

# **CERTIFICATE**

Certified that all required annexures and particulars pertaining to the proposals are furnished in English.

District Forest Officer,
Thoothukudi Dvision
Thoothukudi.

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# **CERTIFICATE**

Certified that double the extent of land proposed for Compensatory Afforestation is only within the Reserve Forests and such land is available.

District Forest Officer,
Thoothukudi Dvision
Thoothukudi.

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BY

TAMIL NADU FOREST DEPARTMENT

From

Thiru Rampati, I.F.S., Conservator of Forests, Tirunelveli Circle, Tirunelveli – 7. To

The Principal Chief Conservator of Forests,

Chennai. - 15.

C. No. D / 12455 / 2007, dated 04.12.2007.

Sir,

Sub: Forests - Diversion of forest land for non-forest purpose 0.055 Ha. of forest land in Srivaigundam R. L. Sy. No. 600 of Srivaigundam village in Thoothukudy division to the Executive Engineer, TWAD Board Urban division, Thoothukudi for construction of Intake well along with pump room and Footbridge - Submission of - Regarding.

Ref: The District Forest Officer, Thoothukudy Lr. No. D / 7868 / 07, dated 09.11.07.

I submit to enclose herewith a Section 2 proposal under Forest (Conservation) Act, 1980 received from the District Forest Officer, Thoothukudy for kind reference. The District Forest Officer has reported that the Executive Engineer, TWAD Board, Urban Division, Thoothukudy has sent the proposal for diversion of 0.055 Ha. of forest land in Sy. No. 600 of Srivaigundam village of Thoothukudy division for proposed construction of Intake well of 10 M. dia at the distance of 75 M. from the Thamirabarani River bund footbridge over 7250 M. length and 3 M. width from intake well to bund of the river and control room. The Sy. No. 600 of Srivaikundam village has been declared as R.L. as per Rule 5 of General rules framed under Section 26 of Tamil Nadu Forest Act as stated in District Collector, Tirunelveli Lr. No. 153018 / 1975, dated 06.01.1975. Copy of the letter is enclosed herewith for kind reference.

The requirement of land for this project is as follows:

1) Intake well .. .. .. 95  $M^2$ 

2) Foot bridge to a length of 72.5 M.& 3 M. width  $217 \text{ M}^2$  552 M<sup>2</sup> (or) 0.055 Ha.

3) Control Room 20m x 12m .. .. 240 M<sup>2</sup>

in install

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The District Forest Officer has reported that Kuthiraimozhitheri R.F. has been identified as degraded forest for planting under compensatory afforestation. The user agency has given undertaking for the payment of NVP raising compensatory afforestation and annual lease rent etc., The details of amount to be collected from user agency are as follows:

1) The net present value at Rs. 5.80 Lakhs x 0.0552 Ha	Rs. 32,020/-
2) Cost of Compensatory Afforestation at Rs.37700 x 0.1104 Ha.	Rs. 4,162/-
3) Maintenance cost at Rs. 7,000 / per year x 5	Rs. 3,864/-
	Rs. 40,046/- (or)
	Rs. 41,000/-

The District Forest Officer has reported that there is no endangered fauna or flora, but grasses Amalai and Velikaruvai are present, which are the only weeds in that area. No protected Archeological site is near by. There is no violation of Forest Conservation Act, 1980. In view of the above the District Forest Officer has recommended the proposal for diversion of forest land.

The protected site located in S. No. 600 of Srivaikundam village was inspected by me on 29.11.2007. This Survey No. forms the river bed of Thambirabarani river. During my inspection the river water was flowing on about half of the area. On the rest of the area there is no vegetal cover except some weeds. There is no other alternative alignment for the purposes except through this Reserved land. For the above purpose no trees are to be cut. The proposed Reserved land is essential for providing water supply to the Industries and also for drinking purpose. Hence it is recommended.

I, therefore, request that the proposal may kindly be got approved from the Government and orders communicated early.

Encl: Three proposals.

Yours faithfully, Sd/- Rampati, Conservator of Forests Copy to the District Forest Officer, Thoothukudi for information & necessary action.

/t.c.b.o.

Senior Draughang Officer

Son

⊠113-A-1, Ettayapuram Road, Pole pettai, Phone: 0461-2346600 e-mail: dfothoothukudi@sancharnet.in

### TAMILNADU FOREST DEPARTMENT

From
Thiru. L.Nadhan, I.F.S.,
District Forest Officer,
Thoothukudi Division,
Thoothukudi – 628 002.

To
The Conservator of Forests,
Tirunelyeli Circle,
Tirunelyeli.

C.No. D/7868/2007, Dated: 9.11.2007

Sir,

only

Sub: Forests – Diversion of Forest land for Non Forest purpose – proposal under Forest Conservation Act 1980 – Tamil Nadu Water supply Board proposed to construction of In tank well along with pumproom and Footbridge in Reserve land survey No. 600 of Srivaikundam village in Srivaikundam Range of Thoothukudi Division – Proposal submission – regarding.

•Ref: District Collector, Thoothukudi reference No. Pa9/6801/2007, dated 30.10.2007.

I submit that the TWAD Board, Thoothukudi has submitted a proposal for diversion of Forest land for Non Forest purpose of construction of In tank., well of 10m dia at the distance of 75m from the river bund along with pump room and construction of Footbridge of length 72.5m from Intank well to the river bund for laying the connecting main of 800mm size G.I. Pipeline over the footbridge for supply of water to Industries like Southern Petro Chemicals Industries Corporation, Thoothukudi, Alkali Chemicals, Thoothukudi Termal Power Project, Dharangathara Chemicals work, SIPCOT, Zirconium Titanic Sponge plant, Heavy water plant and Port trust which had been proposed through District Collector, Thoothukudi.

The proposed construction of Intank well along with pumproom and Footbridge is located in (Reserve land) survey No. 600 of Srivaikundam Village of Srivaikundam Forest Range of this division. The survey No.600 is as reserve land as declared in District Collector of Tirunelveli in his reference No. 153018/1975, dated 6.1.1975. Hence, the proposal under Forest Conservation Act 1980 Section 2 in the above reference cited had been sent for the diversion of forest land.

The details of forest land required for diversion of Forest area for Non Forest purpose is below.

1. In tank well : 95 m<sup>2</sup> 2. Footbridge Length 72.5 L x 3 Width

3. Control room Length 20m x Breath 12m : 240 m2

> Total : 552 m2

: 217 m<sup>2</sup>

The area was inspected with user agency on 6.11.2007 by me. The land required for diversion is (552 m2) 0.0552 Ha which is below 1 Ha. In view of importance of the project, double the extant of land for that is to be diverted i.e., 0.1104 Ha of degraded reserved Forest in Kuthiraimozhitheri RF of this division can be afforested by Collecting the required fund from the user agency. proposed for compensatory afforestation had been marked in the map. The user agency had given an undertaking that they will pay all amounts as demanded. We may collect the lease rent at the prevailing rates.

The details of amounts to be collected from user agency is as below.

The land proposed for diversion in 0.0552 Ha 6.9 lakhs / Ha

The Net present value to be Collected is 0.0552 x 6.9 :Rs. 38,088.00 2 lakhs

Cost of Compensatory Afforestation 0.0552x2=0.1104 :Rs. 4,162.00 Ha (0.1104x37700)

Maintenance cost of 5 year @, Rs.7000/- per year x :Rs. 4 0.1104 Ha

> Total :Rs. 46,144.00

Rs. 47,000.00 Hence, the proposal in 5 copies along with check list and certificates are submitted herewith for favour of further necessary action as the land required is only for providing drinking water.

> Yours faithfully, Sd/- L. Nadhan, District Forest Officer. Thoothukudi.

Copy to District Collector, Thoothukudi.

Copy to Executive Engineer, TWAD, Urban division, Thoothukudi. Copy to Ranger, Srivaikundam.

/True copy/by Order/

Superintendent! 21187

# (3)

# PART – II

( To be filled by the concerned Deputy Conservator of Forests)

State Serial No. of Proposal .....

7	Location of the Project / Scheme:		Noth side of the Tamirabarani river bed in Survey No 600 of Srivaikundam village.
	State / Union Territory	:	Tamilnadu
ii	District	:	Thoothukudi District
iii	Forest Division	:	Thoothukudi Forest Division
iv	Area of Forest land proposed for diversion (in.Ha)	:	Pipe line length of 72.5Mts and 3Mts width of 217M2 from river bund, Well of 95m2 and Control room of 240M2 total area 552M2.of Forest land is proposed for diversion
v	Legal Status of Forest	:	(Survey no 600 of Srivaikundam Village)  Reserve land in Srivaikundam Range.
vi	Density of Vegetation	:	The ground is covered Nivelion & Covered A Nivelion
vii	Species –wise (Scientific names) and diameter class-wise enumeration of trees (to be enclosed. In case of irrigation / hydel Projects enumeration at FRL. FRL -2 meter & FRL-4 meter also be enclosed)		No cuttings of trees is required.
viii		:	No erosion is expected due to this project in Forest area.
ix	Approximate distance of proposed site for diversion from boundary of forest	:	The proposed pipe line and Tank well is passing through the Reserve land of survey no 600of Srivaikundam Village.
X	whether forms part of National Park. Wildlife sanctuary. biosphere reserve, tiger reserve, elephant corridor, etc., (If so, the details of the area and comments of the Chief Wildlife Warden to be annexed).		Nil.
	Whether any rate/endangered/ unique	:	No rate flora is found in the area requested
xi.	species of flora and fauna found in the area. If so details thereof		

	/1-4			_
	/ heritage site/ defence establishment or any other important monument is located in the area. If so, the details thereof with NOC from competent authority, if required.	5		
8	Whether the requirement of forest land as proposed by the user agency in col.2 of Part – I is unavoidable and barest minimum for the project. If no, recommended area item-wise with details of alternatives examined.		0.0552 Ha of Reserve land as proposed by user agency in colm 2 of Part I is unavoidable and barest minimum for the project. In view of the project the proposal is considered.	
9	Whether any work in violation of the Act has been carried out (yes/no). If yes, details of the same including period of work done, action taken on erring officials. whether work in violation is still in progress		No	
10	Details of compensatory afforestation scheme	:		•
i	Details of non Forest area/ degraded forest area identified for compensatory afforestation, its distance from adjoining forest, number of patches, size of each patch	:	The Compensatory afforestation is proposed to be carried out in he degraded reserve forest area of twice the extent of land proposed for diversion in kultural one skillweri RF.	
ii	May showing non-forest/degraded forest area identified for compensatory afforestation and adjoining forest boundaries	:	Map enclosed.	
iii	Detailed compensatory afforestation scheme including species to be planted. implementing agency, time schedule, cost structure etc.,	:	Enclosed.	
iv	Total Financial outlay for compensatory afforestation scheme	:	3.94 lakes 47000/-6	
V	Certificates from competent authority regarding suitability of area identified for compensatory afforestation and from management point of view. (To be signed by the concerned Deputy Conservator of Forests	:	Certificate enclosed	
11	Site inspection report of the DCF (to be enclosed) especially highlighting facts asked in col.7 (xi,xii) 8 and 9 above.	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	sinepected site on 6.11.07. The reserve land of 0.0552 HA lies in S. No. 600 of Sirivarigundam village. The area has no enan resed fauna or flora but grasses, Amalai and relikkaruvai are present strickaruvai are present s	plogital
	\$	20	ite is rearby the last guived is also is only sest minimum and us . There is no violation for est Censervation A	d a ravoida

			(color or color or
12	Division / District Profile	:	
i	Geographical area of district	:	4,63,100 Ha.
ii	Forest area of the district	:	11272.26 Ha
iii	Total forest area diverted since 1980 with number of cases		3.2434 Ha with 5 cases
iv	Total compensatory afforestation stipulated in the district / division since 1980 on	:	
a	Forest land including penal compensatory afforestation	:	70 Ha
b	Non – Forest land	:	36.26 Ha
V	Progress of Compensatory, afforestation as on (date)	:	
a	Forest land	:	70 Ha
b	Non – Forest land	:	36.76 Ha
13.	Specific recommendations of the DCF for acceptance or otherwise of the Proposal with reasons.	•	In view of the importance of the project, the proposal is recommended for acceptance.

