

Paryavaran Bhavan,
C.G.O. Complex, Lodi Road,
New Delhi-110003

Dated the 9th May, 2006

Sub: Environmental Clearance for optimization of Inner Harbour Development at Tuticorin Port
by Tuticorin Port Trust-regarding.

CE R.No. 423
19/5/06.

Reference is invited to the letters No.T12/TNPCB/F.27275/TTN/2005/, dated 16.03.2006 from Tamil Nadu Pollution Control Board, Tuticorin Port Trust letter No. E(C)/F.59/10/DB/2006/D/36 dated 24/03/2006, no. E (C) /F.59/10/DB/2006/D/309 dated 18/03/2006, No E (C) /F.59/10/DB/2006/D/772 dated 07/02/2006, No E (C) /F.59/10/DB/2006/D dated February, 2006, E (C) /F.59/10/DB/2006/D dated 06/07/2005 and No E (C) /F.59/10/DB/2006/D dated 4/02/2005 regarding the subject mentioned have been considered. Public hearing for the project has been done on 21.09.2005.

The proposed project consisting of construction of berths, dredging and reclamation of the dredged material is also involved. Under the proposed project the following three activities are proposed:

1. Deepening the approach channel and harbour basin to cater 12.80 m draught vessels from the existing draught of 10.70 mts.
2. Construction of berth no. 9 and north cargo berth.
3. Construction of three number shallow draught berths.

Accordingly, environmental clearance from Environment Impact Assessment Notification, 1994 as amended from time to time is hereby accorded to the project subject to effective implementation of the following conditions:-

(A) Specific Conditions:

- (i) No displacement of people should take place due to the project.
- (ii) All issues raised during the public hearing should be addressed and action plan for implementing the issues/concerns raised by the fishermen should be formulated and submitted to this Ministry within 3 months from the date of receipt of this letter.
- (iii) The project proponent should earmark an amount 0.5% of the total civil works of the project for the socio-economic development and welfare measures in the area including drinking water supply, vocational training, and fishery related development programmes.
- (iv) The fishing activities by the fishermen living in the settlement along the project area should not be hindered and a mechanism may be evolved for the movement of fishing boats *vis-à-vis* shipping activities.
- (v) The project proponent should not undertake any destruction of mangroves during construction and operation of the project.
- (vi) All the conditions stipulated by the Tamil Nadu Pollution Control Board should be effectively implemented.
- (vii) Sewage arising in the port area should be disposed off through septic tank – soak pit system or shall be treated alongwith the industrial effluents to conform to the standards stipulated by Tamil Nadu Pollution Control Board should be utilized/re-cycled for gardening, plantation and irrigation.

AF/PO2
M. D. V. P. a draft by
M. D. V. P. a to mos initials
M. D. V. P. a to mos initials
M. D. V. P. a to mos initials

SEIC

19/5/06

2015

T. N. S. P. C. B.

(viii) Adequate plantation should be carried out along the roads of the Port premises and a green belt shall be developed.

(ix) There should be no withdrawal of ground water in CRZ area, for this project. The proponent shall ensure that as a result of the proposed constructions, ingress of saline water into ground water does not take place. Piezometers shall be installed for regular monitoring for this purpose at appropriate locations on the project site.

(x) The project should not be commissioned till the requisite water supply and electricity to the project are provided by the PWD/Electricity Department.

(xi) No facilities should be constructed in the Coastal Regulation Zone area.

(xii) No land reclamation should be carried out for this project.

B. General Conditions:

(i) Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation etc. should be ensured for construction workers during the construction phase of the project so as to avoid felling of trees/mangroves and pollution of water and the surroundings.

(ii) The project authorities must make necessary arrangements for disposal of solid wastes and for the treatment of effluents by providing a proper wastewater treatment plant outside the CRZ area. The quality of treated effluents, solid wastes and noise level etc. must conform to the standards laid down by the competent authorities including the Central/State Pollution Control Board and the Union Ministry of Environment and Forests under the Environment (Protection) Act, 1986, whichever are more stringent.

(iii) The proponent should obtain the requisite consents for discharge of effluents and emissions under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (prevention and Control of Pollution) Act, 1981 from the Tamil Nadu Pollution Control Board before commissioning of the project and a copy of each of these shall be sent to this Ministry.

(iv) The proponents should provide for a regular monitoring mechanism so as to ensure that the treated effluents conform to the prescribed standards. The records of analysis reports must be properly maintained and made available for inspection to the concerned State/Central officials during their visits.

(v) In order to carry out the environmental monitoring during the operational phase of the project, the project authorities should provide an environmental laboratory well equipped with standard equipment and facilities and qualified manpower to carry out the testing of various environmental parameters.

(vi) The sand dunes and mangroves, if any, on the site should not be disturbed in any way.

(vii) A copy of the clearance letter will be marked to the concerned Panchayat/local NGO if any, from whom any suggestion/representation has been received while processing the proposal.

(viii) The Tamil Nadu Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's Office/Tehsildar's Office for 30 days.

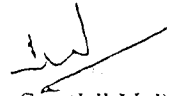
(ix) The funds earmarked for environment protection measures should be maintained, in a separate account and there should be no diversion of these funds for any other purpose. A year-wise expenditure on environmental safeguards should be reported to this Ministry's Regional Office at Bangalore and the State Pollution Control Board.

(x) Full support should be extended to the officers of this Ministry's Regional Office at Bangalore and the officers of the Central and State Pollution Control Boards by the project proponents during their

inspection for monitoring purposes, by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities.

- (xi) In case of deviation or alteration in the project including the implementing agency, a fresh reference should be made to this Ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection.
- (xii) This Ministry reserve the right to revoke this clearance, if any of the conditions stipulated are not complied with to the satisfaction of this Ministry.
- (xiii) This Ministry or any other competent authority may stipulate any other additional conditions subsequently, if deemed necessary, for environmental protection, which shall be complied with.
- (xiv) The project proponent should advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen at Website of the Ministry of Environment & Forests at <http://www.envfornic.in>. The advertisement should be made within 7 days from the date of issue of the clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Bangalore.
- (xv) The Project proponents should inform the Regional Office at Bangalore 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 Land Development Work.

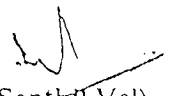
The above mentioned stipulations will be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (protection) Act, 1986, the Hazardous Chemicals (Manufacture, Storage and Import) Rules, 1989, the Coastal Regulation Zone Notification, 1991 and its subsequent amendments and the Public Liability Insurance Act, 1991 and the Rules made thereunder from time to time. The project proponents should also ensure that the proposal complies with the provisions of the approved Coastal Zone Management Plan of Tamil Nadu State and the Supreme Court's order dated 18th April, 1996 in the Writ Petition No.664 of 1993 to the extent the same are applicable to this proposal.


(A. Senthil Vel)
Additional Director

To
✓ The Chairman,
Tuticorin Port Trust,
Tuticorin -628004

Copy to:

1. Chief Conservator of Forests, Ministry of Environment and Forests, Regional Office (SZ), Kendriya Sadan, 4th Floor, E&F Wings, 17th Main Road, 1 Block, Koranmangala, Bangalore – 560034.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 110032.
3. Chairman, Tamil Nadu State Coastal Zone Management Authority, & Principal Secretary, Department of Environment and Forests, Secretariat, Chennai-9.
4. The Chairman, Tamil Nadu State Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600 032.
5. DIG (SU), Regional Office Cell, Ministry of Environment & Forests, New Delhi.
6. Guard File.
7. Monitoring Cell.
8. Direct (EI), Ministry of Environment & Forests, New Delhi.


(A. Senthil Vel)
Additional Director

622/774

2

No.10-63/2007-IA-III
Government of India
Ministry of Environment and Forests
(IA-III Division)

S

Paryavaran Bhawan, -
CGC Complex, Lodhi Road,
New Delhi - 110003

1134
11/10/07

Date 1, the 13th August, 2007

To
Chairman,
M/s Tuticorin Port Trust,
Tuticorin-628004 Tamil Nadu

Sub: Construction of North Cargo Berth-II at Tuticorin Port - Environmental clearance - regarding.

Sir,

This has reference to your letter No.E(C)/F59/11/2007/PD/D 2261, dated 29.5.2007 regarding the subject mentioned above. The proposed project involves development of 2 North Cargo Berths in the North Breakwater (NBW) opposite to the existing Berth No 8 and the proposed Berth No 9 at Ch 2056-2065 of NBW. The proposed berth will be used for handling cargo like rock phosphate, copper concentrate, steam, coal and liquid cargo (edible

The proposal was considered in the Ministry and this Ministry hereby grants environment clearance in accordance with para 7(ii) of Environment Impact Assessment Notification, 2006 exempting preparation of Environment Impact Assessment and public consultation.

However, the Tuticorin Port Trust should implement all the conditions stipulated by the Ministry while according environmental clearance vide letter No 30-7/2005-IA-III, dated 9.8.2006 and submit the compliance report to the Ministry's Regional Office, Bangalore every three months. Further, TPT shall adhere to the following conditions -

1. No mangroves or coral reefs shall be destroyed during the construction and operation of the project.
2. The fishing activities by the fishermen living in the settlement near the port should not be hindered and a mechanism may be evolved for the movement of fishing boats vis-a-vis shipping activities.

Company should take up green belt programme in the project area and may be submitted to the Ministry within one year.

Sewage arising in the port area should be disposed off through septic tank - soak pit system or shall be treated alongwith the industrial effluents to conform to the standards stipulated by Pollution Control Board and should be utilised for gardening, plantation and irrigation.

There should be no withdrawal of ground water in CRZ area for this project. The proponent shall ensure that as a result of the proposed constructions, ingress of saline

filed
24/8/07
11/10/07
11/10/07

water into ground water does not take place. Piezometers shall be installed for regular monitoring for this purpose at appropriate locations on the project site.

6. Specific arrangements for rainwater harvesting should be made in the project design and the rain water so harvested should be optimally utilized. Details in this regard should be furnished to this Ministry's Regional Office at Bangalore within 3 months.
7. The facilities to be constructed in the CRZ area as part of this project should be strictly in conformity with the provisions of the CRZ Notification, 1991 as amended subsequently.
8. No product other than those permissible in the Coastal Regulation Zone Notification, 1991 shall be stored in the Coastal Regulation Zone area.
9. Water sprinkler system should be provided to mitigate the dust from the bulk cargo.
10. Appropriate drainage facility should be provided in order to collect the runoff from the port. The collection system should be linked to the treatment facilities so that the runoff are treated before discharge.

(Dr. A. Senthil Vel)
Additional Director

Copy to

1. The Chief Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office (SZ), Kendriya Sadan, 4th Floor, E&F Wings, 17th Main Road, 1 Block, Koramangala, Bangalore- 560 034
2. The Member Secretary, Tamil Nadu Coastal Zone Management Authority & Director, Department of Environment, Government of Tamil Nadu, Chennai - 600 009
3. The Member Secretary, Tamil Nadu Pollution Control Board, 76, Mount Salai, Gundy, Chennai - 600 032
4. Secretary, Environment and Forests, EC 3 Department, Government of Tamil Nadu, Secretariat, Chennai-600 009
5. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum- Office Complex, East Arjun Nagar, Delhi -110032
6. Director (EI), Ministry of Environment & Forests
7. Regional Office (HQ), Ministry of Environment and Forests
8. Guard File
9. Monitoring File/Record File

(Dr. A. Senthil Vel)
Additional Director

NO.J.16011/17/95-L.111

TELEGRAM PARYAVARAN
NEW DELHI
TELEPHONE 4360478
परीवारण (द्विभाषीय)
TELEX (bilingual) W 66185 DDE IN
FAX 4360678

भारत सरकार

पर्यावरण एवं वन मंत्रालय

GOVERNMENT OF INDIA

MINISTRY OF ENVIRONMENT & FORESTS

पर्यावरण मन्त्र, श्री श्री श्री पर्यावरण

PARYAVARAN BHAVAN, CGO COMPLEX

लोधी रोड, नई दिल्ली-110003

LODHI ROAD, NEW DELHI 110003

Dated the 20th November, 1995.

OFFICE MEMORANDUM

Subject:- Capital Dredging in Approach Channel of Dock Basin at Tuticorin Port, Tamil Nadu - Environmental Clearance.

...

Reference is invited to Tuticorin Port Trust's (TPT) communication No. E(C)/F.59/7/95LB dated 20th March, 1995 and 12th July, 1995 regarding environmental clearance to the above mentioned proposal.

