.5 km in WSW direction), Machhrehta Distributary (~6.5 km in ESE direction), Behat Distributary (~7.0 km in SE direction), Islamnagar Distributary (~7.0 km in WNW direction) &Pirai Nala (~9.0 km in NE direction) are present within 10 km radius of the plant site.

Total water requirement for the Grain based Ethanol Plant will be 2778 KLPD out of which 1832 KLPD will be recycled in plant operations. Hence, the fresh water requirement for the project will be 946 KLPD which will be met from adjacent Sugar Mill due to interlinked project. Effluent of 1067 KLPD quantity will be treated through state of art CPU/Effluent Treatment Plant of 1300 KLPD capacity (Anaerobic, aerobic, Filters, & RO system). The plant will be based on Zero Liquid discharge system.

The total power requirement for the proposed Ethanol Plant will be 5.2 MW, which will be met from 10.0 MW Co-Generation Power Plant& D.G. Sets (for emergency). 2 nos. of D. G. Sets of capacity 1500 KVA each which will be used as standby during power failure. Stack height (10 m) will be provided as per CPCB norms to the DG sets. A 60 TPH Rice Husk/ Bagasse/Biomass fired boiler will be installed. ESP/Bag filter with a stack height of 50 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm3.

Details of process emissions generation and its management:

- ESP/Bag filter with a stack height of 50 m will be installed for controlling the particulate emissions. Online Continuous Emission Monitoring System will be installed with the stack and data will be transmitted to CPCB/SPCB servers.
- CO_2 generated (150 TPD) during the fermentation process will be collected by utilizing CO_2 scrubbers and sold to authorized vendors.

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

- Solid waste from the Grain based operations generally comprises of fibers and proteins in the form of DDGS (91 TPD), which will be ideally used as Cattle, poultry and fish feed ingredients. Yeast sludge will be sent to the sludge drying beds or may be added to the wet cake.
- Ash (60 TPD) from the boiler will be given to brick or cement manufacturing unit.
- Used oil & grease (0.5 KL/Annum) generated from plant machinery/gear boxes as hazardous waste will be sold out to the CPCB authorized recyclers.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 200 KLPD will be for manufacturing of fuel ethanol only.

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 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 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 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). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 200 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(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). 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.

(iv). Total fresh water requirement shall be 946 KLPD which will be met from adjacent Sugar Mill. Prior permission shall be obtained from the concerned regulatory authority/Irrigation division in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises. Rainwater shall be collected in storage ponds and utilized for plant activities. Ground water monitoring shall be done regularly and report is to be submitted to concerned authorities regularly.

(v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.

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

(vii). 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.

(viii). 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.

(ix). 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.

(x). 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.

(xi). 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.

(xii). 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.

(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 be completed within time as proposed.

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

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

(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. 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.

(xvii). 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.

Agenda No. 39.13

Proposed establishment of grain based distillery of capacity 500 KLD along with co gen power plant – 14.9 MW at plot no 26, 9 (part), 8, 7, 6, 5, 4 M.P.A.K.V.N, Industrial area, Borgaon, Tehsil – Sausar, Distt – Chhindwara (MP) BY M/S GULSHAN POLYOLS LIMITED - Consideration of Environment Clearance.

[IA/MP/IND2/223942/2021, IA-J-11011/313/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. Environmental and Technical Research Centre made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the proposed Grain based distillery of capacity 500 KLD along with Co Gen Power Plant – 14.9 MW at Plot No 26, 9 (Part), 8, 7, 6, 5, 4 M.P.A.K.V.N, Industrial Area, Borgaon, Tehsil – Sausar, Distt – Chhindwara (MP) by M/s Gulshan Polyols Limited.

The project proposal is applied for environment clearance as it does not require ToR & Public Hearing is exempted as per EIA notification 2006 and its amendment vide gazette notification of MoEF&CC vide no 750-E dated 17th February 2020 and SO- 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

All grain based fuel ethanol plants are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification and amendment vide no SO- 2339 dated 16th June 2021 under category 'B-2' and appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity are as under:

Product / Activity (Capacity / Area)	**Quantity**	**Unit**	**Mode of transport / Transmission of product**
Ethanol	500	KLD	Road / Tankers
Co Gen Power	14.9	MW	-

Land area of 83340.08 m^2 (8.3340 Ha) will be used for proposed distillery establishment. Proposed land is situated in Industrial Area. Industry will develop greenbelt in an area of 33 % i.e., 27500.0 m^2 out of total area of the project.

The estimated project cost is Rs 30000 Lakh. Total capital cost earmarked towards environmental pollution control measures is Rs 5538 Lakh and the Recurring cost (operation and maintenance) will be about Rs 450 Lakh per annum. Total Employment will be 250 persons as direct & 200 person's indirect establishment. Industry proposes to allocate Rs 150 Lakh towards Corporate Environmental Responsibility.

There is no national park, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves and Wildlife Corridors etc. within 10 km distance from the project site. Khapa – Padri RF, Jalal Khera RF, Kondar RF within 10 km radius. River/ water body Kanhan is flowing at a distance of 7.15 Km in the east direction.

Total water requirement is 9102 KLD of which fresh water requirement for Distillery unit will be 2500 KLD (@ 5.0 KL/KL of product) and for Co gen power plant will be 715 KLD (@ 1.99 KL/MW/Hr). Total fresh water

requirement for project will be 3235 KLD will be sourced from Industrial supply water. Effluent of Spent wash 2900 KLD (@ 7.44 KL/KL of product). Spent wash will be pass through Filter Press. Upon separation of suspended solids in Filter press, Thin Slops are recycled to process / fermentation section partially and rest spent wash will be concentrated in Multi-effect evaporators to form a Thick (Protein) Syrup, which is mixed with the Wet Cake separated earlier from filter press. This interim product is subject to drying in a rotating steam tube bundle dryers to deliver a value added by-product – DDGS – Distillers Dried Grains with soluble (~ 240 TPD). The plant will be based on Zero Liquid discharge system.

