File No.: 11-90/2012-IA.III

Government of India Ministry of Environment, Forest and Climate Change (Impact Assessment Division)

> Indira Paryavaran Bhawan, Jor Bagh Road, Ali Ganj New Delhi – 110 003

Dated: 14th October, 2020

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The Vice President

M/s Gujarat State Fertilizers and Chemicals Limited, Post-Fertilizer nagar, District: Vadodara, State: Gujarat, Jamnagar, Gujarat-391750.

Subject: Expansion of Existing Jetty for Additional Cargo Handling and Isolated Storage Facilities including the Conveying Pipelines at Existing GSFC Sikka, Jamnagar, Gujarat by M/s Gujarat State Fertilizers & Chemicals Limited – Environmental and CRZ Clearance

Sir,

This has reference to your online proposal to this Ministry on 30th Jun 2020 in favour of Environmental Clearance for Expansion of Existing Jetty for Additional Cargo Handling and Isolated Storage Facilities including the Conveying Pipelines at Existing GSFC Sikka, Jamnagar, Gujarat by M/s Gujarat State Fertilizers & Chemicals Limited.

2. The above mentioned proposal was considered by the Expert Appraisal Committee (EAC) for Infrastructure, CRZ and other Miscellaneous projects in its 241st meeting on 25-26th August, 2020.

3. The project proponent along with the EIA consultant M/s Eco Chem Sales & Services, made a presentation through Video Conferencing and provided the following information:

(i) **Brief description of the Proposal:** M/s Gujarat State Fertilizers & Chemicals Limited has proposed the Expansion of Existing Jetty for Additional Cargo Handling and Isolated Storage Facilities including the Conveying Pipelines at Existing GSFC Sikka, Jamnagar, Gujarat. The proposal is expansion of existing, construction of additional jetty for additional liquid and solid bulk cargo handling and isolated storage facilities including the conveying pipelines. After expansion Cargo handling of liquid bulk will be from 1.315 MMTPA to 3.5MMTPA and solid bulk to 3.225 MMTPA. The Jetty expansion, dredging and New Approach trestle will be outside ESZ, MNP, MS and MF. Laying of Pipelines will be within Denotified Forest land available to GSFC. The ToR for the proposal was issued on 14th June 2018. The project was recommended by Gujarat Coastal Zone Management Authority (GCZMA) *vide* letter No. ENV-10-2018-152-128-Tcell dated 18th June, 2020 and was appraised to the EAC for obtaining Environment and CRZ clearance for the proposed project Expansion of Existing Jetty for Additional Cargo Handling and Isolated Storage Facilities including the Conveying Pipelines at Existing GSFC Sikka, Jamnagar, Gujarat.

(ii) Nature of project (New/Expansion/Amendment/Extension etc.): This expansion project at jetty area covers extension of existing liquid cargo handling Jetty, Addition of New solid cargo handling Jetty in line with existing jetty, New approach trestle, Laying of liquid cargo

pipelines on existing pipeline rack, Laying of pipe conveyor belts on new structure of existing land for dry bulk, Night navigation and unloading facility for dry bulk and Sulphuric Acid storage tanks at Sikka Shore Terminal(SST), Warehouse and storage sheds for solid cargo at Chemical Storage Terminal (CST), Laying of pipelines from storage terminals (SST&CST) to manufacturing unit (Motikhavdi) & Motikhavdi to CST& Wet grinding facilities of Rock Phosphate at CST.

- (iii) Whether the proposal was considered in earlier meetings of EAC: No.
- (iv) Address of project site (Plot No./Village/ Tehsil/ District/State): Survey No. 57,427 & 429 (Older Plot No. 167/2, & 167/1) Sikka Port, Sikka Jamnagar Gujarat.

