

**CWSS TO CHENGAM - PUDUPALAYAM TOWN PANCHAYATS AND 40  
HABITATIONS OF CHENGAM - PUDUPALAYAM UNIONS IN TIRUVANNAMALAI  
DISTRICT**

**SALIENT DETAILS**

| <b>Sl. No.</b> | <b>Description</b>        | <b>Original</b>   | <b>Executed</b>           |
|----------------|---------------------------|---|---------------------------|
| 1.             | Administrative approval   | G.O.Ms.No.97 dt 15.06.2009 for Rs.888/- lakhs.          |                           |
| 2.             | Technical Sanctioned      |   |                           |
|                | 1.Original:               | CE/NR/CER No.21/09-10 dt : 15.07.2009 for Rs.918 lakhs. |                           |
|                | 2.Revised:                | CE/NR/CER No.37/09-10 dt : 28.12.2009 for Rs.906 lakhs. |                           |
| 3.             | Population benefitted     |   |                           |
|                | Chengam T.P.              | 25400(P)  |                           |
|                | Pudupalayam T.P.          | 11000(P)  |                           |
|                | Chengam Rural             | 15323(U)  |                           |
|                | Pudupalayam Rural         | 9055(U)   |                           |
| 4.             | Total Requirement         | 1.563 Mld (intermediate)/1.977 Mld (ultimate)           |                           |
| 5.             | Source                    | Thenpennaiyar river upstream side of Sathanoor Dam      |                           |
| 6.             | Raw water pumping main    | 200mm CI B class pipe-4350m                             | 200mm DI K9 pipe-4440.50m |
| 7.             | Off take well             | 4 m Dia depth 15m                                       | 4 m Dia depth 18m         |
| 8.             | Pump house                | 6 m Dia 4m Height                                       | 6 m Dia depth 4m Height   |
| 8 .A           | Raw water turbine pumpset | 1133 LPM x 104M   | 1133 LPM x 104M           |
| 9.             | Foot Bridge               | 2.5m width 180mts length                                | 2.5m width 180mts length  |
| 10.            | Treatment                 | 2MLD full scale treatment                               | 2MLD full scale treatment |
| 11.            | Gravity Main              |   |                           |
|                |                           | a) 250mm HDPE PN 6 pipes - 10200m                       | a)250 mm DI K7 pipe- 550m |
|                |                           | b) 225mm HDPE PN 6 Pipes - 4960m                        | b)300mm GRP 6 Bar-4994m   |

|     |                         |  |                                      |
|-----|-------------------------|--|--------------------------------------|
|     |                         | c) 140mm OD PVC 4 KSC pipes-<br>19996m | c)250mm OD PVC 4 Ksc Pipe-<br>3470m  |
|     |                         |  | d)200mm OD PVC 4 Ksc Pipe-<br>6318m  |
|     |                         |  | e)200 mm DI K7 pipe -355.5m          |
|     |                         |  | f)140mm OD PVC 6 Ksc Pipe-<br>19704m |
|     |                         |  | g)150mm DI K7 pipe-150m              |
|     | Total                   | 35156.00                               | 35541.5                              |
| 12. | <b><u>SUMPS</u></b>     |  |                                      |
|     | Treatment Plant         | 1.00 lakh – 1 No.                      | 1.00 lakh – 1 No.                    |
|     | Pudupalayam TP          | 1.0 Lakhs 1 No.                        | 1.0 Lakhs -1 Nos.                    |
|     | Chengam TP              | 2.0 Lakhs 1 No.                        | 2.0 Lakhs 1 No.                      |
| 13. | OHTS                    |  |                                      |
|     | Chengam TP              | 30,000 lit 1 No.                       | 30,000 lit 1 No.                     |
|     | Pudupalayam TP          | 1.00 Lakhs 1 No.                       | 1.00 Lakhs 1 No.                     |
| 14. | Group pumping           |  |                                      |
|     | Chengam TP              |  |                                      |
|     | 140mm OD PVC 4 Ksc Pipe | 930m                                   | 906m                                 |
|     | 110mm OD PVC 4 Ksc Pipe | 3560m                                  | 1792m                                |
|     | 90mm OD PVC 4 Ksc Pipe  | 2450m                                  | 2408m                                |
|     | 75mm OD PVC 4 Ksc Pipe  | 1070m                                  | 1016m                                |
|     | 63mm OD PVC 4 Ksc Pipe  | 9405m                                  | 9245m                                |
|     | Total                   | 17415m                                 | 15367m                               |
| 15. | Group pumping           |  |                                      |
|     | Pudupalayam TP          |  |                                      |
|     | 90mm OD PVC 4 Ksc Pipe  | 1715m                                  | 1703m                                |