Power requirement for proposed unit will be 475 – 500 KWH (11300 KW) will be met from proposed co-generation power plant of 14.9 MW & State power distribution corporation Limited. Unit proposes 1 DG sets of 1250 KVA capacity. Stack height 7 Meter above roof top has been provided as per CPCB norms. 90 TPH (01 No) Coal fired boiler will be installed. Electrostatic Precipitator (ESP) with a stack of height of 75 meter will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm^3 for the proposed boilers

Details of process emissions generation and its management: 240 TPD Carbon di-oxide would be recovered from the process which will be sold in the market.

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

Particulars	**Proposed Establishment**	**Remarks**
Fly ash	200 Tonnes/day	Fly ash generated will be provided to brick manufacturer and Cement Manufacturer.
DDGS	240 MT/Day	Will be Sold as Cattle Feed in open market
Used Oil & Grease	Approx. 1500 Liters /Annum	Hazardous waste will be disposed as per the Hazardous Waste Management Rules 2016.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 500 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations EAC suggested that Rs 1.5 Crores allocated for CER shall be spent solely on providing drinking water facilities to nearby villages. Further, EAC directed that ash generated shall be used for brick

manufacturing in factory premises. PP agreed for the same. EAC suggested that width of green belt shall be 5 m.

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 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 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 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). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 500 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(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). 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.

(iv). Total fresh water requirement shall be 3235 KLPD which will be met Industrial supply. Prior permission shall be obtained from the concerned regulatory authority/Irrigation division in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises. Rainwater shall be collected in storage ponds and utilized for plant activities. Ground water monitoring shall be done regularly and report is to be submitted to concerned authorities regularly.

(v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed. Ash generated shall be used for brick manufacturing in factory premises.

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

(vii). 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.

(viii). 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.

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

(x). 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.

(xi). 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.

(xii). The green belt of 5 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.

(xiii). As committed Rs. 1.5 Crores allocated for CER shall be spent solely on providing drinking water facilities to nearby villages.

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

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

(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. 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.

(xvii). 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.

Agenda No. 39.14

Proposal for distillery expansion from 200 KLPD to 845 KLPD to manufacture Ethanol at Belgaum, Karnataka by M/s. The Ugar Sugar Works Ltd located at Ugar Khurd village, Athani Taluk, Belgaum District, Karnataka State - Consideration of Environment Clearance reg.

[IA/KA/IND2/221757/2021, J-11011/315/2012-IA II (I)]

The Project Proponent and the Accredited Consultant M/s. Samrakshan made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project distillery expansion from 200 KLPD to 845 KLPD to manufacture Ethanol at Belgaum, Karnataka by M/s. The Ugar Sugar Works Ltd located at Ugar Khurd village, Athani Taluk, Belgaum District, Karnataka State.

The project/activities are covered under category A of item 5 (g) 'Distilleries' of the Schedule to the EIA, 2006 and requires appraisal at central level by the sectoral Expert Appraisal Committee (EAC). The proposal has been submitted under the Ministry's EIA Notification, 2006 amendments vide Notification no. S.O. 345(E) dated 17th January 2019 & extension of notification S.O. 750(E) dated 17th February 2020, S.O 980(E) dated 2nd March, 2021. Accordingly, the proposal shall be appraised as category 'B2' project. It was informed that no litigation is pending against the proposal.

Ministry had issued Environment Clearances earlier vide letter No. J-11011/80/99-IA II (M) dated 07.11.2003 and EC letter No. J-11011/80/99-IA II dated 17.08.2000 for modernization of 30 KLD distillery unit and establishment of 45 KLD distillery unit respectively. Further, Environmental Clearance from MoEF & CC vide F. No. J-11011/315/2012-IA. II(I) dated 15.07.2017 and amendment F. No. J-11011/315/2012-IA-II (I) dated 08.12.2020 was granted for expansion of Sugar cane crushing capacity from 10000 TCD to 20000 TCD, Co-generation power plant from 44 MW to 75 MW & Molasses based Distillery from 75 KLPD to 200 KLPD by installing additional 155 KLPD plant and dismantling existing 30 KLPD plant.

The details of products and capacity are as under:

Plant capacity	Existing as per EC 2017	EC sought for proposed expansion		
	RS/ ENA from C-Heavy molasses	Ethanol from C/ B - Heavy molasses	Ethanol from Sugarcane syrup	Ethanol from Grain (during sugarcane crushing off season)
45 KLD existing	45	45	45	-
155 KLD under installation	155	155	155	-
645 KLD proposed	-	-	645	400
Production scenario after expansion	200	200	845	400
All units in KLD				

Note: *Any one of the raw material is used at a time.*

Existing land area of Sugar, Cogen and distillery unit is 1962727.1 m^2 (485 Acres), additional 275186 m^2 (68 Acres) land will be used for proposed expansion. Industry has already developed greenbelt in an area of 35 % i.e., 781043 m^2 (193 Acres) out of total area of the project 2237913 m^2 (553 Acres).

The estimated project cost is Rs. 90 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 16.6 Crores and the Recurring cost (operation and maintenance) will be about Rs. 6.87

Crores per annum. Total Employment will be 87 persons, out of this the direct employment is 68 persons & indirect is 19 persons after expansion. Industry proposes to allocate Rs. 0.6 Crores @ of 0.75 % towards 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 Krishna is flowing at a distance of 0.5 km in South of the industry.

Baseline ambient air quality monitoring is not carried out since the project is to be appraised as B2 category as per the Notification of MoEF & CC S.O 2339(E) dated 16.06.2021. However, ambient air quality monitoring is carried out by the industry as per the conditions of the Consent issued by KSPCB. The monitoring data during February 2021 indicate PM_{10} (73.60 $\mu g/m^3$), $PM_{2.5}$ (32.86 $\mu g/m^3$), SO_2 (4.61 $\mu g/m^3$) and NOx (10.33 $\mu g/m^3$).