9/107 4/15

District Forest Officer, Thoothukudi District, Thoothukudi.

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# Model Estimate for Raising Compensatory Afforestation Plantation in Thoothukudi Division,

2007 - 2008

Espacement: 3.15m x 3.15m

Name of species:

Area

1Hectare

**Component** compensatory Afforestation

No. of seedlings

1000/Hectare

1000

Pro rata 26000/Hectare

Casualities

TOTAL

100 1100

Location:

Size of Polybag

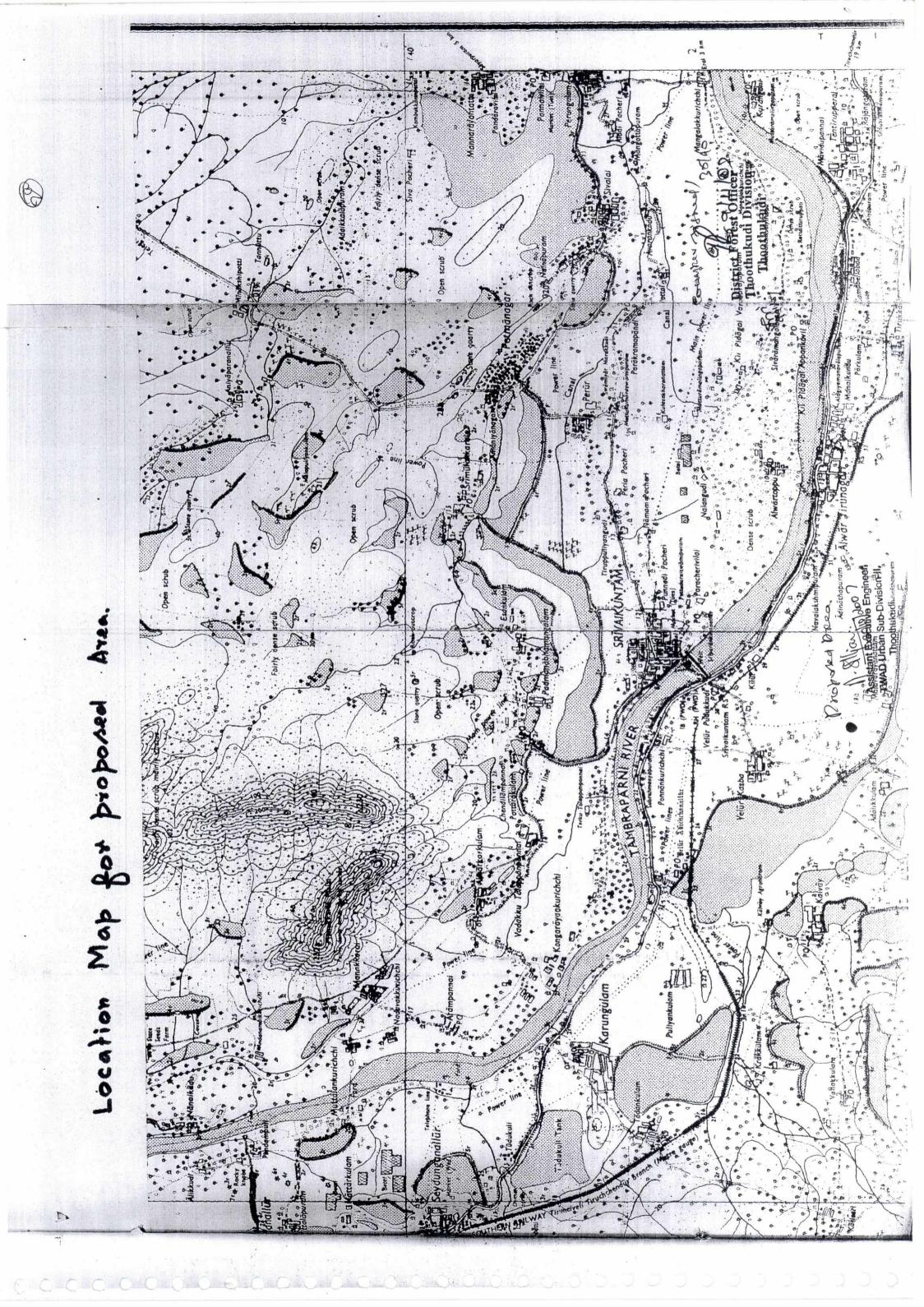
13x25

No.	Quantity	Description of Work	FSR	Man/d	Rate	Per	Amount
		Advance work					
1	1100	Cost of poly bags Size 13x25			301	1000	331
2	4.84	Cost of Miscellaneous seeds	LR		20	. 1	97
3	20.9	Cleaning of Nursery Site	4.1	2.42	205.82	200	22
4	1	Forming Mother bed	4.2		26	1	26
5	0.04	Cost of Farmyard manure					
		for Mother bed	LR		44	1	2
6	1	Watering the Mother bed					
	15	twice daily	4.5.1	0.82	69.74	10	105
	1	Watering the Mother bed					
	30	twice daily	4.5.1	0.41	34.87	10	105
7	0.418	Cost of fertile earth for soil mixture	PCCF	0.84	83	1	35
			M.E	- 8		1	
	0.418	Cost of fertile earth for soil mixture	-do -	0.147	130	1	54
8	0.418	Cost of Farmyard manure for					
		Soil mixture	-do -	0.28	209	1	87
9	1	Water storage pit	LS		105	1	105
10	1100	Filling the bags with soil mixture	4.6.5	4.78	381.02	1000	419
		1:3 arranging in beds and pricking					
		out seedling					
11	1100	Daily Twice watering - 10 days	4.10.5	0.23	19.56	1000	215
*	10						
12	1100	Once Daily watering - 30 days	4.11.5	0.115	9.78	1000	323
	30						

13	1100	Alternative Days - 30 days	4.11.5	0.115	9.78	1000	323
	30	, , , , , , , , , , , , , , , , , , , ,					
14	1100	Weekly once - 30 days	4.12.3	0.115	9.78	1000	323
	30	F 0 1					
15	1100	Cost of water	4.12.3		0.85	1000	94
	100	2	# VI				
16	1100	Shifting, weeding and grading the	4.15.1	0.51	43.38	1000	239
	5	Container plants					
17	1	Forming temporary shade pandals	4.9	1 .	85.05	1	85
		10x1m including collection of grass					
18	0.37	Land rent for 6 months	-		40	1	89
	6						- 2
19	150	Survey and demarcation including	3.3	0.31	26.37	100	40
		cutting 1m wide lines for plantations			SE 13		
		(Chain and Compass Survey)					
20	1000	Aligning and marking or stacking	5.2.1	1.38	117.37	1000	117
		excluding cost of stacks.					
	*	Digging 45cm3 pits in Tank bed					
		Areas and plains (Other than hard					4.5
		gravelly soil)					
21	1000	Rainy Season	5.6.2	3.23	274.7	100	2747
22	1100	Transport of Container plants to the	5.44	1.53	130.1	1000	143
		planting site over an average lead of			190		
		2 Km including Loading and					
		unloading charges.			-		
23	1100	Additional lead up to 8 k.ms	5.44		6.00	1000	53
	8						
24	1100	Head load upto 500m where the	5.13.2	3.59	305.30	1000	336
		seedlings are stacked at the planting					
		site					
25		Distribution of Seedlings to					
		the planting site					
А	110	where the lead is up to 100m	5.16.1	1.69	143.7	1000	16

					. (2)	27)	
В	400	where the lead is up to 200m	5.16.2	2.25	191.4	1000	77
26	1000	Planting the container plants by refilling the pits of 45cu m pits	5.2	1.15	97.81	100	978
27	100	Replacement of Casualities by reopening the failed pits and planting the seedlings	5.23		235.2	100	235
28	1000	Weeding and soil working to a depth 15cm and 1m around	5.24	1.23	104.61	100	1046
29	500	Cost of manure and neem cake			10.00	1	5000
30	500	Applying of neem cake and manure			5.00	1	2500
31	1	Erection of Publicit Name board		LS	4000.00	1	4000
32	1100	Formation of Catch water pit 0.90x0.45x0.30m Watering	2 2	5.26	581.74	100	6399
34		Contingencies photos,etc		141		2 4	13700 353
		lotai					37700

District Forest Officer,
Thoothukudi Division,
Thoothukudi.



### TAMILNADU FOREST DEPARTMENT

FROM i larii beru Thiru.C.K.Sreedharan,I.F.S., Principal Chief Conservator of Forests, #1. Jeenis Road, Panagal Building, Saidapet, Chennai 600 015.

TO The Secretary to Government, Environment and Porests Department Secretariat, Chennai-9.

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Ref. No. TS4/74244/2007, dated: 20.12.07

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Forests - Diversion of Forest land for non-forest purpose 0.055 ha. of Forest land in Srivaigundam R.L. Sy No;600 of Srivaigudam Village in Thoothukudy division to the Executive Engineer. Thoothukudy division, Thoothukudi for Construction of Intake well along with pump room and Foot bridge - proposal sent under Forest DEC 2007 (Conservation) Act 1980 - Concurrence requested.

JUD 60 OF SIR ADD DO DE COLL wish to inform that the District Forest Officer, Thoothukudi through

the Conservator of Forests, Tirunelveli has sent a proposal under section 2 of Forest (Conservation) Act 1980 for diversion of 0.055 ha. of Forest land in Sy. No. 600 of Srivaigundam Village of Thoothukudi Forest division in favour of TWAD Board for Construction of Intake well of 10 Mtrs. dia at distance of 75 Mtrs from Thamirabarani River bund Foot bridge over 72.50 Mtrs length and 3 Mtrs width from Intake well to bund of the river and control room. The Sy No. 600 by Srivaikundam Village has been declared as R.L. as per Rule 5 of General rules framed under section 26 of Tamil Nadu Forest Act as stated in District Collector, Tirunelveli letter No: 153018/1975, dated: 6.1.1975. Copy of the letter is enclosed herewith for kind references.