|     |                        |   |   |
|-----|------------------------|---|---|
|     | 75mm OD PVC 4 Ksc Pipe | 2793m   | 2757m   |
|     | 63mm OD PVC 4 Ksc Pipe | 970m  | 934m  |
|     | Total                  | 5478m   | 5394m   |
| 16. | Pumpsets               |   |   |
|     | Head Works             | Vertical turbine 45HP x 104m x 1133 LPM 2 Nos.                      | Vertical turbine 45HP x 104m x 1133 LPM 2 Nos.                      |
|     | Treatment 2 Nos.       | Clear water pumpset 9HP x 1078 LPM x 30m HSC                        | Clear water pumpset 9HP x 1078 LPM x 30m HSC                        |
| 17. | Group pumping pumpsets |   |   |
|     | Chengam TP             |   |   |
|     | Group 1                | 8 HP x 456 LPM x 40m-2 Nos.<br>Open well type submersible pumpsets. | 8 HP x 456 LPM x 40m-2 Nos.<br>Open well type submersible pumpsets. |
|     | Group 2                | 3 HP x 150 LPM x 40m-2 Nos.<br>Open well type submersible pumpsets. | 3 HP x 150 LPM x 40m-2 Nos.<br>Open well type submersible pumpsets. |
|     | Group 3                | 1 HP x 65 LPM x 25m-2 Nos.<br>Open well type submersible pumpsets.  | 1 HP x 65 LPM x 25m-2 Nos.<br>Open well type submersible pumpsets.  |
| 18. | Pudupalayam TP         |   |   |
|     | Group 1                | 2 HP x 130 LPM x 30m-2 Nos.<br>Open well type submersible pumpsets. | 2 HP x 130 LPM x 30m-2 Nos.<br>Open well type submersible pumpsets. |
|     | Group 2                | 2 HP x 86 LPM x 31m-2 Nos.<br>Open well type submersible pumpsets.  | 2 HP x 86 LPM x 31m-2 Nos.<br>Open well type submersible pumpsets.  |
|     | Group 3                | 2 HP x 56 LPM x 25m-2 Nos.<br>Open well type submersible pumpsets.  | 2 HP x 56 LPM x 25m-2 Nos.<br>Open well type submersible pumpsets.  |
| 19. | Distribution System    |   |   |
|     | a) Chengam TP          | 90mm OD PVC 4 Ksc Pipe 5429m  | 5424m   |
|     | b) Pudupalayam TP      | 90mm OD PVC 4 Ksc Pipe 6131m  | 6131m   |

|     |                            |  |                         |
|-----|----------------------------|--|-------------------------|
| 20. | Proportional Cost          |  |                         |
|     | Chengam TP                 | Rs.501.4 Lakhs   | Rs.565.77 Lakhs         |
|     | Pudupalayam TP             | Rs.240.0 Lakhs   | Rs.265.53 Lakhs         |
|     | Chengam Rural              | Rs.146.6 Lakhs   | Rs.167.69 Lakhs         |
|     | Pudupalayam Rural          |  |                         |
|     |                            | <b>Rs.888.00 Lakhs</b>                                       | <b>Rs.998.998 Lakhs</b> |
| 21. | Cost per 1000 lit          | Rs.21.16   | Rs.22.14                |
| 22. | per Capital cost           | Rs.1566  | Rs.1761                 |
| 23. | Name of Contractor         | M/s.VSS Construction,<br>No.90, Gandhi Nagar,<br>Dharmapuri. |                         |
| 24. | Date of work order         | 30.01.2010   |                         |
| 25. | Date of site handling over | 13.02.2010   |                         |
| 26. | Period of contract         | 1 Year   |                         |
| 27. | Agreement No.              | CE/NR/27/09-10dt.31.3.2010                                   |                         |
| 28. | Agreement value            | Rs.655.56 Lakhs  |                         |