Total fresh water requirement after expansion shall not exceed 2247 KLPD and shall be met from Krishna River flowing at a distance of about 0.5 km in southern direction from project site. Department of Water Resource Organization, Government of Karnataka has permitted the project proponent to draw 175 MCFT per year (13577 KLD)

Mode of treatment of distillery spent wash, spent lees & other utility effluents are as under:
Molasses/Sugar syrup-based distillery operation

- Raw spent wash will be partially recycled back to fermentation process and remaining will be treated in MEE and Concentrated spent wash will be sent to drier. Potash Powder is given to Fertilizer industry.
- Spent lees and MEE condensates will be taken to Biodigester followed by Stripper & UV Treatment and reused in cooling tower makeup and in wet scrubber.
- The distillery plant will be based on Zero Liquid discharge system.

Grain based distillery operation

- Raw spent wash will be treated in Decanter. Partial thin slop is sent as wet cake to DDGS drier and remaining spent wash is sent to MEE. Concentrated spent wash from MEE will be sent as wet cake to DDGS drier. DDGS is sent for Cattle feed.
- Spent lees and MEE condensates will be treated in Stripper & UV Treatment.
- Cooling tower overflow will be recycled back to Cooling tower for water makeup.
- Treated effluent from Stripper & UV Treatment system will be reused in cooling tower makeup and in wet scrubber.

Power requirement after expansion will be 7.75 MW to the Distillery unit and will be met from co-generation power plant. Existing distillery plant has 1 No. 2000 KVA capacity DG set. Stack of 30 m AGL height is provided

as per CPCB norms to the DG set. Existing distillery has 50 TPH with bagasse as fuel and this boiler will be upgraded to 55 TPH. Wet scrubber with stack of 45.5 m height is installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3.

Details of process emissions generation and its management: During fermentation 495 TPD of CO_2 is estimated to be released. The CO_2 will be scrubbed and sent to CO_2 plant for production of liquefied CO_2 for commercial purpose.

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

Sl. No.	Details of the Solid waste	Quantity in MT/Day			Utilization existing and after proposed expansion
		Existing	Proposed	After expansion	
Distillery plant					
1	Sludge (Yeast)	40	40	80	Supplied to farmers as manure
2	Fly Ash	3.5	0.5	4	Supplied to farmers as manure.
3	Bottom Ash	2.5	0.1	2.6	

Hazardous waste generation and its management

Waste category	Hazardous Waste	Quantity	Method of handling
5.1	Used Oil	9.54 KL	Used oil is reused for lubrication purpose for factory machineries during the season
5.2	Oil-soaked cotton waste	1.5 MT	Oil-soaked cotton waste is burnt in boilers.

Certified compliance report obtained from Regional Office, for the project vide File No. EP/12.1/2017-18/01 KAR/275 dated 16.07.2021 and Status of compliance is '**Satisfactory**'.

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed expansion of 645 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations, it was informed to the EAC that PP has approached Ministry for expansion from 200 KLD to 845 KLD without achieving the production capacity of 200 KLD granted in the previous EC letter No.J-11011/315/2012-IA. II(I) dated 15.07.2017 and has not submitted CCR for the same.

In this regard PP has informed that industry has not yet initiated the expansion for 200 KLD and the distillery is operating with the production capacity of 45 KLD, CCR has been submitted for the same.

Subsequently, EAC mentioned that considering the importance of EBP programme the proposal may be recommended and Ministry may take a decision whether expansion may be granted without achieving previous EC production capacity.

Further, EAC found the CER proposed is low. Therefore, EAC directed that PP shall allocate Rs. 2 crores for CER and it shall solely be used for installation and maintenance of solar lights for the villagers. PP agreed for the same.

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 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 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 EMP report is in compliance of the PFR. The Committee 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). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 645 KLPD shall be only be used for fuel ethanol manufacturing as per self-certification in form of an affidavit by

the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(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). The project proponent will treat and reuse the treated water within the integrated industry and no waste or treated water shall be discharged outside the premises.

(iv). Total fresh water requirement for the integrated industry shall not exceed be 2247 KLPD which shall be met from Krishna river. Prior permission shall be obtained from the concerned regulatory authority/Irrigation division in this regard, and renewed from time to time. No ground water recharge shall be permitted within the premises. Rainwater shall be collected in storage ponds and utilized for plant activities. Ground water monitoring shall be done regularly and report is to be submitted to concerned authorities regularly.

(v). Raw spent wash shall be treated in MEE and Concentrated spent wash will be sent to drier. Spent lees and MEE condensates will be taken into Stripper & UV Treatment. If grains are used as a raw material spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.

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

(vii). 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.

(viii). 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.

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

(x). 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.

(xi). 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.

(xii). 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.

(xiii). PP shall allocate Rs. 2 crores for CER and it shall solely be used for installation and maintenance of solar lights for the villagers.

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

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

(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. 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.

(xvii). 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.

Agenda No. 39.15

Proposed 175 KLPD Molasses/ Cane Juice/ Sugar Syrup/Grain Based Distillery & 5 MW Co-Generation Power Plant at Village Bhagwanpur Fulwa, Tehsil Faridpur, District Bareilly, Uttar

Pradesh. by M/s. Dwarikesh Sugar Industries Limited- Consideration of Environment Clearance.

[IA/UP/IND2/194690/2021, IA-J-11011/31/2021-IA-II (I)]

The Project Proponent and the Accredited Consultant M/s. J.M. EnviroNet Pvt. Ltd made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project proposed 175 KLPD Molasses/ Cane Juice/ Sugar Syrup/Grain Based Distillery & 5 MW Co-Generation Power Plant at Village Bhagwanpur Fulwa, Tehsil Faridpur, District Bareilly, Uttar Pradesh. by M/s. Dwarikesh Sugar Industries Limited.

All Molasses based distilleries>100 KLPD & Non-Molasses based distilleries >200 KLD 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). It was informed that no litigation is pending against the proposal.

Standard ToR has been issued by Ministry of Environment, Forests & Climate Change vide letter IA-J-11011/31/2021-IA-II(I) dated 26th January, 2021. Public Hearing for the proposed project has been conducted by Uttar Pradesh Pollution Control Board on 24thJune, 2021. The Public Hearing was chaired by Additional District Magistrate, Bareilly. The main issues raised during public hearing were related to farmer benefits, payment queries of sugarcane, environmental impacts on air & water pollution, benefits to local people and development of nearby villages.

