

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

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**Dated: 05.11.2020**

**MINUTES OF THE 24<sup>th</sup> MEETING OF THE EXPERT APPRAISAL COMMITTEE**  
**(INDUSTRY-2 SECTOR FOR PETRO-CHEMICAL BASED PROJECTS),**  
**HELD ON 19<sup>th</sup> OCTOBER, 2020**

**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 offered by the EAC members on the minutes of its 23<sup>rd</sup> Meeting of the EAC (Industry-2) held during 18<sup>th</sup> September, 2020 conducted through Video Conferencing (VC) and 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: -

**19<sup>th</sup> October, 2020 (Monday)**

**Consideration of Environmental Clearance**

**Agenda No. 23.1**

**Proposed Naphtha Hydro Treatment Unit (NHDT) & 90 KTPA Semi Regenerative Type Catalytic Reforming Unit (CRU), by M/S Indian Oil Corporation Limited District: Located at Noonmati Village, Guwahati Taluk, Kamrup District, Assam - Consideration of Environment Clearance.**

**[IA/AS/IND2/172111/2017, File No: J-11011/197/2017-IA(II)I]**

The project proponent M/s Indian Oil Corporation Limited, Guwahati Refinery and the accredited Consultant M/s Hubert Enviro Care System (P) Ltd, Chennai have made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project for "Proposed Naphtha Hydro Treatment Unit (NHDT) & 90 KTPA Semi Regenerative Type Catalytic Reforming Unit (CRU) within the Existing Refinery Complex" by M/s. Indian Oil Corporation Limited, Guwahati Refinery Located at Patta No 54 and Dag No 1, Noonmati Village, Guwahati Taluk, Kamrup District, Assam State.

All petroleum refineries are listed as S. No. 4(a)- Petroleum refining industry of Schedule of Environmental Impact Assessment (EIA) Notification under Category 'A' and are appraised by Central Level by Expert Appraisal Committee (EAC).

The Standard ToR was issued vide letter no. J-11011/197/2017-IA. II(I) dated 07<sup>th</sup> July, 2017. Public Hearing for the proposed project is exempted under para 7(ii) of EIA notification, 2006.

The details of products and capacity as under:

<b>S.No.</b>	<b>Units</b>	<b>Installed Capacity (MMTA)</b>	<b>Year commissioning</b>	<b>of</b>	<b>Licensor</b>
1.	CDU	1.0	Revamped 1986 & 2000		RUMANIAN/ EIL
2.	DCU	0.33	1962		RUMANIAN
3.	NSF	0.13	1984		EIL
4.	ISOSIV	0.13	2002		UOP
5.	HDT	0.66	2002		UOP
6.	HGU	10	2002		TECHNIP BENELUX
7.	SRU	5 TPD	2002		EIL
8.	ISOM	0.045	2010		AXEN
9.	INDMAX	0.15	2016		
10	INDADEPTG	35 TMTA	2017		IOC-R&D

Ministry had issued EC earlier vide letter no. J-11011/71/2012-IA-II(I) dated 22.01.2015 to the existing project in favour of M/s. Indian Oil Corporation Limited, Guwahati Refinery.

Existing land area is 490 Acres (1.98 sq.km). No additional land will be used for proposed expansion. Industry has already developed greenbelt in an area of 41.76 %i.e.1.98 km<sup>2</sup> (490 Acres) out of total area of the project. The estimated project cost is Rs. 296 Crore. Total capital cost earmarked towards environmental pollution control measures is Rs 9 Lakhs and the recurring cost (operation and maintenance) will be about Rs. 207 Lakhs per annum. Total Employment will be 1554 persons. As per office memorandum by MoEF&CC released vide F.No.22-65/2017-IA.III dated 1st may 2018,

A total fund of Rs 3.05 Cr has been allotted for implementation of CER activities under the expansion project of CRU and CDU by IOCL, Guwahati Refinery. As per corporate guidelines for Implementation of CER projects a committee has been constituted with three members to finalize the CER projects in consultation with stakeholders & regulatory /district authority. The CER projects shall be undertaken preferably within 2 years of project completion.

There is one wildlife sanctuary (Amchang Wildlife Sanctuary,  $\approx$  3.51 km, E) within 10 km radius from the project site. Brahmaputra river  $\approx$  2.13 Km (N), Bharalu River  $\approx$  2.92 Km (SW), Sampathar Nadi  $\approx$  4.43 km (ENE), Moralouralu Nala  $\approx$  6.61 km (WSW), Mora Nala  $\approx$  6.87 km (SW), Bar Nadi  $\approx$  6.9 km (NW), Bardong Nala  $\approx$  8.65 km (SE) and Silguri Nadi  $\approx$  8.65 km (NW).

The State Chief Wildlife Warden vide dated 14<sup>th</sup> September, 2017 has recommended the proposal with the following condition:

*Periodic monitoring of pollution level by the State Pollution control Board may be made mandatory in area close to Amchang Wildlife Sanctuary, man-animal conflict mitigation is emerged need of that area. Therefore it is pertinent that a fund may be provided by IOCL Guwahati Refinery, which will be utilized for Wildlife conservation and mitigation of man-animal conflict.*

Ambient air quality monitoring was carried out at 8 locations during March - May 2018 and average baseline data indicates the ranges of concentrations as: PM10 (47.3 – 61.4  $\mu\text{g}/\text{m}^3$ ), PM2.5 (24.9-30.5 $\mu\text{g}/\text{m}^3$ ), SO2 (8.9-10.9 $\mu\text{g}/\text{m}^3$ ), NOx (20.4 – 28.3  $\mu\text{g}/\text{m}^3$ ), CO (0.41-0.67 $\mu\text{g}/\text{m}^3$ ). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.911  $\mu\text{g}/\text{m}^3$ , 15.698  $\mu\text{g}/\text{m}^3$  and 6.473  $\mu\text{g}/\text{m}^3$  with respect to PM10, SO2 and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement is 346 KLPH of which fresh water requirement of 162 KLPH will be met from River Brahmaputra and Recycle water of 184 KLPH will be sourced from ETP. Existing: Approx. 212.30 KLPH of effluent is being generated in the existing facility of which 16.58 KLPH is discharged into Brahmaputra River and 43 KLPH net discharge to storm water channel excluding evaporation & Ground Losses. Remaining 142.37 KLPH is being reused back in the system for cooling tower, fire water makeup and service water. Due to the proposed expansion approx. 188.2 KLPH of effluent is generated in the existing facility of which 4.2 KLPH is discharged into water reservoir pond. Remaining 184 KLPH is reused back in the system for cooling tower, fire water makeup, flushing and greenbelt.