> 2) The requirement of land for this Project is as follows: eneral approval ecoorded by Coversment of India

95 M<sup>2</sup>atate and 1. In take Well

Insixs in 2. Foot bridge to a length of 72.5 M mahana Risky & 3 M Width

od vlonis v.3. Control Room 20 M x 12 M 240 M<sup>2</sup>

Total:

552 M<sup>2</sup> (or) 0.055 Ma.

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Thoothukudi division on 6.11.2007 and he has reported that there is no endangered fauna or Flora, but glases Amalai and Velikaravai are present, which are the only weeds in that area and no protected Archeological site is near by and there is no violation of Forest (Conservation) Act 1980.

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- 4) The Project site located in Sy. No. 600 of Srivaikundam Village was inspected by the Conservator of Forests also on 29.11,2007 and reported that the river water was flowing on about half of the area and on the rest of the area there is no vegetal cover except some weeds and there is no other alternative alignment for the purposes except through this Reserved land and for the above purpose no trees are to be cut.
- 5) In views of the above the District Forest Officer/Conservator of Forests have recommended the proposal for diversion of forest land.
- 6) The Project involves no felling of trees and also since the area proposed for diversion is only 0.055 ha. Compensatory Afforestation need not be insisted. The Net Present Value which works out to. Rs.32020/- (at Rs. 5.80 lakhs / /per ha.) only may be collected from user agency. The user agency has furnished undertaking for the payment of Net Present Value.
- 7) I am enclosing herewith the proposal in duplicate duly recommended.
- 8) In this regard, I wish to inform that this project falls under the category of General approval accorded by Government of India in letter No:11.9/98 FC. dated: 3.1.2005 & 24.9.2007 Empowering the State Government, for granting order for diversion of Forest land up to 1 ha in extent in each case. Hence Stage I/II for diversion of 0.055 ha. in Srivaigundam Village in Thoothukudi Forest Division infavour of TWAD Board may kindly be issued subject to following condition.

<sup>1)</sup> The Legal Status of Forest land shall remain unchanged.

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2) The user agency shall deposit the Net Present Value of the diverted Forest land measuring 0.055 ha. as per the orders of the Hon'ble Supreme Court dated: 30.10.2002 and 1.8.2003 in IA No. 566 in W P © No:202/95 and the guidelines issued by Ministry vide letter No:5-1/1998 Fc (Pt.ii) dated: 18.9.2003 and 22.9.2003 in this regard.

- 3) Additional amount of the Net Present Value of the diverted forest land if any becoming due after finalization of the same by the Hon'ble Supreme Court of India on receipt of the report from the Expert Committee, shall be charged by the State Government from the user agency. The user agency shall furnish the under taking to this effect.
- 4) The funds received from the user agency towards Net Present Value under the Project shall be transferred to Ad-hoc CAMPA in account number C.A 1579 of Corporation Bank, Block-11, CGO Complex Phase-I, Lodhi Road, New Delhi-110003 (or) Union Bank of India, Sunder Nagar Branch, New Delhi A/c No: 344901010070128.

Encl: Proposals in Duplicate.

Yours faithfully, Sd/- Gautem Dey, for Principal Chief Conservator of Forests

Copy to:

The Conservator of Forests, Tirunelveli Circle.

Copy to: The District Forest Officer, Thoothukudi Division.

for information.

/True Copy/By Order/

V. Hernavath

Senior Draughting Officer.

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From

Dr.R.Palaniyandi, I.A.S. District Collector, Thoothukudi. a District Forest (

The District Forest Officer, Thoothukudi.

Roc.No.Pa9/ 6801/07 dt30.10.07

To

Sir,



20 MGD Closed Conduit System WSS – construction of Well, Control Room, Foot Bridge in Forest area – permission requested-reg.

Letter No. 2910/JDO.1/F.20MGD/2007/dt. 25.10.2007 of Executive Engineer, TWAD Board, Urban Division, Thoothukudi

Thoothukudi is an important industrial town situated on the South-East Coast of India. The town is connected by road rail and by air. Industries like Southern Petro Chemical Industries Corporation, Tuticorin Alkali Chemicals, Tuticorin Thermal Power Project, Dharangathara Chemical works, SIPCOT, Zirconium Titanium Sponge Plant, Heavy Water Plant and Port Trust are located in and around Thoothukudi. To meet the requirement of water for the aforesaid industries, 20 MGD WSS was sanctioned in G.O.Ms.No. 2289/PWD dated 12.4.70 for Rs. 470.40 lakhs. The Scheme was executed and put into beneficial use during the year 1975 and is being maintained by TWAD Board. The Scheme has been declared as TWAD Board owned scheme vide G.O.Ms.No. 83/dt. 4.5.98.

The Source for the Scheme is the surface water of River Thamiraparani drawn through North Main Channel from



Srivaikuntam Anaicut. The head works of the Scheme is located Iruvappapuram. A link channel connecting Arumuga Mangalam Tank and North Main Channel has also been constructed for drawing raw water requirements during closure period. However, the experience in drawal of raw water from the North Main Channel reveals that much difficulties are met with to tap even a quantity of least 50% of raw water requirement during the closure period, water is being illegally tapped or pilfered during its transit by the wayside roots. This illegal tapping could not be controlled in the past period even though protection arrangements were made jointly by PWD and Revenue Department. The PWD have suggested tapping the requirement at authorities Srivaikuntam Anaicut itself and conveying the same through closed conduit system to the 20 MGD Plant. Accordingly a proposal has been formulated for 20 MGD WSS through closed conduit system.

The proposal for providing Closed conduit system to 20 MGD WSS has been administratively approved vide G.O.Ms.No. 160/RD/dt. 30.7.1998 for Rs. 2193.00 lakhs to install and Rs. 375.98 lakhs to maintain annually. It is proposed to draw 20 MGD of Water from the Sraivaikuntam Anaicut through intake well of 10m dia. The water will be pumped to the proposed sump at ridge point near Petmanagar. The alignment of Pumping main is along the sides of the road leads to Vagaikulam from Srivaikuntam via Thirupuliangudi, Perur and Petma Nagar.

It is proposed to construct an Intake well of 10m dia at a distance of 75m from the bank of the river. The Intake Well along with pumproom is suitably designed after checking the details of

(R)

soil depth of water above bed level. It is also proposed to construct a Foot bridge of length 72.50m from the Intake Well to the bund and it is proposed to lay the connecting main of 800mm size C.I. Pipeline over the Foot bridge. Salient details of the Intake well cum pumphouse is as follows:

Size proposed = 10.0m dia with Pumphouse

Bottom of Intake Well = (+) 2.00m

Average Bed level of river(GL) = (+) 8.00M

Maximum depth of water

at the location @ 75M = 4.00M

Floor level of pumphouse = (+) 18.20m

Foot valve level = (+) 5.00 m

Bund level of river = (+) 18.20m

Maximum flood level = (+)16.030 M occured during 1993

Crest level of Srivaikuntam

Anaicut = (+)12.01M

Sill level of North Main channel = (+)9.57M

The Control room of size 20m x 12m is proposed inside the river adjoining to the bund by providing column foundations. The salient details of the control room are as follows:

Size =  $20m \times 12m$ 

Floor level = + 18.20 m

The pumpsets housed in the Pumphouse over the Intake well will be receiving power supply from the Control Panel housed in the control room to be located near the bank of the



River. The Indoor Transformer is also proposed to be housed in the Control Room.

The area required for Well, Foot Bridge and Control Room measuring 552 Sq.m. falls in SF NO. 600 which is now under Forest Department limit.

Since there is no other area for tapping surface water other than S.F.No.600 (Forest land), I request that necessary permission may please be accorded for enter upon and to execute the work.

I inform to add that necessary fees if any demanded will be paid by TWAD Board from the Project Cost.

Collector Collector



(R)

# ANNEXURE - I CHECK LIST FOR PROPOSALS UNDER FOREST (CONSERVATION) ACT ,1980

SI.No	ACT ,1980	
01.110	Name of Document	Page No
	*	of
1	Information in proforms as not mile (4)	Proposa
2	Information in proforma as per rule (4) of F ( c Rules	
	Certificate from the Project authority that demand for forest land for the project is minimum.	3
3	Commissioner that no alternative suitable non — forest land is available for the project	-
4	project (ie) survey no Jcompartment no. item wise requirement of forest area for the project Vi.Dam seat, submergence, canal etc.	7
5	Area statement for none forest area required for the project.	_
6	Index Map in suitable scale	
7	Map of forest area required indicating classics	5
	in district colour to be countersigned by the Dy.  Conservator of Forest and Project authority	8
8	Contour map of the project area	
9	Unqualified commitment form project authority to bear the cost of exploitation of trees and the cost of compensatory afforestation	-
11	Statement showing specie-wise abstract of tree growth in forest area required for the project	Garne analysis and
	Project Authority stating that no violation of the provision of F ( C ) Act 1980 occurred	
	circumstances leading to violation and the date of commencement of work / quantity of work done and amount spent Dy. conservator of Forests to clarify about the details of work done in violation of the Act after site inspection. Name of the persons responsible for violations of the Act be also reported and action to be taken against them be reported.	Not applicable
i	n case the work is started in non forest area in violation of the guidelines then details of the same are also furnished. In case the work is carried out in corest area as per Court's order then details of court case and the work done be furnished. In either of the case the date of stating the work, amount spent on the works and details of work carried out be urnished.	Not applicable



14	0.40	
14	Certificate from the Deputy Commissioner of the	e Not
	Concerned District about availability of non force	t applicable
	land for compensatory aforestation.	
15	Map of the non - forest land solveted for	
(4		r "
	compensatory afforestation on a suitable scale clearly showing adjoining.	•
16	Suitability certificate from D. Communication	
	Suitability certificate from Dy.Conservator of forests	66
17	that non forest is suitable for raising tree species.  Certificate from the Dy.conservator of forests that	
	non – forest land selected for commence	t "
	afforestation is in a compact block / and contiguous	
	to forest area at in close proximity of forest area and	
	suitable from the management and protection point of view.	
18	Detailed compensatory afforestation scheme for non	1
	- forest area / degraded forest area clearly showing	
	seedlings to be planted per ha. list of species to be	
	planted etc.	
19	Cost benefit analysis	
20	Brief note on the project by project authority	
21	Certificate from Project authority regarding ,	9
	catchment area treatment plan with estimate of	
	expenditure to be incurred on forest land	1
22	List of trees species -wise / girth class -wise in	Not
	lorest area required for the project with specific	applicable
	remarks of Dy.conservator of forests whether felling	applicable
	of all the trees is essential for implementing the	
	project	
23	Certificate from Dy.conservator of forests that the	66
	proposal does not affect any movement of	
	nistorical, religious, archaeological or recreational	
	importance including wildlife sanctuary and national	
	part etc.	
24	Information regarding number of benefits of	water
	beneficiaries of the project	supply to
db. 503		Industry
25	Site inspection certificate for forest area by	
	Dy.conservator of forests/ conservator of forests	
20	concerned as per the guidelines.	
26	In respect of mining proposals following additional	
	details are also required	
a)	Area in ha. already broken up during the	Not
6)	subsistence of earlier mining lease.	applicable
b)	Whether minerals are available in broken up area	
CI	and is so estimated quantity of the same	
C)	Estimated quantity of minerals in forest area ( ha)	
	proposal to be broken up afresh.	