The details of products and capacity are as under:

S. No.	Products	Capacity
1.	Ethanol (Biofuel) / Extra Neutral Alcohol (ENA), Rectified Spirit (RS) & denatured spirit	175 KLPD
2.	Power	5.0 MW

The total area for the proposed distillery project is 11.6 acres (4.7 hectares). Industry will develop 1.6 Ha (3.95 Acres) i.e. 34% of the total project area under greenbelt/plantation.

The estimated project cost is Rs. 225 Crores for proposed project. Total capital cost earmarked towards environmental pollution control measures is Rs. 40 Crores and the Recurring cost (operation and maintenance) will be about Rs. 3 Crores per annum. No. of working days will be 350 days/annum. Total Employment during operation phase will be 150 persons (125 persons on Permanent basis + 25 persons on Temporary

basis) for proposed project. Industry proposes to allocate Rs 1.65 Crores @ 0.73 % of total project cost towards socio-economic developmental activities.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors, Reserved Forests (RF)/ Protected Forests (PF) within 10 km radius from the project site. Water bodies in 10 km radius study area are 2 rivers – East Bahgul River (~ 2.0 km in ENE direction) & Ramganga River (~ 7.0 km in SW direction); 6 Distributaries- Faridpur Branch, Fatehganj Distributary, Athana Distributary, Shahjahanpur Branch, Fatehganj Pump Canal, Bajhera Distributary; 4 Nala/ Drain – Baskhar Drain, Karpia Nala, Gundhia Nala, Gauneya Nala are also present within 10 km radius of project site.

Ambient air quality monitoring was carried out at 8 locations during Winter Season (December, 2020 to February, 2021) and the baseline data indicates the ranges of concentrations as: PM_{10} (57.6 to 92.2 μg/m3), $PM_{2.5}$ (27.6 to 52.1 μg/m3), SO_2 (5.6 to 18.6 μg/m3) & NO_2 (12.3 to 35.6 μg/m3). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.155 μg/m3, 0.044 μg/m3, 0.912 μg/m3, 1.07 μg/m3 with respect to PM10, PM2.5, SO2 and NO2. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement for the proposed Molasses based Ethanol Plant will be 2640 KLPD out of which 1559 KLPD will be recycled in plant operations. Hence, the fresh water requirement for the project will be 1081 KLPD (For distillery, Co-generation Power Plant, utility & domestic uses) which will be sourced from ground water.

Effluent of 1649 m^3/day during Molasses based operation and 776 m^3/day during Grain based operations will be treated through Effluent Treatment Plant/Condensate Polishing Unit (Based on Anaerobic, aerobic & UF/RO) of capacity 1800 m^3/day. The plant will be based on Zero Liquid discharge system.

Total Power requirement for proposed project will be 3.5 MW which will be sourced from proposed 5.0 MW Co-Generation Power Plant. D.G. Sets (2 x 600 KVA) will be used for emergency backup purpose only. Stack (height 6 m above roof level) will be provided as per CPCB norms to the proposed DG sets. A Slop Fired boiler of 40 TPH capacity will be installed for proposed project. Bag Filter with a stack height of 72 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm3 for the proposed boiler.

Details of process emissions generation and its management:

Source	Emissions	Management
Slop Fired Boiler (40 TPH)	Particulate matter, SO_2, NOx	• Installation of Bag filter with proposed boiler • Stack of adequate height (72 m) as per norms • Necessary temperature profile to be maintained in boiler.
Fermentation	Carbon dioxide	Carbon dioxide (126 TPD) generated will be collected by utilizing CO_2 scrubbers and sold to authorized vendors.

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

- During Molasses/Cane Juice/Sugar Syrup based operation- Spent wash (1322 TPD) generated will be concentrated in Multi-effect evaporator and then (259 TPD) used as fuel in proposed boiler.
- During Grain based operation - Solid waste from the Grain based operations generally comprises of fibres and proteins in the form of DDGS (69 TPD) which will be ideally used as cattle feed.
- Fly ash (45 TPD) generated from the boiler will be utilized for brick manufacturing/ soil amendment/converted to ash granules to be used as potash fertilizer.
- Sludge will be dried and given to farmers to be used as soil manure.
- Used oil & grease (0.5 KL/Annum) generated from plant machinery/gear boxes as hazardous waste will be sold out to the CPCB authorized recyclers.

During deliberations EAC observed that the funds allocated for CER is low and directed that PP shall allocate Rs. 2.5 crores for CER. EAC suggested that the funds shall be used for establishment of solar plant within factory premises and electricity shall be provided for villagers free of cost. Further, EAC has also suggested that PP shall install ESP for controlling particulate emissions. PP agreed for 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 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 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 EMP report is in compliance of the PFR. The Committee 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 integrated industry and no waste or treated water shall be discharged outside the premises.

(iii). Total fresh water requirement for the integrated industry shall not exceed be 1081 KLPD which shall be met from groundwater. Prior permission shall be obtained from the concerned regulatory authority/Irrigation division in this regard, and renewed from time to time.

(iv). During Grain based operation, spent wash shall be treated by decanter, MEE & dryer and DDGS obtained shall be used as cattle feed. During Molasses based operations, spent wash shall be concentrated in MEE and followed by incineration in boiler as fuel.

(v). CO_2 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. Firefighting 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). PP shall allocate Rs. 2.5 crores for CER and it shall be used for establishment of solar plant within factory premises. Electricity shall be provided to villagers from the solar plant free of cost.

(xiii). There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products as per CPCB norms 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.

Agenda No. 39.16

Establishment of Greenfield Project of Grain Based Distillery Plant (200 KLPD) at Village-Arawan, Tehsil-Ben, PO-Parwalpur, Distt-Nalanda–803114, Bihar by M/s Patel Agri Industries Private Limited - Unit#II - Consideration of Environment Clearance.