2. The proposal has been examined and environmental clearance is hereby accorded subject to the following conditions:-

- (i) Dredging operations should be undertaken in consultation with either the Central Water and Power Research Station (CWPRS), Pune or the National Institute of Oceanography, Goa, to ensure that dredging operations do not cause any adverse impact on the water quality and marine productivity in the vicinity.
- (ii) During dredging, construction and maintenance stages, the water quality parameters at the bottom level should be continuously recorded. Tests should also be carried out to measure water quality parameters, namely, turbidity, dissolved oxygen, ammonical nitrogen and other nutrients and their levels must be maintained within the prescribed standards. Periodic reports on these tests should be submitted to the Ministry with proper analysis.
- (iii) To prevent discharge of sewage, bilge wastes and other liquid wastes including ballast, into the marine environment, adequate system for collection, treatment and disposal of liquid wastes including shore line interceptor for receiving liquid wastes from all shore line installations and small boats.

connection for ships to allow for discharge of sewage must be provided. A note on the facilities for such treatment may be submitted to the Ministry of Environment & Forests within 8 weeks from receipt of this Office Memorandum.

- (iv) Adequate noise control measures must be adopted to contain the noise within the prescribed standards in the work zone environment which should not exceed 85 dBA.
- (v) Quality of treated effluents, solid wastes, emissions and noise levels etc. must conform with the standards laid down by the Central/State Pollution Control Board and under the Environment (Protection) Act, 1986.
- (vi) Reclaimed area should be utilised only for container handling facilities.
- (vii) Afforestation should be undertaken over 30% of the port area. A phased afforestation programme with requisite financial details be submitted to the Ministry within six months.
- (viii) A part of the revenue generated due to increased handling of cargos should be utilised for improving the environment in the project impact area by maintaining a clean sea front, establishment of sewage treatment and oil recovery plants and/or other measures as required at the site.

3. In the Tuticorin Port Trust, sufficient inhouse capability in the form of Environmental Cell should be created to monitor and implement programme related to pollution control and environmental conservation.

4. There should be adequate provisions for enhancing the present allocation of Rs. 2 crores on environmental aspects.

5. In case of any deviation or alternations in the project, a fresh reference should be made to the Ministry for modifications in the clearance conditions or imposition of new ones for ensuring environmental protection.

6. These stipulations will be enforced among others under the Water (Protection and Control of Pollution) Act, 1974, the Air (Protection and Control of Pollution) Act, 1981, the Environment

01
2
(Protection) Act, 1986 and the Public Liability Insurance Act, 1991.

7. The above conditions will be monitored by the Regional Office of the Ministry.

(Dr. NALINI BHAT)
ADDITIONAL DIRECTOR

The Secretary,
Ministry of Surface Transport,
Parivahan Bhavan,
Parliament Street, New Delhi-11.

Copy to:-

1. The Chairman,
Tuticorin Port Trust,
Administrative Office, Tuticorin-628004.
2. The Chairman,
Central Pollution Control Board,
Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar,
Shahadra, Delhi-110032.
3. The Chief Conservator of Forests, Regional Office, (Southern Zone), Ministry of Environment & Forests, NO.463, 1st Main, IIIrd stage, IIIrd Block, Basaveshwarnagar, Bangalore-560004.
4. The Chairman, Tamil Nadu Pollution Control Board,
32, Santhome High Road, Madras-600004.
5. The Secretary and Commissioner,
Department of Forests, Madras.
6. Guard File.

(Dr. NALINI BHAT)
ADDITIONAL DIRECTOR

16/10/2007

No.10-107/2007-IA-III
Government of India
Ministry of Environment and Forests
IA-III Division

Prayasana, A
C.C.O. Complex, T-4, R-3
New Delhi

Dated the 16/10/07

Sub: Construction of jetty along the Sethusamudram Ship Canal Project by M/s Tuticorin Port Ltd. regarding.

Reference is invited to the letter No. SCF-35/2007 C.O. (C) dated 14.8.2007 from M/s Tuticorin Port Ltd. regarding the subject mentioned.

The project involves construction of a 1000 p.m. long and 2 p.m. wide berth with a 1000 p.m. long bulk head. The dredging of the project will be less than 0.5 m. For the construction of 100,000 MT and river sand of 0.4 MT. The berthing jetty-cum-viewing platform is proposed along the dike at about 1.2 km from the G point and the jetty is at a distance of 1.2 km approximately from Duganahalli. This jetty shall also help in berthing of small crafts, patrol boats, merchant surveillance, etc. The project also involves construction of the project, it is proposed to drive larger size of piles, and the piles shall be of forced cement concrete and will be interconnected with cross beams. The top level of the jetty shall be 10 m. The project does not attract the provisions of the EIA notification 2006 since the jetty is not a major project and its capacity. Further, the project is located in the water in the open waters and does not affect the flow of the water and movement of flora and fauna in the area. The Coastal Regulation Zone Notification also does not apply to the above project since it is located in the offshore area. The project has been proposed for emergency berthing purpose, for providing access to the major port, for emergency communication, berthing of small crafts and for the project.

8

The project has been considered in the Expert Committee meeting held on 29/09/2007 and the Committee has recommended the project for approval.

The project is a minor project and does not attract the provisions of the EIA notification 2006. The project is a minor project and does not attract the provisions of the EIA notification 2006.

(A) Specific Conditions

The project should be carried out and completed within the stipulated time frame and the project should be completed within the stipulated time frame and the project should be completed within the stipulated time frame.

The project should be carried out and completed within the stipulated time frame and the project should be completed within the stipulated time frame and the project should be completed within the stipulated time frame.

The project should be carried out and completed within the stipulated time frame and the project should be completed within the stipulated time frame and the project should be completed within the stipulated time frame.

The project should be carried out and completed within the stipulated time frame and the project should be completed within the stipulated time frame and the project should be completed within the stipulated time frame.

The project should be carried out and completed within the stipulated time frame and the project should be completed within the stipulated time frame and the project should be completed within the stipulated time frame.

The project should be carried out and completed within the stipulated time frame and the project should be completed within the stipulated time frame and the project should be completed within the stipulated time frame.

B. General Conditions

- (ii) Construction of the proposed structures, if any in the Coastal Regulation Zone area should be undertaken meticulously conforming to the existing Central/local rules and regulations including Coastal Regulation Zone Notification 1991 & its amendments. All the construction designs/drawings relating to the proposed construction activities must have approvals of the concerned State Government Departments/Agencies.
- (iii) Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation etc. should be ensured for construction workers during the construction phase of the project so as to avoid felling of trees/mangroves and pollution of water and the surroundings.
- (iv) The project authorities must make necessary arrangements for disposal of solid wastes and for the treatment of effluents by providing a proper wastewater treatment plant outside the CRZ area. The quality of treated effluents, solid wastes and noise level etc. must conform to the standards laid down by the competent authorities including the Central State Pollution Control Board and the Union Ministry of Environment and Forests under the Environment (Protection) Act, 1986, whichever are more stringent.
- (v) The proponent shall obtain the requisite consents for discharge of effluents and emissions under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 from the Tamil Nadu Pollution Control Board before commissioning of the project and a copy of each of these shall be sent to this Ministry.
- (vi) The sand dunes, corals and mangroves, if any, on the site should not be disturbed in any way.
- (vii) A copy of the clearance letter will be marked to the concerned Panchayat/local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.
- (viii) The funds earmarked for environment protection measures should be maintained in a separate account and there should be no diversion of these funds for any other purpose. A year-wise expenditure on environmental safeguards should be reported to this Ministry's Regional Office at Bangalore and the State Pollution Control Board.
- (ix) Full support should be extended to the officers of this Ministry - Regional Office at Bangalore and to officers of the Central and State Pollution Control Boards by the project proponents during their inspection for monitoring purposes, by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities.
- (x) In case of deviation or alteration in the project including the implementing agency, a fresh reference should be made to this Ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection.
- (xi) This Ministry reserve the right to revoke this clearance, if any of the conditions stipulated are not complied with to the satisfaction of this Ministry.
- (xii) This Ministry or any other competent authority may stipulate any other additional conditions subsequently if deemed necessary, for environmental protection, which shall be complied with.
- (xiii) The project proponent should advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen at Website of the Ministry of Environment & Forests at <http://www.mef.gov.in>. The advertisement should be made within 7 days from the date of issuance of clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Bangalore.

(xiii) The Project proponents should inform the Regional Office at Bangalore 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 Land Development Work.

5. The above mentioned stipulations will be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (protection) Act, 1986, the Hazardous Chemicals (Manufacture, Storage and Import) Rules, 1989, the Coastal Regulation Zone Notification, 1991 and its subsequent amendments and the Public Liability Insurance Act, 1991 and the Rules made thereunder from time to time. The project proponents should also ensure that the proposal complies with the provisions of the approved Coastal Zone Management Plan of Tamil Nadu State and the Supreme Court's order dated 18th April, 1996 in the Writ Petition No 661 of 1993 to the extent the same are applicable to this proposal.

(Dr. A. Senthil Velu
Additional Director

To,

Chairman,
Tuticorin Port Trust,
Tuticorin-628 004,
Tamil Nadu

Copy to

1. The Chief Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office (S/), Kendriya Sadan, 4th Floor E&F Wings, 17th Main Road, 1 Block, Koramangala, Bangalore-560034
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum Office Complex, East Aram Nagar, Delhi-110032
3. The Director, Environment Department, Government of Tamil Nadu, Chennai
4. DIO (S/), Regional Office Cell, Ministry of Environment & Forests, New Delhi
5. The Chairman, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600092
6. Guard File
7. Monitoring Cell
8. Director (H), Ministry of Environment & Forests, New Delhi

(Dr. A. Senthil Velu
Additional Director

6

1 p.p.m. - 1 (M)

EP/12-1/711510

तार :
Telegram : PARYAVARAN
NEW DELHI

दूरभाष :
Telephone :
टेलीक्स (द्विभाषीय) :
(bilingual) W 60185 DEEN
4360678

मार्त मरवार

पर्यावरण एवं वन मंत्रालय
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT & FORESTS
पर्यावरण भवन, सी. जी. आ. कॉम्प्लेक्स
PARYAVARAN BHAWAN, C.G.O. COMPLEX
लोदी रोड, नई दिल्ली-110003
LODHI ROAD, NEW DELHI 110003

No. J-16011/24/93-IA.111

3363
6/2/95

27th January, 1995.

OFFICE MEMORANDUM

Subject:- Replacement of RCC jetty with Block Work Pier at
Extension Port by Tuticorin Port Trust.

.....

Reference is invited to letter No.E(C)/F.93/1/94/DB dated
07.11.1994 from Tuticorin Port Trust seeking environmental clearance
for the above mentioned proposal.

2 The proposal has been examined and environmental clearance
1 hereby accorded subject to the following conditions :-

(1) Scooping/dredging of the loose/hard materials to fit in the
precast cement concrete blocks should be undertaken in
stages in consultation with an expert institute such as
Central Water and Power Research Station (CWPRS), Pune or any
other institute to ensure that these operations do not cause
any adverse impact on surface and ground water and marine
productivity in the vicinity;

(11) During dredging, construction and maintenance stages, the
water quality parameters at the bottom level should
be inspected and periodic records be maintained.
Adequate measures must be adopted to improve the
water quality in general and particularly in respect
of dissolved oxygen and coliform bacteria which are

..... 2/-

7

beyond permissible limit. Tests should also be carried out to measure other water quality parameters viz. turbidity, ammonical nitrogen and other nutrients which must be maintained within the prescribed standards;

(iii) Screening of pollutants in the harbour waters should be undertaken by the project authorities to ensure that the water quality parameters improve so as to fall within the prescribed limits in two years time. Quarterly reports in respect of water quality parameters must be forwarded to this Ministry for monitoring;

(iv) The project authorities should consider worst case disaster scenario with respect to specific cases like oil/chemical spills, fire/explosion, terrorist attack, flood etc., spelling out definite adequate measures to be taken to prevent and contain such disasters. A report on this must be forwarded to this Ministry within six months from the date of issue of environmental clearance.

(v) To prevent discharge of sewage, bilge wastes and other liquid wastes into the marine environment, adequate system for collection, treatment and disposal of liquid wastes including shoreline interceptor for receiving liquid wastes from all shoreline installations and special hose connection for ships to allow for discharge of sewage must be provided;

(vi) The quality of treated effluents, solid wastes, emissions and noise levels etc., must conform to the standards laid down by the competent authorities including Central/State Pollution Control Board and under the Environment (Protection) Act, 1986, whichever are more stringent.

3. In the Tuticorin Port Trust, sufficient in-house capability (environment cell) should be created to monitor and implement the programme related to pollution control and environmental conservation.

4. Adequate financial provision must be made for implementation of the above stipulations.

5. In case of any deviation/alterations in the project proposal from those submitted to this Ministry for clearance, these stipulations may be modified and/or new ones imposed for ensuring environmental protection.

6. These stipulations will be enforced along with others under the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, and the Environment (Protection) Act, 1986.