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d)	In case minerals are available in already broken up	1
	area uteri detailed justification fr proposing frost	
	area for mining purposes.	-
e)	Whether reclamation of worked area is carried out	
	and it so details of the same.	Name and Address of the Owner, where the Owner, which is the
ŋ	The details of safety zone area for mining as per	Not
	raid 4.7 of the guidelines. The undertaking from	applicable
	project authority to hear the cost of foncing the	applicable
	salety zone are anorestation over one and a half	
0	unles of dedraded forest area the details of ansata	
	Zone to be ascertained from the competent authority	
	viz. Indian Bureau of Mines/ Department of Geology	
	and mining of state Government	
g)	A copy of the approved mining plan be enclosed	66
	with the proposal. In case where renewal of mining	••
	lease is recommended for less area then date of	
	taking over possession of balance area be indicated	
h)	Whether map showing the forest area required for	
	mining and clearly indicating the details of adjoining	44
	land use in enclosed. Mao should be properly	
	indexed and details of mining, leases if any existing	
	in adjoining area should be furnished separately	
	with the proposal.	
i)	In case the project authority area having other	
	mining leases also in forest area then details of the	66
	same.	- 1
j)	In case the mining activity was continued as per	
	court order then brief details of the same be	22
	furnished clearly stating whether mining is still	ĺ
	continuing or otherwise The details of work carried	-
	out in forest area during the stay period and date of	
	stoppage of mining activity be reported.	
k)		
-	during last ten years period and revenue realized	46
	etc.	=
1)	No objection certificate from the state pollution	
132	control board for renewal of mining lease as per	66
	explanatory note annexed to notification No.2-	100
	12013 / 4 /89-IAI dated 27.1.1994 from Government of	
	India regarding Environmental Impact Assessment	
	of Development projects.	41
m)	CODY of the order giving administration	
,	Technical sanction to the project	-EL
n)	Certificate from Deputy Conservator of forests that	
	all required annexures and particulars pertaining to	
	the proposals are furnished in English.	200
	, , , sale are rannance in English.	

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Executive Engineer, TWAD Board, Urban Division, Thoothukudi

District Forest Officer
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# APPENDIX (See Rule 6) FORM – 'A'

Form for seeking prior approval under section 2 of the proposals by the State Governments and other authorities

# PART – 1 ( to be filled up by user agency)

L	1 Project Details		
	and project/scheme for which the forest land is required		: 20 MGD water supply scheme closed conduit system water supply scheme to Thermal power project SIPCOT Complex. Heavy water plant and other industries in Thoothukudi District for Drinking and other purposes.
11	) Map showing the required forest land, boundary of adjoining forest on a 1,50,000 scale map	- 1	: Map enclosed
iii	Cost of the Project	+:	Rs.28000 lakhs
iv,	project in the forest area.		Now the raw water is being draw from the North main channel of Srivaikundam Anicut. In closure period (Summer) the drawal of raw water for treatment faces much difficulties due to Agricultural objections. Agriculturalist approached Highcourt and obtained orders for taking 20 MGD raw water direct from Sirvaikundam Anicut & Government approved the same (Judgement & GO Copy enclosed)
	Cost Benefit Analysis (to be enclosed)	:	NIL NIL
1)	Employment likely to be generated	10	There is possibilities for growth of Industries and possibility for formation of new Industries, if adequate water provided. Because of this employment opportunity can be generated.
	Purpose –wise break up of the total land required.	:	Total area required 552 sq.m construction of intake well with foot bridge and control room.



	Dataile of displacement of	Γ.	
	Details of displacement of people due to the project, if any	:	ONIGO
i)	Number of Families	:	
ii)	Number of scheduled castes/ Schedules Tribe families	:	
iii)	Rehabilitation plan ( to be enclosed)	:	was .
iv)	Whether clearance under Enviornment (Protection) Act, 1986 required ? (Yest /No)	:	Not applicable
v)	Undertaking to bear the cost of raising and maintenance of compensatory afforestation and / or penal compensatory afforestation as well as cost for protection and regeneration for safety zone etc as per scheme prepared by the state Government (Undertaking to be enclosed)	•	Enclosed
vi)	Details of Certificates / documents enclosed as required under the instructions.	•	<ol> <li>Check list</li> <li>Specific undertaking for the payments of net present value of the forest land</li> <li>District Collector Certificate for No alternative suitable now forest land is available for the 20 MGD closed conduit water supply scheme</li> <li>Map showing the required forest land</li> <li>Certificate that provision of forest conservation Act 1980 have not been violated in the Reserve forest area grounded for the project</li> <li>Scheme brief note.</li> </ol>

District Formal

District Forest Officer

Thoothukudi Division
Thoothukudi

Thoothukudi

Al-a/Forest Department

Executive Engineer, TWAD Board, Urban Division, Thoothukudi

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O/o, the Executive Engineer, TWAD Board, Urban Division,Thoothukudi

# CERTIFICATE FOR LAND ALTERNATION

PROPOSALS UNDER FOREST (CONSERVATION) ACT 1980 FOR PROVIDING WATER SUPPLY SCHEME TO 20 MGD CLOSED CONDUIT SYSTEM.

- 1. Certified that the demand for forest land for the Project is
- 2. Certified that no alternate suitable non forest land is available for the project.
- Amount required for a compensatory afforestation and catchment treatment cost etc is provided in the project estimate and would be paid to Forest Department on Demand by the Project Authority.

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Executive Engineer, TWAD Board, Urban Division, Thoothukudi

District Forest Officer
Thootbulundi Division
Thootbulundi

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மாவட்ட ஆட்சியர் அலுவலகம், தூத்துக்குடி மாவட்டம், தூத்துக்குடி

# சான்றிகழ்

தமிழ்நாடு குடிநீர் வடிகால் வாரியம் மூலம் நிறைவேற்றப்படவுள்ள நாளொன்றுக்கு 20 மில்லியன் காலன் ( 20 எம்.ஜி.டி) குடிநீர் திட்டத்திற்கு

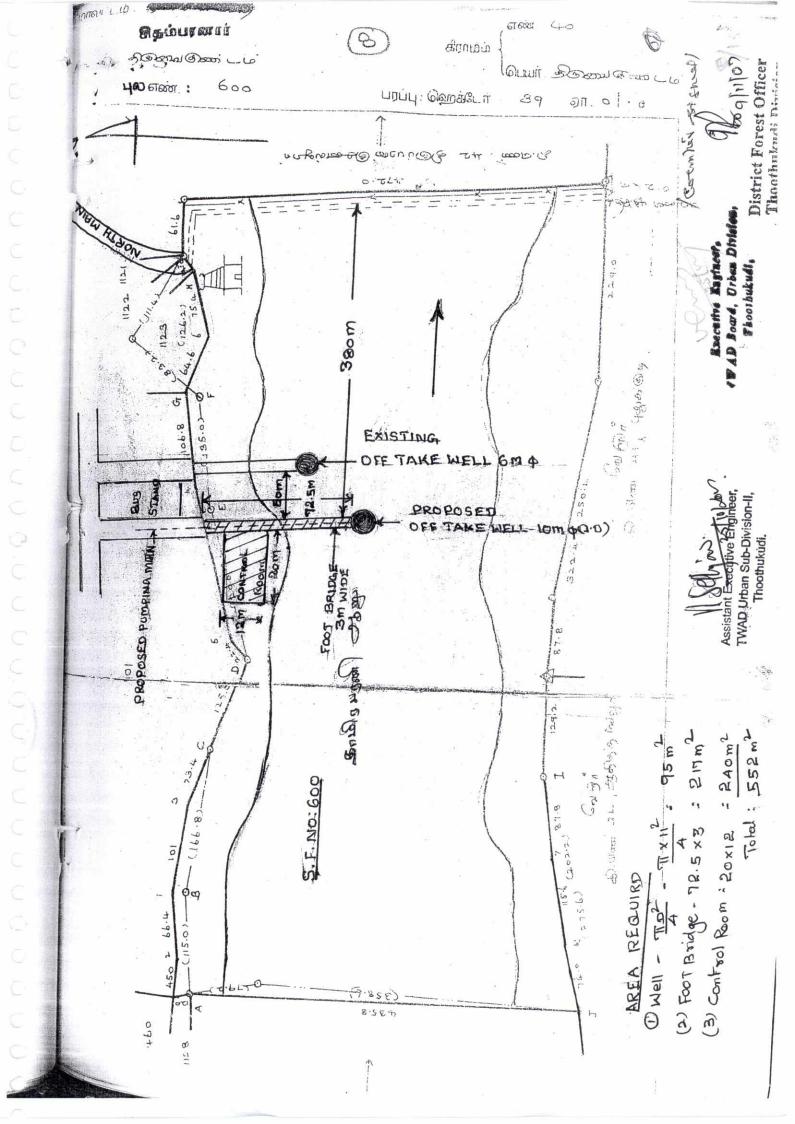
ஸ்ரீவைகுண்டம் அணைக்கட்டு நீர் சேகரிப்பு பகுதியில் (வன நிலம் புல எண் 600) நீர் சேகரிப்பு கிணறு , மின் இயக்கிஅறை , நடைமேம்பாலம் இவைகளை கட்ட 552 சமீ பரப்பளவு நிலம் தேவைப்படுகிறது. இப்பகுதி அணைக்கட்டு எல்லையில் இருந்து 400 மீ தூரத்தில் உள்ளது. இப்பகுதியில் மட்டுமே போதிய குடிநீர் திட்டத்திற்கான கிணறு அமைக்க போதிய ஆழம் உள்ளதாக கண்டறியப்பட்டுள்ளதால் வனநிலம் புல எண் 600 நீங்கலாக மாற்று இடங்களில் குறிப்பிடத்தக்க ஆழம் இல்லாததால் மாற்று இடங்களில் குறிப்பிடத்தக்க ஆழம் இல்லாததால் மாற்று