[IA/BR/IND2/223280/2021, IA-J-11011/300/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s Grass Roots Research & Creation India (P) Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the proposal for establishment of Greenfield Project of Grain Based Distillery Plant (200 KLPD) at Village-Arawan, Tehsil-Ben, PO-Parwalpur, Distt-Nalanda–803114, Bihar by M/s Patel Agri Industries Private Limited - Unit#II.

The project proposal does not require ToR & Public Hearing as per EIA notification 2006 and its amendment vide gazette notification of MoEF&CC vide no 750-E dated 17th February 2020 and SO- 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

All grain based fuel ethanol plants are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification and amendment vide no SO- 2339 dated 16th June 2021 under category 'B-2' and appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity are as under:

SL.No	Units	Proposed Capacity
1	Installed Capacity	Grain Base Distillery of 200 KLPD
2	Major Raw Material	Damaged Grain Feed Stock, Broken Rice, Maize, Bajra & Sorghum, Starchy Materials etc.
3	Final Product & By-Product	Ethanol (200 KLPD) DDGS- 85 TPD CO2- 110 TPD

Total land required for the project is 5.47 Acres. Industry will develop greenbelt in an area of 33% of total project area i.e., 1.81 Acres out of total area of the project.

The estimated project cost is Rs 200 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs 200 lacs and the Recurring cost (operation and maintenance) will be about Rs 67 lacs per annum. Total Employment will be 125 persons as direct & indirect due to the project. Industry proposes to allocate 2.5 % of Company Profit towards Corporate Social Responsibility.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site. Jalwar Nadi is at approx. 7.0 km towards SW, Huan Nadi is at Approx. 0.55 km towards East, Sansi Nadi is at approx. 3.2 km towards East, Mohana Nadi is at approx. 2.1 km towards West, Nonai Nadi is at approx. 8.8 km towards WNW, Pamar Nadi is at approx. 6.6 km towards SW and Chiraia Nadi is at Approx. 5.3 km towards North.

Ambient air quality monitoring was carried out at Project Site during 01.04.2021 to 30.04.2021 and the baseline data indicates the ranges of concentrations as: PM10 (67.4– 88.8 µg/m3), PM2.5 (37.4–50.2 µg/m3), SO2 (7.1–9.8 µg/m3) and NO2 (15.8–22.0 µg/m3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.01 µg/m3, 0.04 µg/m3 and 0.34 µg/m3 with respect to PM_{10}, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

One Time Total water requirement for the project will be 3,138 KLD which will be further reduced through recycling & reuse of 2,422 KLD. 716 KLD fresh water demand is @ 3.58 KL/KL of Ethanol which will be sourced from ground water. The applications for permission of withdrawal of ground water has been submitted to CGWA vide application no 21-4/876/BR/IND/2021 dated:-01.08.2021. Effluent of 1,332 KLD quantity will be treated through 1,500 KLPD ETP. The plant will be based on Zero Liquid discharge system

Power requirement will be 6.0 MW and will be met from company other plant near to the current distillery project. 2 DG sets of 500 kVA capacity are used as standby during power failure. Stack (Height 30m) will be provided as per CPCB norms to the proposed DG sets. No boiler will be installed in the current project, steam will be sourced from company's other distillery project near to the current proposal. 30 m stack height will be installed for DG set to control the emission. Regular monitoring will be done to ensure that ambient air quality standards to met all the time. All the internal roads will be asphalted.

Details of process emissions generation and its management:

CO_2 generated during fermentation process will be collected, purified, liquefied and sold to vendors.

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

Type of Waste	Quantity (TPA)	Storage	Utilization/ Disposal
DDGS – (by product) (Dried distillers' grains with soluble)	29,750	Covered shed	Sold as Cattle Feed, Poultry & Fisheries
Waste papers/Boxes	5	Covered shed	Sold out to local Market
Used Oil	2.0 KL	HDPE drums in covered shed	Used for oiling the machine in house and balance will be given to authorized re-cycler

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 200 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations, EAC directed that Rs. 4 Crores shall be allocated for CER and shall be used for establishment of solar plant within factory premises and electricity will be provided for villagers free of cost. EAC has also directed that PP shall not commence operations of distillery without obtaining prior permission for extraction of ground water from CGWA/concerned authority. Further, EAC asked to submit details of rain water harvesting. PP has submitted details of amount of water that can be saved by harvesting rain water annually in compliance of 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 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 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 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). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 200 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(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). 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.

(iv). Total fresh water requirement shall be 716 KLPD which will be met ground water. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority. No ground water recharge shall be permitted within the premises.

(v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.

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

(vii). 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.

(viii). 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.

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

(x). 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.

(xi). 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.

(xii). The green belt of 5 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.

(xiii). As committed PP shall allocate Rs. 4 Crores for CER and shall be used for establishment of solar plant within factory premises. Electricity shall be provided to villagers from the solar plant free of cost.

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

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

(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. 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.

(xvii). 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.

Agenda No. 39.17

Establishment of Greenfield Project of Grain Based Distillery Plant (200 KLPD) at Village-Arawan, Tehsil-Ben, PO-Parwalpur, Distt-Nalanda–803114, Bihar by M/s Patel Agri Industries Private Limited - Unit#I - Consideration of Environment Clearance.

[IA/BR/IND2/223202/2021, IA-J-11011/300/2021-IA-II (I)]

The Project Proponent and the accredited Consultant M/s Grass Roots Research & Creation India (P) Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the proposal for establishment of Greenfield Project of Grain Based Distillery Plant (200 KLPD) at Village-Arawan, Tehsil-Ben, PO-Parwalpur, Distt-Nalanda–803114, Bihar by M/s Patel Agri Industries Private Limited Unit#I.