S.No	Description	Existing (KLPH)						Proposed (KLPH)						Total (KLPH)						Remarks
		Total Water	Fresh Water	Treated Water Use	Water From DM	Effluent/ Sewage Generated	Loss	Total Water	Fresh Water	Treated Water Use	Water From DM	Effluent/ Sewage Generated	Loss	Total Water	Fresh Water	Treated Water Use	Water From DM	Effluent/ Sewage Generated	Loss	
1	DM Plant	112	112	0	0	10	5	-26.3	-26.3	0	0	-7	-2	85.7	85.7	0	0	3	3	Regeneration Sent to ETP
a	Boiler	134	0	55	79	59	20	-67.2	0	-55	-12.2	-54.5	42.3	66.8	0	0	66.8	4.5	62.3	Blow Down Sent to ETP
b	Process	18	0	0	18	18	0	-2.1	0	0	-2.1	-2.1	0	15.9	0	0	15.9	15.9	0	Blow Down Sent to ETP
2	Cooling Tower	300.3	197.93	102.37	0	27.3	273	-94.6	-141.23	46.36	0	96.5	-201.1	205.7	56.7	149	0	123.8	71.9	Blow Down Sent to ETP
3	Green Belt	5	5	0	0	0	5	1	-5	6	0	0	-5	6	0	6	0	0	0	
4	Domestic	20	20	0	0	18	2	-12	-12	0	0	-12	0	8	8	0	0	6	2	Sent to ETP
5	Flushing	0	0	0	0	0	0	9	0	9	0	9	0	9	0	9	0	9	0	
6	Service water	50	30	20	0	40	10	-49	-29	-20	0	-39	-10	1	1	0	0	1	0	Sent to ETP
7	Fire water	64	34	30	0	40	24	-33.4	-23.4	-10	0	-15	-18.4	30.6	10.6	20	0	25	5.6	Sent to ETP
<b>Total</b>		<b>703.3</b>	<b>398.93</b>	<b>207.37</b>	<b>97</b>	<b>212.30</b>	<b>339</b>	<b>-274.6</b>	<b>-236.93</b>	<b>-23.37</b>	<b>-14.3</b>	<b>-24.1</b>	<b>-194.2</b>	<b>428.7</b>	<b>162</b>	<b>184</b>	<b>82.7</b>	<b>188.2</b>	<b>144.8</b>	

Source: M/S IOC-GR

Note: Existing: Out of 212.30 KLPH of effluent generated 142.37 KLPH of treated effluent is reused in the system. 16.58 KLPH is discharged into Brahmaputra river and 43 KLPH net Discharge to storm water channel excluding evaporation & Ground Losses.

Proposed: Out of 185.7 KLPH of effluent generated 184KLPH of treated effluent is reused in the system. 4.2 KLPH discharged into water reservoir pond excluding evaporation & ground losses.

The power requirement after expansion will be 17.275 MW/Hr (existing ~18MW/Hr & additional- 0.725 MW/Hr) which will be sourced from Captive Power Plant. Existing unit has Nil TFH and Boiler Nil.

**Details of Process emissions generation and its management is given below in table:**

Source	Fuel used	Stack Details					Emission per stack (g/s)		
		No of Stack	Height (m) AGL	Dia (m)	Temp (°C)	Exit Velocity (m/s)	PM	SO <sub>2</sub>	NO <sub>x</sub>
<b>Existing Stack emission</b>									
TPS Unit 5	FO	1	58	2.3	157	6.74	68830	1.03	6.45
TPS & Unit 6 & 7	FO	1	55	3.27	151	6.79	141995	2.60	21.42
SRU	FO	1	45	0.35	581	7.97	1022	0.00	0.24
HDT	FO	1	40	0.92	237	6.64	9155	0.13	0.73
CDU	FO	1	40	1.26	275	9.26	21822	0.42	3.55
DCU	FO	1	48	2.7	167	5.93	81637	1.04	7.12
HGU	FO	1	48	1.53	159	6.45	28330	0.30	2.16
MSQU	FO	1	30	0.59	182	5.05	3216	0.02	0.04
Total g/s							17.59	43.50	24.92
Source	Fuel used	Stack Details					Emission per stack (ms/Nm <sup>3</sup> )		
<b>Proposed Stack Emission</b>									
CRU (Naphtha Hydrotreater)	FO	1	42	1.8	657.1	4.14	37923	50	850
CRU (Reformer)	FO	1	45	0.8	289.6	4.55	8231	50	850
<b>Total (mg/NM<sup>3</sup>)</b>							<b>100</b>	<b>1700</b>	<b>700</b>
<b>Total g/s</b>							<b>0.64</b>	<b>10.9</b>	<b>4.49</b>

**Details of Solid waste/ Hazardous waste generation and its management is given below in table:**

**Solid Waste (Operation Phase):**

**Municipal solid waste:**

S.No	List of Items	Quantity (Kg/day)		Total (kg/Day)	Remarks
		Existing	Proposed		
1	Organic waste	36	4.3	40.3	Composted and used as Manure for Green

					Belt
2	Inorganic	54	2.9	56.9	Disposed through Authorized PCB vendors
<b>Total</b>		<b>90</b>	<b>7.2</b>	<b>97.2</b>	

### Hazardous Waste Management:

S.No	List of Items	Waste Category	Quantity (Ton)		Remarks
			Existing	Proposed	
1	Spent Catalyst	4.2	69.43	0.99	Proposed Catalyst: Nickel based Bimetallic Composition: Ni, Mo and Sulfur Frequency: 3 Yrs. Disposal Method: Authorized vendor for Land Fill
2	Net Gas Chlorides treating Adsorbent (CRU Unit)		--	0.788	Composition Activated Alumina Frequency: Once in every six months Disposal Method: Authorized vendor for Land Fill
3	Makeup Gas Sulfur Guard Bed (BENSAT Unit)		--	0.176	Composition: Copper Oxide, Aluminium Oxide, Sodium Oxide Frequency: 1 Yr Disposal Method: Authorized vendor for Land Fill
4	Liquid Feed Sulfur Guard Bed (BENSAT Unit)		--	0.224	Composition: Copper Oxide, Aluminium Oxide, Sodium Oxide Frequency: 1 Yr Disposal Method: Authorized vendor for Land Fill
5	Spent Catalyst Bed (BENSAT Unit)		--	0.192	Composition: Aluminium Oxide, Platinum Disposal Method: Metal Recovery
6	Oily Sludge	4.1	1754		Frequency: Once in every six months Disposal Method: Authorized vendor for Disposal
7	Pollution Control Facilities (Residual Cake)		1217		Disposal Method: Authorized vendor for Land Fill

## Hazardous waste from proposed CRU Unit

	UOM	Amount	Unit	Frequency	Waste Management
Spent Catalyst	Kg	1390	NHT	Once in every 3 years	Spent catalyst / guard bed are stored in sealed drum for auction for metal recovery / landfill. Spent catalyst/bed material is processed at vendor set up.
Sulfur Guard Bed	Kg	202.2	BENSAT	6 months	
Spent Catalyst	Kg	190	BENSAT	10 years	
Net Gas Chloride Guard Bed	Kg	350	Platforming	6 months	
LPG Chloride Guard Bed	Kg	260	Platforming	1 year	
Spent Catalyst from Reactors	Kg	9627	Platforming	Once in 2 years	

EC compliance was submitted to Regional Office, MoEF&CC. Site visit by MoEF&CC officials done on 12-04-2018 and the compliance of EC recommendations was certified.

There is no litigation pending against the proposal.