7. The project authorities must convey their acceptance to comply with the aforesaid conditions by issuing a Government

order to this effect.

Sy/-
(I.K. Kamboj)
Additional Director (Scientific)

To

The Secretary,
Ministry of Surface Transport,
Parivahan Bhavan, Parliament Street,
New Delhi-110001.

Copy for information and necessary action to :-

1. Chairman, Tuticorin Port Trust, Administrative Office,
Tuticorin - 628 004.
2. Chairman, Central Pollution Control Board, Pariwesh
Bhavan, CBD-cum Office Complex, East Arjun Nagar,
Shahdara, Delhi-12.001.
3. ~~Chief Conservator of Forests, Regional Office (Southern
Zone), Ministry of Environment & Forests, NO. 463,
1st Main, IIrd Stage, IIIrd Block, Basaveshwaranagar,
Bangalore - 560 079.~~
4. Chairman, Tamil Nadu Pollution Control Board, 32,
Santhome High Road, 3rd & 4th Floors, Madras-600 004.
5. Secretary and Commissioner, Forest and Environment
Department, Govt. of Tamil Nadu, Fort St. George,
Madras-600 009.
6. DIG(SU), Incharge, Regional Office Cell, Ministry of
Env. and Forests, Paryavaran Bhavan, New Delhi.
7. Guard file.

Sy/-
(I.K. Kamboj)
Additional Director (Scientific)

No..J-16011/6/99-IA-III
Government of India
Ministry of Environment and Forests
(IA-III Division)

Paryavaran Bhavan,
CGO Complex, Lodhi Road,
New Delhi - 110003

Dated the 31st March, 2005

Sub: Sethusamudram Shipping Channel Project by M/s Tuticorin Port Trust, Tuticorin, Tamil Nadu – Environmental Clearance – regarding.

Reference is invited to D.O. No.PD-22012/2/96-PDZ (Pt.) dated 15th December, 2003, dated 5th January, 2004, letter No.PD-22012/2/96-PDZ, dated 9th September, 2004, 28th September, 2004 from Ministry of Shipping, letter No.EC/F/42/82004/CPT dated 20.9.2004, No E(C)/42/8/DB/2004/D, dated 9.10.2004, No E(C)/F.42/8/2003/CPC/D dated 25.10.2004 and No E(C)/42/8/CPC-2004, dated 24.11.2004 from Tuticorin Port Trust, Tuticorin and Tamil Nadu Pollution Control Board letters No.T-11/INPCB/28347/SSCP/2004-2, dated 24.10.2004 and letter No.T-11/INPCBd/28347/SSCP/2005 dated 4.3.2005 regarding the above project have also been considered

The Order of the High Court of Madras dated 17.12.2004 in W.P. Nos 33528 and 33529 of 2004 and W.P.M.P. Nos 40521 and 41570 of 2004 filed by Shri O. Fernandes, Co-convener, Coastal Action Network, Chennai Vs. Union of India and Others have also been taken into consideration.

The report submitted by the Tuticorin Port Trust with regard to "Issues raised during public hearing meetings and response of project authorities" received vide letter No E(C)/F.42/8/SSCP/2005, dated 16.3.2005 from Tuticorin Port Trust has been taken into consideration.

As per the detail project report submitted by Ministry of Shipping vide letter No.PD-22012/2/96-PDZ, dated 2.3.2005 the following are the alignment of the shipping channel

Segment	Length (km)	Bearing	Depth (m)
1	4.37	10°37'3"	-12m
2	17.30	0°0'0"	-12m
3	13.38	346°42'41"	-12m
4	37.44	339°29'56"	-12m
5	40.48	36°28'36"	-12m
6	54.25	73°29'13"	-12m
Total	167.22		

The total capital dredging envisaged for the project is around 82.5 million cu. m while the maintenance dredging is 0.55 million cu. m per year. The dredged material are proposed to be disposed in the sea at a depth of 25-30 km distant away from Adam's Bridge (an area of 5km X 5km at geographical coordinates, 8°55'51.16"N and 79°26'54.81"E) and 10°13'14.05"N and 80°13'11.56"E.

Based on the information and facts provided by Ministry of Shipping, Tuticorin Port Trust, proceedings of the public hearing provided by Tamil Nadu State Pollution Control Board, the response provided by M/s Tuticorin Port Trust to the issues raised by the public in the public hearing and the recommendations of the Expert Committee on Infrastructure Development and Miscellaneous Projects, the project is accorded environmental clearance under Environmental (Impact) Assessment Notification, 1994 subject to the following specific and general conditions:

A. Specific Conditions:

- i) The dredged material will be disposed off in the identified sites in the sea. No dredged material will be disposed off on land.
- ii) During dredging and disposal activities, monitoring marine environment quality should be done periodically and necessary navigational steps should be taken up in case of increase in turbidity beyond the prescribed limits.
- iii) All the necessary measures to protect the biodiversity including endangered species of mangroves, corals, mammals should be provided by the proponent as per the recommendations made in the EIA Report.
- iv) So as to offset any impact on the fisheries, adequate arrangements to provide sustainable livelihood opportunities to the coastal communities including fishermen should be made with appropriate budgetary provisions in the project cost for the implementation of the same. An amount of 2% of the project cost should be made available for such activities so as to provide appropriate livelihood opportunities and training to the coastal community.
- v) Opening of river mouths in the vicinity of the proposed site may be considered so as to provide better opportunities for estuarine fishing leading to the enhancement of livelihood opportunities.
- vi) The project proponent should undertake studies for ship maneuvering along the channel.
- vii) Emergency anchoring areas should be provided at appropriate locations along the alignment.
- viii) All the ships transiting through the channel will comply with IMO Standards and follow MARPOL convention (MARPOL 73/78).

- (ix) Discharge of bilge, ballast, treated sewage, solid wastes, oily wastes and spillage of cargo should not be allowed in Gulf of Mannar.
- (x) All the ships using the route should have proper treatment facilities for sewage through treated sewage will not be allowed to be discharged in Gulf of Mannar area.
- (xi) Oil spill contingency plan should be drawn up by TPT within one year from the date of issue of this letter including the preparedness to prevent spread of spillage in Gulf of Mannar and Palk bay and its immediate recovery by deploying equipments and ships.
- (xii) The channel should be properly marked by navigational light buoys.
- (xiii) Accidents due to collision should be averted through VTMS and also control of cruise speed
- (xiv) Strict monitoring should be undertaken at four hourly interval round the clock to monitor the movement of sediments of dredged material in the dredging area and daily on the coast and other sensitive areas of Gulf of Mannar Biosphere/National Marine Park.
- (xv) No restriction on the movement of fishing vessel and fishing activities will be imposed in the area except during ship transits.
- (xvi) Effective monitoring of aquatic ecosystem may be done to ensure that no damage is done to the turtles, dugongs, flora and other endangered species
- (xvii) All the genuine issues raised during the public hearing will be implemented in a time bound manner and a report submitted to the Ministry once in every six months
- (xviii) Environmental monitoring cell may be constituted to monitor all the environmental parameters associated with this project
- (xix) The Environment Management Plan recommended by NEERI should be implemented
- (xx) No foreshore facilities should be taken up without obtaining necessary clearances including Coastal Regulation Zone Notification, 1991
- (xxi) A study will be undertaken with regard to the amphidromic point, which is located at Nagapattinam and its impact on the proposed canal. This study report shall be submitted within a period of 6 months.
- (xxii) For the purpose of monitoring the project, the project proponent have identified scientific institutions namely Suganthi Devadason Marine Research Institute,

Kanyakumari, Central Marine Fisheries Research Institute, Cochin, Central Electro Chemical Regional Institute, Mandapam, Alagappa Institute of Technology, Karaikudi and Centre for Advance Studies in Marine Biology, Parangipetti.

B. GENERAL CONDITIONS:

- (i) Development of the proposed channel should be undertaken meticulously conforming to the applicable Central/local rules and regulations including Coastal Regulation Zone Notification, 1991 and its amendments.
- (ii) A well-equipped laboratory with suitable instruments to monitor the quality of air and water shall be set up as to ensure that the quality of ambient air and water conforms to the prescribed standards. The laboratory will also be equipped with qualified manpower including a marine biologist so that the marine water quality is regularly monitored in order to ensure that the marine life is not adversely affected as a result of implementation of the said project. The quality of ambient air and water shall be monitored periodically in all the seasons and the results should be properly maintained for inspection of the concerned pollution control agencies. The periodic monitoring reports at least once in 6 months must be send to this Ministry (Regional Office at Bangalore) and State Pollution Control Board.
- (iii) Adequate provisions for infrastructure facilities such as water supply, fuel for cooking, sanitation etc. must be provided for the laborers during the construction period in order to avoid damage to the environment. Colonies for the laborers should not be located in Coastal Regulation Zone area. It should also be ensured that the construction workers do not cut trees including mangroves for fuel wood purpose
- (iv) To prevent discharge of sewage and other liquid wastes into the water bodies, adequate system for collection and treatment of the wastes must be provided. No sewage and other liquid wastes without treatment should be allowed to enter into the water bodies
- (v) Appropriate facility should be created for the collection of solid and liquid wastes generated by the barges/vessels and their safe treatment and disposal should be ensured to avoid possible contamination of the water bodies.
- (vi) Necessary navigational aids such as channel markers should be provided to prevent accidents. Internationally recognized safety standards shall be applied in case of barge/vessel movements.
- (vii) The project authorities should take appropriate community development and welfare measures for villagers in the vicinity of the project site, including drinking water facilities. A separate fund should be allocated for this purpose.
- (viii) The quarrying material required for the construction purpose shall be obtained only from the approved quarries/borrow areas. Adequate safeguard measures shall be taken


to ensure that the overburden and rocks at the quarry site do not find their way into water bodies.

- (ix) For employing unskilled, semi skilled and skilled workers for the project, preference shall be given to local people.
- (x) The recommendations made in the Environmental Management Plan and Disaster Management Plan, as contained in the Environmental Impact Assessment and Risk Analysis Reports of the project shall be effectively implemented
- (xi) A separate Environmental Management Cell with suitable qualified staff to carry out various environment should be set up under the charge of a Senior Executive who will report directly to the Chairman, Tuticorin Port Trust.
- (xii) The project affected people of any should be properly compensated and rehabilitated.
- (xiii) The funds earmarked for environment protection measures should be maintained in a separate account and there should be no diversion of these funds for any other purpose. A year-wise expenditure on environmental safeguards should be reported to this Ministry.
- (xiv) Full support should be extended to the officers of this Ministry's Regional Office at Bangalore and the officers of the Central and State Pollution Control Boards by the project proponent during this inspection for monitoring purposes, by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities
- (xv) In case any deviation or alteration in the project is contemplated including a change in the implementing agency, a fresh reference should be made to this Ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection. The project proponents should be responsible for implementing the suggested safeguard measures
- (xvi) This Ministry reserves the right to revoke this clearance, if any of the conditions stipulated are not complied with to the satisfaction of this Ministry
- (xvii) This Ministry or any other competent authority may stipulate any additional conditions subsequently, if deemed necessary for environmental protection, which shall be complied with
- (xviii) The project proponent should advertise atleast in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen at Website of the Ministry of Environment & Forests at <http://www.envfor.nic.in>. The advertisement should be

made within 7 days from the date of issue of the clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Bangalore

- (xix) The project proponents should 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 development work.

The above mentioned stipulations will be enforced, *inter-alia*, under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Hazardous Chemicals (Manufacture, Storage and Import) Rules, 1989, the Coastal Regulation Zone Notification, 1991 and its subsequent amendments and the Public Liability Insurance Act, 1991 and the Rules made thereunder from time to time.



(A. Senthil Vel)
Joint Director

To

Shri N.K. Raghupathy,
Chairman,
Tuticorin Port Trust,
Tuticorin-628 004,
Tamil Nadu.

Copy to:

1. The Chief Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office(SZ), Kendriya Sadan, 4th Floor E&F Wings, 17th Main Road, 1 Block Koranmangala, Bangalore-560034.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 110032.
3. The Director, Environment Department, Government of Tamil Nadu, Chennai
4. DIG (SU), Regional Office Cell, Ministry of Environment & Forests, New Delhi
5. The Chairman, Tamil Nadu State Pollution Control Board, Chennai.
6. Guard File.
7. Monitoring Cell.
8. Director (EI), Ministry of Environment & Forests, New Delhi.


(A. Senthil Vel)
Joint Director

Office Address:

No. 88, CPIC Annex Building

9th floor, Anna Salai

Madras - 600 002

Fax: 044 - 22300010

ph. 22300005

F.No.10-7/2005-IA.III
Government of India
Ministry of Environment & Forests
(IA.III Section)



Paryavaran Bhawan,
CGO Complex, Lodhi Road,
New Delhi - 110 003.