The project proposal does not require ToR & Public Hearing as per EIA notification 2006 and its amendment vide gazette notification of MoEF&CC vide no 750-E dated 17th February 2020 and SO- 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

All grain based fuel ethanol plants are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification and amendment vide no SO- 2339 dated 16th June 2021 under category 'B-2' and appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity are as under:

SL.No	Units	Proposed Capacity
1	Installed Capacity	Grain Base Distillery of 200 KLPD
2	Major Raw Material	Damaged Grain Feed Stock, Broken Rice, Maize, Bajra & Sorghum, Starchy Materials etc.
3	Final Product & By-Product	Ethanol (200 KLPD) DDGS- 85 TPD CO2- 110 TPD

Total land required for the project is 6.41 Acres. Industry will develop greenbelt in an area of 33% of total project area i.e., 2.12 Acres out of total area of the project.

The estimated project cost is Rs 200 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs 200 lacs and the Recurring cost (operation and maintenance) will be about Rs 67 lacs per annum. Total Employment will be 125 persons as direct & indirect due to the project. Industry proposes to allocate 2.5 % of Company Profit towards Corporate Social Responsibility.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site. Jalwar Nadi is at approx. 6.8 km towards SW, Huan Nadi is at Approx. 0.8 km towards East, Sansi Nadi is at approx. 3.0 km towards East, Mohana Nadi is at approx. 1.7 km towards West, Nonai Nadi is at approx. 8.7 km towards WNW, Pamar Nadi is at approx. 6.0 km towards SW, Nonal Nadi is at approx. 9.5 km towards NW and Chiraia Nadi is at Approx. 5.4 km towards North.

Ambient air quality monitoring was carried out at Project Site during 01.04.2021 to 30.04.2021 and the baseline data indicates the ranges of concentrations as: PM10 (67.4– 88.8 µg/m3), PM2.5 (37.4–50.2 µg/m3), SO2 (7.1–9.8 µg/m3) and NO2 (15.8–22.0 µg/m3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.01 µg/m3, 0.04µg/m3 and 0.0.34µg/m3 with respect to PM10, Sox and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

One Time Total water requirement for the project will be 3,138 KLD which will be further reduced through recycling & reuse of 2,422 KLD. 716 KLD fresh water demand @3.58 KL of fresh water/KL of Ethanol, will be sourced from ground water. The applications for permission of withdrawal of ground water has been submitted to CGWA vide application no 21-4/875/BR/IND/2021 dated:-01.08.2021. Effluent of 1,332 KLD quantity will be treated through 1,500 KLPD ETP. The plant will be based on Zero Liquid discharge system.

Power requirement will be 6.0 MW and will be met from company other plant near to the current distillery project. 2 DG sets of 500 kVA capacity are used as standby during power failure. Stack (Height 30m) will be provided as per CPCB norms to the proposed DG sets. No boiler will be installed in the current project, steam will be sourced from company's other distillery project near to the current proposal. 30 m stack height will be installed for DG set to control the emission. Regular monitoring will be done to ensure that ambient air quality standards to met all the time. All the internal roads will be asphalted.

Details of process emissions generation and its management:

CO_2 generated during fermentation process will be collected, purified, liquefied and sold to vendors.

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

Type of Waste	Quantity (TPA)	Storage	Utilization/ Disposal
DDGS – (by product) (Dried distillers' grains with soluble)	29,750	Covered shed	Sold as Cattle Feed, Poultry & Fisheries
Waste papers/Boxes	5	Covered shed	Sold out to local Market
Used Oil	2.0 KL	HDPE drums in covered shed	Used for oiling the machine in house and balance will be given to authorized re-cycler

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 200 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations, EAC directed that Rs. 4 Crores shall be allocated for CER and shall be used for establishment of solar plant within factory premises and electricity will be provided for villagers free of cost. EAC has also directed that PP shall not commence operations of distillery without obtaining prior permission for extraction of ground water from CGWA/concerned authority. Further, EAC asked to submit details of rain water harvesting. PP has submitted details of amount of water that can be saved by harvesting rain water annually in compliance of 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 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 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 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). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 200 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(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). 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.

(iv). Total fresh water requirement shall be 716 KLPD which will be met ground water. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority. No ground water recharge shall be permitted within the premises.

(v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.

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

(vii). 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.

(viii). 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.

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

(x). 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.

(xi). 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.

(xii). The green belt of 5 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.

(xiii). As committed PP shall allocate Rs. 4 Crores for CER and shall be used for establishment of solar plant within factory premises. Electricity shall be provided to villagers from the solar plant free of cost.

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

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

(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. 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.

(xvii). 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.

Agenda No. 39.18

Establishment of Greenfield Project of Grain Based Distillery Plant (100 KLPD) with Co-Generation Power Plant of 15 MW at Village-Arawan, Tehsil-Ben, PO-Parwalpur, Distt-Nalanda–803114, Bihar by M/s Patel Agri Industries Private Limited-Unit#III - Consideration of Environment Clearance.

[IA/BR/IND2/223382/2021, IA-J-11011/302/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s Grass Roots Research & Creation India (P) Ltd., made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the proposal for establishment of Greenfield Project of Grain Based Distillery Plant (100 KLPD) with Co-Generation Power Plant of 15 MW at Village-Arawan, Tehsil-Ben, PO-Parwalpur, Distt-Nalanda–803114, Bihar by M/s Patel Agri Industries Private Limited-Unit#III.

The project proposal does not require ToR & Public Hearing as per EIA notification 2006 and its amendment vide gazette notification of MoEF&CC vide no 750-E dated 17th February 2020 and SO- 2339 dated 16th June 2021. It was informed that no litigation is pending against the project.

All grain based fuel ethanol plants are listed at S.N. 5(ga) of Schedule of Environmental Impact Assessment (EIA) Notification and amendment vide no SO- 2339 dated 16th June 2021 under category 'B-2' and appraised at Central Level by Expert Appraisal Committee (EAC).

The details of products and capacity are as under:

SL.No	Units	Proposed Capacity
1	Installed Capacity	Grain Base Distillery of 100 KLPD
2	Major Raw Material	Damaged Grain Feed Stock, Broken Rice, Maize, Bajra & Sorghum, Starchy Materials etc.

3	Final Product & By-Product	Ethanol (100 KLPD) DDGS- 43 TPD CO2- 55 TPD
4	Power Plant	15 MW

Total land required for the project is 9.84 Acres. Industry will develop greenbelt in an area of 33% of total project area i.e., 3.25 Acres out of total area of the project.