Accordingly, the Corporate Environment Responsibility (CER) for the proposed project is as follows:

S.No.	Activity	Amount allocated in Rs.
1. Total Cost	Additional Capital Cost	INR. 296 Crores
2. EMP Cost	Capital Cost	INR 9 Lakhs
3. Recurring Cost	After Expansion Recurring Cost Per Annum	INR. 207 Lakhs
4. CER Cost	As per office memorandum by MoEF relased vide F.No. 22-65/2017-IA.III dated 1 <sup>st</sup> may 2018. A total fund of Rs. 3.05 Cr has been allotted for implementation of CER activities of CRU and CDU expansion project of IOCL Guwahtati Refnery. As per corporate guidelines for Implementation of CER projects a committee has been constituted with three members to finalize the CER projects in consultation with stakeholders & regulatory/ district authority. The CER projects shall be undertaken preferably within 2 years of project completion.	INR 3.05 Crores
5. Land	Land for the expansion is already in the possession of plant.	Nil
6. P.H. Commitment	Public Hearing for the proposed project is exempted under para 7 (ii) of EIA notification, 2006.	Nil
7. Green belt	Around the project site	INR 10

		Lakhs
8. Conservation Plan	<p>For General Remarks of the Monitoring Report dated 13.04.2018, Status of action taken for NBWL clearance Condition (i) is as follows:</p> <p>A. The environmental clearance for the INDA dept and INDMAX Revamp project of IOCL Guwahati Refinery was granted by Ministry of Environment, Forest and Climate Change (MoEF&amp;CC), GOI on 18/04/2016 with a condition that clearance from National Board for Wildlife is to be obtained in respect of Amchang Wildlife Sanctuary.</p> <p>B. Accordingly, an online application was submitted to Guwahati Wildlife Division for NBWL clearance on 31/08/2016 and the standing committee of NBWL finally recommended for both the projects in its 45<sup>th</sup> meeting held on 4<sup>th</sup> Sep 2017 with one of the following conditions: Man-Animal Conflict Mitigation is emergent need of the area closed to Amchang Wildlife Sanctuary. Therefore, it is pertinent that a fund may be provided by IOCL, Guwahati Refinery which will be utilized for Wildlife Conservation and mitigation of man-animal conflict.</p> <p>C. To comply on the above point, a meeting was held on March 19, 2018 in the office of the PCCF, WL and Chief Wildlife warden, Assam.</p> <p>D. PCCF, Assam was asked by Govt of Assam to submit a detailed plan vide letter dated 3<sup>rd</sup> July, 2019.</p> <p>E. Accordingly, a letter was sent from PCCF office to DFO, Wildlife, Guwahati to submit the mitigation plan for Amchang Wildlife Sanctuary on 10<sup>th</sup> July 2019.</p> <p>F. IOCL, Guwahati Refinery has meeting with Principal Chief Conservator of Forest and HoFF, Assam on 12.03.2020 to discuss the fund to be provided and also to provide the Mitigation Plan.</p> <p>G. M/s IOCL Guwahati Proposes wild life conservation and mitigation plan.</p>	Nil



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

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

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the CER plan and found to be addressing the issues in the study area. Certified report on compliance of existing EC conditions also found to be satisfactory. The Committee also found the additional studies and information submitted and presented by the project proponent to be satisfactory.

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

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 treated effluent of 4.2 KLPH shall be sent for deep sea discharge through diffuser recommended by NIO.
- (iii). The National Emission Standards for Petroleum Oil Refinery issued by the Ministry vide G.S.R. 186(E) dated 18<sup>th</sup> March, 2008 and G.S.R.595(E) dated 21<sup>st</sup> August, 2009 as amended from time to time, shall be followed.
- (iv). Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology. For emission control and management, use of FG/NG in heater as fuel, adequate stack height, use of Low NOX burners in heater & boiler, continuous stack monitoring, Sulphur recovery plant, etc. shall be installed/ensured.
- (v). Total fresh water requirement for the proposed project shall not exceed 162 KLPH to be met from Sea water. Necessary permission in this regard shall be obtained from the concerned regulatory authority.
- (vi). Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- (vii). Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.
- (viii). Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
- (ix). Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided. The ash from boiler shall be sold to brick manufacturers/cement industry.
- (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 5-10 m width shall be developed in the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. The project proponent shall ensure 33% greenbelt area vis-à-vis the project area through afforestation in the degraded area. The Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

- (xii). The CER allocation shall be spent mainly for addressing the issues raised during public consultation/hearing including education/skill development/solar lights, etc., and shall be completed within 5 years. The amount proposed if any in CER shall be spent during execution of the project and shall not be linked with the CSR.
- (xiii). For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- (xiv). 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.
- (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. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.
- (xvi). Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- (xvii). Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken/implemented accordingly.
- (xviii). The PP should improve the efficiency of ETP Plant and the water discharge should be as per prescribed CPCB Norms. They should also install 24x7 hours monitoring system (of the discharge) and the same should be connected to the server of SCPB/CPCB.

## **Agenda No. 24.2**

### **Expansion of Refinery Capacity from 20 MMTPA to 46 MMTPA with Petro-Chemical Complex, M/s Nayara Energy Limited located at Vadinar, District: Devbhumi Dwarka, Gujarat - Consideration of Environment Clearance - regarding.**

**[IA/GJ/IND2/175608/2018, File No: IA-J-11011/320/2006-IA-II(I)]**

The Project Proponent and the accredited Consultant M/s CSIR- National Environmental Engineering Research Institute made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project Expansion of Refinery Capacity from 20 MMTPA to 46 MMTPA with Petrochemical Complex by M/s Nayara Energy Limited at Vadinar, District: Devbhumi Dwarka, Gujarat.

The proposed expansion of project is listed at S.N. 4(a) "Petroleum Refinery Industry" & 5(c) "Petro-Chemical Complex" 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) in its 38<sup>th</sup> meeting held during 25-27<sup>th</sup> June 2018 and recommended Terms of References (ToR) for the Project. The ToR has been issued by Ministry vide letter No. J-11011/320/2006-IA-II(I); dated 03/08/2018.

The details of products and capacity are as under:

#### Product Slate for Existing & Proposed Refinery

Sr. No.	Products	Capacity (KTPA)	
		Existing Refinery (20 MMTPA)	Ultimate Refinery (46 MMTPA)
1.	LPG	938	785
2.	Naphtha /MS	4,200	10,726
3.	Gasoline		
4.	SKO/ATF	872	624
5.	Diesel/ HSD	9,706	22,775
6.	Furnace Oil/VGO	220	-
7.	Sulphur	318	1,610
8.	Petcoke	2,247	2,191
9.	Bitumen	377	337
10.	Ethanol	-	110
11.	Fuel & Losses		
	a. Fuel	1,009	4,316
	b. Losses	111	476
	c. Propylene	-	2,050 *

\*450 KTPA out of these are covered in ADP1 Project clearance

#### Product Slate for the Proposed 10.75 MMTPA Petro-chemicals Complex

Sr. No.	Products	Capacity (KTPA)
1.	Propylene/Polypropylene (PP)	1000*
2.	Butadiene	180
3.	MTBE/ETBE	150
4.	Benzene	500
5.	PX	1400

6.	PTA	2,400
7.	LAB	200
8.	Polypropylene	1050
9.	HDPE	500
10.	LLDPE	550
11.	LDPE/ EVA	200
12.	MEG/DEG	800
13.	SM	500
14.	Phenol	200
15.	Acetone	125
16.	Bisphenol -A (BPA)	35
17.	Polycarbonate	130
18.	N-Butanol	50
19.	i- Butanol	10
20.	2 Ethyl Hexanol	120
21.	Neo Pentyl Glycol (NPG)	40
22.	Acrylic acid	10
23.	Acrylates (Butyl, Methyl, Ethyl)	300
24.	SAP	100
25.	Propylene Oxide (PO)/PG/Polyols	200

<b>Sr. No.</b>	<b>Activity</b>	<b>Amount allocated in Crore Rs.</b>
1. Total Cost	Cost of the Project	130000
2. EMP Cost	Air Pollution Control system, ETP, Dust Suppression System, Online Monitoring System, Offline Environmental Monitoring, marine Water Quality Monitoring, Action Plan for Mangrove Conservation / Eco Sensitive Zone etc.	3877
3. Recurring Cost		30.4
4. CER Cost	Please refer in PH commitment	-
5. Land	No additional land purchase	0
6. Public consultation Commitment	Infrastructure development, Health care services , Education and skill development, Water Resource Development, Sustainable Livelihoods, link patients with Government schemes	140.8

7. Green Belt	Plantation across refinery area.	46
8. Conservation Pla	Peafowl Conservation Plan	0.4

Ministry had issued EC earlier vide letter no. J-11011/320/2006-IA-II (I); dated 16/09/2008 and 07/03/2014 to the existing project in favour of M/s. Essar Oil Limited valid till 16/09/2018. EC was transferred from M/s Essar Oil Limited to M/s Nayara Energy Limited on date 20/07/2018.