# FLOW DIAGRAM

226 (I) 24 Hours  
303 (U)

1.00LL Sump at  
Pudupalayam T.P  
GL Of Sump - 116.240

LS 16410 LS 15010 LS 23083M 5373M 270 (I) 347 (U)

140mm OD PVC Pipe 6Ksc LS13010 LS12010 LS9510 LS9314

GL - 120.280 140mm OD PVC Pipe 6Ksc 440 (I) 44 (U)

Tee Provision for  
Muthurur Pl. - 3 Nos  
Unnamalaiyam Pl. - 6 Nos  
Total

140mm OD PVC Pipe 6Ksc

650 / 68 (U)

Tee Provision for  
Kottakulam Pl. - 6 Nos  
Methundalur Pl. - 6 Nos  
Total

335 (I) 415 (U)

140mm OD PVC Pipe 6I

GL - 136.510

LS 10200M

559 (I) 748 (U)

200mm ODPVC Pipe

270 (I) 347 (U)

GL 128.260

LS 12880M

Gravity Main

Tee Provision for  
Kadayanallur Pl. - 6 Nos  
Pinjur Pl. - 2 Nos  
Mannalai Pl. - 3 Nos  
Total

74 (I) / 75 (U)

200mm PVC Pipe

1230M LS 9198

894 (I) 1163 (U)

250mm PVC Pipe LS 8158 LS 8970M

Gravity Main

350mm GRP Pipe 8970M LS 4078 LS 3778 LS 470 LS 0

1034 (I) 1307 (U)

1.00LL 7.50 Stand Post  
LWL - 171.780  
MWL - 175.405

1133 (I) 1432 (U)

GL - 89.740  
F.T.VL - 89.740

Head Work Site  
Veerakulam Drain Cum  
Pump House

LS 0 LS 180

Raw water Pumping Main  
200mm DIK Pipe - 4350M

LS 1510 LS 2270

2.00MLD TP

MWL - 171.050  
AVGL - 163.475

66 (I) / 68 (U)

Separate out let for  
Thiruvalluvar Pl. - 6 Nos  
Arasidai Pl. - 2 Nos  
Prossapadu Pl. - 6 Nos  
Total