Dated: March 31, 2014

To,
Chief Engineer,
M/s V.O. Chidambaranar Port Trust,
Engg. Dept. (Civil), Administrative Office,
Tuticorin - 628 004, Tamil Nadu

Subject: Extension of validity of Environmental Clearance and amendment in Clearance dated 09.05.2006 granted for optimization of inner harbour development at V.O. Chidambaranar Port, Tuticorin, Tamil Nadu by M/s V.O. Chidambaranar Port Trust - Reg.

This has reference to your letter No: E(C)/F.59/11/SDB-EN-CL/QS/2013 dated 29.04.2013 seeking extension of validity and amendment in Clearance granted vide letter no. F.No.10-7/2005-IA-III, dated 09.05.2006 for the following Components:

- i. Deepening the approach channel and harbor basin to cater to 12.80m draught vessels from the existing draught of 10.70m
- ii. Construction of berth no.9 and North Cargo Berth
- iii. Construction of three number Shallow Draught Berths

2.0 The issue was discussed by the EAC in its 130th meeting held on 22nd - 24th January, 2014 and the Committee recommended the proposal for the revalidation of environmental Clearance along with amendment for construction of 2 shallow berths instead of 3 shallow births.

3.0 Accordingly, the validity of the clearance is extended for a period of five years i.e. up to 08.05.2016. The EC dated 09.05.2006 is amended for construction of 2 no of shallow draught Berths with dredging instead of 3 nos of berths, keeping the birth length unchanged.

4.0 As committed the proposed dredging quantity in front of 2 of Shallow Draught Berths should be 0.5 Million Cu.m approximately. All other conditions remain unchanged.


(Lalit kapur)
Director (IA-III)

Copy to:

- (1) The Principal Secretary, Department of Environment and Forests, First Floor, Panagal Building, Saidapet, Chennai - 600 015, Tamil Nadu.

Handwritten notes and signatures at the bottom of the page:
n a p.
Cdr
16/04/14
07/4/14
E/E/PD
200/100

- (2) The Chairman, CPCB, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 110032.
- (3) The Director, Department of Environment, Government of Tamilnadu, Panagal Building, Ground Floor, Saidapet, Chennai-15, Tamil Nadu.
- (4) The Chairman, Tamil Nadu Pollution Control Board, No. 76, Mount Salai, Gundy, Chennai, Tamil Nadu.
- (5) The CCF, Regional Office, MoEF (SZ), Kendriya Sadan, IVth floor, E&F wings, 17th Main Road, Koramangala II Block, Bangalore – 560 034.
- (6) Guard File.
- (7) Monitoring Cell.



(Lalit Kapur)
Director (IA-III)

F.No. 11-139/2010-IA.III
Government of India
Ministry of Environment, Forests & Climate Change
(IA-III Section)

Indira Paryavaran Bhawan,
Jor Bagh Road,
New Delhi - 110 003

Dated: 2nd January, 2015

To
The Chief Engineer,
M/s V.O. Chidambaranar Port Trust,
Tuticorin – 628 004, Tamil Nadu.

Subject: Construction of North Cargo Berth –III and IV and dredging in front of North Cargo Berth II, III, and IV and filling up of dredged material into reclaim the land inside VOC Port Complex, Tamil Nadu by M/s V.O. Chidambaranar Port Trust – Environmental and CRZ Clearance - Reg.

Sir,

This has reference to your proposal forwarded by the Principal Secretary to Govt. of Tamil Nadu, Environment & Forests Department, Tamil Nadu vide letter No.: 8328/EC.3/2014-1 dated 30.05.2014 seeking prior Environmental and CRZ Clearance on the above-mentioned subject.

2. The Ministry of Environment, Forests & Climate Change has considered the application. It is noted that the proposal is for grant of Environmental and CRZ Clearance for **Construction of North Cargo Berth –III and IV and dredging in front of North Cargo Berth II, III, and IV and filling up of dredged material into reclaim the land inside VOC Port Complex, Tamil Nadu by M/s V.O. Chidambaranar Port Trust.** The proposal was considered by the EAC in its meeting held on 30th June, 2014 – 2nd July, 2014. The proponent has informed that:

- i. The project was accorded TOR vide letter no. F.No.11-139/2010-IA-III dated 27.05.2011. The extension of validity of ToR issued even letter no. dated 07.11.2013.
- ii. The proposal involves construction of North Cargo Berth –III and IV and dredging in front of North Cargo Berth II, III, and IV and filling up of dredged material into reclaim the land inside VOC Port Complex, Tamil Nadu.
- iii. The present cargo handling capacity of V.O.Chidamabranar Port is 33.34 Million Tones.
- iv. Keeping in view the future growth in cargo traffic, V.O.Chidambaranar Port has taken up the two projects under PPP model (1) North Cargo Berth-III (2) North Cargo Berth-IV.
- v. The cargo profile for the new berths proposed by the Port is by bulk cargoes. The cargoes will be handled by providing mechanized handling facilities and despatch the majority cargo through railway to reduce air pollution.
- vi. The capacity addition of North Cargo Berth-III and North Cargo Berth-IV is 18.30 Million Tonnes per annum.
- vii. The length and width of each berth is 306 m & 22.90m respectively.
- viii. The Capacity of each berth is 9.15 Million Tonnes.
- ix. The North Cargo Berth-II is under construction after getting the MoEF clearance vide letter dated 13.08.2007.



- x. The estimated dredging is depth of 14.10m for 6.10 Million cum in front of NCB-II, III and IV and the dredged materials is planned for reclamation of low lying area so that the Port will bring the wastelands for use in Port.
- xi. The **estimated cost** of North Cargo Berth III is Rs.420 Crore and North Cargo Berth IV is Rs.355 Crore.
- xii. **Approvals:** The Tamil Nadu State Coastal Zone Management Authority has recommended the project vide letter No: 8328/EC.3/2014-1 dated 30.05.2014.
- xiii. **Wildlife issues:** The port falls within 10 km from Gulf of Mannar.
- xiv. There is no **court cases/violation** pending with the project proponent.
- xv. **Public Hearing** was conducted on 27.12.2013 at Thoothukudi district, Tamil Nadu.

3. The DPR for dredging was prepared by Indian Institute of Technology, Chennai. The EIA study has carried out by M/s. Centre for Environment, health and safety, Annamalai University, Chidambaram, Tamil Nadu. The Marine Environment of Gulf of Mannar was surveyed and studied for its ecological sensitivity by SDMRI, Tuticorin. The dredged material is envisaged essentially in a scientifically designed secured landfill kind of methodology and the bunds will be provided with geo synthetic membranes to prevent any leachate into marine environment. The reclamation of land along the existing breakwaters in both Northern and Southern Break waters, will be through engineered structured which will not allow any pollutant escape or ingress into marine environment. The dredging will be done through Cutter and Suction method to have the least physical disturbance and the modeling studies through MIKE software used to predict the dispersion and accordingly the reclamation proposal was envisaged.

4. The proposal was considered in the Expert Appraisal Committee (EAC) and recommended in its 135th EAC meeting held on 30th June, 2014 – 2nd July, 2014 for granting Environmental and CRZ Clearance. The Ministry of Environment, Forests & Climate Change hereby accords Environmental and CRZ Clearance for the above-mentioned **Construction of North Cargo Berth –III and IV and dredging in front of North Cargo Berth II, III, and IV and filling up of dredged material into reclaim the land inside VOC Port Complex, Tamil Nadu** by M/s V.O. Chidambaranar Port Trust under the provisions of the Environment Impact Assessment Notification, 2006 and CRZ Notification, 2011 and amendments thereto and Circulars issued thereon and subject to the compliance of the following specific conditions, in addition to the general conditions mentioned below:

A. Specific Conditions:

- (i) "Consent for Establishment" shall be obtained from State Pollution Control Board under Air (Prevention and Control of Pollution) Act, 1981 and Water (Prevention and Control of Pollution) Act, 1974.
- (ii) The environmental clearance is subject to obtaining prior clearance from wildlife angle including clearance from the Standing Committee of the National Board for Wildlife as applicable.
- (iii) Grant of environmental clearance does not necessarily implies that wildlife clearance shall be granted to the project and that their proposals for wildlife clearance shall be considered by the respective authorities on their merits and decision taken.
- (iv) The investment made in the project, if any, based on environmental clearance so granted, in anticipation of the clearance from wildlife angle shall be entirely

at the cost and risk of the project proponent and Ministry of Environment, Forests & Climate Change shall not be responsible in this regard in any manner.

- (v) Dredging shall be done within the existing break water as committed.
- (vi) Dredging shall only be conducted by cutter/suction method and dredge spoil should not be disposed in open sea that will impact corals of Gulf of Mannar.
- (vii) The Berth III and IV should not handle any oil or chemical related cargo. No storage of oil and chemical shall take place.
- (viii) Wind screen shall be provided all along the coal stack yard.
- (ix) Since the port is in the vicinity of the Eco-Sensitive Zone, the storage of rock phosphate and copper concentrates shall only be in leak proof silos. The coal shall be stacked in the closed masonry wall with sprinkler arrangement. The stack yard should be weather proof. A detailed design in this regard shall be submitted to MoEF&CC with a copy to R.O., MoEF&CC, Chennai and Tamil Nadu PCB, prior to commencement of above activity.
- (x) All the conditions/recommendations stipulated by Tamil Nadu Coastal Zone Management Authority (TNCZMA) vide letter no. 8328/EC.3/2014-1 dated 30.05.2014, shall be complied with.
- (xi) A study report shall be submitted for the leachate generation at the coal stack yard and the suggestive mitigative measures.
- (xii) Dredging activity should be carried out so that it in no way affects the corals. CWLW will supervise the working.
- (xiii) The project shall be executed in such a manner that there shall not be any disturbance to the fishing activity.
- (xiv) No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.
- (xv) All the recommendation of the EIA/EMP, Disaster Management Plan shall be strictly complied within letter and spirit. 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 MoEF&CC along with half yearly compliance report to MoEF&CC-RO.
- (xvi) The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.
- (xvii) The project proponent shall take up mangrove plantation/green belt in the project area, wherever possible. Adequate budget shall be provided in the Environment Management Plan for such mangrove development.



(xviii) The commitment made by the Proponent to the issue raised during Public Hearing shall be implemented by the Proponent.

(xix) Corporate Environment Responsibility:

- a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
- b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/ deviation/violation of the environmental or forest norms/conditions.
- c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.
- d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

B. General Conditions:

- (i) The construction of the structures should be undertaken as per the plans approved by the concerned local authorities/local administration, meticulously conforming to the existing local and Central rules and regulations including the provisions of Coastal Regulation Zone Notification, 2011 and the approved Coastal Zone Management Plan of Tamil Nadu.
- (ii) A six-Monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Chennai regarding the implementation of the stipulated conditions.
- (iii) In the event of any change in the project profile a fresh reference shall be made to the Ministry of Environment, Forests & Climate Change.
- (iv) This Ministry reserves the right to revoke this clearance, if any, of the conditions stipulated are not complied with to the satisfaction of this Ministry.
- (v) Ministry of Environment, Forests & Climate Change or any other competent authority may stipulate any additional conditions subsequently, if deemed necessary, for environmental protection, which shall be complied with.
- (vi) The project proponents 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 land development work.
- (vii) A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsilidar's office for 30 days.
- (viii) Full support should be extended to the officers of this Ministry's Regional Office at Chennai and the offices of the Central and Tamil Nadu State Pollution Control Board by the project proponents during their inspection for

monitoring purposes, by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities.

- (ix) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional Office.

5. These stipulations would be enforced among others under the provisions of water (Prevention and Control of Pollution) Act, 1974 the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and Municipal Solid Wastes (Management and Handling) Rules, 2000 including the amendments and rules made thereafter.

6. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department and Civil Aviation Department from height point of view, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

7. The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental & CRZ Clearance and copies of clearance letters are available with the Tamil Nadu State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forests & Climate Change at <http://www.envfor.nic.in>. The advertisement should be made within Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Chennai.

8. This Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

9. Any appeal against this Clearance 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.

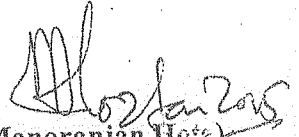
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parish/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

11. The proponent shall upload the status of compliance of the stipulated Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) 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.

12. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated 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 the SPCB.

13. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent 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 Clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.


(Dr. Manoranjan Hota)
Director

Copy to:

1. The Secretary, Environment & Forests Department, Govt. of Tamil Nadu, Saint George Port, Chennai.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110 032.
3. The Member Secretary, Tamil Nadu State Pollution Control Board, Chennai.
4. The Director, Environment Department, Govt. of Tamil Nadu, Chennai.
5. Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forests and Climate Change, Regional Office, 1st Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai – 34.
6. Guard File.
7. Monitoring File.


