

**GOVERNMENT OF MANIPUR  
PUBLIC HEALTH ENGINEERING DEPARTMENT**

----

No. CE/PHE/3-94/NDB/2019/**4161**Imphal, 11<sup>th</sup> March, 2021.

**MINUTES OF THE PRE-BID MEETING FOR MANIPUR WATER SUPPLY  
PROJECT UNDER NDB HELD ON 04-03-2021(THOUGH VIDEO  
CONFERENCE)**

Ref. No. CE/PHE/3-94/NDB(W)/P-VI/2020/4013

Ref. No. CE/PHE/3-94/NDB(W)/P-VII/2020/4014

Ref. No. CE/PHE/3-94/NDB(W)/P-VIII/2020/4015

Ref. No. CE/PHE/3-94/NDB(W)/P-IX/2020/4016

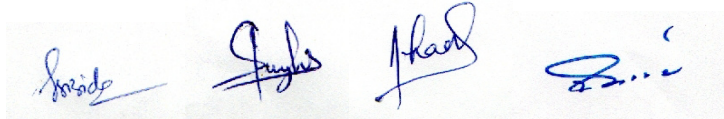
Ref. No. CE/PHE/3-94/NDB(W)/P-X/2020/4017

Ref. No. CE/PHE/3-94/NDB(W)/P-XI/2020/4018

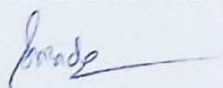
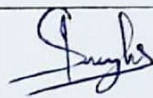
The pre-bid meeting chaired by Chief Engineer, PHED assisted by Addl. Chief Engineer, PHED, Executive Engineer, Water Supply, Maintenance-II and officials of PMSC (Wapcos Ltd.) was participated by the following firms listed below for Manipur Water Supply Project Packages OTP P-VI(W), OTP P-VII(W), RWS P-VIII(W), RWS P-IX(W), RWS P-X(W) & RWS P-XI(W). This is issued as per Sectt.-PHE letter no. SCMs-905/I/2020-PHED-PHED dated 11<sup>th</sup> March, 2021:-

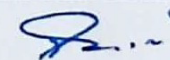
The following firms have submitted their queries through email: -

1. JAYANTISUPER CONSTRUCTION PVT LTD.,
2. Unipro Techno Infrastructure Pvt. Ltd., Chandigarh.
3. WPIL Limited, Kolkata.
4. LARSEN & TOUBRO LIMITED, Chennai.
5. NalandaEngicon Pvt. Ltd.



Sr. No.	Reference	Description as Per Tender/ IFB	Queries/ Clarification of the bidder	Remarks
1.	Section No. <b>II</b> Page No. <b>6</b> Para No/ Clause No. <b>A-4.1</b>	<b>ELIGIBLE BIDDERS</b> A Bidder may be a reputed firm / contractor, registered in Central/State Government / Semi Government works in appropriate class upto the date of issue of this procurement/NIT and from any of the member countries of NDB. <b>No Consortium/Joint bids shall be accepted.</b>	Looking to the quantum of work it is required to <b>allow Consortium/Joint Venture from maximum 2 (two) members</b> including Lead for better competition please.	Clarified as:- No Change in NIT.
2.	Section No. <b>III</b> Page No. <b>12</b> Para No/ Clause No. <b>A.1.2.iii</b>	iii) laying, jointing, testing & commissioning of ductile iron (DI/GI) pipe of 50 mm diameter & above for a length of minimum 80 km in a single project during the last 5 years (from FY2015-16 to FY2019-20)	iii) <b>Providing&amp;</b> laying, jointing, testing & commissioning of ductile iron (DI)/Galvanised Iron(GI) pipe of 50 mm diameter & above for a length of minimum 80 km in a <b>maximum two projects</b> during the last 5 years (from FY2015-16 to FY2019-20)	Clarified as:- No Change in NIT.



3.	Section No. <b>II</b>	No escalation will be allowed. The price quoted should be firm during the validity of contract period.	Since the variation in the market prices of pipe, cement, steel is huge. Please allow price escalation on the basis of price index issued by govt of India.	Clarified as:- No change in NIT.
	Page No. <b>6</b>			
	Para No/ Clause No. <b>A-3.1</b>			
4.	Section No. <b>III</b>	Basic and detailed engineering including procurement and Construction of Water Supply Infrastructure for at least 1 Project in the past 5 years (FY2015-16 to FY2019-20) in the member countries of NDB.	The value of work required for qualification is not mentioned.  Please clarify.	Clarified as:- No change in NIT.
	Page No. <b>12</b>			
	Para No/ Clause No. <b>A.1.2.ii</b>			
5.	Section No. <b>III</b>	Average Construction Turnover: The bidder should submit the audited financial statements for the last 3 (three) financial years from FY2017-18 to FY2019-20 to demonstrate the current soundness of the bidders' financial position showing a minimum average turnover of not less than Rs. 159.00	We suggest that 10% weightage to annual turnover per year shall be allowed to bring them to a current price level.  Please consider.	Clarified as:- No change in NIT.
	Page No. <b>13</b>			
	Para No/ Clause No. <b>A.1 Technical Criteria Point No 3</b>			

