

F. No. J-11011/320/2006-IA-II(I)  
Government of India  
Ministry of Environment, Forest and Climate Change  
(IA Division)

Indira Paryavaran Bhawan  
Jor Bagh Road, New Delhi -3  
Dated: 3<sup>rd</sup> August, 2018

To,

**M/s Nayara Energy Limited**  
Khambhalia Post, PO Box No.24,  
District **Devbhumi Dwarka** (Gujarat)

**Sub: Expansion of Refinery from 20 MMTPA to 46 MMTPA and Petrochemical Complex at Khambhalia, District Devbhumi Dwarka (Gujarat) by M/s Nayara Energy Limited - Terms of Reference - reg.**

**Ref: Online Proposal No. IA/GJ/IND2/75290/2018 dated 2<sup>nd</sup> June, 2018.**

Sir,

This has reference to your online proposal No. IA/GJ/IND2/75290/2018 dated 2<sup>nd</sup> June, 2018 for grant of terms of reference (ToRs) to the project 'Expansion of Refinery from 20 MMTPA to 46 MMTPA and Petrochemical Complex' by M/s Nayara Energy Limited in a total area of 2275 ha at Vadinar, Taluka Khambhalia, District Devbhumi Dwarka (Gujarat), as per the provisions of the EIA Notification, 2006. The proposal has been submitted along with the project documents including Form-1, draft ToRs and the Pre-feasibility Report.

2. The project/activity is covered under category A of item 4(a) 'Petroleum Refining Industry' and 5(c) 'Petrochemical complexes' of the Schedule to the Environmental Impact Assessment Notification, 2006, and was appraised at Central level by the sectoral EAC in the Ministry.

3. The details of products are as under:-

Refinery/ Petrochemical complex	Product		Capacity (KTPA)	
			Existing	Ultimate
	Processing of Crude		20 MMTPA	46 MMTPA
Refinery	01	LPG	938	785
	02	Kero+ATF	872	624
	03	Naphtha/MS	4200	10726
	04	Gasoline		
	05	HSD	9706	22775
	06	Furnace Oil/ V.G.O.	220	-
	07	Sulphur	318	1610
	08	Bitumen	377	337
	09	Fuel & Loss	1120	6620
	10	Pet Coke	2247	2191
	11	Ethanol	-	110



<b>Petrochemical Complex</b>	01	Propylene/ Polypropylene(PP)	-	1000
	02	Butadiene	-	180
	03	MTBE/ETBE	-	150
	04	Benzene	-	500
	05	PX	-	1400
	06	PTA	-	2400
	07	LAB	-	200
	08	PP	-	1050
	09	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

4. Total water requirement will be 928 MLD, of which fresh water requirement of 342 MLD will be met from sea water after desalination. Effluent of 93 MLD will be treated in the Effluent Treatment Plant, which shall be reused for fire water/service water/horticulture purposes. Reject water from desalination/RO and cooling tower blow down of 573 MLD will be taken back to sea via pipeline and is released through diffuser system as recommended by the National Institute of Oceanography, Goa.

Power requirement will be increased from 160 MW to 927 MW, proposed to be met from Captive Power Plant of M/s Vadinar Power Company Limited.

5. The proposal along with the draft ToR was considered by the Expert Appraisal Committee (Industry -2) in its 38<sup>th</sup> meeting held during 25-27 June, 2018. The Committee has recommended for grant of ToR to the project for preparation of EIA/EMP reports. The minutes of the meeting are available on website of the Ministry.

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6. Based on recommendations of the EAC, the Ministry of Environment, Forest and Climate Change, hereby accords terms of reference for preparation of EIA/EMP reports for the above said project, with the standard ToR as specified/notified applicable for such project/activity, and the additional terms and conditions as under:

(i) 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 aspects of the project/activity. The project proponent shall be required to address all the environmental concerns expressed during the process, and make appropriate changes in the draft EIA/EMP.

(ii) Layout plan earmarking space for development of green belt of 5-10 m width along the plant periphery and also ensuring 33% of the project area to be developed as green area with native species plantation.


(iii) 3D modelling shall be undertaken for risk and safety assessment.

(iv) Latest compliance report for the existing environmental clearance, duly certified by the concerned Regional Office of the Ministry to be submitted.

(v) For the desalination plant, pipeline and other permissible activities, if in CRZ areas, recommendations from the State Coastal Zone Management Authority shall be obtained and submitted to the Ministry while submission of the proposal for EC to the project.

(vi) Necessary recommendation/clearance from the Standing Committee of the National Board for Wildlife shall be obtained, if applicable.

7. You are required to submit the final EIA/EMP reports prepared by the consultants accredited with the Quality Council of India/National Accreditation Board of Education and Training (QCI/NABET), to the Ministry for grant of environmental clearance, within 3 years as per this Ministry's OM No. J-11013/41/2006-IA.II (I) dated 8<sup>th</sup> October, 2014.

  
3/3/2018  
**(S. K. Srivastava)**  
**Scientist E**

**Copy to:-**

1. The Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest & Climate Change, Regional Office (WZ), E-5, Arera Colony, Link Road -3, Ravishankar Nagar, Bhopal - 462 016 (MP)
2. The Member Secretary, Gujarat State Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhi Nagar - 382 043 (Gujarat)
3. Guard File/Monitoring File/Record File