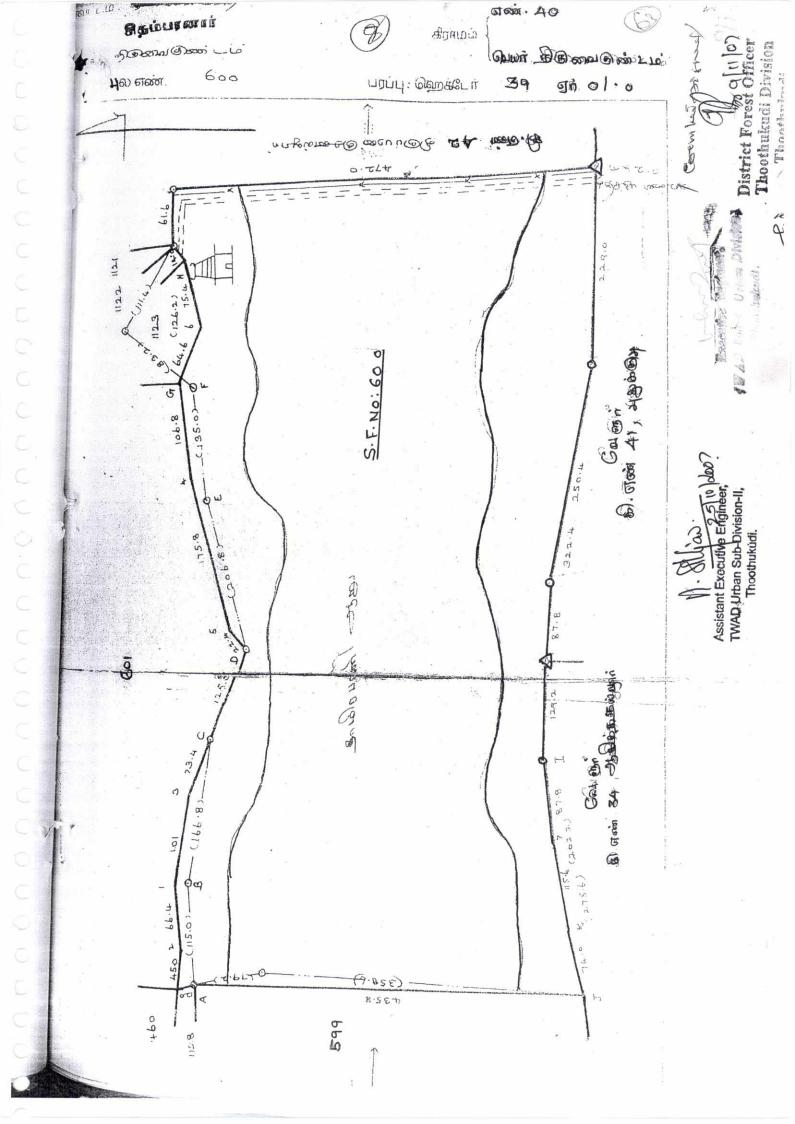
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மாவட்ட ஆட்சியர், தூத்துக்குடி மாவட்டம், தூத்துக்குடி





0.00rm CONSTRUCTION OF OFF. TAKE WELL CUM FUMP FIGURE BUND LEVEL 18.20M FOOT BRIDGE -72.5M LENGTH 10.00m 9.00 20.00m 14.00 14.00d 8.5 8.5 30.00m Turbine pumpset -400 HP X3Nos 31570 LPM X43 m HEAD 4.00 13.80m 40.00rn TWAD Urban Sub-Division-II, Thoothukudi. Assistant Executive Engineer 11.5m 50.00m HZBEX 12 CC1:2.4 60.00m 11.60 20 MGD WSS - CLOSED CONDUIT SYSTEM District Forest Officer 70.00m. 24.29年 18.20m Cocumen A fresh Thoothukudi Division HEAD WORKS AT SRIVAIKUNDAM ANAICUT 72.50m 5.0m Foot valve level Keootkukudi T 10.00m of Americut crest level 10 50m / \_\_\_\_\_ 9.07m NMC Sill level 6.00m 2.00m 12.0km 9.6900

DETAILS OF TRIAL BOKES AT HEADWORKS. ( FOR OFFTAKE WELL.)

2 1 CM	0	3.00M		4.50M		6.60M			9.45M
WATER	CLAY &	SILT	SAND, SILT	& CLAY.	SAND®	SILT		FINE SAND	
dimension following page service	3.60M		5,20M		6.00M				9.45M
WATER		SAND®	SILT	CLAY &	SILT		FINE SAND.		Andrew or the state of the stat
2.60M		4.20M	4.80M		5.40M		8.10M		9.45M
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1.80M		**	5.20M		P	LO DESCRIPTION OF			9.45M
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1.80M			5.40M			6.90M		ā	9.45M
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L.50M			3.30M		6.60M		8.50M		9.45M
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BORE 5	@10.65M
BORE 4	@8.50M
BORE3	@6.00M
BORE 2	@7.30M
BOREL	@€.00M

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District Forest Officer Thoothuludi Division

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Assistant Executive Engineer,

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# 20 MGD WSIS COLUSED CONDUITSYSTEM.) DETAILS OF TRIAL BORES AT HEADWORKS. ( FOR FOOT BRIDGE.)

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c	,	3.00M	3,65M	0	100		MOL	50.0	9.45M	
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Thoothukudi

District Forest Officer Thoothukudi Division

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O/o,the Executive Engineer, TWAD Board, Urban Division,Thoothukudi

## CERTIFICATE

This is to certify that the provision of Forest Conservation

Act 1980 have not been violated in the reserve forest area granted for

providing water supply scheme to 20 MGD closed conduit system.



Executive Engineer, TWAD Board, Urban Division, Thoothukudi

/ Compen Signed /

District Forest Officer Thoothukudi Division Thoothukudi

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O/o,the Executive Engineer, TWAD Board, Urban Division,Thoothukudi

### UNDERTAKING

We hereby giving our Concurrence / Undertaking for the payment of Net present value of the forest land, as per rules in force, raising plantation cost, Maintenance of Plantation, Annual lease Rent, etc of Srivaikundam Forest Area will be paid without any delay to the Forest Department on receipt of demand note.



Executive Engineer, TWAD Board, Urban Division, Thoothukudi

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District Forest Officer Thoothukudi Division Thoothukudi

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# O/o,the Executive Engineer, TWAD Board, Urban Division,Thoothukudi

### BRIEF SCHEME REPORT

20 MGD water supply scheme closed conduit system. Water supply scheme to Thermal power project SIPCOT complex, Heavy water plant and other Industries in Thoothukudi District for Drinking and other purposes.

Now the raw water is being drawn from the North main channel of Srivaikundam Anicut. In closure period (Summer) the drawal of raw water for treatment faces much difficulties due to Agricultural objection. Agriculturalist approached High court and obtained orders for taking 20 MGD raw water direct from Srivaikundam Anicut and the Government approved the same. Also the PWD authorities have suggested tapping the requirement (20 MGD) at Srivaikundam Anicut itself and conveying the same through closed conduit system to the 20 MGD Treatment plant to avoid illegally taping the water. Accordingly a project report has been prepared for 20 MGD water supply scheme through closed conduit system. (Report on Detailed Estimate is enclosed separately).

District Forest Offices

Thoothulaudi Division

a/ brief scheme report 20 MGD

Executive Engineer, TWAD Board, Urban Division, Thoothukudi



# REPORT TO ACCOMPANY THE DETAILED ESTIMATE FOR PROVIDING CLOSED CONDUIT SYSTEM FROM SRIVATKUNDAM ANICUT TO THE EXISTING 20 MGD WATER SUPPLY SCHEME

2800

ESTIMATE AMOUNT :Rs. 2825 takhs

### I.PREFATORY :-

Thoothukudi is an important industrial town situated on the South-East coast of India between latitudes 8 Degree and 9 Degree North and longitudes 78° and 79° East. Being situated on the sea coast and near the equator, the town has humid climate. This town has an average rainfall of 57.7 cm and bulk of this rainfall is received during North-East monsoon period of October to December. The town is connected by road, rail and by air. This town is a port city and noted for Pearl Fishing and salt Manufacturing Industries. Other Industries like Southern Petro chemical Industries Corporation, Tuticorin Alkali Chemicals, Tuticorin Inermal power project, Dharangathara Chemicals works. SIPCOT, Zirconium Titanium Spange plant, Heavy water plant and Port Trust are located in and around Thoothukudi.

To meet the requirement of water for the aforesaid industries, 20 MGD WSS was sanctioned in G.O.Ms.No.2289/PWD Dated 12.4.70 for Rs. 470.40 Lakhs and subsequently revised the proposal for Rs.565.30 lakhs in G.O.Ms.No. 413/PWD dt.12.3.1980. The scheme was executed and put into beneficial use during the year 1975 and is being maintained by TWAD Board. The scheme has been declared as TWAD Board owned scheme vide G.O.Ms.No. 83 dt. 4.5.98.

# 2. DETAIL S OF 20 MGD WATER SUPPLY SCHEME :

The Source for the scheme is the surface water of River inamiraparam drawn through North Main Channel from Srivalkundam Analcut. The head works of the scheme is located near Iruvappapuram. The surface flow of North main channel is drawn from Peikulam regulator to the raw water sump through two numbers of RCC conduits of size 8' X 6'. During non-flow season (Closure period) the water stored in the nearby Irrigation Tank (Arumugamangalam Tank ) is drawn to the sump by means of temperory pun psets & pipe lines. The water from the sump is pumped to the treatment

unit at Manjaneerkayal by means of 4 number of 80 HP turbine pumpsets having a duty of 7500 gpm x 27' head (2 Nos. stand bye) through 1200mm PSC 4 KSC pipes for a length of 3780 M. The water is filtered through 12 numbers of twin type rapid sand filter units after the conventional pretreatment. From the filter units the treated water is collected in the clear water reservoir of 40 lakhs litres capacity located nearby. From the clear water reservoir, the water is fed to the sump cum pumphouse and pumped to the beneficiaries through 1200mm PSC 4 KSC clear water pumping main of length 11386M by means of 135 HP Clear Water Vertical Turbine pump sets (3 nos. - 50% stand bye) and branched to the beneficiaries as detailed below.