Existing land area available is 22750000 m<sup>2</sup> (2275 Ha). Existing refinery is in 11710000 m<sup>2</sup> (1171 Ha) and proposed expansion will be in 11040000 m<sup>2</sup> (1104 Ha) area. No additional land will be acquired. Industry has already developed 410 Ha greenbelt areas for existing refinery and will develop 340 Ha for the proposed project; the total green belt area after proposed expansion will be 750 Ha which will be 33 % of total 2275 Ha project area. The estimated project cost of proposed expansion (Refinery plus petro chemical complex) is Rs. 1,30,000 Cr. Total capital cost earmarked towards environmental pollution control measures is Rs. 3923 Cr for expansion and the Recurring cost (operation and maintenance) will be about Rs. 30.4 Cr. per annum. Total Employment will be 2000 persons as direct & 12000 – 15000 persons indirect during expansion. Industry proposes to allocate Rs 74.58 Cr for next five years towards Corporate Social Responsibility however the budget numbers may vary depending on company's year on year financial performance.

There is Marine National Park and Marine Sanctuary within 10 km distance from the project site. Phuljhar River and Sinhan dam are located at distance of ~2.0 km (in East direction) and ~5km (in South west direction), respectively from Refinery Boundary.

Ambient air quality monitoring was carried out at 09 locations during summer 2018, March 2018 to June 2018 and the baseline data indicates the ranges of concentrations as: PM<sub>10</sub> (60-140 µg/m<sup>3</sup>), PM<sub>2.5</sub> (15 – 42 µg/m<sup>3</sup>), SO<sub>2</sub> (10-31µg/m<sup>3</sup>) and NO<sub>2</sub> (17-36 µg/m<sup>3</sup>). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 142 µg/m<sup>3</sup>, 61 µg/m<sup>3</sup> and 77 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>x</sub> and NO<sub>x</sub>. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS) except PM<sub>10</sub> where baseline concentration is already exceeded the concentration.

Total water requirement of 928 MLD will be met from Sea Water which includes 204 MLD for existing and 724 MLD for proposed expansion project. Effluent of 93 MLD quantity will be treated through effluent treatment plant and entire treated effluent will be utilized for service water, fire water make

up, RO feed and horticulture. 536.5 MLD Desalination/RO Reject & 36.5 MLD sea water based cooling tower blow down will be sent for deep sea discharge through diffuser recommended by NIO.

Power requirement after expansion will be 927 MW including existing 160 MW and will be met from CPP (Captive Power Plant). Existing unit has 27 DG sets of (125 kVA to 2000 kVA) capacity, additional 50 DG sets (125 kVA to 2000 kVA) will be used as standby during power failure. Stack (vary between 6 to 30 m) will be provided as per CPCB norms to the proposed DG sets.

Details of Process emissions generation and its management:

The major sources during the operational phase include process emissions from CDU, VDU, FCCU, SRU, DHDT, VGO-MHC etc. and petrochemical plant operations.

Details of stacks of existing and proposed refinery and petrochemical complex are as given below:

#### **Stack Details of Existing 20 MMTPA Refinery**

Sr. No.	Stacks	Emissions as per MoEF&CC Norms (mg/Nm <sup>3</sup> )			
		PM	SO <sub>2</sub>	NO <sub>x</sub>	CO
1	DCU-1	10	50	350	150
2	DCU-2	10	50	350	150
3	DCU-3	10	50	350	150
4	SRU-I	-	-	350	150
5	SRU-II	-	-	350	150
6	DHDS	10	50	350	150
7	SRU	-	-	350	150
8	FCC Heater	10	50	350	150
9	FCC Regenerator	100	1700	450	400
10	CDU/VDU	100	1700	450	200
11	CDU-2	100	1700	450	200
12	NHT/CCR	10	50	350	150
13	Mini HMU	10	50	350	150
14	HMU-1	10	50	350	150
15	HMU-2	10	50	350	150
16	DHDT	100	1700	450	200
17	VGO MHC	100	1700	450	200

### Stack Details of Proposed 26 MMTPA Refinery

Sr. No	Stacks	Emissions as per MoEF&CC Norms (mg/Nm <sup>3</sup> )			
		PM	SO <sub>2</sub>	NO <sub>x</sub>	CO
1.	Feed Preparation Unit (FPU)	5	50	250	100
2.	High Propylene FCC-1 Heater	5	50	250	100
3.	High Propylene FCC-1 Regenerator	50	850	350	300
4.	Gasoline Desulphurisation (GDS-1)	5	50	250	100
5.	CDU/VDU-3	50	850	350	150
6.	NHT-2	5	50	250	100
7.	CCR-2	5	50	250	100
8.	DHDT-2	50	850	350	150
9.	HMU-3	5	50	250	100
10.	HMU-4	5	50	250	100
11.	HMU-5	5	50	250	100
12.	High Propylene FCC-II Heater	5	50	250	100
13.	High Propylene FCC-2 Regenerator	50	850	350	300
14.	Aromatic Extraction Unit	5	50	250	100
15.	DCU-2-Furnace-1	5	50	250	100
16.	DCU-2-Furnace-2	5	50	250	100
17.	DCU-2-Furnace-3	5	50	250	100
18.	Ebulated Bed RHCK	50	850	350	150
19.	Hydrocracker	5	50	250	100
20.	Solvent Deasphalting Unit (SDA)	50	850	350	100
21.	SRU-3	-	-	250	100
22.	SRU-4	-	-	250	100
23.	SRU-5	-	-	250	100
24.	SRU-6	-	-	250	100
25.	Gasoline Desulphurisation (GDS-2)	5	50	250	100
26.	ATF HT	5	50	250	100



### Stack Details of Proposed Petrochemical Complex

Sr. No.	Stacks	Emissions as per MoEF&CC Norms (mg/Nm <sup>3</sup> )			
		PM	SO <sub>2</sub>	NO <sub>x</sub>	CO
1.	PDH	5	50	250	100
2-10.	Cracker & associated units-Furnace-1-9 (9 Stacks)	5	50	250	100
11-16.	Para Xylene, Furnace-1-6 (6 Stacks)	5	50	250	100

The incremental predicted GLCs of major air pollutants viz., SO<sub>2</sub> and NO<sub>x</sub> due to the proposed expansion activities over the baseline air quality are within stipulated standards of CPCB i.e. 80 µg/m<sup>3</sup>. However, measures proposed for mitigating impacts on ambient air quality during the project operations include the following:

- Off gases from proposed units would also be treated in amine absorption and regeneration unit meant for H<sub>2</sub>S removal as already in practice for desulphurization of off gases (fuel gas) from existing units
- Performance evaluation of Sulphur Recovery Units with Tail Gas Treatment Units would be done on regular basis (at scheduled intervals) through monitoring off gas flow rate, H<sub>2</sub>S concentration at inlet and outlet and efficiency of sulphur recovery process
- FCCU would have particulate control systems such as cyclones.
- All the combustion units shall be maintained properly at optimum efficiency
- All fuel combustion units would be operated with minimum excess air so that fuel consumption is optimized.
- Energy conservation projects/schemes to result into reduction in quantity of fuel would be implemented
- Low NO<sub>x</sub> burners would be installed in furnaces, heaters and boilers for petrochemical units
- Leak detection and repair (LDAR) program would be implemented in petrochemical plant as well as in refinery
- Flares shall be designed with steam injection facility for refinery as well as for petrochemical plant.
- Port holes and sampling facilities would be provided at proper location for all new stacks coming up under proposed expansion project for monitoring of flue gas characteristics (velocity, flue gas temperature) and also for checking concentration of different pollutants at regular intervals
- Regular record on sulphur dioxide emissions shall be maintained at the refinery as part of the environmental data records

- Refinery would comply with applicable emission standards of CPCB/ MoEF&CC for the existing and proposed units
- Ambient air quality with respect to PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, H<sub>2</sub>S, CO, HC and VOCs monitoring shall be continued at appropriate locations in the impact zone
- Inventory of odorous compounds would be maintained and release of such compounds would be prevented
- Continuous online analyzers would be installed in all stacks as per recommendations of CPCB direction.
- Stacks of sufficient height (CPCB norms) shall be provided to ensure adequate dispersal of pollutants.
- All access roads (internal as well as external) to be used by the project authorities will be paved (either with WBM, concrete or bitumen) to suppress the dust generation along the roads
- Fuel leaks would be prevented from on-land equipment. Further, installation of leak detection systems and leak detection tests on fuel systems shall be done including distribution lines and tanks as per guidelines of CPCB/GPCB
- VOC emissions would be controlled through proper operation/ maintenance practices in refinery and petrochemical plant.
- Efforts will be made to minimize CO<sub>2</sub> emissions from the refinery operations

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

Refinery believes in effective waste management because management of waste reduces or eliminates adverse impacts on the environment and human health and supports economic development and improved quality of life. Towards the mission of effective management of wastes, refinery has implemented Standard Operating Procedure for management of wastes.

Details of different types and quantity of solid and hazardous wastes generated in the existing refinery, their storage and disposal practices followed is summarized in table below:

**Details of Types of Waste Generation, Disposal, and Storage Methods**

<b>Sr. No.</b>	<b>Description of Wastes</b>	<b>Generation &amp; Storage of Wastes</b>	<b>Disposal of Wastes</b>
1.	Chemical Sludge from ETP	Chemical sludge is stored in Reinforced Cement concrete (RCC) pits lined with 1.5 mm thick HDPE liner & connected to	Collection, Storage, Transportation and disposal through TSDF/ Incineration

		leachate collection sump which is finally connected to ETP where leachate is treated.	
2.	Oily Sludge or Emulsion	Oily sludge is stored in Reinforced Cement concrete (RCC) pits lined with 1.5 mm thick HDPE liner & connected to leachate collection sump which is finally connected to ETP where leachate is treated.	Collection, Storage, Transportation and disposal through TSDF/ Incineration /actual users/ co-processing in DCU
3.	Used lubricating oil	The waste is packed in closed 200 Kg. MS drums and stored in storage facility having HDPE liner, Reinforced Cement concrete (RCC) floor, covered at the top & Leachate collection and treatment facility.	Collection, Storage, Transportation & Disposal through actual users
4.	Wastes / residues containing oil	The waste is packed in closed 200 Kg. MS drums/ Jumbo Bags and stored in the storage facility having HDPE liner, Reinforced Cement concrete (RCC) floor, covered at the top &	Collection, Storage, Transportation and disposal through TSDF/ Incineration / actual users
5.	Spent Catalyst from Various units	Packed in 200 lit MS Drums, closed from top with lid & ring and then stored in the storage facility having Reinforced Cement concrete (RCC) floor and covered at the top.	Collection, Storage, Transportation & Disposal through actual users/ TSDF/ Incineration
6.	Spent Resins waste	Packed in 200 lit MS Drums, closed from top with lid & ring and then stored in the storage facility having Reinforced Cement concrete (RCC) floor and covered at the top	Collection, Storage, Transportation and disposal through TSDF/ Incineration / actual users
7.	Slop Oil	Slop oil generated is collected in slop oil Tanks having combined capacity of 6500 m <sup>3</sup> .	Reused within the plant
8.	Discarded Empty Drums/ Containers	Stored in the storage facility having Reinforced Cement concrete (RCC) floor and covered at the	Collection, Storage, Transportation & Disposal through

		top.	actual users
9.	Expired Hazardous Chemicals	The waste is packed in closed drums and stored in the Hazardous waste storage facility having HDPE liner, Reinforced Cement concrete (RCC) floor, covered at the top & Leachate collection and treatment facility.	Collection, Storage and disposal through TSDF/ Incineration / actual users
10.	Insulated Copper Wire Scrap/ Copper with PVC Sheathing Cables	Stored in Open RCC Floor at Material Management Control yard	Collection, Storage, Transportation and disposal by selling it to registered recycler / actual users
11.	Contaminated Cotton rags or other cleaning materials	Packed in Jumbo Bags and then stored in the storage facility having Reinforced Cement concrete (RCC) floor and covered at the top	Collection, Storage, Transportation and disposal through TSDF/ Incineration / actual users
12	e- Waste	Stored in the storage facility having Reinforced Cement concrete (RCC) floor and covered at the top.	Collection, Storage, Transportation and disposal through actual users
13.	Lead Acid Batteries Waste	Stored in the storage facility having HDPE liner, Reinforced Cement concrete (RCC) floor, covered at the top & Leachate collection and treatment facility.	Collection, Storage, Transportation and disposal through actual users
14.	Waste Coke/ Heater Deposits	Stored in 1 MT jumbo bags at storage facility having Reinforced Cement concrete (RCC) floor and covered at the top.	Collection, Storage, Transportation & Disposal through actual users/ Incineration / TSDF
15.	Spent Carbon	Packed in closed MS drums of 200 Kg/ Jumbo Bags stored in the storage facility having Reinforced Cement concrete (RCC) floor and covered at the top.	Collection, Storage, Transportation and disposal through TSDF/ Incineration / actual users/ Incineration in power plant boilers

Public Hearing for the proposed project has been conducted by the Gujarat Pollution Control Board on 28<sup>th</sup> August, 2020 & 29<sup>th</sup> August, 2020 for the part

of Jamnagar & Devbhumi Dwarka districts respectively. Most of the speakers at the public hearing expressed appreciation and gratefulness towards the Nayara Refinery for the various public welfare measures undertaken in the surrounding villages of Jamnagar district and Devbhumi Dwarka District. These measures include direct employment, business opportunities (direct/indirect), facilities in respect of medical, education, potable water supply, village roads, and scholarship for higher education, support to farmers & fishermen with better machinery, fodder for cattle, animal husbandry, and other miscellaneous development works. People of the region expected these facilities are to be continued further with more support with the expansion of refinery. In general, people welcomed the proposed expansion plan of the Nayara Energy Limited.