(Dr. Manoranjan Hota)
Director

F.No.10-28/2016-IA.III

Government of India
Ministry of Environment, Forest & Climate Change
(IA.III Section)

Indira ParyavaranBhawan,
Aliganj, JorBagh Road,
New Delhi - 3

Dated: 14th July, 2016

To

21/7
21/6
EE (PD)
Thiragonjan 008
21/8/11
21/7
21/7

The Chief Engineer
M/s V O Chidambaranar Port Trust
Engineering Department (Civil),
Administrative Office
Tuticorin-628004

E-mail: ce@vocport.gov.in ; fax.: 0461-2354270;

Sub: Construction of Five numbers of Shallow Draught Berth at V.O. Chidambaranar Port, Thoothukkudi District, Tamil Nadu by M/s V O Chidambaranar Port- Additional construction of two numbers of Shallow Draught Berth.-Amendment in Terms of Reference (ToR) - reg.

Ref.: Your online proposal no. IA/TN/MIS/55278/2016 dated 03.06.2016.

Sir,

Kindly refer your online proposal no. IA/TN/MIS/29149/2015 dated 19.03.2016 alongwith project documents including Form-I, Pre-feasibility Report and draft 'Terms of Reference' as per the EIA Notification, 2006. It is noted that MoEF&CC vide letter no. 10-28/2016-IA.III dated 20th May, 2016 has issued TOR for preparation of EIA Report for construction of five numbers of Shallow Draught Berth at V.O. Chidambaranar Port, Thoothukkudi District, Tamil Nadu.

Now, proposal is submitted for additional construction of two numbers of Shallow Draught Berth at V.O. Chidambaranar Port, Thoothukkudi District, Tamil Nadu by M/s V O Chidambaranar Port. Following is the details of proposed two Shallow Draught Berths :

S. N.	Details	Shallow Draught Berth 1 (Construction Materials)	Shallow Draught Berth 2 (Cement, Raw Materials & General Cargoes)
1	Size of Berth	260 m x 30 m	243 m x 30 m
2	Type	Pile Foundation with RCC Deck slab	Pile Foundation with RCC Deck slab
3	Capacity	2.00 Million Tonnes Per Annum	2.67 Milion Tonnes Per Annum
4	Project Cost	Rs. 65.37 Crore	Rs. 126.68 Crores
5	Cargo to be handled	Construction Materials (Bricks, Tiles, Glass, Sand, Steel etc.)	Cement, Raw Materials & General Cargoes (Lime, Gypsum & General Cargoes)
6	Equipment	1 No. Harbor Mobile Crane 42 T/ hr. capacity 2 Nos. Pay loaders of	1 no. Mobile ship un loader-300 T/hr. capacity 1 no. Rail mounted

27/6/16

		capacity 10 T /hr/ each	cement loader -750 T/hr capacity 2 Nos. pay loader 19 T/hr/ each capacity.
--	--	-------------------------	---

2.0 The proposal was considered by the Expert Appraisal Committee (Infra-2) in its meetings held during 29th June, 2016 and the Committee recommended that existing TOR letter no. 10-28/2016-IA.III dated 20.05.2016 may be amended for additional two shallow water berths. The existing ToR alongwith public hearing will remain same.

3.0 The Ministry accepts the recommendation of the Expert Appraisal Committee (Infra-2) for amendment in the existing TOR.

4.0 All the conditions will remain unchanged.

5.0 This issues with the prior approval of the Competent Authority.

A.N. Singh
(A.N. Singh)
Scientist 'D'

Copy to:

- 1) The Member Secretary, Tamil Nadu Pollution Control Board, No. 76, Mount Salai, Gundy, Chennai, Tamil Nadu.
- 2) Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (SEZ), Ist and IInd Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai – 34

CE-158
18/5/2000

32

Shrin Kc
in 18.5.2
copy to
(2000)

18/5/2000
CE

Pl. put up
to chairman
in 18.5.2

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
DEPARTMENT OF SHIPPING
(PORTS WING)

No.PD-26018/1/99-PDZ (CRZ)

New Delhi, the 12th May, 2000

To
The Chairman,
Tuticorin Port Trust,
Tuticorin - 628 004.

Sub.: Proposal for Environmental Clearance for construction of Cargo Berth No. 8 at Tuticorin Port Trust.

The undersigned is directed to refer to Tuticorin Port Trust letter No. E(C)/F.41/Spl..TC(PW)/99/D.777 dated 15.2.99 on the subject mentioned above and to say that the proposal has been considered by this Ministry from environmental angle and clearance is hereby accorded under Ministry of Environment & Forests Notification No.H-11011/6/97-IA.III dated 9th July, 1997 (SO No.494 (E) subject to strict implementation of the following safe guard measures:-

- (i) All construction design/drawings relating to construction activities must have the approval of the concerned Government Departments/ Agencies of the State Government of Tamil Nadu. Ground water should not be tapped for construction activities as the drawl of ground water for industrial use from the CRZ is a prohibited activity.
 - (ii) Adequate provision for all infrastructural facilities such as water supply, fuel, sanitation etc. must be extended for labourers during the construction period in order to avoid damage to the environment.
 - (iii) Dredging operations, if any, should be undertaken in consultation with either the Central Water and Power Research Station, Pune or National Institute of Oceanography, Goa or any other authorised agency to ensure that dredging operations do not cause adverse impact on water quality and marine productivity in the vicinity. Dredging operation as far as possible should be kept to the minimum for avoiding any adverse impact on marine life.
 - (iv) Disposal sites for excavated material should be so designed that the revised land use after dumping and changes in the land use pattern do not interfere with the natural drainage.
 - (v) To meet any emergency situation, adequate foam containers should be kept ready with supporting fire fighting system and water pipeline.
 - (vi) The staff posted in sensitive areas should be trained in implementation of the Crisis Management Plan already drawn by the authorities. Mock drill(s) for this purpose should be conducted on a regular basis. Provisions of Dock Safety Act and the guidelines issued by the DG, FASLI/CLI, Mumbai for the safety and health of the workers should be followed.
- ...2/-

- (vii) For development of green buffer including mangroves wherever feasible, the authorities should start growing large nursery of multipurpose species such as Eucalyptus, Casuarine, Dalbergia, Terminalia etc. The norm of about 2000-2500 trees per hectare may be adopted for raising of green belt. Necessary permission may be obtained from the concerned authorities for cutting of trees, if any, for the project.
- (viii) To prevent discharge of sewage and other liquid waste, including ballast into marine environment, adequate system for collection, treatment and disposal of liquid wastes must be provided to the satisfaction of Tamil Nadu State Pollution Control Board, Chennai.
- (ix) Adequate noise control measures must be taken to maintain noise level at various work places within the standard prescribed by the competent authorities. If need be, ear plugs and ear muffs should be provided to the workers in the project area.
- (x) The quality of treated effluents, solid wastes and emissions must conform to the standards laid down by the competent authority including Tamil Nadu State Pollution Control Board, Chennai.
- (xi) An Environmental Cell should be set up immediately and made operational with adequate laboratory facilities, equipment and a mobile van for collecting air samples. The record and data should be submitted with proper analysis and corrective measures required, if any, for maintaining the levels within the prescribed limits to the Regional Office, Ministry of Environment and Forests, (SR) Government of India, Bangalore. The Environment Cell should coordinate and monitor environmental mitigative measures executed in the project area. The Project Proponent is advised to institutionalise their Environmental Monitoring through some recognised Scientific Institution for the Project.
- (xii) Necessary leakage detection devices with early warning system must be provided at strategic locations.
- (xiii) Standby DG Sets must be provided to ensure uninterrupted power supply to the pump house and the fire fighting system.
- (xiv) Third party inspection should be ensured during construction and operational phases with adequate insurance cover. The project authorities should confirm on regular intervals of six months to the Ministry about the implementation of the suggested safeguard measures and the data/report should be opened for inspection by the Team which would be constituted by the Ministry, if found necessary.

- (xv) Full support should be extended to the Regional Office, Ministry of Environment and Forests, (SR) Government of India, Bangalore during inspection of the project for monitoring purposes by the project proponents by furnishing full details and action plans including action taken report on mitigative measures.
- (xvi) Adequate funding provisions, year-wise and item-wise, must be made for implementation of the above mentioned safeguard measures.
- (xvii) The Project Proponents should follow the mitigative measures in toto as mentioned in the Environmental Impact Assessment Study/ Environmental Management Plan for the above project.

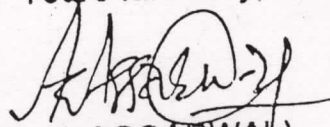
2. In case of any deviation or alteration in the project including the implementation agency, a fresh reference should be made to the Ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection. The project authorities would be responsible for implementing the above suggested safeguard measures.

3. The Ministry reserves the right to revoke clearance, if the conditions stipulated as above are not implemented to the satisfaction of the Ministry.

4. These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability (Insurance) Act, 1991 alongwith their amendments and rules from time to time.

This issues with the approval of competent authority.

Yours faithfully,

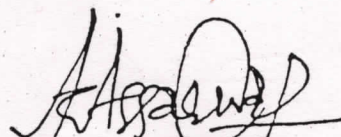


(A. K. AGGARWAL)

DESK OFFICER (PORTS DEVELOPMENT)

Copy to:

- (i) Director (IA), Ministry of Environment & Forests, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi - 110 003.
- (ii) Chief Conservator of Forests, Kendriya Sadan, 4th Floor, E&F Wing, 17th Main Road, Bangalore - 560 034.
- (iii) Tamil Nadu State Pollution Control Board, 100 Mount Salai, Guindy, Chennai - 600 032.
- (iv) Guard File.



(A. K. AGGARWAL)

DESK OFFICER (PORTS DEVELOPMENT)

41-m 30P)
No.J-16011/1/7/88-I.A. (10)

Government of India

Ministry of Environment and Forests

Department of Environment, Forests & Wildlife

EP/12/1/24/17

Paryavaran Bhavan
C.G.O. Complex
Lodi Road,
New Delhi-110 003.

Dated the 23rd December, 88.

OFFICE MEMORANDUM

TN

Subject:- Construction of second coal jetty at Tuticorin Port Trust (TPT).

...

Reference is invited to TPT letter No.E(C)/F.57/88/DE dated 7th June, 1988 seeking environmental clearance for the above mentioned proposal. The documents submitted by the project authorities have been examined and after due consideration, the proposal is approved from environmental angle subject to the following safeguards:-

- i) Adequate pollution control measures must be taken by Tuticorin Port Trust with regard to air, water, solid waste disposal and marine environment. All effluents, emissions etc. must conform to the prescribed standards.
- ii) Adequate arrangements for infrastructural facilities like water supply, power supply and fire fighting/emergency must be ensured for the port area.
- iii) Since the port also handles hazardous cargo, a Disaster Management Plan must be prepared by the Port authorities and after approval of the nodal agency of the State Government, it should be forwarded to the Ministry for approval.
- iv. Adequate sewerage and drainage system must be employed in the port area.
- v. The project authorities must ensure that dredging operations does not cause any adverse impacts on water hydrology and marine productivity in the vicinity and the surrounding soils.
1. Extensive green belt development programme in and around the port premises must be undertaken. Apart from the wood land and green belts, shown in the Port Master Plan, plantation of suitable species of trees must also be carried out along the existing roads in the port area, open vacant spaces and along the shore line.
- ii. An Environment Monitoring Cell must be set up in the Port.

372- Re (11)
15-5-8
38/100/122
15/3/8
SK

The conditions stipulated above may be varied or new conditions imposed in the interest of environmental protection.

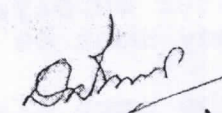
The stipulated conditions will ~~will~~ be implemented, under the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986.

(D.K. Biswas)
Adviser

Secretary,
Ministry of Surface Transport,
Parivahan Bhawan, New Delhi.

Copy for information to:-

1. Development Adviser (Ports), Ministry of Surface Transport, Parivahan Bhawan, New Delhi.
2. Chairman, Tuticorin Port Trust, Administrative Building, Tuticorin-628 004. *TN*

2c

(D.K. Biswas)
Adviser

Slno 8114/

3

श्री

पर्यावरण
नई दिल्ली

श्री

Telephone No 4361316

श्री

Telex W 66185 DOE IN

Fax 4300678

मिनिस्ट्री

गवर्नमेंट ऑफ इंडिया

GOVERNMENT OF INDIA

MINISTRY OF ENVIRONMENT & FORESTS

पर्यावरण भवन, सी.जी.ओ. बिल्डिंग

PARYAVARAN BHAVAN C.G.O COMPLEX

लोदी रोड, नई दिल्ली-110003

LODI ROAD NEW DELHI 110003

No. J-16011/10/93-IA.III

(a)

7th February, 1994.