Code	Activity	Sub- Code	Latitude	Longitude
		Α	22°27'31.48"N	69°47'50.70"E
1.000	Dropoged New	B	22°27'31.11"N	69°47'50.79"E
1	Approach Trestle	C	22°27'25.45"N	69°47'53.85"E
	Approach mesue	D	22°27'25.62"N	69°47'54.55"E
		E	22°27'25.59"N	69°47'52.03"E
		F	22°27'25.50"N	69°47'51.48"E
2	Existing Jetty	G	22°27'23.90"N	69°47'51.84"E
		H	22°27'24.06"N	69°47'52.43"E
		I	22°27'25.98"N	69°47'52.01"E
	Extension of Existing	J	22°27'25.78"N	69°47'51.10"E
3	Extension of Existing	K	22°27'23.57"N	69°47'51.65"E
	Jetty	L	22°27'23.76"N	69°47'52.60"E
		M	22°27'28.51"N	69°47'51.52"E
	Existing Dolphins	N	22°27'27.10"N	69°47'51.89"E
4		0	22°27'22.66"N	69°47'53.06"E
1999		P	22°27'21.18"N	69°47'52.97"E
		0	22°27'27.71"N	69°47'51.89"E
	Proposed Four New Dolphins in existing jetty	R	22°27'29.08"'N	69°47'51.22"E
5		S	22°27'21.77"N	69°47'53.12"E
		T	22°27'20.32"N	69°47'53.24"E
		U	22°27'30.95"N	69°47'50.83"E
	Proposed New Jetty	V	22°27'30.73"N	69°47'49.82"E
6		W	22°27'39.30"N	69°47'47.64"E
		X	22°27'39.53"N	69°47'48.69"E
7	Dredging in front of existing letty	Y	22°27'24.53"N	69°47'50.49"E
8	Dredging in front of new Jetty	Z	22°27'34.87"N	69°47'47.99"E
		TA	22°27'53.07"N	69°47'43.53"E
	Constantial and the	TB	22°27'49.46"N	69°47'38.40"E
	Turning Circle	TC	22°27'42.82"N	69°47'37.94"E
9		TD	22°27'39.30"N	69°47'47.64"E
		TE	22°27'39.53"N	69°47'48.69"E
		TE	22°27'46 98"N	69°47'52.73"E

(v) Geo-coordinates of project site: Bounded Latitudes (North):

Proposal No. IA/GJ/MIS/647/2012

Code	Activity	Sub- Code	Latitude	Longitude
	Dredging in Navigation channel	NA	22°28'56.37"N	69°47'21.73"E
10		NB	22°28'56.37"N	69°47'27.44"E
10		NC	22°27'53.07"N	69°47'43.53"E
		ND	22°27'49.46"N	69°47'38.40"E
	Existing & Proposed Pipeline for Liquid Material	PA	22°27'24.83"N	69°47'52.37"E
11		PB	22°27'29.99"N	69°48'15.34"E
		PC	22°26'48.32"N	69°49'58.45"E
	Proposed Pipe Line for Solid Material	PD	22°27'25.89"N	69°47'55.57"E
12		PE	22°27'30.20"	69°48'15.35"E
		PF	22°26'48.70"N	69°49'58.50"E

(vi) Chemical Storage Terminal (CST) & Sikka Shore Terminal (SST):

Code	Activity	Latitude	Longitude
13	Sulphuric Acid Tanks at Sikka Shore	22°26'35.92"N	69°50'2.8 "E
14	Terminal (SST)	22°26'29.08''N	69°50'5.64"E
15	Methanol, Benzene, EDC and Cyclohexanone storage tanks at Chemicals Storage Terminal (CST)	22°26'38.23"N	69°50'17.44"E
16	Wet Grinding Unit at Chemicals Storage	22°26'36.06"N	69°50'29.37"Е
17	Terminal (CST)	22°26'35.38"N	69°50'14.95"E
18	Warehouse of Rock Phosphate and Fertilizers at Chemical Storage Terminal (CST)	22°26'33.72"N	69°50'16.13"E

(vii) Area (ha)/Length (km) of the proposed project: Area for CST & SST: 56.0100 ha in the existing land Distance from Jetty to CST & SST: 4.5 kms.

Jetty Details:

S. No	Particulars	Existing Structure	Extension/ Additional Structure	Remarks
Α	Bulk Liquid Car	go Handling Jetty		
1	Platform	48.8 m × 18.5 m	70 m × 27.25 m	Existing platform will be extended
B	Bulk Solid Carge	Handling Jetty		New facility
1	Platform		270 m × 30 m	
2	Concrete Approach		8 m x 200 m	
С	Navigation Channel	Width: 120 m Depth: -11.5 m Turning Circle diameter: 400 m	Width: 168 m Depth: -14.5 m Length:2000 m	

S. No	Particulars	Existing Structure	Extension/ Additional Structure	Remarks
		Turning Circle depth: -10 m	Turning Circle diameter: 440 m Turning Circle depth: -14.8 m	

(viii) Connectivity to the site:

- Road: SH-92 at 1.27 km towards S and SH-6: 8.2 km towards S connecting to National Highway.
- Railway Station: Sikka Railway Station: 3 kms towards S and Jamnagar Railway Station: 25 kms towards E.
- Airport: Jamnagar Airport: 25 kms towards E.Okhamandal tehsil has good road and rail connectivity with broad gauge rail system that reaches upto Okha town. State Highway (SH-6A) is the major state road connectivity for the Okha port, National Highway (NH-8E) is about 28 km from the port.
- (ix) Investment/Cost of the project: The total cost of the project is ₹775 Crores.
- (x) Item of Schedule to the EIA Notification, 2006: The proposed project is categorized under 7(e) Ports & Harbours, 6(a) "Oil and Gas Transportation Pipeline", 6 (b) "Isolated Storage and Handling of Hazardous Chemicals", Category A of Schedule of EIA Notification, 2006.

S. No	Landuse/Landcover	Area (Ha.)	Percentage (%) of total Land	
1 SST Area (Internal roads connecting to terminal)		13.0975	23.38%	
2	CST Area (Internal roads connecting to terminal & STP)	17.5825	31.39%	
3	Green Belt at CST & SST	18.5000	33.03%	
4	Open Land at CST & SST	6.8300	12.19%	
	Total Land at SST & CST		100.00%	

(xi) Landuse/Landcover of project site in tabular form:

(xii) Landuse/Landcover around 10 km radius of project site (1 km in case of Highway projects): The area surrounding the project site is largely a Range Land like Open Scrub, Reed Grass, Mangroves and Scrub Land are covering around 7.09%, 14.16%, 8.30% and 7.21% respectively of the total study area. Water body like Pond, Shallow Sea, Sea Water and Salt Pan are covering around1.04%, 4.88%, 22.69% and 5.33% respectively. Waste Land like Barren Land and Mud are covering around6.86% and 10.25% respectively of the total study area. Agriculture Land like Fallow Land and Crop Land are covering around 4.58% and 3.15% respectively of the total study area. Settlement is covering around 3.91% and Reserve Forest is covering around 0.96% of the total study area

- (xiii) **Terrain and topographical features:** The site terrain is mainly flat alluvial black coastal soil. The nature of soil is alkaline. The topography of the area is flat and plain and presence of marshy land.
- (xiv) Details of water bodies, impact on drainage, if any: Nearest Ponds: Motikhavdi Pond-8.5 kms towards S & Vadinar Pond- 10.4 kms towards SW. Nearest River: Sasoi river 9.33 kms towards SW & Fuljari River- 9.02 kms towards SE. No impact on surface drainage as there is no waste water generation or discharge from the proposed project.
- (xv) Water requirements, sources (during construction and operation phases) and NOC: The total water requirement is 2694 KLD which will be sourced from Jamnagar Municipal corporation and/or Gujarat Water Infrastructure Ltd. Assurance letter from GWIL has been obtained vide letter No. GWIL/JAM/2018/254 dated 20.03.2018.
- (xvi) Groundwater extraction/usage and NOC/Clearance from CGWA/State Ground Water Department: Not Applicable, as no groundwater will be extracted/utilized for the proposed project.
- (xvii) Whether the project is in Critically Polluted area (Yes or No. If yes, provide brief details): No.
- (xviii) **ToR details:** Date of ToR Application Submission: 19th March 2018, Date of EAC Meeting (Infra-2): 30th Meeting held on 18th to 20th April, 2018, Date of ToR Issue: 14th June, 2018.
 - (xix) Public Hearing Details and Summary of issues raised and response/commitments by Proponent: Not Applicable as the site is located in Notified Industrial area of GIDC Sikka.
 - (xx) If the project involves expansion copy of certified compliance report issued by concerned regional office: Yes, it involves expansion. Certified compliance report is obtained from MOEFCC, RO Bhopal vide File No. 5-53/2014 (Env)/628, dated 16.11.2018 and copy is included in EIA report.
 - (xxi) Whether the project involves diversion of forest land and status of application: No. Project activities will be within the Denotified Forest land available to GSFC.
- (xxii) Whether the project is located within 10 km of Protected Areas (PA) including National Parks, Sanctuaries and Tiger Reserves etc.: Yes the project is located within 10 Km radius of Marine Forest, Marine Sanctuary and Marine National Park. GSFC has already obtained NOC from Wildlife and Forest as the project site falls under MNP, MS and MF and proposed activities will be carried out within denotified forest land available with GSFC.
- (xxiii) Whether the project is located within the Eco-Sensitive Zone (ESZ) or Eco-Sensitive Area (ESA) notified by the MoEF&CC: Yes, the project passes from ESZ and NOC for the same has been obtained from Forest and Wildlife department and proposed activities will be carried out within denotified forest land and permissible to use wildlife area available with GSFC. GSFC has obtained NOC from Wild Life department for carrying out proposed project activities. All activities will be carried out within denotified service out within denotified for proposed expansion.
- (xxiv) Waste Management: Used Oil: Collection, Storage, transportation and disposal by selling to registered recyclers, Discarded bags/ Containers: Collection, Storage, transportation and disposal by selling to registered recyclers, Oil Contaminated Cotton Waste: Collection, Storage, transportation and disposal at CHWIF of SEPPL, Oil Containing Cargo Residue: Collection, Storage, transportation and disposal at CHWIF of SEPPL.
- (xxv) STP details: A 50 KLD of STP is proposed to treat the 42.4 KLD sewage water.