*Insids*

*Singh*

*Phad*

*R. -*

		Crore from execution of water supply and other civil engineering works.		
6.	Section No. <b>III</b>	If a single bidder applies in all the six packages viz OTP P-VI(W), OTP P-VII(W), RWS P-VIII(W), RWS P-IX(W), RWS P-X(W) & RWS P-XI(W), the qualification requirement will be sum total of average annual turnover required in individual tenders taken together. Similar formula will apply in case single bidder bids for multiple packages. Accordingly, only the number of packages in sequence corresponding to the total turnover calculated as above will be consider and the remaining package(s) will not be considered both for Technical and Financial Bid.	We suggest that the financial bid shall be opened on the basis of average annual turnover. If the bidder is L-1 in bids where required average annual turnover exceeds its total turnover, the further financial bids shall not be opened. Please consider.	Clarified as:-  No change in NIT.
	Page No. <b>13</b>			
	Para No/ Clause No. <b>A.1 Technical Criteria Point No 6</b>			

*Senade*

*Singh*

*Sharma*

*Sharma*

7	Section No. <b>9</b>		We suggest that the road restoration of kaccha road shall be done as per item whereas restoration of mettled/ bituminous / CC shall be done by concerned departments such as PWD/MC etc. Please consider.	Clarified as:-  Restoration of roads including bituminous finished for the cut portion shall be in the scope of bidder.	
	Page No.				
	Para No/ Clause No. <b>BOQ</b>				
8	Section No. <b>9</b>	Class of GI pipes	Please clarify the class of GI pipe is not mentioned at various items in BOQ.	Clarified as:-  Class of GI pipes is medium as mentioned in Appendix-9.	
	Page No.				
	Para No/ Clause No. <b>BOQ</b>				
9	Section No. <b>9</b>	GI pipes should be duly ISI marked, Galvanized Mild Steel Tubes Electrical Resistance Welded (ERW) High Frequency Induction Welded (HFIW) Hot Finished Welded (HFW) conforming to IS:1239/Pt(I)/2004 (with latest amendment)	We suggest that the 80 mm & above dia shall be butt welded and smaller dia shall be S&S the pipes shall be procured accordingly i.e Plain end for butt welded, S/S for others. Please consider.	Clarified as:-  No change.	
	Page No.				
	Para No/ Clause No. <b>BOQ</b>				

*[Signature]*

*[Signature]*

*[Signature]*

*[Signature]*

		screwed at both ends as per IS:554/1985, Socketed at one end and the other end protected with plastic thread protector. The Socket conforming to IS:1239 (Pt-II/1992-fourth revision) with amendment No.1 in random length of 4 to 7 metres		
10	General	Payment Schedule	The payment schedule for components is not given in the bidding document. Please provide the same.	Clarified as:- Payment will be made on quarterly basis as given in clause No. 6.1 of General Conditions of Contract.
11	General	Date Extension	Please extend the bid submission date atleast by 1 month for site survey and preparation of bid.	Clarified as:- No change in NIT.
12	BOQ	Providing and laying of DI Distribution Pipes (K-7 class) conforming to IS 12288:2002.	Whether the supply of DI Pipe is under the Contractor's Scope. Kindly confirm.	Clarified as:- Yes, the supply of DI Pipe is under the Contractor's Scope.

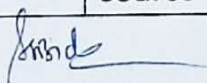
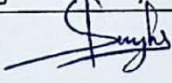
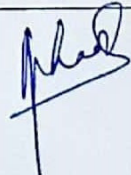
*Smid*

*Singh*

*Phani*

*Sh.*

13	BOQ	Providing and laying of GI Distribution Pipes (K-7 class) conforming to IS 1239/Pt(I)/2004(with latest amendment) screwed at both ends as per IS:54/1985.	Whether the supply of GI Pipe is under the Contractor's Scope. Kindly confirm.	Clarified as:- Yes, the supply of GI Pipe is under the Contractor's Scope.
14	General	Date Extension	Request for Time Extension.	Clarified as:- No change in NIT.
15	Section No. IFB Page No. 2 Para No/ Clause No. 8	<i>"If the office happens to be closed on the last date of submission of tender Fee in hard copy as specified, the same will be received on the next working day at the Office mentioned above."</i>	We understand that only hardcopy submission of Tender fee is required. Kindly confirm.  Also please provide the address for hardcopy submission.	Clarified as:- Only hard copy of tender fee is to be submitted to the Office of Chief Engineer, PHED, Khuyathong, Manipur, Imphal-795001 as already mentioned in IFB of NIT
16	Section No. Section VI Page No. 487 Para No/ Clause No. 6.1	<i>Payments shall be adjusted for deductions for advance payments (if any), retention, other recoveries in terms of contract &amp; taxes to be deducted at source [TDS] as per</i>	We would like to bring to your kind notice that mobilization advance has been provided for various water supply projects that were envisaged across contracts in India to facilitate better cash flow and smooth	Clarified as:- No mobilization advances will be provided for this work as mentioned in Section-VI, GCC, Clause-10