Most of the people expressed need for the development in the region and social upliftment needs of the people in the nearby villages.

To summarise, the environmental and social concerns/issues of the local people are already taken into consideration through the proposed expansion activities of M/s Nayara Energy Limited, and the proposed project proves to be beneficial for the overall socio-economic development of the people of the region through various welfare schemes/ programs.

The EAC held a detailed discussion & deliberated the Public Hearing issues during the meeting for the proposed project.

Certified compliance report of earlier EC and CRZ Clearance is received from MoEF&CC, Regional Office Bhopal vide letter No. 5-26/2008 (ENV)/63 dated 8<sup>th</sup> March, 2019.

Status of Litigation Pending against the proposal:

**Special Civil Application Number 15322 of 2019**

**(DILIPSINH BHIKABHAI JADEJA versus UNION OF INDIA)**

A Writ Petition in the Gujarat High Court (hereinafter referred to as "GHC" for the sake of brevity) is filed challenging the TOR condition which states "Public consultation shall be carried out by giving a public notice in local newspapers about revised scope of the project, and for inviting responses in writing, if any, from the concerned persons having plausible stake in the environmental aspect of the project/activity."

GPCB, published an advertisement in the local newspapers in the State of Gujarat inviting objections to the proposed project of Nayara Energy, dispensing public hearing.

## **ISSUE RAISED IN THE PETITION PENDING IN GUJRAT HIGH COURT:**

- a) Aggrieved by the advertisement issued by the GPCB, calling for only objections for the proposed expansion dispensing with the public hearing it is alleged that a limited public consultation being held and in violation of rights of the petitioners.
- b) It is alleged that the expert appraisal Committee (EAC) does not have any discretion to allow a project to go for public consultation dispensing with the public hearing.

Vide order dated 17/09/2020 the honorable Gujrat High Court **disposed of** the Petition with the following observations (Supra)

*"Mr. Yagnik, learned advocate for the applicant does not press this application with a liberty to take appropriate recourse in accordance with law as public hearing is conducted during the Covid Pandemic. Present application is disposed of."*

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

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

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the CER plan and found to be addressing the issues in the study area. Certified report on compliance of existing EC conditions also found to be satisfactory. The Committee also found the additional studies and information submitted and presented by the project proponent to be satisfactory.

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

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 environmental clearance is subject to obtaining prior clearance from the wildlife angle, including clearance from the Standing Committee of the National Board for Wildlife, as applicable, as per the Ministry's OM dated 8<sup>th</sup> August, 2019. Grant of environmental clearance does not necessarily imply that Wildlife Clearance shall be granted to the project and that their proposal for Wildlife Clearance will be considered by the respective authorities on its merit and decision taken.
- (ii). The project proponent shall prepare a site specific conservation plan and wildlife management plan in case of the presence of Schedule-1 species in the study area, as applicable to the project, and submit to Chief Wildlife Warden for approval. The recommendations shall be implemented in consultation with the State Forest/Wildlife Department in a time bound manner.
- (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 treated effluent of 536.5 MLD Desalination/RO Reject & 36.5 MLD shall be sent for deep sea discharge through diffuser recommended by NIO.
- (v). The National Emission Standards for Petroleum Oil Refinery issued by the Ministry vide G.S.R. 186(E) dated 18<sup>th</sup> March, 2008 and G.S.R.595(E) dated 21<sup>st</sup> August, 2009 as amended from time to time, shall be followed.
- (vi). Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology. For emission control and management, use of FG/NG in heater as fuel, adequate stack height, use of Low NOX burners in heater & boiler, continuous stack monitoring, Sulphur recovery plant, etc. shall be installed/ensured.
- (vii). Total fresh water requirement for the proposed project shall not exceed 724 MLD to be met from Sea water. Necessary permission in this regard shall be obtained from the concerned regulatory authority.

- (viii). Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- (ix). Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.
- (x). Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
- (xi). Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided. The ash from boiler shall be sold to brick manufacturers/cement industry.
- (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 5-10 m width shall be developed in the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. The project proponent shall ensure 33% greenbelt area vis-à-vis the project area through afforestation in the degraded area. The Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xiv). The CER allocation shall be spent mainly for addressing the issues raised during public consultation/hearing including medical, education/skill development, potable water supply, solar lights, village roads, and scholarship for higher education, support to farmers & fishermen with better machinery, fodder for cattle, animal husbandry, and other miscellaneous development works etc., and shall be completed within 5 years. The amount proposed if any in CER shall be spent during execution of the project and shall not be linked with the CSR.
- (xv). For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- (xvi). 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.
- (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. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.

- (xviii). Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- (xix). Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken/implemented accordingly.
- (xx). The PP should improve the efficiency of ETP Plant and the water discharge should be as per prescribed CPCB Norms. They should also install 24x7 hours monitoring system (of the discharge) and the same should be connected to the server of SCPB/CPCB.

### **Agenda No.24.3**

**Modernization Project at MRPL, Mangalore by M/s Mangalore Refinery and Petrochemicals limited located at Kuthethoor/Bala Village, Mangalore, Karnataka - Consideration of Environmental Clearance - regarding.**

**[IA/KA/IND2/176690/2020, J-11011/215/2010-IA II(I)]**

The Project Proponent M/s. Mangalore Refinery and Petrochemicals limited, Mangalore, made a detailed presentation on the salient features of the project and informed that:

The proposal is for Environmental Clearance to the Modernization Project by M/s. Mangalore Refinery and Petrochemicals limited at Kuthethoor/Bala Village, Mangalore, Karnataka.

The project/activity is covered under category A of items 4(a) - Petroleum Refining Industry and 5(c)- Petro-chemical complexes of Schedule of Environmental Impact Assessment (EIA) Notification 2006 and requires appraisal at Central Level by Expert Appraisal Committee (EAC).

The proposal has been submitted under para 7(ii) (b) of MoEF&CC notification S.O. 3518 (E) dated 23.11.2016 for consideration without any ToR, Public hearing and EIA/EMP report.

**The details of products and capacity as under:**

<b>S. No.</b>	<b>Product Details</b>	<b>Existing Quantity, in MMTPA</b>	<b>Proposed Quantity, in MMTPA</b>	<b>Total Quantity, in MMTPA</b>
1	LPG	0.797	0.00	0.797
2	Naphtha	1.281	0.00	1.281
3	Motor Spirit	1.407	0.00	1.407
4	Kerosene	0.537	0.00	0.537
5	ATF	1.595	0.00	1.595

6	Diesel	6.434	0.00	6.434
7	Fuel Oil	2.305	0.00	<b>2.161</b>
8	Bitumen	0.345	<b>0.144</b>	<b>0.489</b>
10	Sulphur	0.195	0.00	0.195
11	Mixed Xylene	0.350	0.00	0.350
12	Pet Coke	0.674	0.00	0.674
13	Polypropylene	0.380	0.00	0.380
14	VGO	0.086	0.00	0.086
15	Fuel and loss	0.214	0.00	0.214
<b>Total Products including Fuel &amp; Loss</b>				<b>16.600</b>

**Details about amount allocated for each activity:**

S. No.	Activity	Amount allocated in Rs.
1	Total Cost	415 Crores
2	EMP Cost	120 Crores
3	Recurring Cost	10 Crores per annum
4	CER Cost	3.11 Crore
5	Land	NIL, within Refinery complex
6	P.H. Commitment	NIL
7	Green Belt	3.77 Crores
8	Conservation plan	NIL

MoEF&CC has issued following Environmental Clearances in favor of M/s MRPL. The details of all ECs are given below.