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(xxvi) **Details of tree cutting and Green belt development:** No trees cutting will be done. 33.03% Greenbelt will be developed in 185000 m² area.

(xxvii) Energy conservation measures with estimated saving:

- Employing renewable energy sources such as day lighting and passive solar heating;
- Using energy efficient electrical appliances;
- Installing lighting control devices where appropriate and linking to photoelectric dimming;
- Switching off truck engines while they are waiting to access the site and while these are waiting to be loaded and unloaded;
- Throttling down and switching off idle equipment;
- Regular maintenance of all powered equipment to ensure appropriate fuel consumption rates.
- (xxviii) **Details of Rain Water Harvesting:** Rain water harvesting is not feasible at the project site as the soil is saline, however RWH will be done by periodically di-silting of ponds in nearby villages.
 - (xxix) Whether the project is in CRZ area: If yes, provide details of components in CRZ area, layout on CRZ map of 1:4000 scale prepared by an authorised agency and appraisal by State Coastal Zone Management Authority (SCZMA) and copy of their recommendations: Yes the project site is located in CRZ-IVB (Creek), CRZ-II, CRZ-IB and CRZ-IA. The Superimposition of Project site is done on CRZ map prepared by authorized agency Anna University and included in EIA report. CRZ has been recommended by SCZMA vide letter No. ENV-10-2018-128-T-Cell dated June 18, 2020 and included in EIA report.
 - (xxx) Whether the project involves foreshore facilities. If yes, provide details of shoreline study, dredging details, disposal of dredge material, reclamation, cargo handling with dust control measures and oil Spill Contingent Management Plan.:

Yes following are the foreshore activities:

- Extension of Existing liquid cargo handling berth
- Addition of New solid cargo handling berth in line with existing jetty
- Breasting and Mooring points (Dolphins)
- New approach trestle
- Laying of liquid bulk pipelines on existing pipeline rack
- Laying of pipe conveyor belts on new structure of existing land for dry bulk
- Night navigation
- Unloading arm
- Unloading facility for dry bulk

Shoreline Study: Sikka coast is stable and there are no accretion or erosion impacts on the shoreline as per the Status of Shoreline change map prepared by Institute of Ocean Management Anna University.

Dredging Details:

Dredging Area	Existing Depth Available	Proposed Depth required	Remarks	Area in Ha.
Liquid Cargo Handling Berth	11.5 m	14.5 m		1.32 Ha
Solid Cargo Handling Jetty	10 m	14.8 m	Existing Turning circle region will be used for proposed jetty	1.32 Ha
Proposed Turning Circle & Navigational Channel	Navigation Channel: 11.5 m Turning Circle depth: -10 m	Navigation Channel: 14.5 m Turning Circle depth: 14.8 m	Existing Navigation channel region will be used partly for proposed turning circle and navigation channel	34.6 Ha (0.06 Ha.+34Ha.)

Disposal of Dredged Material: Disposal of dredged material will be done in designated dredged disposal area of 1 km x 1 km into deep sea located 25 kms away from the Jetty and 12 km away from the nearest shoreline.

Dust Control Measures: As dust control measures Solid Cargo Handling will be done through close pipe conveyor belts.

Oil Spill/Chemical Contingent Management Plan: The proposed project does not envisage handling of bulk oil cargo. The liquid Cargo will handle chemicals like Benzene, Methanol, Cyclohexanone and EDC and Solid Cargo will handle Rock Phosphate and Fertilizers. The Chemical spill could occur due to various reasons at Jetty, approach channel etc. The spills beyond these areas are not covered in this plan. The proposed project does not include handling of crude oil hence oil spill is envisaged only from fuels in engine rooms mixed with water on ship board. Spill control procedures will be followed.