OFFICE MEMORANDUM

Subject:- Construction of multi-purpose general Cargo Berth No.7 at Tuticorin Port by Tuticorin Port Trust.

.....

Reference is invited to letter No.E(C)/F.46/1/93/DB dated 05.07.1993 from Tuticorin Port Trust seeking environmental clearance for the above mentioned proposal.

2. The proposal has been examined and environmental clearance is hereby accorded subject to the following conditions :-

1. Dredging operations and reclamation work should be undertaken in stages in consultation with an Export Institute such as Central Water and Power Research Station (CWPRS) Pune, or any other Institute, to ensure that dredging operations do not cause any adverse impact on surface and ground water and marine productivity in the vicinity;
- ii. During dredging, construction and maintenance stages, the water quality parameters at the bottom level should be inspected and periodic records be maintained. Tests should be carried out to measure water quality parameters viz. turbidity, dissolved oxygen, ammonical nitrogen and other nutrients which must be maintained within the prescribed standards;
- iii. Screening of pollutants in the harbour waters should be taken up by the project authorities and periodical monitoring reports on water quality parameters must be forwarded to this Ministry at six monthly intervals;

.....2/-

- iv. In addition to the Disaster Management Plan prepared, the project authorities should consider worst case disaster scenario with respect to specific cases like oil/chemical spills, fire/explosion, terrorist attack, flood etc., spelling out definite adequate measures to be taken to prevent and contain such disasters. A report on this must be forwarded to this Ministry within six months from the date of issue of environmental clearance;
 - v. To prevent discharge of sewage, bilge wastes and other liquid wastes into the marine environment, adequate system for collection, treatment and disposal of liquid wastes including shoreline interceptor for receiving liquid wastes from all shoreline installations and special hose connection for ships to allow for discharge of sewage must be provided;
 - vi. Green belt development programme, as proposed, must be carried out. In addition, suitable species of trees must also be planted along the existing roads in the port area, open vacant spaces and along the shoreline;
 - vii. Adequate noise control measures such as providing muffler to muffle the sound from engines, motors etc., rubber paddings while installing machines, headphones/earplugs to workers working in the noisy environment to contain the noise within prescribed standards must be adopted;
 - viii. The quality of treated effluents, solid wastes, emissions and noise levels etc., must conform to the standards laid down by the competent authorities including Central/State Pollution Control Board and under the Environment (Protection) Act, 1986, whichever are more stringent.
3. In the Tuticorin Port Trust, sufficient in-house capability (environment cell) should be created to monitor and implement the programme related to pollution control and environmental conservation.
 4. Adequate financial provision must be made for implementation of the above stipulations.
 5. In case of any deviation/alterations in the project proposal from those submitted to this Ministry for clearance, these stipulations may be modified and/or new ones imposed for ensuring environmental protection.

.....3/-

6. These stipulations will be enforced among others under the Water (Prevention & Control of Pollution) Act, 1974. The Air (Prevention & Control of Pollution) Act, 1981, and the Environment (Protection) Act, 1986.

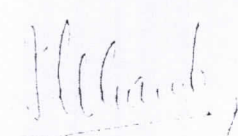
S/H
(I.K. Kamboj)
Joint Director (Scientific)

To

The Secretary,
Ministry of Surface Transport,
Parivahan Bhavan, Parliament Street,
NEW DELHI - 110001.

Copy to:-

1. Chairman, Tuticorin Port Trust, Administrative Office, Tuticorin - 628 004.
2. Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Shahdra, Delhi-32.
3. Chief Conservator of Forests, Regional Office (Southern Zone), Ministry of Environment & Forests, No.463, 1st Main, IIIrd Stage, IIIrd Block, Basaveshwaranagar, Bangalore - 560 079.
4. Chairman, Tamil Nadu Pollution Control Board, 32, Santhome High Road, 3rd & 4th Floors, Madras-600 004.
5. Secretary and Commissioner, Forest and Environment Department, Govt. of Tamil Nadu, Fort St. George, Madras-600 009.
6. DIG (SU), Incharge, Regional Office Cell, Ministry of Env. and Forests, Paryavaran Bhavan, New Delhi.
7. Guard file.


(I.K. Kamboj)
Joint Director (Scientific)



तार :
Telegram : PARYAVARAN,
NEW DELHI
दूरभाष :
Telephone : 2436 4592
टेलिक्स :
Telex : W-66185 DOE IN
फैक्स : 4360678



भारत सरकार
पर्यावरण एवं वन विभाग
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT & FORESTS
पर्यावरण भवन, सी. जी. ओ. कॉम्प्लेक्स
PARYAVARAN BHAVAN, C.G.O. COMPLEX
लोदी रोड, नई दिल्ली-110003
LODHI ROAD, NEW DELHI-110003

F.No.11-139/2010-IA.III

Dated: 27th May, 2011

To
Chairman,
M/s Tuticorin Port Trust,
Tuticorin - 628 004, Tamil Nadu.

CE/EE(PD)
For nla

Subject: Finalization of ToR for construction of North Cargo Berth -III and IV at Tuticorin Port, Tamil Nadu by M/s Tuticorin Port Trust - Reg.

Dear Sir,

Kindly refer to your above proposal submitted to this Ministry. The proposal involves construction of North Cargo Berth - III and IV at Tuticorin Port for handling bulk cargo like thermal coal, industrial coal and Rock Phosphate and Copper Concentrate etc. The proposed site falls within Harbour Basin, 2 km away from the shore. No additional land requirement. The jetty will be of pile foundation with reinforced cement concrete deck slab. The capacity of the proposed North Cargo Berth III will be 6.56 MTA and North Cargo Berth IV will be 7.28 MTA. These bulk cargoes will be handled by mechanized handling system to reduce air pollution. Approximately, 1.20 MCM will be dredged in the dock basin area in front of the berth.

There is no storage facilities proposed in the jetty. The shore reception system consisting of shore unloader with hoppers are planned separate conveyors will be used for transporting cargoes from jetty to stock pile area. The sewage will be treated in the existing STP. The port is well connected with roads. The residential area is about 7 km away from the proposed site. The expected cost will be Rs. 603 crores for North Cargo Berth III and Rs. 474.30 Crores for North Cargo Berth IV.

The above proposal was considered in the 95th EAC meeting held on 18th - 20th January, 2011. The details as presented by the project proponents and after discussions, the following "Terms of Reference" were finalized to be suitably added to those furnished by the project proponent.

- (i) Hydrodynamic studies to ensure that the proposed construction of North Cargo Berth no - III and Berth No. IV does not have any significant impact to the shoreline abutting the project must be carried out.
- (ii) Dredging and disposal mechanism shall be included on the basis of modeling study.

Sham

CE/EE

16/6
24/06
11/7/11

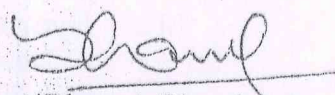
50

- (iii) The port has been in operation for the past more than 30 years and the current status of both terrestrial and marine environment must be available along with appropriate mitigative measures, EMP, DMP, Risk management, firefighting facilities etc. Submit a comparative studies to examine the impacts due to various activities.
- (iv) Impact arising out of handling of coal, rock phosphate and copper concentrate at the Berth III and Berth No. IV shall be examined. The system must be identified and augmented to meet the present requirement in terms of risk assessment, EMP, DMP etc.
- (v) A comprehensive EIA shall be prepared for the port as a whole including the proposed construction of the berths and submitted to the ministry-showing construction phase and operational phase.
- (vi) Sox and NOx are very high. Examine the reasons and submit details.
- (vii) The SPM is very low even for coal jetty. Examine the reasons and submit details.
- (viii) The EIA to include complete characterization of the sediments at least for toxic metals namely Antimony, Arsenic, Berilium, Cadmium, Chromium ¹⁶, Chromium total, Mercury and lead. The water quality monitoring parameters should also include these metals.
- (ix) The impact of the dredging and disposal of the dredged material should be studied in-depth depending upon the toxic metal contents of this material and the location of its disposal, using modelling studies.

Public hearing to be conducted for the project as per provisions of Environmental Impact Assessment Notification 2006 and the issues raised by the public should be addressed in the Environmental Management Plan.

A detailed draft EIA/EMP report should be prepared as per the above additional TOR and should be submitted to the Ministry as per the Notification.

Yours faithfully,



(Bharat Bhushan)
Director (IA-III)

30.05.2011

Copy to:

The Member Secretary, Tamil Nadu State Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600032.

S. NO. 11-139/2013-IA-III
Government of India
Ministry of Environment & Forests
(IA-III Division)

Parity Division (IA-III)
Complex, Lodhi Road,
New Delhi
November 7, 2013

To,

The Chief Engineer
V. O. Chidambaram Port Trust
Engg. Dept (Civil)
Administrative Office
Tuticorin - 628 004

dy CE / EE-QS

Sub: Construction of North Cargo Berth - III, North Cargo Berth - IV and dredging in front of North Cargo Berth - II, North Cargo Berth - III and North Cargo Berth - IV at V. O. Chidambaram Port, Tuticorin, TN

Dear Sir

This is with reference to your above proposal regarding extension of validity of ToRs and request for exemption of Public Hearing.

2.0 The matter was placed before the EAC committee in its 125th meeting held on June 10, 2013. The committee recommended to extend the validity of ToRs by one year i.e. up to May 26, 2014 with following additional ToRs

- i) Submit the details of the Green belt showing the existing proposals.
- ii) Submit compliance details on the conditions of previous EC/CRZ clearance.
- iii) Submit the details of Oil Contingency plan along with the infrastructures.
- iv) Submit the details of the Cargo evacuation system.
- v) Submit the details of ship's waste management.

3.0 Regarding Public Hearing it was decided by the committee that the issue related to Public Hearing is to be looked after by MoEF.

4.0 The matter has been examined in the Ministry and it is decided to extend the validity of ToRs by one year i.e. up to May 26, 2014. However, Public Hearing may be conducted for the project as per provisions of Environmental Impact Assessment Notification, 2006 and the issues raised by the public should be addressed in the Environment Management Plan.

Yours Faithfully,

(Lalit Kumar)
Dir.

Annexure 1

Terms of Reference for Ports and Harbor

Objective

Terms of Reference (TOR) for preparation of Environmental Impact assessment (EIA) for Ports and Harbor projects as per the EIA notification, 2006 has been devised to improve the quality of the reports and facilitate the decision making transparent and easy. TOR will help the project proponents and consultants to prepare report with relevant project specific data, which are informative, compact and easy to comprehend. TOR for Ports and Harbor projects is expected to cover all environmental related features.

General Information

Development of port facilities can make a significant contribution to the economic development and the growth of maritime transport. At the same time it may also create adverse impact on the surrounding environment. Port development may create a wide range of impact on the environment through activities like construction work, dredging, reclamation, land fills, discharges from ships and cargo operations, and other port related activities. Port development and operation should, therefore, be planned with careful consideration of their environmental impact. The preparation of EIA report and implementation of EMP is essential for effectively managing these adverse effects.

EIA-EMP report should be based on maximum rated capacity of the project in terms of cargo handling, technology, equipment, manpower, resource use, etc. The report should be based on generic structure given in appendix III to the EIA notification 2006 for the project or its expansion based on proposed peak rated capacity. The report should incorporate the page numbers of various chapters, sections and sub-sections, tables, appendices, drawings and figures etc., with titles shall be clearly indicated under the heading contents.

Ports, Harbors, break waters & dredging with cargo handling capacity ≥ 5 million TPA of cargo handling capacity (excluding fishing harbors are classified as category A projects and with cargo handling capacity < 5 million TPA and/or ≥ 10000 TPA of fish handling capacity are classified as category B projects, subject to the applicability of General Conditions as stipulated in the EIA Notification, 2006 and as amended vide 1st December 2009.

Note:

- Capital dredging inside and outside the ports or harbors and channels are included
- Maintenance dredging is exempt provided it formed part of the original proposal for which Environment Management Plan was prepared and environmental clearance obtained

1.0 Introduction

This chapter should cover the following.

- Purpose of the project, project proponent, brief description of the project- name, nature, size, location of the project, its importance to the country and the region
- Land description- plot/ survey nos/ village, tehsil, district, state & extent of the land

- ▶ Profile of the project proponent, name and contact address with e-mail, implementing organization, organizational chart, project consultants etc
- ▶ Whether the project attracts the provisions of General Conditions of EIA Notification 2006 and its amendment. If so applicability should be discussed
- ▶ The proponent should confirm that the project meets the central/state/local environmental regulations and standards applicable for the project
- ▶ Any litigation pending against the proposed project and/ or any direction/ order passed by any court of law against the project, if so, details thereof
- ▶ In case of expansion/ modernization of the project, the environmental compliance status for the existing project should be explained

2.0 Project Description

This chapter should cover the broader details of the basic activities, location, layout and implementation schedule of the project.