K.			
	At LS 464M - Branch to PRC & DCW	1.00	MGD
	At LS 4280M-Branch to Zircomium & Titanium	1.50	MGD
	AT LS 7520 M - Branch to SIPCOT sump -	1.70	MGD
	At LS 9268 M - Branch to TAC Colony -	0.20	MGD
	At LS 9900M - Branch to SPIC Colony -	0.80	MGD
	At LS 10386 M - Branch to sump for TTPP, TAC, HWP and SPIC Ammonia	-8.80	MGD
	At LS 11386 M - T0 SPIC sump	6.20	MCD
		.0.50	MOD

From the sump provided for TTPP, TAC, and HWP water is pumped to the following beneficiaries through 750mm CI LA CL pipe -2344M and 600mm CI LA cl pipe - 4576M upto the sump provided for TTPP at LS 6920M

At LS 1374M - Branch to HWP - 0.60MGD

At LS 2344M - Branch to TAC - 1.50 MGD

At LS 5980M - Branch to SPIC Ammonia - 0.50 MGD

At LS 6920M - To TTPP Sump - 6.20 MGD

### 3. ALLOCATION OF QUANTITY TO BENEFICIARIES

		Quantity in MGD	
Beneficiary	G.O.Ms.No.288	G.O.Ms.No.48	BP.Ms.No.45
1) M/s.SPIC	Dt.17.12.89	dt. 28.2.95	dt.29.5.2003
2) M/s.SPIC	7.30	7.00	5.50
2) M/s. TAC	1.70	1.00	0.60
3) M/s. HWP	0.60	0.60	0.50
4) M/s. TTPP	6.20	5.00	3.50
5) M/s. DCW	1.00	1.00	0.50
6) M/s. SIPCOT	1.70	2.75	1.70
7)M/s. Zirconium	1.50	0.15	0.80
sponge plant		*	0.00
8) M/s Sterlite Industries India	- 1 td	2.50	3.00
9.)For future requi	iromont		
	nement		
I ()TAi	0.00 1600	Page Country C	3.90
21	0.00 MGD	20.00 MGD	20.00 MGD

## NECESSITY FOR THE PROPOSAL

A link channel connecting Arumuga Mangalam tank and North main channel has also been constructed for drawing raw water requirements during closure period. However, the experience in drawal of raw water from the North main channel reveals that much difficulties are met with to tap even a quantity of least 50 % of raw water requirement during the closure period, water is being illegally tapped or pilfered during its transit by the wayside roots. This illegal tapping could not be controlled in the past period even though protection arrangements were made jointly by PWD and Revenue Department. Moreover PWD authorities are stating that in order to supply 20 MGD of water at Iruvappapuram, they have to release at least 50 MGD of water at Srivalkundam anicut. Therefore the PWD authorities have suggested tapping the requirement at Srivalkundam Anicut itself and conveying the same through closed conduit system to the 20MGD Plant. Accordingly a proposal has been formulated for 20 MGD WSS through Closed Conduit System.

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### 5. ADMINISTRATIVE APPROVAL

The proposal for providing Closed Conduit System to 20 MGD WSS has been administratively approved vide G.O. Ms.No. 160 / RD / dt. 30.7.1998 for Rs. 2193.00 Lakhs to install and Rs. 375.98 Lakhs to maintain annually. The GO stipulates that,

- 1. The financial potentiality should be raised by levying water charges based on the capital investment and maintenance cost for the scheme
- 2. Government funds or funds allotted by the Governments from the financial Institutions like LIC., etc., should not be used for the implementation of this scheme.
- 3. On completion of the scheme, completion report and fund utilisation should be sent to Government.

In BP.Ms.No. 45 dt. 29.05.2003, it is ordered that the TWAD Board will take up the above proposal as deposit work.

As the beneficiaries expressed their inability to bear the installation cost as investment for carrying out this work as deposit work, they suggested to raise the financial resources by way of increased tariff or certain fixed water charges. Accordingly several meetings were conducted with the beneficiaries and finally the following conclusions were arrived at.

- 1. The beneficiaries will have to remit their implementation share as additional tariff at the rate of Rs. 10.00 per cubic metre for 50% of their respective demand (as per the quantity finalised in the BP.Ms.No. 45 dt. 29.5.2003) in addition to the existing tariff of Rs. 15.00 per cubic metre every month for the implementation period of twenty months towards the installation cost.
- The amount thus collected will be utilised for implementation of Closed Conduit proposal only.

The above proposal was placed in the Board meeting held on 19.1.2006 for approval and the Board accorded approval for carrying out the implementation of Closed Conduit System to 20 MGD WSS on the above lines vide BP.Ms.No. 39/ PM / dt. 13.4.2006

#### 6. BRIEF DESCRIPTION OF THE PROPOSAL :

Anicut through off take well of 10 m dia. The water will be pumped to the proposed sump at ridge point near Petmanagar. The alignment of pumping main is along the sides of the road leads to Vagaikulam from Srivaikundam via Thirupuliangudi, Perur and Petma Nagar. The length of pumping main is 8140m as against the original sanctioned proposal of 8000M. The classification of soil met with in this alignment is ordinary soil upto LS 6000M and beyond that it is red earth, SDR and MR. Hence, it is proposed to lay 1000mm BWSC 8,6-KSC pipes for a length of 6540 M in field area and for the balance 1600M 1000mm PSC 6,4 KSC pipes are proposed. Since the alignment of pumping main is coming through the road and also the road width is very less to work with 1200mm/1100mm PSC Pipes it is proposed to use 1000mmdia BAR WRAPPED STEEL CYLINDER PIPES in the above reaches. Since the joints are made of welding there will be minimum expenditure in maintenance and for attending the repair work if any during later. Period in the paintenance and for attending the repair work if any during later.

The water collected in the proposed ① Lakh Litre sump at ridge

point will be gravitated to the treatment site at Manjaneerkayal (for a distance of
10500m 1000mm PSC 4 KSCpipes for 8010m, and 1100mm PSC pipes (bksc)

for a length of 6305m upto Iruvappapuram stand post and then by using the

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ting 1200mm PSC 4 KSC pipes3780M from Iruvappapuram stand post to atmentisite at Manjaneerkayal.

In order to avoid excess pressure head created due to gravity main the existing pumping main of 1200 MM PSC -4KSC it is proposed to provide 4.0L.L.Capacity with 6.0m Staging as balancing Reservoir at uvappapuram within TWAD Board premises.

Necessary provision is also made for providing Inlet connection from the existing pumpset from Iruvappapuram to the proposed 4 LL standpost so that this stand post can be put in use in both cases when direct pumping from Srivalkundam is done as well as from Iruvappapuram thro' NMC.

# 7.COMPONENTS OF THE PROPOSAL

#### 7.1 HEAD WORKS :

Channel

It is proposed to construct an offtake well of 10.0m dia at a distance of 75m from the bank of the river. The offtake well along with pumproom is suitably designed after checking the details of soil, depth of water above bed level. It is proposed to construct a foot bridge of length.

-99. Gom from the intake well to the band and it is proposed to lay the connecting main of 800 mm street of proposed out the foot bridge.

Sallent details of the off-take well cum pumphouse is as follows.

Size proposed:  Bottom of OFFtake well  Average Bed level of River (G/L)  Maximum depth of water	=10.0m dia with pump house = (+)2.00m = (+)8.00 m = 4.00 m
at the location @ 75M  Floor level of pumphouse  Foot valve level  Bund level of River  Maximum flood level	= (+)18.20 m = (+) 5.00 m = (+)18.20 m = (+)16.030 M occurred during 1993
Crest level of Srivalkundam  Anicut  Sill level of Northmain  Channel	= (+)12.01 M = (+)9.57 m

The control room of size 20m x25m is proposed inside the River 7.2 CONTROL ROOM

adjoining to the bund by providing column foundations.

The salient Details of the control room are as follows.

Size

The pump sets housed in the pump house over the off-take well will be receiving power supply from the control panel housed in the control room to be located near the bank of the River. The indoor Transformer is also proposed Floor level proposit en losed in vol 7)

to be housed in the control room.

It is proposed to use 3.3kv H.T.vertical type turbine pumpsets for the Head works. It is proposed to run two pumpsets parallel and to have 50 % 7.3. Pumpsets: standbye(2+1) The efficiency of the pumpset is assumed as 75 % Hence the Horse power of the each pumpset works out to 400 HP. The duty of the pumpset Is 31570 lpm x 43m Head each. Which will have a combined discharge of 63140 Ipm against a head of 43m when 2pumps are operated in parallel. The hours of pumping is proposed as 24 hours.

The conveying main has been designed as a pumping main upto the ridge point at LS 8140 m. At LS 8140 m a ground level sump of  $10^{\circ}$  L.L. is 7.4.PUMPING MAIN proposed. The details of pipes of the pumping main are as follows.

1000MM BWSC 6Ksc 1440 M 1000 MM PSC 6Ksc 1. LS 0-5100 2. LS 5100-6540 4KSC 570 M 1000MM PSC 3. LS 6540-7110 1030 M 4. LS 7110-8140

The staff quarters are proposed in the sanctioned outline proposal at 7.5. STAFF QUARTERS: - 1 NO

Head works site . 1. Watchman quarters (Twin type) - 1 No

2. Electrician quarters(Twin type) - 1 No 3. Electrical Superintendent Quarters



Since the head work site is situated adjacent to the Srivaikundam Special Village Panchayat it is now proposed to be deleted.

7.6 GROUND LEVEL SUMP AT LS 8140M( RIDGE POINT)

A ground level sump of 16 L.L. capacity has been proposed to be constructed at SF.No. 839A/2 of Srimoolakkarai village which is a Poramboke land. The land required to construct the sump is  $40 \text{m} \times 40 \text{m}$ . The salient details of the sump are as follows. Detention time adopted is 16 minutes.

Capacity = 10.LL

MWL = (+)33.90 M

LWL = (+) 29.90 m

Av.G.L. = (+) 31.40 M

Dia of sump = (+) 20 M 29.25 M

S.F.No. 839/2 of Sri Moolakkarai village

#### 7.7. GRAVITY MAIN

The conveying main has been designed as gravity main from the ground level sump at LS 8140m to the newly proposed stand post of capacity 4.00 L.L near existing raw water pump house at L.S 14315 M & David population.

THE DETAILS OF PIPE ARE AS FOLLOWS

LS 0m - 10500m = 1200mm PSC 4 KSC pipes. 10500

L.S. 10500m - 12100m = 1200mm BWSC 4 KSC Pipes

(Upto 4.00 L.L Capacity standpost) \ 1600

LS 12100 - 14315 = 1100mm PSC 6 KSC Pipes 2215

LS 14315m -1815qm =1200mm PSC 4 KSC pipes (existing) 3865

(Stand post to treatment plant)

TOTAL 18139

The above stand post is proposed as a Break pressure Tank, so as to minimize the available pressure in Gravity main and to utilize the existing 1200mm PSC main from Iruvappapuram to treatment plant.

Salient details of Stand post at Iruvappapuram



Capacity = 4.00 LLAV.GI = + 7.48 mLWL = + (13.48 m) 14.98 mMWL = + (17.08 m) 18.58 m

It is proposed to locate the above stand post within TWAD Board premises. at Invappagnian existing Headworks.

As per the Instructions of the Higher officials LS levels were taken along the proposed alignment of pumping main and Gravity main from Srivaikundam to Iruvappapuram and from this to Manjalneerkayal. This level particulars were used for preparing the Detailed Estimate. The salient details of existing head works at Iruvappapuram are furnished below.