The estimated project cost is Rs 211 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs 822 lacs and the Recurring cost (operation and maintenance) will be about Rs 107 lacs per annum. Total Employment will be 104 persons as direct & indirect due to the project. Industry proposes to allocate 2.5 % of Company Profit towards Corporate Social Responsibility.

There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site. Jalwar Nadi is at approx. 7.0 km towards SW, Huan Nadi is at Approx. 0.55 km towards East, Sansi Nadi is at approx. 3.2 km towards East, Mohana Nadi is at approx. 2.1 km towards West, Nonai Nadi is at approx. 8.8 km towards WNW, Pamar Nadi is at approx. 6.6 km towards SW and Chiraia Nadi is at Approx. 5.3 km towards North.

Ambient air quality monitoring was carried out at Project Site during 01.04.2021 to 30.04.2021 and the baseline data indicates the ranges of concentrations as: PM10 (67.4– 88.8 µg/m3), PM2.5 (37.4–50.2 µg/m3), SO2 (7.1–9.8 µg/m3) and NO2 (15.8–22.0 µg/m3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.46 µg/m3, 0.35 µg/m3 and 0.365 µg/m3 with respect to PM10, Sox and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

One Time Total water requirement for the project will be 8186 KLD which will be further reduced through recycling & reuse of 4723 KLD. 369 KLD fresh water demand @3.59 KL of water/KL of Ethanol which will be sourced from ground water. The total fresh water demand for plant including CPP etc will be 3,423 KLD. The applications for permission of withdrawal of ground water has been submitted to CGWA vide application no 21-4/874/BR/IND/2021 dated 01.08.2021. Effluent of 1,341 KLD quantity will be treated through 1,500 KLPD ETP. The plant will be based on Zero Liquid discharge system.

Power requirement will be 3.0 MW and will be met from in-house captive power plant. 2 DG sets of 500 kVA capacity are used as standby during power failure. Stack (Height 30m) will be provided as per CPCB norms to the proposed DG sets. Project will have 125 TPH AFBC boiler will be installed. ESP and bag filter with a stack of height of 70m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/nm^3 for the proposed boilers. Regular monitoring will be done to

ensure that ambient air quality standards to met all the time. All the internal roads will be asphalted.

Details of process emissions generation and its management:

CO_2 generated during fermentation process will be collected, purified, liquefied and sold to vendors.

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

Type of Waste	Quantity (TPA)	Storage	Utilization/ Disposal
DDGS – (by product) (Dried distillers' grains with soluble)	15,050	Covered shed	Sold as Cattle Feed, Poultry & Fisheries
Ash from boiler	35,700	Silo	Sold to Bricks manufactures in nearby area
Waste papers/Boxes	5	Covered shed	Sold to recyclers
Used Oil	2.0 KL	HDPE drums in covered shed	Used for oiling the machine in house and balance will be given to authorized re-cycler
Spent Resin from DM Plant	2.0 KL	HDPE drums in covered shed	Given to authorized re-cycler

As per OM dated 16th June, 2021, PP has submitted self-certification in the form of affidavit declaring that the proposed capacity of 100 KLPD will be for manufacturing of fuel ethanol only.

During the deliberations, EAC directed that Rs. 4.22 Crores shall be allocated for CER and shall be used for establishment of solar plant within factory premises and electricity will be provided for villagers free of cost. EAC has also directed that PP shall not commence operations of distillery without obtaining prior permission for extraction of ground water from CGWA/concerned authority. Further, EAC asked to submit details of rain water harvesting. PP has submitted details of amount of water that can be saved by harvesting rain water annually in compliance of 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 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 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 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). As per OM dated 16th June, 2021, project falls in category B2 and the proposed additional capacity of 100 KLPD shall be only for fuel ethanol manufacturing as per self-certification in form of an affidavit by the Project Proponent. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.

(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). 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.

(iv). Total fresh water requirement shall be 369 KLPD which will be met ground water. Extraction of ground water shall not be done without obtaining prior permission of CGWA/concerned authority. No ground water recharge shall be permitted within the premises.

(v). The spent wash shall be concentrated and dried to form DDGS to be used as cattle feed.

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

(vii). 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.

(viii). 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.

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

(x). 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.

(xi). 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.

(xii). The green belt of 5 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.

(xiii). As committed PP shall allocate Rs. 4.22 Crores for CER and shall be used for establishment of solar plant within factory premises. Electricity shall be provided to villagers from the solar plant free of cost.

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

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

(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. 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.

(xvii). 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.

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

Agenda No. 39.19.1

Clarification regarding requirement of Environmental Clearance for polyurethane industries

Background: The Polyurethane (PU) manufacturing units used to operate with Consent to Establish (CTE), Consent to Operate (CTO) without EC as EIA notification of 2006 does not explicitly mention Polyurethane in its scope. However, it was informed that off-late some State Pollution Control Boards (SPCBs) have not considered renewal of CTO and to obtain clarification from MoEFCC whether such projects require EC (Environmental Clearance) or not.

The above matter was considered in Industry III sector in its 5th EAC meeting dated February 22-23, 2021 wherein M/s Indian Polyurethane Association made a representation that the Ministry has exempted requirement of prior EC for item 6 (b) 'Isolated storage & handling of hazardous chemicals', which inter alia removed restriction in Isocyanate storage, there is no requirement of prior EC for Polyurethane foam

manufacturing. The EAC has deliberated the issue and made following remarks:

- *The 'manufacturing of Polyurethane foam' requires prior environmental clearance, as it is covered under item 5 (f)' Synthetic organic chemical industry' of the schedule to the EIA Notification, 2006. However, utilization of Polyurethane foam as a raw material/further application doesn't require EC.*
- *The manufacturing Polyurethane foam involves ozone depleting substances and are also covered under Hazardous substance management rules.*
- *Detailed deliberations on the matter requires further information related to complete process, raw material, process flow etc.*

Based on the above observations, IA-Policy division has issued a clarification dated 11.03.2021 stating 'manufacturing of Polyurethane foam' requires prior environmental clearance, as it is covered under item 5 (f)' Synthetic organic chemical industry' of the schedule to the EIA Notification, 2006. However, utilization of Polyurethane foam as a raw material/further application doesn't require EC.