- ▶ Type of the project- new, expansion, modernization, container cargo handling facility, fishing, minor / major port etc
- ▶ Relevance of the project in the light of the existing development plans of the region
- ▶ Project coverage, master plan, phasing and scope
- ▶ Description of a project site, geology, topography, transport and connectivity, demographic aspects, socio, cultural and economic aspects, villages, settlements
- ▶ Capacity of the port, types of cargo proposed for handling, cargo handling equipments, ancillary operations, housing, truck parking details etc
- ▶ Technologies involved for design, construction, equipment and operation
- ▶ Use of existing public infrastructure – road, railway and inland waterway net works, water supply, electrical power etc
- ▶ Estimated water budget for the proposed project- during construction/ operation stages
- ▶ Estimated cost of development of the project, environmental cost, funding agencies i.e., whether governmental or on the basis of BOT etc
- ▶ Details of land acquisition, rehabilitation of communities / villages present status of such activities
- ▶ Resources, manpower and time frame etc –required for project implementation

Essential Maps to be Provided with Application

- ▶ A map specifying locations of the state, district and project location
- ▶ A map of project area and 10 km area from boundary of the proposed/existing project area, delineating protected areas notified under the wild life (Protection) Act, 1972 / critically polluted areas as identified by the CPCB from time to time / eco-sensitive areas as notified under Section 3 of E(P) Act 1986 / inter state boundaries and international boundaries
- ▶ A map covering aerial distance of 15 km on the landward side from the proposed project boundary delineating environmental sensitive areas as specified in column no 9(iii), Form I of EIA notification dated 14th Sep 06.
- ▶ Land use map of the study area to 1: 25,000 scale based on recent satellite imagery of the project area and 10 kms from the proposed project boundary delineating the cropping pattern,

wastelands, forest area and built-up areas, water bodies, human habitation and other surface features such as railway tracks, ports, airports, roads, NH, major industries etc.

- ▶ Site lay out plan of the proposed development shall be submitted to a scale of 1:5000, clearly marking the layout of breakwaters, navigation channels, harbor basin, berths, dry docks, work shops, container freight station, cargo handling systems, conveyors, covered and uncovered storage yards, ware houses, roads, railway tracks, effluent disposal point, administrative and operational buildings, utilities, town ships, greenbelt, dredged material disposal, etc. Boundaries of the proposed port shall be shown therein with latitude and longitude.
- ▶ Area drainage contour map of the project area and 2-5 km from the proposed project area shall be clearly indicated. In case of any proposed diversion of nallah/canal/river, same shall also be shown in the map
- ▶ Hydrographic charts of the offshore area giving general morphology of the coastal stretch to a scale of 1:50,000 shall be submitted covering water depth up to 10m beyond the maximum proposed dredging depths of the project and covering a distance of 5 km along the coast from the project limits on both sides
- ▶ The CRZ maps indicating the High Tide Line (HTL), Low Tide Line (LTL), demarcated by one of the authorized agencies and the project lay out superimposed on the map should be submitted on 1:5000 scale map. At the stage of TOR and the recommendations of the State Coastal Zone Management Authority (at the stage of EC). Simultaneous action shall also be taken to obtain the requisite clearance under the provisions of the CRZ notification 1991 for the activities to be located in the CRZ.
- ▶ In case the project is located within 10km of the National parks, sanctuaries, biosphere reserves, migratory corridors of wild animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife warden thereon (at the stage of EC)

3.0 Analysis of Alternatives (Technology & Sites)

In case, the scoping exercise results in need for alternatives this chapter shall include:

- ▶ Description of various alternatives like locations or layouts or technologies studied
- ▶ Description of each alternative
- ▶ Selection of alternative

4.0 Description of the Environment

4.0 Study Area

As a primary requirement of EIA process, the proponent should collect primary baseline data in the project area as well as in the area falling 5 km from the proposed project boundary and secondary data should be collected within 15 kms aerial distance from the project boundary, as specifically mentioned at column 9(iii) of Form I of EIA Notification 2006. The study areas mentioned in this document shall be considered for guidance purpose but the exact study area for different environmental attributes (water, air, noise, soil, etc) is to be submitted considering the proposed activities and location, along with proper reasoning, for review and approval by the expert appraisal committee.

4.1 Land Environment

4.1.1 Land

Availability of land for earmarking for the port without causing a due hardship to local habitat and their socio cultural and economic aspects is very important. Data on the land availability is to be ascertained from local authorities, revenue records etc. Justification for the proposed quantum of the area is to be given.

4.1.2 Topography

Baseline data to be given on description of existing situation of the land at the proposed project area including description of terrain hill slopes coastal and inland topography, coastal features (lowland, beaches, littoral areas, shoal areas), terrain features, slope and elevation. Study of land use pattern, habitation, cropping pattern, forest cover, environmentally sensitive places etc, by employing remote sensing techniques (if available) and also through secondary data sources.

4.1.3 Geology

Baseline data to be provided on rock types, regional tectonic setting (reported fractures/faulting, folding, warping), and history of any volcanic activity, seismicity and associated hazards, mainly in the coastal area. Information on quarry yields, strengths of rock, distance of quarries from habitat, restrictions for quarrying, environmental controls, statutory permissions etc., should be provided.

4.1.4 Soil

Soil data including type, classification, characteristics, soil properties etc., are important from engineering considerations for design of structures, loading capacities of cargo stockpiles, green belt development etc. Changes in parameters of soil also may affect plantation and vegetative growth, which in turn may endanger the health of local habitat. Baseline data of the soil, results of investigations carried out to be provided for the project area.

4.2 Water Environment

4.2.1 Ground Water

Baseline data of ground water including data of pH, dissolved solids, suspended solids, BOD, DO, coli-form bacteria, oil, heavy metals (depending upon the type of cargo) is to be collected at least for one season. Usage purpose of the ground water, if any, is to be indicated.

4.2.2 Surface Water

Baseline data on location of surface water like lagoons, lakes, tidal inlets, streams, rivers, their details, present quality and their utility, if any, is to be provided. Details of water bodies in the project area shall be described specifically. Water quality is to be monitored for one season.

4.3 Marine Environment

4.3.1 Coastal Hydrology/Geomorphology

Coastal hydrology requires collection of oceanographic data during the study period, covering the following parameters:

- ▶ Tides
- ▶ Waves (wind waves and swells)
- ▶ Storm surges
- ▶ Currents
- ▶ Salinity
- ▶ Sea water temperature
- ▶ Suspended load, and
- ▶ Seabed bathymetry

Baseline oceanographic data should extend at least to depths more than 10m of proposed deepening of the harbor approach and basin as per master plan proposed. A study on likely changes in the sediment transport and littoral drift due to the construction of port particularly the breakwater should to be taken up.

Details of mangroves, marshes and other coastal vegetation, sand dunes, coastal stability, seismic characteristics, history of any endangered species, coastal erosion, and shoreline changes should be furnished.

4.3.2 Bed Sediment Contamination

Baseline data on bottom sediments and the associated bottom biota and other physical habitat, at the proposed project area and the neighborhood areas has to be collected and analyzed.

4.3.3 Sea/Harbor Water Quality

Baseline data shall be collected on chemical parameters in the open sea and in the proposed port area for understanding hydro chemical characteristics in the marine environment (such as sea water temp, BOD, DO, pH, TSS, salinity, heavy metals depending upon the cargo, etc.)

4.4 Biological Environment

4.4.1 Marine/Coastal Ecology

Baseline data of aquatic flora and fauna at the project area, including the coastal area is to be ascertained by proper surveys including mangroves and marshes and other coastal vegetation, sand dunes. Data on coastal stability, seismic characteristics, history of any endangered species, coastal erosion, shoreline changes, if any, is also necessary.

4.4.2 Flora and Fauna in the Neighborhood

Details on secondary data on the existing flora and fauna in the study area as well as 15km from its boundary, carried out by an university/institution under the relevant discipline (such as BSI, ZSI, WII, etc) shall be included in the list of flora and fauna along with classification as per Schedule

given in the Wild Life Protection Act, 1972 and in the Red Book Data and a statement clearly specifying whether the study area forms a part of an ecologically sensitive area or migratory corridor of any endangered fauna.

4.5 Air Environment

Meteorological Data

Meteorological data covering the following should be incorporated in the EIA report. The data for at least a 10 year period should be presented from the nearest meteorological station, except for the history of cyclones and tidal surges for which 100 year data is required.

- ▶ Wind speed and direction
- ▶ Rainfall
- ▶ Relative humidity
- ▶ Temperature
- ▶ Barometric pressures
- ▶ History of cyclones

Ambient Air Quality

Base line data of ambient air parameters namely particulate matter size less than 10µm or PM₁₀ µg/m³, particulate matter size less than 2.5 µm or PM_{2.5} µg/m³, sulphur dioxide (µg/m³), nitrogen dioxide (µg/m³), carbon monoxide (µg/m³) heavy metals and other harmful air pollutants depending upon the type of the cargo should be monitored.

This data should be collected in an area extending at least 5 km from the project boundary by observation at a number of locations. Specific importance should be attached to areas in close proximity of project say up to 1 km. One season data should be monitored other than monsoon as per the CPCB Norms. One station should be in the up-wind/ non-impact/ non-polluting area as a control station.

4.6 Noise

Baseline data on noise pollution at the project area and the neighbourhood up to 1 km or nearest residential areas is to be monitored as per the CPCB norms.

4.7 Socio-Economic and Occupational Health Environment

Baseline data at the project area shall include the demography, particularly on human settlements, health status of the communities, existing infrastructure facilities in the proposed area and area of impact due to the proposed activity. Present employment and livelihood of these populations, awareness of the population about the proposed activity shall also be included.

4.8 Existing Solid Waste Disposal Facilities

Details of authorized municipal solid waste facilities, biomedical treatment facilities and hazardous waste disposal facilities in the area should be inventorized, in case if it is proposed to utilize the same

4.9 Public Utilities

Base line data of existing public utility infrastructure shall be ascertained and reported to assess the impact of the project on these public utilities in order to incorporate desired methods in the EMP and monitor the same during the construction as well as operational phases of the port.

4.10 New Policy on Expansion of Existing Ports and Initiation of New Projects

MoEF had assigned a study to Ministry of Earth Sciences (MoES) for identifying coastal stretched with regard to erosion/ accretion. Based on the phase study report the MoEF has formulated new policy on expansion of existing ports and initiation of new projects along the coastline vide office memorandum dated 3rd November 2009(Annexure -) and the same was kept in the public domain i.e. on the ministry's web site. MoEF had initiated phase II study through Institute for Ocean management (IOM) and ICMAM to identify the shoreline changes at micro level and map them in atleast 1:25000 scale map. Based on the out come of the study, further stipulations if any, will be indicated for development of foreshore facilities along the Indian coast. A decision in this regard by MoEF is expected by 31st October 2010. Till such time the stipulations as per ministry's office memorandum dated 3rd November 2009 shall be complied.

5.0 Anticipated Environmental Impact and Mitigation Measures

This Chapter should describe the likely impact of the project on each of the environmental parameters, methods adopted for assessing the impact such as model studies, empirical methods, reference to existing similar situations, reference to previous studies, details of mitigation methods proposed to reduce adverse effects of the project, best environmental practices and conservation of natural resources. The identification of specific impact followed with mitigation measures should be done for different stages i.e., location of the port, construction including dredging, ship traffic including discharges from vessels and cargo operations.

5.1 Land Environment

5.1.1 Land

Anticipated Impact: Impact of project construction/operation on the land requirement / land use pattern should be assessed. Affect of future growth of the port facility and/or of the ancillaries should be carefully assessed by preparing master plans for the port and the ancillaries. Impact on the public utilities arising out of the utilities for the project activities and impact on the natural drainage system are equally important. Prediction of impact should include impact on the existing infrastructures like road network, housing, ground water/surface water etc., and loss of productive soil and impact on natural drainage pattern.

Mitigation Measures: Mitigation measures to reduce adverse effects like adopting soil improvement techniques and adopting suitable design methods to reduce land requirement. Where land acquisition and consequential R&R methods are called for, it should be implemented duly adhering to the norms and complying with pertinent statutory requirements for such land acquisition. Strengthening of road and rail network infrastructure to handle the increase in traffic and truck parking arrangements, integration of Port development with the local land use plan should be planned.

5.1.2 Topography, Geology and Soil

Anticipated Impacts: Impact of port construction/operation on the topography due to activities like depletion of hills due to large scale quarrying, filling of low lying area with dredged spoil and borrowed material, damage to existing vegetation/green belt and plantation, changes in land use patterns, disturbance to existing protected areas like mangroves, forests and environmentally sensitive areas/zones should be assessed

Flooding due to filling up of low-lying areas should be assessed. Impact on the surrounding land use pattern, on infrastructure like housing, ground water, etc should be assessed.