Proposed Pipe line  
Pipe Rise lead

2.00LL Sump at Chegem T.P  
GL Of Sump - 150.790

559 (I) 748 (U) For 24 Hours

200mm ODPVC Pipe

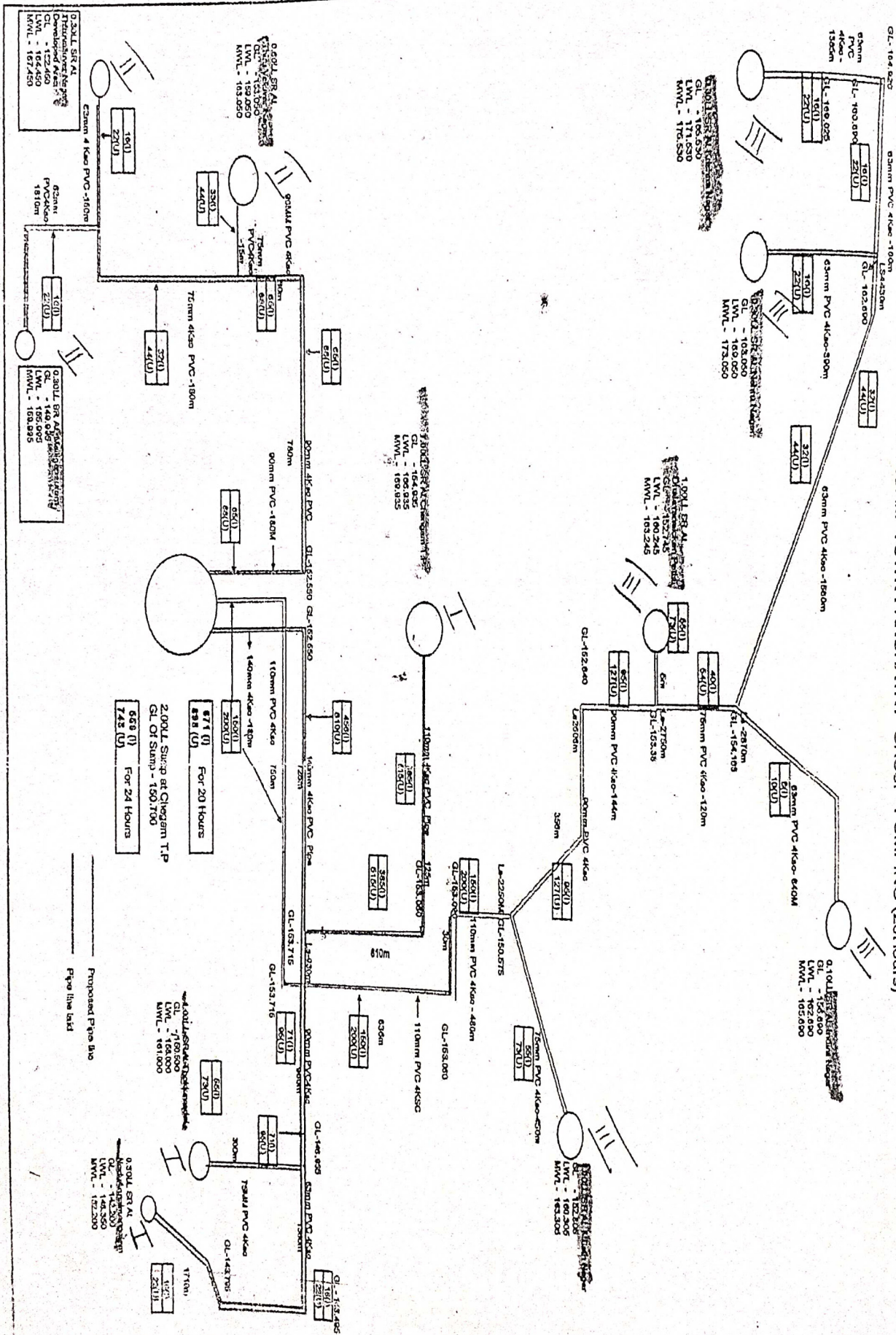
LS 14670

4860m Gravity Main

LS 15160M

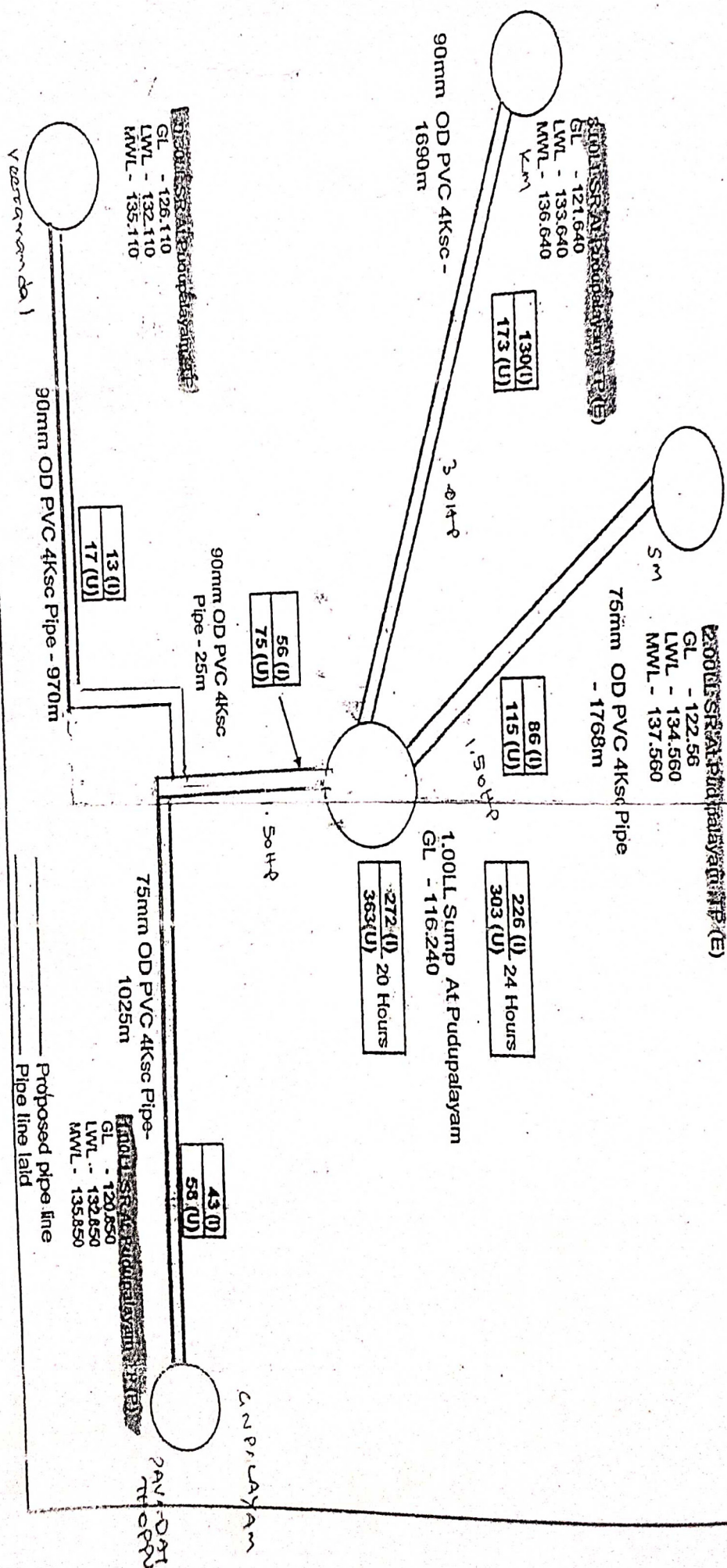


CHENGAM TOWN PANCHAYAT GROUP PUMPING (20Hours)





**Pudupalayam Town Panchayat Group Puming (20Hours)**





10,000 Lit Exist. OHT

TAPPING POINT 1 - PART 1

THAZHAYUTHU VP 5 HABITATIONS

Thazhayuthu 60,000 Lit Exist. OHT  
15LPM/16LPM inter./lit

Existing 1,00,000 Lit Capacity  
9.00 m  
Staging Stand Post at Treatment Work site