S. No	Project	EC letter no.	Date of EC
1.	Environmental Clearance for setting up a new refinery at Mangalore.	J-11011/6/89-IA-II	01.02.1991
2.	Environmental Clearance for expansion of Refinery from 3 MTPA to 9 MTPA.	J-11011/6/96-IA-II (I)	05.08.1996
3.	Environmental Clearance for Diesel Quality Improvement and expansion of the refinery to 13.6 MMTPA.	J-11011/8/2009 - IA-II (I)	23.12,2009
4.	Environmental Clearance for Phase - III Refinery Project.	No. 21-383/2007 - IA- III	03.04.2008*
5.	Environmental Clearance for Single Point Mooring (SPM) Project.	No. 10-49/2009 - IA. III	01.04.2011
6.	Environmental Clearance for Polypropylene Unit (PPU).	J-11011/215/2010 - IA- II (I)	01.11.2011
7.	BS V / VI Auto Fuel Quality Project	J-11011/47 /2016- IA.II (I)	10.07.2017
8.	CRZ Clearance for setting up of 70 MLD Desalination Plant at Taneerbavi village, Mangalore	No. 11-3/2019-IA.III	18.04.2019

\* Initial EC issued to Mangalore SEZ and later amended

Existing land area is 1592 Acre; additional 0.82 Acre land will be used for proposed modernization project within the Refinery complex premises. The Industry has already developed greenbelt in an area 492 acre. Industry will develop greenbelt in an area of 33(% i.e. 525 acre out of 1592 acre area of the project. Industry will undertake compensatory afforestation, in case the land is not available for green belt development at existing industry premises. The estimated project cost is Rs. 415 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 120 crores and the Recurring cost (operation and maintenance) will be about Rs. 10 crores per annum. Total Employment will be 10 persons as direct & 10 persons indirect after expansion. Industry proposes to allocate Rs. 3.11 crores @ of 0.75 % towards Corporate Environment 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. Gurupur River is flowing at a distance of 2 KM in South direction.

Ambient air quality monitoring was carried out by MoEF recognized Laboratory, at 6 locations during April 2019 to March 2020 and the baseline data indicates the ranges of concentrations as: PM10 (34 µg/m<sup>3</sup>), PM2.5 (20 µg/m<sup>3</sup>), SO<sub>2</sub> (14.2 µg/m<sup>3</sup>) and NO<sub>2</sub> (17.5 µg/m<sup>3</sup>). No incremental GLC is expected out of this project. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement for the proposed facilities is 61 m<sup>3</sup>/hr will be met from Treated Sewage effluent from Mangalore Special Economic Zone Limited (MSEZL). No additional river water is used for said proposed project. Effluent of 41 m<sup>3</sup>/hr quantity will be treated in existing Waste Water Treatment Plant (WWTP) with RO and recycled to existing cooling towers. No increase in total permitted treated effluent discharge of 446 m<sup>3</sup>/hr to Sea through a pipeline

The existing power requirement for normal operation of the refinery is 180 MW and 0.77 MW additional power will be required for the proposed project and will be met from existing captive power plants. Existing unit has 10 DG sets of 16,850 KVA capacity, no additional DG sets will be required as standby during power failure. Stack height as per CPCB norms have been provided for the existing DG sets. Steam requirement for the proposed project is 9.2 TPH and will be met from existing Boilers. No additional liquid/gas fired boilers will be installed.

SO<sub>x</sub> emission will be within the permitted limit of 2.375 Tons per hr

Hazardous Solid waste will be within the existing permitted/authorised quantity. Handling of Wet waste instead of dry at PFCC Unit. Generated waste will be stored in secured manner and handed over to SPCB/CPCB authorized Co-processor/recyclers.

Public hearing for the proposed project is not considered, as per MoEF&CC notification S.O. 3518 (E) dated 23rd November, 2016 under provision of para 7(ii) (b).

Certified compliance report was issued by Regional Office, MoEF&CC, Bangalore vide letter no. EP/12.1/32,69,638,546,5&12(2011-12)/Karnataka dated 24/06/2016.

There is no litigation pending against the proposal.

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

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

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

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

*PP has submitted certified compliance report issued by Regional Office, MoEF&CC, Bangalore vide letter no. EP/12.1/32,69,638,546,5&12 (2011-12)/Karnataka dated 24/06/2016. The EAC deliberated and not accepted certified compliance report, since, the submitted compliance report was found to be more than three years old. They should submit current certified compliance report within **Six months** in the Ministry. An undertaking letter/certificate should be submitted by PP accordingly.*

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). They should submit current certified compliance report within Six months in the Ministry. An undertaking letter/ certificate should be submitted by PP accordingly.
- (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 treated effluent of 446 m<sup>3</sup>/hr shall be sent for deep sea discharge through diffuser recommended by NIO.
- (iv). The National Emission Standards for Petroleum Oil Refinery issued by the Ministry vide G.S.R. 186(E) dated 18<sup>th</sup> March, 2008 and G.S.R.595(E) dated 21<sup>st</sup> August, 2009 as amended from time to time, shall be followed.
- (v). Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology. For emission control and management, use of FG/NG in heater as fuel, adequate stack height, use of Low NOX burners in heater & boiler, continuous stack monitoring, Sulphur recovery plant, etc. shall be installed/ensured.
- (vi). Total fresh water requirement for the proposed project shall not exceed 61 m<sup>3</sup>/hr to be met from Sea water. Necessary permission in this regard shall be obtained from the concerned regulatory authority.
- (vii). Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- (viii). Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.
- (ix). Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
- (x). Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.

The ash from boiler shall be sold to brick manufacturers/cement industry.

- (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 5-10 m width shall be developed in the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. The project proponent shall ensure 33% greenbelt area vis-à-vis the project area through afforestation in the degraded area. The Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xiii). The CER allocation shall be spent mainly for addressing the issues raised during public consultation/hearing including education/skill development/solar lights, etc., and shall be completed within 5 years. The amount proposed if any in CER shall be spent during execution of the project and shall not be linked with the CSR.
- (xiv). For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- (xv). 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.
- (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. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.
- (xvii). Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- (xviii). Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken/implemented accordingly.

- (xix). The PP should improve the efficiency of ETP Plant and the water discharge should be as per prescribed CPCB Norms. They should also install 24x7 hours monitoring system (of the discharge) and the same should be connected to the server of SCPB/CPCB.