Impact of the project construction on the geology and vice-versa should to be studied in detail. Impact of project construction/operation on the soil parameters, probability of settlement, subsidence, slides, surface drainage, leachets etc., are to be assessed.

Mitigation Measures: Mitigation measures to reduce adverse effects include study of alternative sites, improving green belt, obtaining construction materials from other sources, usage of alternative construction materials like fly ash, where possible; storm water management etc. Adopting soil improvement techniques and suitable designs, ground covering etc.

5.2 Water Environment

5.2.1 Ground Water

Anticipated Impact: Discharge of trade effluent and sewage and its impact. Impact of project construction/operation on the ground water on account of leachets, run off from material and cargo storages and toxic or harmful substances, percolation, sea water intrusion etc.,

Mitigation Measures: Mitigation measures to reduce adverse effects like impervious paving the cargo areas, impervious roads, lined drains, routing surface drainage to settlement tanks/pits etc. Treatment of effluent, recycle/ reuse and disposal should be planned. Groundwater study on leaches should be carried out periodically and should be correlated with baseline data. Remedial measures should be taken in case of any deviation. Based on the total water budget of the project, the use of ground water should to be reviewed and alternatives to be presented.

5.2.2 Surface Water

Anticipated Impact: Impact of port operations on surface water sources, contamination due to cargo operations, impact on utility of surface water resources by the neighboring colonies, impact on surface water flow (ex. flooding) due to anticipated obstructions, etc

Mitigation Measures: Protection measures to surface water resources to prevent reduction in their quality due to construction and operational activities and choice of alternative resources. Proposals to treat effluents conforming to standards notified under EP Act 1996 should be submitted.

5.3 Marine Environment

5.3.1 Coastal Hydrology

Anticipated impact: Impact of the project construction/operation on the coastal hydrology on account of port construction should be assessed by suitable model studies.

Mitigation measures: Careful site selection and port design should be planned to minimize impact due to changes in current patterns and other coastal hydrology. Model experiments or computer simulations of these changes are useful in developing an appropriate design. Shore protection works like construction of sea walls, groynes, sand by passing or beach nourishment should be studied.

5.3.2 Bed Sediment Contamination

Anticipated Impact: Impact of the project construction/operation on the bed sediment contamination on account of port construction/operations is to be assessed by suitable empirical/model studies.

Mitigation Measures: A survey of contamination of bottom sediments should be undertaken before dredging

5.3.3 Sea/Harbor Water Quality

Anticipated Impact: Impact of the project construction/operation on the sea/harbor water quality on account of port construction is to be assessed by suitable empirical/model studies.

Mitigation Measures: Proper collection and disposal of liquid and solid waste from shore establishment and ships should be planned.

5.4 Biological Environment

Anticipated impact: Impact of the project construction/operation on the marine/coastal ecology on account of port construction should be assessed by suitable empirical/model studies. Impact due to floodlights on the nesting of sea turtles and other species should be studied

Mitigation Measures: Mitigation measures to reduce adverse effects should be provided.

5.5 Air Environment

Anticipated Impact: Impact of project construction/operation on the ambient air quality on account of emissions of dust during construction and cargo handling as well as emission of gases from equipment deployed for construction and cargo handling should be assessed. Prediction due to emissions during cargo handling/ emissions from the ships in the port area/ emissions due to increased traffic, emission inventory for critical pollutants with and without mitigation measures, prediction of the impact due to the existing activity on the proposed project, prediction of impact due to sanctioned/on going projects in the surrounding area on the proposed project and the ambient environment shall be carried out.

Mitigation Measures: Mitigation measures proposed during the construction stage should include dust suppression measures by suitable techniques. Mitigation measures proposed during the operation stage should include alternative solutions such as closed conveyor system, closed silos, closed vehicles to transport dusty cargo etc, mitigation measures to lower the emissions from the ships and green belt development.

5.6 Noise Pollution

Anticipated Impact: Impact of project construction/operation on the noise and vibration on account of construction equipment, cargo handling equipment and road traffic.

Mitigation Measures: Mitigation measures to reduce adverse effects should be provided.

5.7 Socio-Economic and Occupational Health Environment

Anticipated Impact: Predicted impact on the communities of the proposed activity. Details of public and private land in the proposed and immediate surroundings socio-economic status of the affected owners of the private land shall be properly complied. Present status of health, housing, public utilities, commercial structures and transportation should be collected. Impact of the project on socio cultural aspects should be assessed. Socio-economic impact due to displacement of fishing settlements and population influx due to increased activities should be assessed.

Mitigation Measures: Mitigation measures to reduce adverse effects including satisfactory R&R methods should be planned.

5.8 Solid Waste Management

Anticipated Impact: Impact due to non-hazardous and hazardous solid waste generated during the construction and operational stages should be assessed.

Mitigation Measures: Mitigation measures to comply the norms should be planned. Options for minimization of solid waste and environmentally compactable disposal/ recycling of waste to conserve natural resources should be planned. Management and disposal of temporary structures, made during construction phase should be planned.

6.0 Environmental Monitoring Program

This Chapter shall include details of environmental monitoring programme. It should include the technical aspects of monitoring the effectiveness of mitigation measures (including measurement methodologies, data analysis, reporting schedules, emergency procedures, detailed budget & procurement schedules)

- ▶ Summary matrix of environmental monitoring, during construction and operation stage
- ▶ Requirement of monitoring facilities
- ▶ Frequency, location, parameters of monitoring
- ▶ Compilation and analysis of data, comparison with base line data and compliance to accepted norms and reporting system
- ▶ Plantation monitoring program

7.0 Additional Studies

Specific condition	Study required
Studies identified by the proponent and the Regulating Authority	Studies directed by the Expert Appraisal Committee while deciding the TOR for the project
Studies identified by the public and other stake holders	Public hearing with the issues raised by the public and the response of the project proponent in tabular form shall be discussed
Risk Analysis and Disaster Management Plan (DMP)	<ul style="list-style-type: none"> • Risk analysis • Safety measures for handling bulk liquid substances • Personal protection equipment • Disaster management Plan (DMP) • Oil spill contingency plan • Emergency response procedures
Natural resource conservation and optimization	<p>Plan of action for conservation of natural resources such as utilization of fly ash and other suitable waste materials availability for the construction of the project. Dredged material utilization and disposal plan should be furnished.</p> <p>Water Conservation measures should be addressed. Energy efficiency measures in the activity arte to be drawn up.</p>
R & R action plans	Detailed R&R plan with data on the existing socio-economic status of the population in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternative livelihood concerns/employment and rehabilitation of the displaced people, civil and housing amenities being offered, etc and the schedule of the implementation of the project specific R&R Plan. Details of provisions (capital & recurring) for the project specific R&R Plan
Specific studies requirement depending on the site and activity proposed shall be discussed	

8.0 Project Benefits

This chapter shall include benefits accruing to the locality, neighbourhood, region and nation as a whole. It should bring out details of benefits by way of:

- Improvements in the physical infrastructure by way addition of project infrastructure, ancillary industries that may come up on account of the project
- Improvements in the social infrastructure like roads, railways, townships, housing, water supply, electrical power, drainage, educational institutions, hospitals, effluent treatment plants improved waste disposal systems, improved environmental conditions, etc.
- Employment potential –skilled; semi-skilled and unskilled labour both during construction and operational phases of the project with specific attention to employment potential of local population as well as necessity for imparting any specialized skills to them to be eligible for such employment in the project on a long term basis i.e., during operational and maintenance stages of the project and

- ▶ Other tangible benefits like improved standards of living, health, education etc.

9.0 Environmental Cost Benefit Analysis

If recommended by the Expert Appraisal Committee at the scoping stage, this chapter shall include the environmental cost benefit analysis of the project.

10.0 Environmental Management Plan (EMP)

- ▶ Summary of potential impact & recommended mitigation measures.
- ▶ Allocation of resources and responsibilities for plan implementation
- ▶ Administrative and technical setup for management of environment
- ▶ Institutional arrangements proposed with other organizations/Govt. authorities for effective implementation of environmental measures proposed in the EIA
- ▶ Safe guards/mechanism to continue the assumptions/field conditions made in the EIA
Environmental specifications for contractors should cover the required safeguards during the design and construction stage

11.0 Summary & Conclusion (Summary EIA)

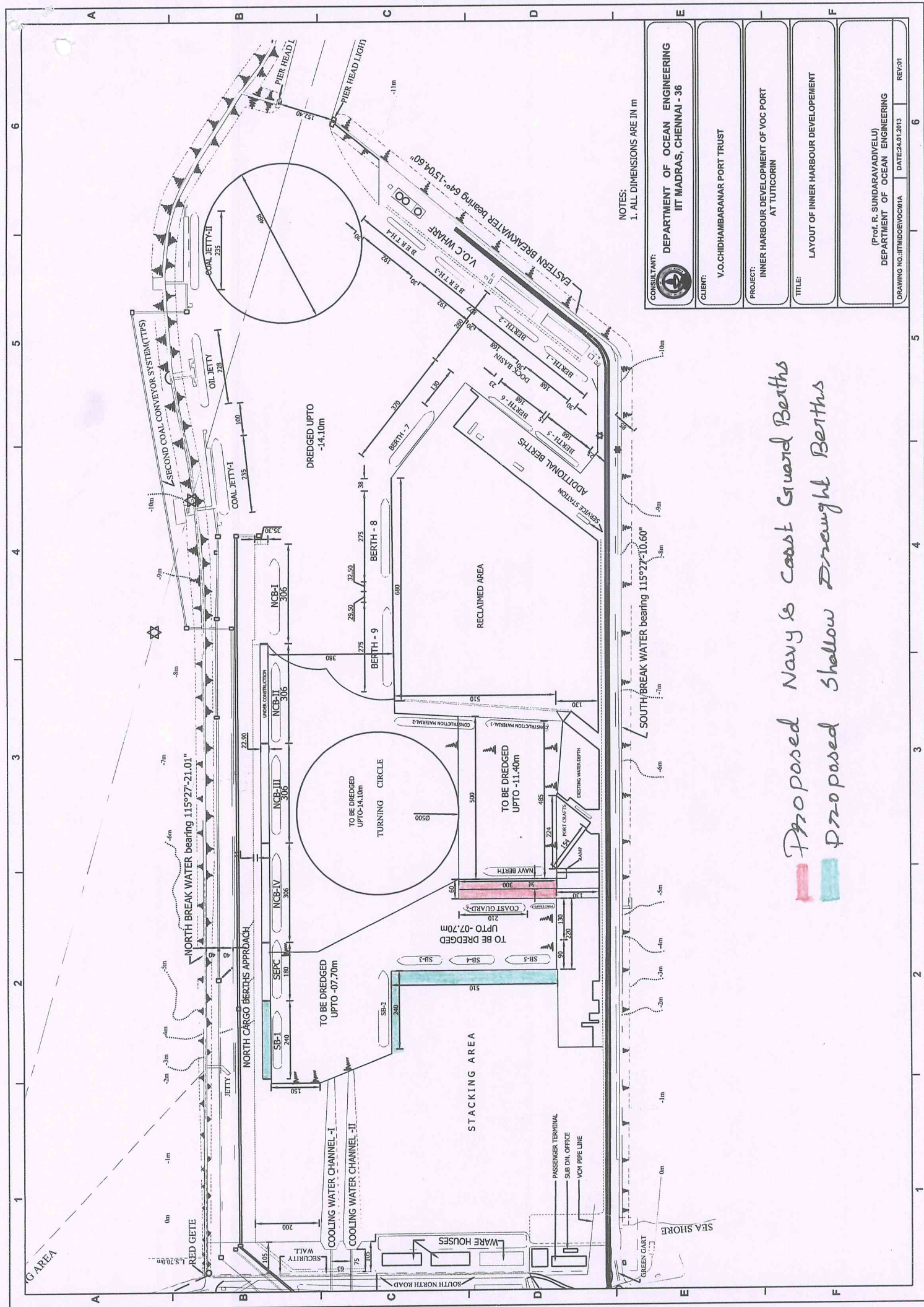
It shall be a summary of the full EIA report condensed to ten A-4 size pages at the maximum. It should necessarily cover in brief the following chapters of the full EIA report – Introduction/ Project description/ Description of the environment//Anticipated environmental impact & mitigation measures/Additional studies/Environmental monitoring programme/Project benefits/Environmental management plan /Disclosure of consultants engaged

12.0 Disclosure of Consultants Engaged

This chapter shall include the names of the consultants engaged with their brief resume and nature of consultancy rendered.

Enclosures

Feasibility report/Form I/Photos of proposed project site



Proposed Navy & Coast Guard Berths
Proposed Shallow Draught Berths