Gravity Main of CWSIG To chengam  
LS OM and Raddhalaayem TPS

50/6  
LS 1305  
LS 1225

LS 2555M

LS 395M

LS 1260M

50/6  
15M

50/6 Guna Thanda  
30,000 Lit Exist. OHT

12 HOURS GRAVITATION  
50/6  
315M

50/6  
165M

63/4 3050M

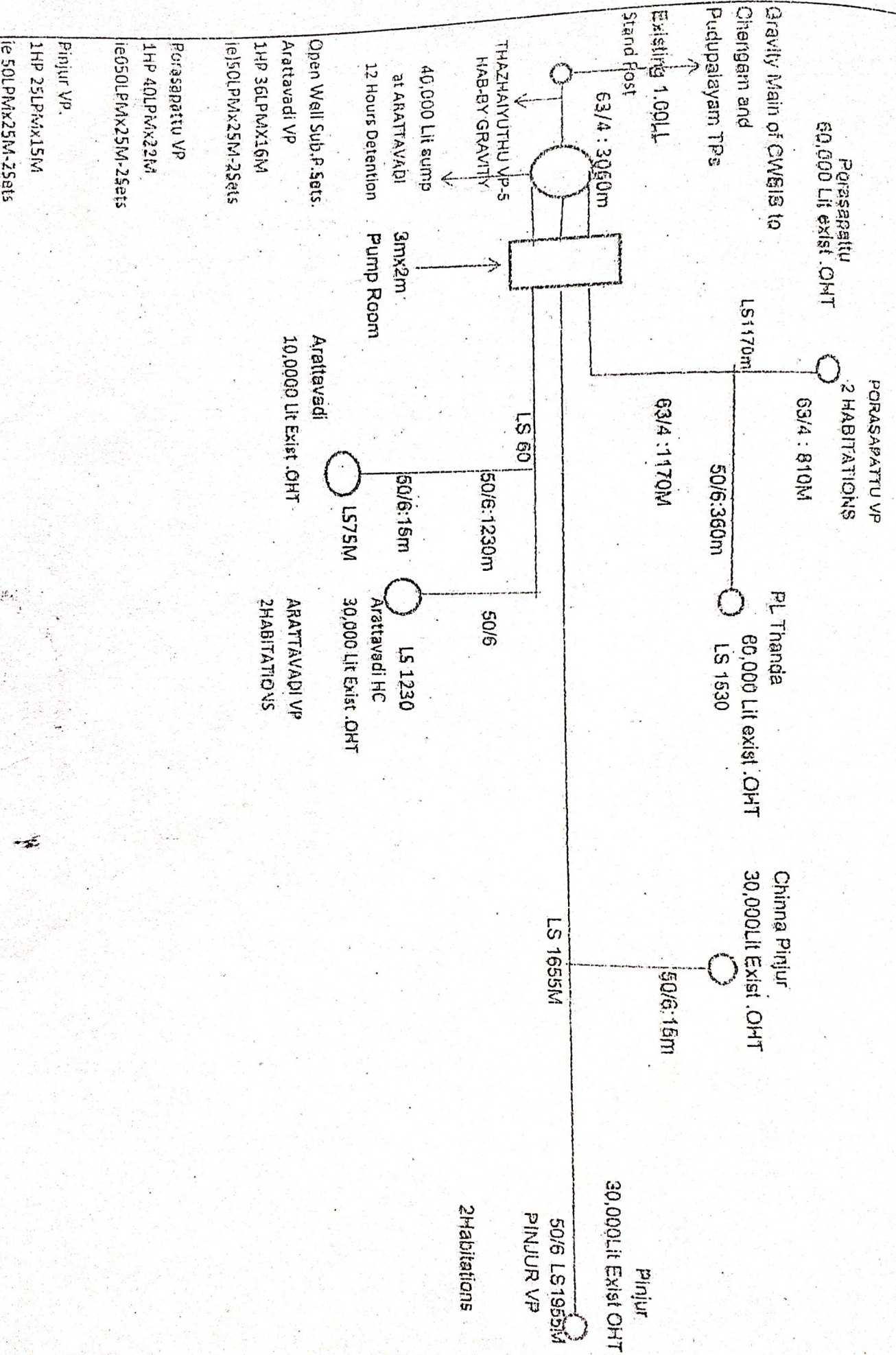
Boyerampalli  
30,000 Lit Exist. OHT

Kunda Thanda  
30,000 Lit Exist. OHT

40,000 Lit Capacity  
SUMP AT ARATTAVADI  
For Arattavadi VP, Porasapattu VP  
and Pinjur VP