Leak during Cargo Transfer Operations: During cargo transfer operation chemical spill can occur either on the shore side or the ship side due to leakage from flange joints, rupture of hose, etc. Most of these leaks will be minor in nature due to the various safety interlocks/ other features provided in the design. Further during cargo transfer operation supervision by operating personnel is also carried out.

Management Plan:

- The loading arms will be provided with Powered Emergency Release Coupler (PERC) to avoid possibility of leak/Spill.
- The loading arms will be equipped with Emergency Shut Down Systems (ESDS) to stop all the cargo operations, in case of any emergency or rough weather.
- Joints at loading arms, hoses will be periodically checked for leakage
- All Hydrocarbon drains will be provided with Plug
- Trained and competent manpower deployed round the clock.

- Pipe conveyor belt, which is a closed system, will be provided to avoid to falling of materials into sea.
- Continuous surveillance of conveying system will be carried out through CCTV during transfer of materials from jetty to storage area.
- Belt Tear Detector will also be provided which immediately detects conveyor belt tear accident and stop conveyor belt.

Spill during Berthing / Collision: During berthing operation damage to the ship can occur due to contact with tugs, jetty or other ship due to improper handling or machinery failure, leading to leakage of cargo. The quantity of spill will depend on the nature of / extent of damage.

- The controls imposed on ship movements within the terminal area are designed to ensure that any risk of collision is eliminated. For example, inward / outward bound ships will have sole occupancy of the approach channel to the jetty berths.
- (xxxi) Whether the project involves Marine disposal: If yes, the provide copy of NOC from Pollution Control Board in case of marine disposal, details of modelling study – details of outfall diffusers, number of dilutions expected, distance at which the outlet will reach ambient parameters, location of intake/outfall, quantity, and detail of monitoring at outfall.: Yes, the dredged material will be disposed at existing designated dredged disposal area which is approved by Gujarat Maritime Board. Modelling studies were carried out for sediment dispersion due to dredge disposal.
- (xxxii) **Brief description of Socio-economic condition of local people:** People in the study area are engaged as cultivators, agriculture, labourer in livestock, forestry, fishing, mining and quarrying, manufacturing, processing and repairs in industries.
- (xxxiii) Land acquisition and R&R issues involved: There is no new land acquisition and R&R is not applicable.
- (xxxiv) **Employment potential, No. of people to be employed:** Approx 500 people will get direct employment during the construction phase and Approx. 100 people will get direct and indirect employment during the operational phase. The detailed breakup of employee numbers during both construction and operation phases are given below-

Phase	Employment Type	No. of Persons
	Permanent	00
Construction	Temporary	100
	Permanent	500
Operation	Temporary 00	
Total		600

(xxxv) Benefits of the project:

- Essential commodity fertilizer will be reaching to consumer through *Make in India* concept.
- Jetty in the state is the beneficial outlook that will provide smooth traffic handling and more trade opportunities to the region, state and country at large.
- Nearby villages will be benefitted from the proposed CER activities for upliftment the conditions of the people in study area like Installation of RO Plant for Drinking Water system & di-silting of ponds, Solar Light, Installation of Toilet Blocks, Medical

Camps, Veterinary camp, Ambulance operation & fuel, Identifying & Providing Iron deficiency tables to Anaemic girls, Repairing structurally deformed Schools & Classes & Development of school playgrounds, Renovation of Anganwadis, Providing books, scholarships, uniforms, sports equipments and stationeries to School.

- Surrounding villages will also be benefitted under Ongoing CSR activities.
- Employment will be generated for local people directly and indirectly.
- (xxxvi) Brief summary of specialised Studies carried out for the project as per the ToR: Bathymetry, Ship tranquillity and Sediment Dispersion studies.

(xxxvii) Details of Court cases: There is no court case against the proposed project.

4. The EAC during its 241st meeting on 25-26th August, 2020, taken into account the submissions made by the project proponent **M/s Gujarat State Fertilizers & Chemicals Limited** that the current proposal only pertains to the **Expansion of Existing Jetty for Additional Cargo Handling and Isolated Storage Facilities including the Conveying Pipelines at Existing GSFC Sikka, Jamnagar, Gujarat**. After a detailed deliberation, the EAC recommended the proposal for grant of Environmental and CRZ Clearance subject to fulfilment of specific conditions other than all standard conditions applicable for this project.