In this regard Dr. Mahesh N. Gopalasamudram, Chairman of Indian Polyurethane Association re-appealed the clarification issued by Ministry.The matter was again considered and deliberated in the 39th EAC Ind-II meeting. The case was presented by them with following details:

Polyurethane industry in India comprises of about 1000 enterprises and majority of them fall under the MSME category. They are spread geographically across the country. Polyurethane is a versatile polymer material and caters to the Mattress, Furniture, Automotive Seating, Steering Wheels, Refrigerators, Cold Storage Rooms, Building and Construction, Footwear, Elastomers, Coatings, Adhesives, Sealants and many more.

Polyurethane is not a synthetic organic chemical and is a thermosetting polymer. It is mostly a solid, inert, non-hazardous material and with high mechanical properties. Academic opinions are also part of the submission on the same. The technical manual for interpretation of 5(f) i.e., Synthetic Organic Chemical does not mention PU in scope.

Polyurethane is produced in a Reaction Injection Moulding process. This is similar to moulding in the plastic injection moulding process.

During the PU reaction Injection moulding, the only gas that is evolved is carbon dioxide. The whole reaction is in a closed loop system. Only 50 grams of Carbon dioxide is generated while producing One Kilogram of Polyurethane Foam.

The whole Polyurethane manufacturing process is based on an Exothermic reaction. No energy or fuel are required for the reaction. The minimal energy produced is 47 kcal/ mole.

The process generates no sludge or solid waste. The PU foam waste generated is reused in making rebonded foam.

The process does not use any water and the PU manufacturing plants use water only for sewage purposes as per domestic norms.

Only gas generated in the reaction is carbon dioxide and hence there is no pollution to air. One Kg of PU manufacturing gives out 50 grams of carbon dioxide emission. In comparison even One Kg of the cleanest fuel will give 2000 grams of carbon dioxide.

The PU Industry does not pollute air, water or soil. There is no noise pollution as there are no moving parts and friction.

Process safety and Occupational safety practices are well in place. Requisite PPE kits are used by the personnel at the processing site. Standard Operating Procedures for the safe handling of raw materials are well established and religiously followed. Bi-annual health checkups are carried out on the employees. The Industry Association conducts periodic Safety Seminars and Webinars and also on Industrial Hygiene for the Polyurethane industry.

Polyurethane industry does not pollute Air, Water or Soil. Polyurethane is non-hazardous and non-reactive. Polyurethane does not create any long term adverse impact ecologically. Polyurethane does not fall in Synthetic Organic Chemical 5(f) category. They are plastics and classified in HSN code Chapter 39 under plastics.

Classification of Polyurethane:

Synthetic Organic Chemical	**Polymers/Petrochemicals**
Molecular weight ~ 500 Daltons.	Molecular Weight ~ 20,000 Daltons.
Nature: Can exist in solid, liquid or gaseous form.	Nature: Mostly solid, high viscous liquids in some cases.
Uses: Reactive material or Solvents	Uses: Inert material used in multiple end applications requiring strength.
Thermal Properties: Have definitive melting Points.	Thermal Properties: melting over a range in case of thermoplastic. Softening seen in glass transition temperature.

Mechanical Properties: Even if solid cannot be cast as film, pulled as thread or made as membrane.	Mechanical Properties: Can be made as fibers, membranes or films of good strength.
Hazardous Nature: Small and/or reactive molecules. Have a tendency to leach from substances that contain them.	Non-Hazardous nature: They are inert.
	Most Polymers originate from Petrochemical origin.

In the view of the above the Association represented that Polyurethane is not a Synthetic Organic Chemical but a Polymer/Petrochemical.

Observation of CPCB representative:

The manufacturing of polyurethane shall require EC as decided in 5th EAC meeting of IND-III. Polyurethane, any of a class of synthetic resinous, fibrous, or elastomeric compounds belonging to the family of organic polymers made by the reaction of di-isocyanates (organic compounds containing two functional groups of structure - NCO) with other difunctional compounds (diols/alcoholic group compounds) such as glycols and as such fit the case of 5(f).

Deliberations in EAC, Ind-II and its Recommendations:

EAC noted that:

- Polyurethanes are a class of extremely versatile polymers. These are formed by reacting an isocynate with an alcohol.
- Isocynates are not ozone depleting and are not banned.
- Isocynates are extensively used worldwide in pharma, pesticides and in several other industries.
- There are no volatile matter emitted in the process, as the entire process starting from unloading till in the process, is a closed single stage reaction needing no water or energy input. Reaction is exothermic. Only emission from the polymerization reactor is of CO2 i.e. 50 gms per kg of polyurethanes foam. Quantity of CO2 emitted is meagre.

After detailed discussions on the matters related to environmental pollution, various balances i.e. emissions, effluents from the processes involved and Ozone depleting substances, if any, EAC decided that the project Polyurethane (PU) manufacturing units does not require Environmental Clearance and the project proponent can operate the existing/proposed facilities after obtaining requisite consents from State Pollution Control Board and other agencies as applicable.

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ANNEXURE

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, ZillaParishad/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.	Sh. Ashok Agarwal	Member
4.	Ms. Saloni Goel	Member
5.	Dr. Y.V. Rami Reddy	Member
6.	Dr. T. Indrasena Reddy	Member
7.	Sh. S. C. Mann	Member
8.	Dr. T. K. Joshi	Member
9.	Dr. J. S. Sharma	Member
10.	Sh. Dinabandhu Gouda, CPCB	Member
11.	Sh. Sanjay Bist, IMD	Member
12.	Sh. Ashok Kr. Pateshwary, Director, MoEFCC	Member Secretary
MoEFCC		
13.	Dr. Mahendra Phulwaria	Scientist 'C'
14.	Sh. Kanaka Teja	Research Assistant

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