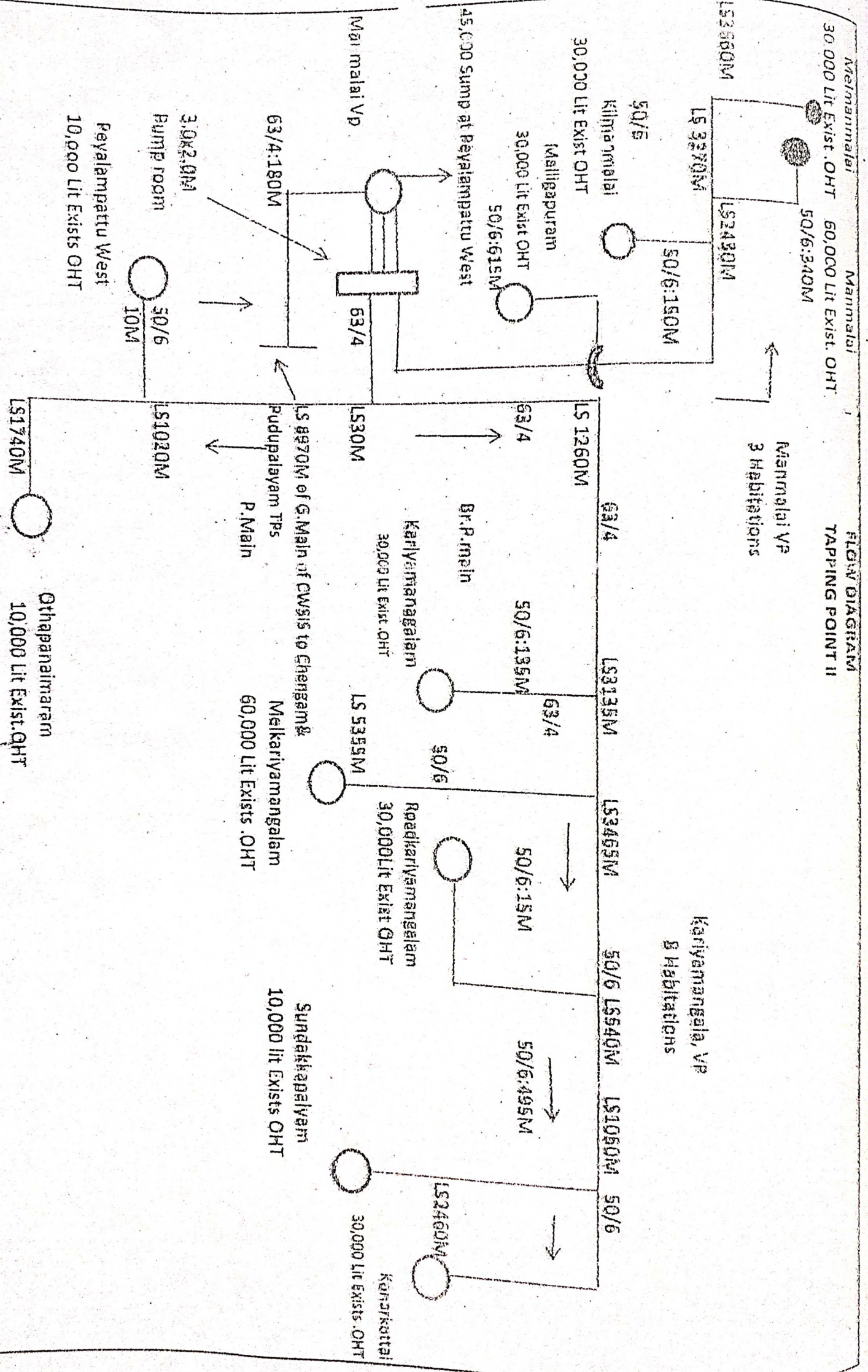


FLOW DIAGRAM  
TAPPING POINT I-PART-II



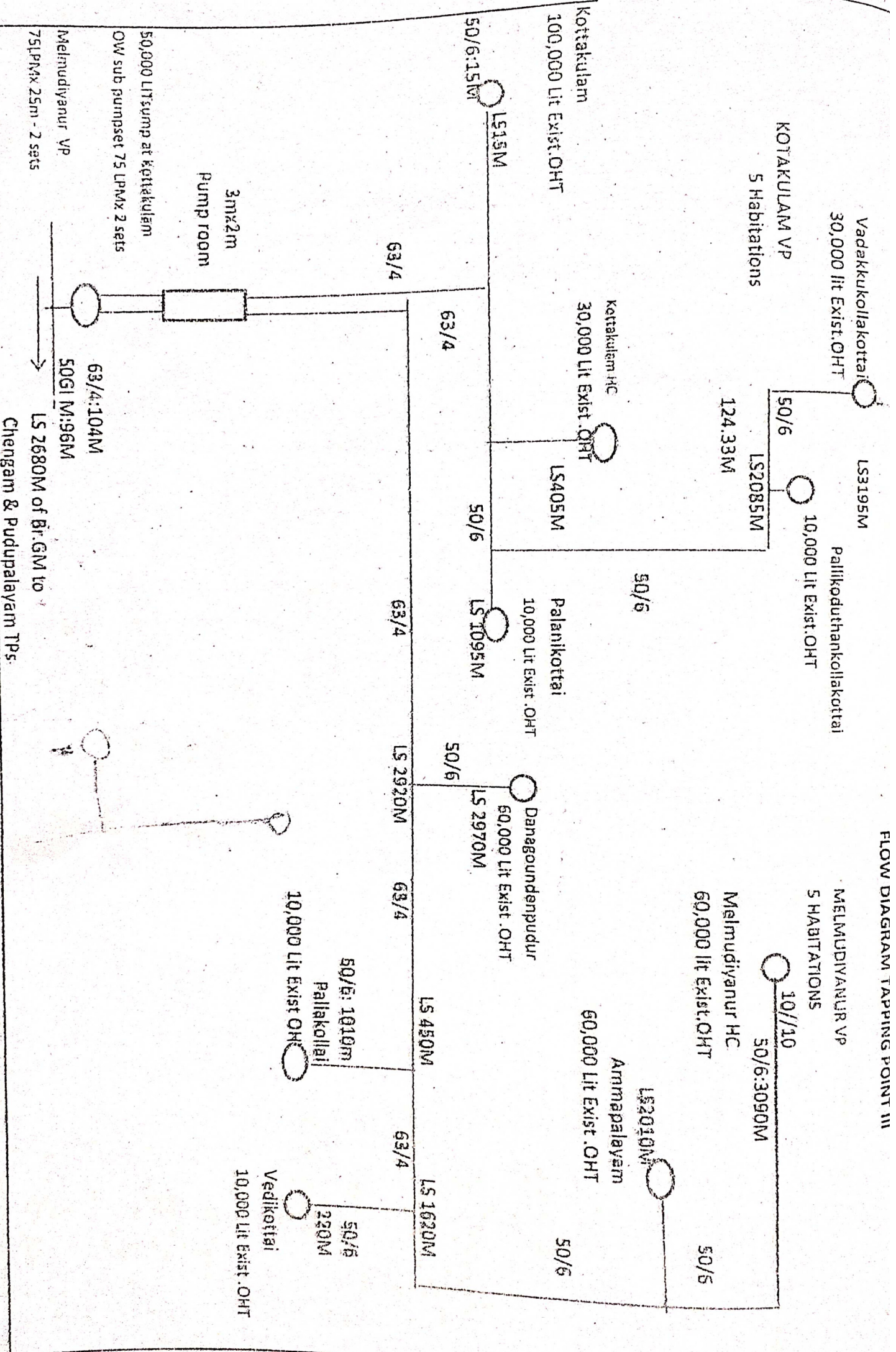


**Flow Diagram**  
**TAPPING POINT II**



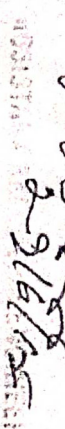


# FLOW DIAGRAM TAPPING POINT III





FLOW DIAGRAM TAPPING POINT-IV



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