**Agenda No. 24.4**

**Expansion of onshore oil & gas production from existing 300000 barrels of oil per day (BOPD) to 400000 BOPD and 165 million standard cubic feet per day (MMSCFD) to 750 MMSCFD by M/s Vedanta Limited (Division Cairn Oil & Gas) located at RJON 90/1 block area in Barmer & Jalore Districts, Rajasthan – Modification of Environment Clearance – regarding.**

**[IA/RJ/IND2/165548/2020, J-11011/13/2018-IA II (I)]**

The proposal is for amendment in Environmental Clearance granted by the Ministry vide letter F. No. J-11011/13/2018-IA-II(I) dated 11<sup>th</sup> April, 2019 for the Expansion of onshore oil & gas production from existing 300000 barrels of oil per day (BOPD) to 400000 BOPD and 165 million standard cubic feet per day (MMSCFD) to 750 MMSCFD from RJON 90/1 block area located at Barmer (Rajasthan) in favour of M/s. Vedanta Limited (Cairn Oil & Gas Division)

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

<b>S. No.</b>	<b>Para of EC issued by MoEF&amp;CC</b>	<b>Details as per the EC</b>	<b>To be revised/ read as</b>	<b>Justification/ reasons</b>
1	9 (u)	At least <b>1.5% of the total project cost shall be allocated for Corporate Environment Responsibility (CER)</b> and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.	Percentage of CER budget allocation shall be as per Office Memorandum on Corporate Environment Responsibility (CER) issued vide letter no. F. No. 22-65/2017-IA-111 dated 151 May, 2018	The fund allocation for the CER shall be deliberated in the EAC or SEAC or DEAC, as the case may be, with a due diligence subject to <b>maximum percentage</b> as prescribed below:  <b>In case of Additional Capital Investment &gt;10000 Cr (In Rs.) – Brown field projects – 0.125% of additional CI to be allocated for CER</b>

The Committee after detailed deliberations **recommended** for amendment in EC as proposed by the project proponent. All other terms and conditions shall remain unchanged.

#### **Agenda No.24.5**

**Expansion & Change in Product Mix by way of Debottlenecking & Modernization by M/s Reliance Industries Limited at Raigad, Maharashtra - Reconsideration of Environment Clearance – regarding.**

**[IA/MH/IND2/75750/2018, IA-J-11011/224/2018-IA-II(I)]**

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

The proposal of expansion & Change in Product Mix by way of Debottlenecking & Modernization by M/s Reliance Industries Limited (RIL) was considered in the 23<sup>rd</sup> EAC meeting held on 18<sup>th</sup> September 2020 and recommending it for grant of Environment Clearance. The following two conditions were included in the MoM. The project proponent has requested to Ministry and EAC to reconsider and remove two conditions while issuing EC. The details are as under:

**Condition (i): The Prior Clearance from Standing Committee of the National Board for Wild life- as applicable**

PP has submitted the following for consideration:

1. The Patalganga Manufacturing Division (PMD) site is within Patalganga MIDC notified industrial area by Govt of Maharashtra.
2. Plant is operating since 1985.
3. The project is outside the ESZ of Karnala Bird Sanctuary (KBS) notified by MoEFCC. The project site is at 4.17 Km distance from the boundary of Karnala bird sanctuary ESZ.
4. The project site is outside and at 3.5 Km distance from Matheran ESA boundary notified in 2003.

PP has clarified that, NBWL clearance is not applicable in this case. Hence, PP requested that while issuing EC this condition may please be excluded.

**Condition (iv): Only the remaining 25 % the effluent shall be sent for CETP discharge after meeting the prescribe standards and rest 75 % shall be treated through ETP/RO system and reused in the plant/process**

PP has submitted the following with a request to reconsider the condition of recycle in view of the following:



1. The present proposal is for change of product mix. The product planned is an import substitution and will aid "Atma Nirbhar Bharat" program announced by Hon'ble PM.
2. The plant is an old manufacturing plant, which was started in 1985 and this proposal is to get enhanced utilization of this old asset.
3. There is no change in effluent load.
4. There is no increase in water consumption.
5. Recycling this extensive quantity of effluent will pose a technological challenge. This requires reasonable time for establishing feasibility & implementation and may also pose difficulties in meeting the stipulations in the consent to operate.
6. Further, as we understand, the matter of enhanced effluent recycle and its potential implementation is represented by the industry and business chambers, FICCI and CII to MOEF and the matter is under examination by the ministry. As and when the new guidelines get finalized by MOEF we will endeavor to abide by the same.

The PP presented their request before the EAC by a detailed presentation. The Committee after detailed deliberations **recommended** for EC as proposed by the project proponent. All other terms and conditions shall remain unchanged.

#### **24.6 Any other items with the permission of the Chair.**

##### **Agenda 24.6.1**

**Expansion of Exploration and Production of Coal Bed Methane gas in Raniganj (South) CBM block by M/s Great Eastern Energy Corporation Limited located at Burdwan, Bankura and Purulia District, West Bengal - Amendment in Environment Clearance - regarding**

**[IA/WB/IND2/115543/2019, J-11011/352/2010-IA II(I)]**

The Project Proponent and the accredited Consultant made a detailed presentation on the salient features of the project and informed that:

The proposal is for amendment in the environmental clearance (EC) granted by the Ministry vide letter dated 24<sup>th</sup> November, 2011 in favour of M/s Great Eastern Energy Corporation Limited to the project for 'Expansion of Exploration and Production of Coal Bed Methane gas in Raniganj (South) CBM Block located at Burdwan, Bankura and Purulia District (West Bengal).

The project proponent has requested for amendment in the EC for drilling of 20 exploratory wells for Shale gas up to a depth of 3000 m, out of total 200 approved wells. The proposal was considered by the Expert Appraisal Committee (Industry-2) in its meetings held during 29-31 July, 2019, 23-25 October, 2019 and 18<sup>th</sup> September, 2020 in the Ministry.

The EAC during its meeting held on 18<sup>th</sup> September, 2020 deliberated and considered the detailed information provided by the MoPNG/DGH on the Shale gas drilling and has noted that the Coal Bed Methane gas and Shale gas drilling are technologically different activities.

The Committee on 18<sup>th</sup> September, 2020 after detailed deliberations opined that the proposal may be reconsidered after conducting the techno-feasibility study, additional studies which shall include water requirement for process, disposal methodology of the used water and hydro fracturing, infrastructure, depth variation CBM/Shale gas and depth of occurrence, methane contamination, mode of occurrence, pressure regime, methodology for production, occupational health plan etc. The project proponent was to submit EMP report also based on these assessments. The Committee has deferred the proposal for want of additional study/information.

The project proponent has submitted the techno-feasibility study/additional studies report vide dated 03<sup>rd</sup> October, 2020 to the Ministry. In view of this, this proposal was again re-considered in the EAC dated 19<sup>th</sup> October, 2020. The EAC has accepted the report and **recommended** the proposal for amendment in the environment clearance (EC). All other terms and conditions shall remain unchanged.

**GENERAL CONDITIONS**

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

respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.

- (viii) The environmental statement for each financial year ending 31<sup>st</sup> 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**

<b>S. No.</b>	<b>Name and Address</b>	<b>Designation</b>
1.	Dr. J. P. Gupta	Chairman
2.	Shri R. K. Singh	Member
3.	Shri Ashok Agarwal	Member
4.	Shri S.C. Mann	Member
5.	Dr. Y.V. Rami Reddy	Member
6.	Dr. T. K. Joshi	Member
7.	Dr. J. S. Sharma	Member
8.	Dr. Uma Kapoor, CGWA	Member
9.	Shri Dinabandhu Gouda, CPCB	Member
10.	Sh. Ashok Kr. Pateshwary, Director, MoEFCC	Member Secretary
<b>MoEFCC</b>		
11.	Dr. Mahendra Phulwaria	Scientist 'C'

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