#### SUMP size = $7.30M \times 6.30M$

MWL = (+) 8.235 M LWL = (+)  $4.935 \,\text{M}$  To be worked, In shelled,  $925 \,\text{m}$ G.L. = (+)  $7.480 \,\text{M}$ 

**PUMPHOUSE** 

Size =  $16.70 \text{ m} \times 8.20 \text{ m}$ 

**PUMPSETS** 

Capacity = 90 HP Turbine

Discharge = 7500 GPM (34095) LPM

Head = 27' (8.24 m)

Nos = 4 Nos ( 2 Nos standbye)

#### 8. LUMPSUM PROVISIONS

- 1. For dewatering arrangements
- 2. For removal of formed earth bund
- 3. Levelling the site.
- 3. For land acquisition
- 4. Obtaining power supply & Providing separate feeder main
- 5. For approach road and strengthening the bund
- 6. For dismantling and reconstruction of existing culverts and other structures.
- 7. Realigning of Sawerpuram pumpingmain if necessary wherever crossing the proposed line.
- 8. Provision for surge arrangements

#### 9.RATES:-

The TWAD schedule of rates for the year 2006-2007 and local rates are adopted for preparing the estimate. For the pumpsets, the rates have been adopted based on the quotations obtained as approved by the SE, TV circle, Kon path whe tr. No. F. 20 mas / AB & 12007 / oft. G. 3. 200 th & W. 9. 200 th and Lo. No. 1745 | F. schedule

10. COST 8 Rote / DO I | 2007 / At. 4. 9. 2007.

The total cost of the estimate works out to Rs. 2825 lakhs Annual Maintenance charges - Rs. 310Lakhs

#### 11.FINANCE

Implementation of the above scheme may be taken up by TWAD as deposit work in BP MS.No.45/Dt.29.5.2003. On 9.11.2004, the Chief Engineer, TWAD Board, Madurai conducted a meeting with all beneficiaries of 20MGD WSS and requested them to contribute the amount required for implementation. A viable and feasible alternative for mobilation of fund for implementation of the scheme by collecting an implementation share, at the rate of Rs. 10.00/1000 litres in addition to existing tariff of Rs. 15.00/1000 litre every month was proposed to the beneficiaries of 20MGD WSS.

The above proposal of mobilalization of fund for implementation of the 20MGD closed conduit Scheme was placed before the Board at its meeting held on 19.1.2006 for its approval and the Board in resolution No.2.20 Dt.20.1.2006,approved to take up the proposal for implementation through mobilization of fund as suggested in BP.Ms.No.45 Dt.29.5.2003.

On 4.12.2006, an agreement was concluded with all the beneficiaries at Chennai in the presence of the Managing Director, TWAD Board. and the Collection of the implementation share from the beneficier from Seen Commenced from 1/06 onwards.

12. MAINTENANCE OF THE SCHEME

On completion of the scheme, the scheme will be maintained by TWAD Board. (MOU) concluded with the beneficiaries. Kovilpatti

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#### <u>தமிழ்நாடு அரசு</u> தருக்கம்

நீர் திட்டம் – தூத்துக்குடி மாவட்டம் – மூடிய நிலைத் திட்டம் – (Closed conduit stem) ஸ்ரீவைகுண்டம் அணைக்கட்டிலிருந்து தற்பொழுது தூத்துக்குடியில் இயங்கி நம் 20 எம்.ஜி.டி. குடிநீர் திட்டம் வரை தண்ணீரை எடுத்துச் செல்லவம் – தூத்துக்குடி எல் மின் நிலையத்தின் நான்காவது நிலைக்கு கூடுதலாக 3 எம்.ஜி.டி. குடிநீர் நிகுவதற்குமான திட்டம் – அமைப்புச் செலவிற்காக ரூ.2193.00 இலட்சமும் ஆண்டு மாரிப்பிற்காக ரூ.375.98 இலட்சமும் செலவு செய்யவும் நிர்வாக அனுமிதி வழங்கிணை வெளியிடப்படுகிறது.

#### ஊரக வளர்ச்சித் துளை

சு அணை (நிலை) எண்.160

நாள்.30.7.1998 படிக்கப்பட்டது.

அரசு ஆணை (நிலை) எண்.21, ஊரக வளர்ச்சித்துறை நாள்.28.1.97. தமிழ்நாடு குடிநீர் வடிகால் வாரியம். மேலாண்மை இயக்குநரின் கடிதம் எண்.78982./திமவ/உபொ.8/நாள்.12.12.97.

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நூலைகுண்டம் அணைக் கட்டிலிருந்து தற்பொழுது தூத்துக்குடியில் பல்பட்டுவரும் 20 எம்.ஜி.டி. குடிநீர் திட்டம் வரை, 23 எம்.ஜி.டி. தண்ணீரை மூடிய வயில் எடுத்துச் செல்லும் திட்டமாக செயல்படுத்தவும், தூத்துக்குடி அனல் பின் வயத்தின் நான்காவது நிலைக்கு கூடுதலாக 3 எம்.ஜி.டி. குடிநீர் வழங்கவும் ஒரு நிட்டத்தை ரு.2193.00 இலட்சம் செலவில் அமைக்கவும் ரூ.375.98 இலட்சம் குடிநீர் பராமரிப்பிற்காக செலவு செய்யவும். நிர்வாக ஒப்புதல் வழங்க தமிழ்நாடு குடிநீர் கோல் வாரிய மேலாண்மை இயக்குநர் அரசை வேண்டியுள்ளார்

2. அரசு ஆணை (நிலை) எண். 21. ஊரக வளர்ச்சி நாள்.22.1.97 ன்படி ஒப்பளிப்பு வழங்கப்பட்ட இந்த 20 எம்.ஜி.டி.குடிநீர்திட்டம், குடிநீர் வடிகால் வாரியத்திற்கு ஒரு சொத்தாக கருதப்படுகிறது. எனவே இத்திட்டத்தை குடிநீர் வடிகால் வாரியமே நிறைவேற்றிப் பராமரிக்க உள்ளது. இந்த திட்டத்தின் நிறுவும் செலவுகளை தொழிற்சாலைப் பயனிட்டார்கள் தண்ணீர் வரியாக எற்றக் கொள்வார்கள் என்றும் தமிழ்நாடு குடிநீர் வாரிய மேலாண்மை இயக்குநர் தெரிவித்துள்ளார்.

3. 16.9.97 அன்று நடந்த தொழில் நுட்ப குழு பரிந்துரை செய்தபடி செயற்குறிப்பு 27.11.97 அன்று நடந்த வாரியக் குழுமக் கூடி வைக்கப்பட்டது. வாரியம் தனது தீர்மானம் எண்.57 நாள்.27.11.97 ல் திட்டத்திற்கு நிர்வாக ஒப்புதல் பெற அரசுக்கு பரிந்துரை தீர்மானித்தது. வாரியக் குழுமத்தின் பரிந்துரையை அரசுக்கு அனப்பி திட்டத்திற்கு நிர்வாக ஒப்புதலிளிக்கும்படி தமிழ்நாடு குடிநீர் வடிகால் விடையில் குழுமத்தின் குரிய்கும்படி தமிழ்நாடு குடிநீர் வடிகால் விடிவான்மை இயக்குநர் அரசினைக் கோரியுள்ளார்.

4. தமிழ்நாடு குடிநீர் வடிகால் வாரிய நிர்வாக இயக்குநரின் செயற்குறிம் அரசு நன்கு ஆராய்ந்தது. ஸ்ரீவைகுண்டம் அணைக் கட்டிலி துருத்துக்கடியில் இயங்கி வரும் 20 எம்.ஜி.டி. திட்டம் வரை, 23 எம் தண்ணீரை மூடிய நிலையில் எடுத்துக் செல்லும் திட்ட செல்லும் திட்ட செல்லும் திட்ட செல்லும் திட்ட செல்லும் திட்ட செல்லும் திருக்கும் நிலையத்தின் நால கூடுதலாக 3 எம்.ஜிடி. குடிநீர் வழங்கும் இந்த திட்டத்தை ரு.2193.00 இவ செல்வ செய்யவம் கீழ்காணும் நிபந்தனைகளுக்குட்பட்டு, அரசு நிரு ஒப்புதல் வழங்குகிறது.

அ) இத்திட்டத்திற்கான மூலதனச் செலவு மற்றும் பராமரிப்புச் கெ ஆகியவற்றை தண்ணிர் அளவிற்கேற்றவாறு வரிவிதித்து அதன் மு நிதி ஆதாரத்தை உயர்த்த வேண்டும்.

ஆ) அரசு நிதி அல்லது, அரசு நிதித் திட்டத்தின் கீழ் அரசு ஒதுக்கும் ஆ காப்பிட்டுக் கழக நிதி போன்ற நிறுவன நிதிகளை, இத்திட்டத்திற் பயன்படுத்தக்கூடாது.

இ) இத்திட்டம் முடிந்தவுடன் இறுதி அறிக்கை மற்றும் நிதிப் பபன்பாட்டுச் சான்றிதழ் ஆகியவற்றை அரசிற்கு அனுப்ப வேண்டும்.

5. இந்த ஆணையுடன் இணைக்கப்பட்டுள்ள அறியிக்கையை அடுத்து வு தமிழ்நாடு அரசிதழில் வெளியிட வேண்டும் என எழுதுபொடி அச்சுத்துறை இயக்குநர் கேட்டுக் கொள்ளப்படுகிறார்.

6. இந்த ஆணை, நிதித்துறையின் அலுவல் சார்பற்ற குறிப்பு எண். 76 (எப்எஸ்)/பி1/98/நாள்.28.4.98 இசைவுடன் வெளியிடப்படுகிறது.

(அளுநின் அனைப்படி)

ரமேஉஷ் சந்திரபண்டா, அரசுச் செயலாளர்.

பெறுநர் மேலாண்மை இயக்குநர்/தகுவவாரியம்/சென்னை – 5.

True copy

30/10/2007

Assistant Executive Engineer, TWAD Urban Sub-Division-II, Thoothukudi.



## PROPERTY WATER SUPPLY AND DRAINAGE BOARD



ABSTRACT

THE PROPOSEL FOR IMPLEMENTING THE WORK OF CONVEYING RAW WATER DIRECTOR FROM SRIVAIKUNDAM ANAICUT TO TREATMENT PLANT AT THE PROPERTY SCHEME-ORDER SISSUED

#### PROGRAMME MANAGEMENT WING

B.P .Ms .No.3

Dated: 13.4.06

Read:B.P.MsNo45 Dt 29.5.2003

#### Dand's Resolution No 2.20 Dt 19:1.06

Order

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The Grant in G.O. Ms. No.160 /dated 30.07.1998 accorded administrative and for the proposal of drawal of 23 MGD raw water from Srivaigundam and conveying it to the existing sump at Iruvappapuram through closed contributions for Rs. 2193.00 lakhs to install and Rs. 275.98 lakhs to maintain and project to the following conditions.

- 1. The financial tentiality should be raised by levying water charges based on the captalinestment and maintenance cost for the scheme.
- 2. Government from the financial institutions that IC etc. should not be used for the implementation of the scheme.
- 3. On completion the scheme, completion report and fund utilization certificate should be set Government.

The west not be taken up for implementation for want of funds arrangement for material action, on the conditions, stipulated above. The beneficiaries also their inability to invest towards the capital cost. In turn, they requested the Board to implement the scheme by arranging funds on its own and agreed to the water charges levied by TWAD Board towards the investment to be towards by TWAD in addition to the regular water charges collected from them.

Now, take Region Region, Madurai prepared a proposal for the drawl and conveyance of water through closed conduit at an estimated cost of Rs. 2410.00 lakes to maintain annually.