5. The Ministry of Environment, Forest and Climate Change has considered the proposal based on the recommendations of the Expert Appraisal Committee (Infrastructure, CRZ and other Miscellaneous projects) and hereby decided to grant Environmental and CRZ Clearance for the **Expansion of Existing Jetty for Additional Cargo Handling and Isolated Storage Facilities including the Conveying Pipelines at Existing GSFC Sikka, Jamnagar, Gujarat** under the EIA Notification, 2006 as amended and CRZ Notification 2011, subject to strict compliance of the following specific conditions, in addition to all standard conditions applicable for such projects.

A. SPECIFIC CONDITIONS

- (i) The Environmental and CRZ Clearance to the project is primarily under provisions of EIA Notification, 2006 and CRZ Notification, 2011. It does not tantamount to approvals/consent/permissions etc required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes as applicable to the project.
- (ii) The project proponent shall abide by all the commitments and recommendations made in the Form-II, EIA and EMP report, submissions made during Public Hearing and also that have been made during their presentation to EAC.
- (iii) Construction activity shall be carried out strictly according to the provisions of the CRZ Notification, 2011. No construction works other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.
- (iv) All the recommendations and conditions specified by the Gujarat Coastal Zone Management Authority (GCZMA) vide letter No. ENV-10-2018-152-128- T cell dated 18th June, 2020 shall be complied with.
- (v) The project proponent shall comply with the air pollution mitigation measures as submitted.
- (vi) The Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained. Creek water monitoring program shall be implemented during the construction phase.

- (vii) All mechanical handling systems, manifolds should be as per safety standards. Since, the products are of highly hazards in nature, SCADA or similar online monitoring to detect leaks pipelines, unloaders should be established for timely action in case of accidental leaks.
- (viii) Dredging shall not be carried out during the fish breeding season. Dredging, etc. shall be carried out in confined manner to reduce the impacts on marine environment. As committed, Silt curtains shall be used to minimize spreading of silt plume during dredging operation. Turbidity should be monitored during the dredging using online monitoring system. No removal of silt curtain unless baseline values are achieved.
- (ix) Wherever possible, dredged material shall be used for bank nourishment. With the enhanced quantities, the impact of dumping on the estuarine environment should be monitored and necessary measures shall be taken on priority basis if any adverse impact is observed.
- (x) An independent monitoring be carried out by any Government Agency/Institute to evaluate the impact during dredging. Impact of dredged material on estuarine environment along with shore line changes should be monitored by the PP and necessary mitigation measures be taken in case any adverse impact is observed. The details shall be submitted along with the six-monthly monitoring report
- (xi) Marine ecological monitoring and its mitigation measures for protection of phytoplankton, zooplanktons, macrobenthos, estuaries, sea-grass, algae, sea weeds, Crustaceans, Fishes, coral reefs and mangroves etc. as given in the EIA-EMP Report shall be complied with in letter and spirit.
- (xii) A copy of the Marine and riparian biodiversity management plan duly validated by the State Biodiversity Board shall be obtained and implement in letter and spirit.
- (xiii) Sewage generated will be treated in STP of 50 KLD capacity. The treated water will be used for flushing, gardening and dust suppression within the port premises.
- (xiv) A continuous monitoring programme covering all the seasons on various aspects of the marine and coastal environs need to be undertaken by a competent universities available in the State or by entrusting to the National Institutes/renowned Universities/accredited Consultant with rich experiences in marine science aspects. The monitoring should cover various physico-chemical parameters along with PHC coupled with biological indices such as microbes, plankton, benthos and fishes on a periodic basis during construction and operation phase of the project. Any deviations in the parameters shall be given adequate care with suitable measures to conserve the marine environment and its resources.
- (xv) A specific study on monitoring impacts on the coral reefs in the 3 km vicinity of the projects must be undertaken by a reputed university from the state. Adequate funds be allocated for the same. Suitable mitigation measures may be developed in case any impacts are noticed in consultation with Chief Wildlife Warden of the state.
- (xvi) Continuous online monitoring of air and water covering the total area shall be carried out and the compliance report of the same shall be submitted along with the 6 monthly compliance report to the regional office of MoEF&CC.
- (xvii) The material recovered from the cutting activity shall be used for filling low-lying areas within the project boundaries. The actions shall be in accordance with proposed landscape planning concepts to minimise major landscape changes. The change in land use pattern

shall be limited to the proposed port limits and be carried out in such a way as to ensure proper drainage by providing surface drainage systems including storm water network.