The quantity earmarked for the beneficiary industries under the scope of the revised proposal is as follows:-

S.No	Name of beneficiry	Requirement in MGD	
1	M/S.Southern Petro chemical Industries corporation (SPIC)	5.50	
2	M/S. Tuticorin Alkali Chemicals (TAC)	0.60	
3	M/S. Heavy Water Plant (HWP )		
4	M/S. Tuticorin Thermal Power Project ( TTPP )	0.50	
5	M/S. Dharangadhara Chemical Works ( DCW )	3.50	
6	M/S. STROOT The structure Works ( DCW )	0.50	
7	M/S. SIPCOT Thoothukkudi	1.70	
,	M/S. Sterilite Industries	3.00	
8	M/S. Zirconium & Titanium Sponge Plant	0.80	
9	For future Industrial requirement & losses	3.90	
	Total	20.00	

The Chief Engineer, Southern Region, Madurai has now suggested that the Government has to be addressed to amend / revise the G.O. Ms. No. 160, dt. 30.7.98, so that TWAD could arrange for the loan from funding agencies on behalf of the beneficiaries for executing the scheme and the same can be collected from the beneficiaries as fixed charges for the loan repayment and variable charges for the commitment towards extra annual maintenance or water charges may be collected from the beneficiaries to match with the annual commitment towards installation and additional maintenance.

Accordingly the proposal was placed before the Board in its meeting dated 5.5.03 for consideration of the following

 To recommend to the Government the revised proposal for the 20 MGD water supply scheme for Rs. 2410.00 lakhs, for permitting TWAD Board for availing loan assistance for implementation and to repay the loan availed either by collecting fixed charges from the beneficiaries for the annual commitment towards capital cost and variable charges towards annual maintenance.

or

To collect water charges from beneficiaries for the quantum of water supplied to match with the annual commitment towards repayment of loan for installation and commitment towards maintenance or at a fixed rate per 1000 litres to be fixed by the Board.

The Board after deliberations, ordered in B.P.Ms No 45/Dt 29.5.2003 that the TWAD Board would take up the proposal of implementation of 20 MGD water supply scheme through closed conduit system as a deposit work.

But, the eight beneficiaries again expressed their inability to participate in the capital investment of the scheme and a separate meeting was conducted by the Chief Engineer, TWAD Board, Southern Region, Madurai with the beneficiaries at Thoothukudi on 9.11.2004 to decide on the mode of mobilisation of fund for the scheme. In the meeting, it was decided to mobilise the required funds by collecting

the implementation share in convenient monthly installments from the beneficiaries as detailed below.

- The beneficiaries will remit their implementation share as additional tariff
  at the rate of Rs.10.00 per cubic metre for 50% of their respective
  demand in addition to the existing tariff of Rs.15 per cubic meter every
  month for the implementation period of twenty two months towards the
  cost of installation.
- 2. The amount thus collected will be utilised for implementation of closed conduit proposal. An amount of about Rs.5.00 crores must be available in advance with TWAD Board in order to take up the work. Hence the work can be commenced after six months from the date of commencement of the collection of implementation share/additional tariff.

Considering the advantages of the closed conduit scheme to the beneficiaries and also to TWAD Board and PWD, the eight beneficiaries were therefore requested to give their consent to this proposal. Accordingly, the consent letters have been received from all the eight beneficiaries for taking up the closed conduit scheme as per the fund mobilisation outlined above.

In the consent letters given, the beneficiaries have demanded to ensure that the additional tariff is collected only for the implementation of the closed conduit scheme and will not be used for any regular maintenance or revamping works.

The above proposal for mobilisation of fund for implementation of the 20MGD closed conduit scheme was placed before Board at its meeting held on 19.1.06 for its approval and the Board vide its resolution No 2.20 dated 20.1.06 after detailed discussion, has resolved as follows on the above subject:

- 1. The beneficiaries will have to remit their implementation share as additional tariff at the rate of Rs.10.00 per cubic metre for 50% of their respective demand (as per the quantity finalised in the B.P.Ms. No.45 Dt 29-5-2003) in addition to the existing tariff of Rs.15 per cubic meter every month for the implementation period of twenty two months towards the cost of installation(Rs 2410.00 lakhs).
  - The amount thus collected will be utilised for implementation of closed conduit proposal only.
  - An MOU/Agreement shall be concluded with the beneficiaries duly incorporating the relevant conditions to safeguard the interest of TWAD Board

Accordingly, the Board after careful consideration approves to take up the proposal of implementing 20 MGD closed conduit through mobilisation of fund adopting the following methodology.



1. a) The beneficiary industries as indicated in the annexure-3 shall remit as additional tariff at the rate of Rs.10.00 per cubic metre for 50% of their respective demand (as per the quantity finalised in the B.P.Ms. No.45 Dt 29-5-2003) every month positively before 15<sup>th</sup> of

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succeeding month for the implementation period of twenty two months towards the cost of installation (Rs 2410.00 lakhs) as already agreed by above mentioned Industries irrespective of the quantity of water supplied, in addition to the existing tariff of Rs.15 per cubic meter being paid every month.

- b) The beneficiaries are liable to pay the enhanced rate of regular tariff if any raised by TWAD Board from time to time for such beneficiaries as a tariff revision policy.
- c) If any beneficiary industry fails to remit the above remittance in full / part within the stipulated period, or fails ultimately to remit the additional tariff, then the original allotment to the beneficiary will be cancelled notwithstanding anything contrary contained in any other agreement if any already entered and the beneficiary will be deleted from the list of beneficiaries and no compensation by any means will be entertained in such event. In such an eventuality, the balance amount required (balance amount corresponding to the amount to be paid by the defaulter) will be borne by the remaining beneficiaries in proportion to their allotment of water as indicated in Annexure-3 in the interest of completion of work.
  - d) In case the amount referred in the above para is not shared by the other beneficiaries, for the timely completion of the project, and the TWAD Board has to incur any expenditure by way of mobilisation of funds from any other sources, in the interest of completion of the scheme the industries shall be liable to pay such additional cost and interest thereof, if any, in proportionate basis along with their additional tariff.
  - The amount thus collected will have to be utilised for implementation of closed conduit proposal only.
  - 3. All efforts will be taken by TWAD Board to complete the scheme within the stipulated period. But, if there is any delay in completing the works, due to non payment (or) delayed payment of implementation share (or) due to reasons beyond the control of TWAD Board, (or) due to 'Force Majeure' conditions, the beneficiaries shall agree to extend their full co-operation to revise the implementation schedule and the cost due to be arrived at based on mutual consent between the beneficiaries and TWAD Board.
    - 4. If the total cost of the work during execution exceeds the estimate cost due to the reasons such as tender excess etc., beneficiaries will have to bear the additional cost on the above terms.
    - An MOU/Agreement shall be concluded with the beneficiaries duly incorporating the relevant conditions to safeguard the interest of TWAD Board
    - The Chief Engineer, TWAD Board, Southern Region, Madurai may take action to accord technical sanction after taking into account

the correct logistics for the implementation of this scheme in accordance with Chapter II Clause 183, Sub clause 2 of D'Code for the proposal, as the cost of proposal (Rs. 24.10 Crores) now worked out is within 10% excess over the cost of Rs.21.93 Crores for which administrative sanction has been accorded vide G.O.Ms.No 160/Dt 30.7.98, after getting the MOU/Agreement signed by all the beneficiaries.

The Chief Engineer , Southern Region, Madurai is requested to act accordingly on the decision of the Board.

Sd/ - S. Karuthiah Pandian, 13.4. Managing Director, TWAD Board, Chennai.600 005.

(By Order of the Board)

To

The Chief Engineer, TWAD Board, Southern Region, Madurai,

Copy to:
The Managing Director, TWAD Board, Chennai - 5.
The Finance Director, TWAD Board, Chennai - 5.
The Engineering Director, TWAD Board, Chennai - 5.
The Superintending Engineer, TWAD Board, T.V.Circle, Kovilpatty
The Executive Engineer, TWAD Board, Urban Division, Thoothukudi.
The Executive Engineer, TWAD Board, Maint. Division, Thoothukudi.
The Joint Chief Engineer(PM), The Joint Chief Engineer(O & M),
TWAD Board, Chennai
The Deputy Chief Engineer(U), TWAD Board, Chennai - 5.
Board cell(3 copies)

/t.c.f.b.o/

Assistant Executive Engineer (Urban)
TWAD Board, Chennai 600005

True Copy

Assistant Executive Engineer,
TWAD Urban Sub-Division-II,
Thoothukudi.

# (3)

# PROVIDING 20 MGD WATSER SUPPLY SCHEME THROUGH CLOSED CONDUIT SYSTEM FROM SRIVAIKUNDAM ANAICUT.

#### GENERAL ABSTRACT

Sl. No.	Description	Amount (Rs.in lakhs)
1	Head works	270.00
2	Conveying main	1633.60
3	Construction of 10 lakh litre sump	34.15
	Sub Total	1937.75
	Petty Supervision charges at 2 1/2%	48.44
	Unforeseen items at about 2 1/2%	47.57
	Sub Total	2033.76
	Centage 18 1/2%	376.24
	TOTAL	2410.00

(3)

#### Annexure 2

# PROVIDING 20 MGD WATER SUPPLY SCHEME THROUGH CLOSED CONDUIT ABSTRACT OF ANNUAL MAINTENANCE ESTIMATE

SI. No	Description of work	Amount (in Rs.)
1	Establishment Charges	679500
2	Electrical energy charges	23700000
3	Repairs and renewals and spares to pumpset valves etc., at 10% cost of pumpset	297000
4	Provision for periodical inspection of pumping plant by reputed agency at 1%	128000
5	Provision for lubricants and inspection charges	30000
6	Provision for removal of silt at Head works twice in a year	5000
7	Provision for telephone charges	15500
	TOTAL	24900000

Rs.249.00 lakhs



#### **WORKING SHEET**

Estimate cost:Rs.2410.00 lakhs Annual maintenance cost:Rs.249.00 lakhs

SI. No.	Beneficiaries	50% of demand furnished by the beneficiaries on 5.2.03.	Monthly installment at Rs.10 per month./1000lts (Rs. in Lakhs)
1	Southern Petro Chemicals Industries Corporation	2.75 MGD	37.50
2	Tuticorin Alkali Chemicals	0.30 MGD	4.09
3	Heavy water plant	0.25 MGD	3.40
4	Tuticorin Thermal Power Project	1.75 MGD	23.87
5	Dharangadara chemical works	0.25 mgd	3,41
6	SIPCOT	0.85 MGD	11.59
7	Sterlite Industries	1.50 MGD	20.46
8	Zirconium & Titanium Sponge plant	0.40 MGD	5.46
	Total	8.05	109.78

For one month revenue realised will be = Rs.109.78 lakhs

For Twenty two months the revenue realised will be

 $= 109..78 \text{ Lakhs} \times 22$ 

= 2415.16 Lakhs

= 24.15 Crores. /