- (xviii) Suitable preventive measures be taken to trap spillage of fuel / engine oil and lubricants from the construction site. Measures should be taken to contain, control and recover the accidental spills of fuel during cargo handling.
- (xix) All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to the RO, MoEF&CC along with half yearly compliance report.
- (xx) The company shall draw up and implement Corporate Social Responsibility Plan as per the Company's Act of 2013.
- (xxi) As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 1st May, 2018, project proponent has proposed that an amount of Rs. Rs. 3.875 Crores (computed on slab basis for the project cost of Rs. 775 Crores) shall be earmarked under Corporate Environment Responsibility (CER) Plan with special focus on providing healthcare facilities to the government hospitals in light of COVID 19 pandemic. A small portion of the fund can also be used for the activities such as Health, Water supply, Sanitation, Road development, Solar lights in nearby areas and Education etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

B. STANDARD CONDITIONS:

I. Statutory compliance:

- (i) The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (incase of the presence of schedule-I species in the study area).
- (ii) Construction activity shall be carried out strictly according to the provisions of CRZ Notification, 2011 and the State Coastal Zone Management Plan as drawn up by the State Government. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.
- (iii) The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- (iv) All excavation related dewatering shall be as duly authorized by the CGWA. A NOC from the CGWA shall be obtained for all dewatering and ground water abstraction
- (v) A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- (vi) All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Coast Guard, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities.

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II. Air quality monitoring and preservation:

- (i) The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NOx in reference to SO₂ and NOx emissions) within and outside the project area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.
- (ii) Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed emission standards.
- (iii) Shrouding shall be carried out in the work site enclosing the dock/proposed facility area. This will act as dust curtain as well achieving zero dust discharge from the site. These curtain or shroud will be immensely effective in restricting disturbance from wind in affecting the dry dock operations, preventing waste dispersion, improving working conditions through provision of shade for the workers.
- (iv) Dust collectors shall be deployed in all areas where blasting (surface cleaning) and painting operations are to be carried out, supplemented by stacks for effective dispersion.
- (v) The Vessels shall comply the emission norms prescribed from time to time.
- (vi) Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
- (vii) A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

III. Water quality monitoring and preservation:

- (i) The Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained.
- (ii) Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality. Silt curtains shall be used to contain the spreading of suspended sediment during dredging within the dredging area.
- (iii) No ships docking at the proposed project site will discharge its on-board waste water untreated in to the estuary/ channel. All such wastewater load will be diverted to the proposed Effluent Treatment Plant of the project site.
- (iv) Measures should be taken to contain, control and recover the accidental spills of fuel and cargo handle.

- (v) The project proponents will draw up and implement a plan for the management of temperature differences between intake waters and discharge waters.
- (vi) Spillage of fuel / engine oil and lubricants from the construction site are a source of organic pollution which impacts marine life. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.
- (vii) Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
- (viii) Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused for horticulture, flushing, backwash, HVAC purposes and dust suppression.
- (ix) A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point should be obtained.
- (x) No diversion of the natural course of the river shall be made without prior permission from the Ministry of Water resources.
- (xi) All the erosion control measures shall be taken at water front facilities. Earth protection work shall be carried out to avoid erosion of soil from the shoreline/boundary line from the land area into the marine water body.

IV. Noise monitoring and prevention:

- (i) Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- (ii) Noise from vehicles, power machinery and equipment on-site should not exceed the prescribed limit. Equipment should be regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipments.
- (iii) Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.
- (iv) The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures:

- Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- (ii) Provide LED lights in their offices and residential areas.

VI. Waste management:

- (i) Dredged material shall be disposed safely in the designated areas.
- (ii) Shoreline should not be disturbed due to dumping. Periodical study on shore line changes shall be conducted and mitigation carried out, if necessary. The details shall be submitted along with the six monthly monitoring reports.
- (iii) Necessary arrangements for the treatment of the effluents and solid wastes must be made and it must be ensured that they conform to the standards laid down by the competent

authorities including the Central or State Pollution Control Board and under the Environment (Protection) Act, 1986.

- (iv) The solid wastes shall be managed and disposed as per the norms of the Solid Waste Management Rules, 2016.
- (v) Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.
- (vi) A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
- (vii) Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.
- (viii) Oil spill contingency plan shall be prepared and part of DMP to tackle emergencies. The equipment and recovery of oil from a spill would be assessed. Guidelines given in MARPOL and Shipping Acts for oil spill management would be followed. Mechanism for integration of terminals oil contingency plan with the overall area contingency plan under the co-ordination of Coast should be covered.

VII. Green Belt:

- (i) Green belt shall be developed in area as provided in project details with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
- (ii) Top soil shall be separately stored and used in the development of green belt.

VIII. Marine Ecology:

- (i) Dredging shall not be carried out during the fish breeding and spawning seasons.
- (ii) Dredging, etc shall be carried out in the confined manner to reduce the impacts on marine environment.
- (iii) The dredging schedule shall be so planned that the turbidity developed is dispersed soon enough to prevent any stress on the fish population.
- (iv) While carrying out dredging, an independent monitoring shall be carried out through a Government Agency/Institute to assess the impact and necessary measures shall be taken on priority basis if any adverse impact is observed.
- (v) A detailed marine biodiversity management plan shall be prepared through the NIO or any other institute of repute on marine, brackish water and fresh water ecology and biodiversity and submitted to and implemented to the satisfaction of the State Biodiversity Board and the CRZ authority. The report shall be based on a study of the impact of the project activities on the intertidal biotopes, corals and coral communities, molluscs, sea grasses, sea weeds, sub-tidal habitats, fishes, other marine and aquatic micro, macro and mega flora and fauna including benthos, plankton, turtles, birds etc. as also the productivity. The data collection and impact assessment shall be as per standards survey methods and include underwater photography.
- (vi) Marine ecology shall be monitored regularly also in terms of sea weeds, sea grasses, mudflats, sand dunes, fisheries, echinoderms, shrimps, turtles, corals, coastal vegetation,

mangroves and other marine biodiversity components including all micro, macro and mega floral and faunal components of marine biodiversity.

(vii) The project proponent shall ensure that water traffic does not impact the aquatic wildlife sanctuaries that fall along the stretch of the river.

IX. Public hearing and human health issues:

- (i) The work space shall be maintained as per international standards for occupational health and safety with provision of fresh air respirators, blowers, and fans to prevent any accumulation and inhalation of undesirable levels of pollutants including VOCs.
- (ii) Workers shall be strictly enforced to wear personal protective equipments like dust mask, ear muffs or ear plugs, whenever and wherever necessary/ required. Special visco-elastic gloves will be used by labour exposed to hazards from vibration.
- (iii) In case of repair of any old vessels, excessive care shall be taken while handling Asbestos & Freon gas. Besides, fully enclosed covering should be provided for the temporary storage of asbestos materials at site before disposal to CTSDF.
- (iv) Safety training shall be given to all workers specific to their work area and every worker and employee will be engaged in fire hazard awareness training and mock drills which will be conducted regularly. All standard safety and occupational hazard measures shall be implemented and monitored by the concerned officials to prevent the occurrence of untoward incidents/ accidents.
- (v) Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- (vi) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- (vii) Occupational health surveillance of the workers shall be done on a regular basis.

X. Corporate Environment Responsibility:

- (i) The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- (ii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- (iii) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

(iv) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

XI. Miscellaneous:

- (i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- (ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- (iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- (iv) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- (v) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- (vi) The criteria pollutant levels namely; PM_{2.5}, PM₁₀, SO₂, NOx (ambient levels) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- (vii) The project proponent 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, commencing the land development work and start of production operation by the project.
- (viii) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
 - (ix) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
 - (x) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
 - (xi) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- (xii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- (xiii) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

- (xiv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- (xv) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- (xvi) Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
 - 7. This issues with the approval of the Competent Authority.

(Amardeep Raju) Scientist-E

Copy to:

- 1. The Principal Secretary, Department of Forests & Environment and Chairman, GCZMA, Govt. of Gujarat, Sachivalaya, Gandhinagar, Gujarat
- The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 32
- The Member Secretary, Gujarat Pollution Control Board, Sector 10-A, Gandhi Nagar 382043, Gujarat.
- 4. The APCCF (C), MoEF& CC, RO (WZ), E-5, Kendriya Paryavaran Bhawan, Arera Colony, Link Road No.3, Ravishankar Nagar, Bhopal –16
- 5. Monitoring Cell, MoEF&CC, Indira Paryavaran Bhavan, New Delhi.
- 6. Guard File/Record File
- 7. Notice Board.

deep Raju) (Amar Scientist-E