		<i>applicable law.</i>	kickoff & progress of project. Hence, we request you to provide us interest free mobilization advance of 10% of the contract value for the subject project. Kindly consider and confirm.	
17	Section No. ITB Page No. 8 Para No/ Clause No. A8	<i>The defect liability period in respect of the entire structure as a whole or in parts of individual components included in the contract shall be 6 months after successful completion of work in all respects and its testing &amp; commissioning.</i>	From the referred clause, we understand that defect liability period of 6 months is concurrent with 5 years of O&M which shall commence after construction duration of 36 months (inclusive of 3 months trial run). Kindly confirm.	Clarified as:-  Defect liability period of 6 months is in concurrent with 5 years of O&M which shall commence after construction period (inclusive of 3 months trial run)
18	Section No. Page No. Para No/ Clause No.	-	We request you to provide the battery limit of the project.	Clarified as:-As per scope of work given in Appendix-9
19	Section No. ITB & PWD Form 12 Page No. 11 & 493 Para No/ Clause	<i>"Compensation for delay of work: @ 1.5 % per month of delay to be computed on per day basis. Provided always that the total</i>	In the former clause, it is mentioned that Delay LD shall be 1.5% per month of delay i.e., 0.05% per day.	Clarified as:-  Compensation for delay of work: @ 1.5 % per month of delay to be computed on per day basis. Provided

*Handwritten signature*

*Handwritten signature*

*Handwritten signature*

*Handwritten signature*



No. E 1 & 22	<p><i>amount of compensation for delay to be paid under this condition shall not exceed 10 % of the tendered value of work or of the tendered value of the item or group of items of work for which a separate period of completion is originally given."</i></p> <p><i>"In the event of the contractor(s) failing to comply with this condition he/they shall be liable to pay as compensation an amount equal to one percent, or such smaller amount as the Superintending Engineer (whose decision in writing shall be final) may decide on the said amount of the contract for every day that</i></p>	<p>In latter clause, it is mentioned as 1% per day on the amount of contract remains incomplete shall be levied as LD.</p> <p>Kindly clarify and also, we request you to consider the amount of delay damages for delay in completing the whole works / milestone shall be 0.05 % of the unfinished value of works per day subject to maximum of 10% of contract value.</p>	<p>always that the total amount of compensation for delay to be paid under this condition shall not exceed 10 % of the tendered value of work or of the tendered value of the item or group of items of work for which a separate period of completion is originally given."</p>	
--------------	---	---	--	--

*Handwritten signature*

*Handwritten signature*

*Handwritten signature*

*Handwritten signature*

		<i>the due quantity of work remains incomplete; provided always that entire amount of compensation to be paid under the provision of this clause shall not exceed ten percent on the amount of the contract as shown in the tender."</i>		
20	Section No. PWD Form - 12 Page No. 493 Para No/ Clause No. 22	<i>".....the time allowed for any work exceeds one month, to complete one-fourth of the whole of the work before one-fourth of the whole time allowed under the contract has elapsed, one-half of the work, before one-half of such time has elapsed; and three-fourths of the work before three-fourths of such time has elapsed. In the event of the contractor(s) failing to comply with this condition he/they shall be liable to</i>	Since LD on intermediate milestones is levied to ensure the progress of the project, we presume that the liquidated damages / penalty levied for the slippage of one milestone will be reimbursed if the progress is covered up with the subsequent milestones and the project is completed within the project duration. Kindly confirm.  Also, we understand that the milestones mentioned in the referred clause is percentage completion with respect to	Clarified as:-  Any penalty levied under the quoted clause as compensation will not be reimbursed.  Yes

*Inside*

*Singh*

*Shah*

*...*

		<i>pay as compensation an amount equal to one percent, or such smaller amount as the Superintending Engineer..."</i>	financial value. Kindly confirm	
21	Section No. II Page No. 6 Para No/ Clause No. A 3.1	<i>No escalation will be allowed. The price quoted should be firm during the validity of contract period</i>	Considering the voluminous nature of work with huge quantum of civil structures and also due to extreme volatility of prices of various materials (DI, GI, Cement, Steel reinforcement, POL, labours, machineries & All commodities), we request you to consider the price adjustment based on FIDIC for the entire contract period i.e., during Construction & O&M.	Clarified as:-  No change in NIT
22	Section No. Section VI Page No. 486 Para No/ Clause No. 5.2	<i>"Cost escalation, affecting the Applicable Law, with respect to taxes and duties and idle period which increases or decreases or due to delay of works in any case, the cost incurred</i>	Please note that the effect of contract price increase or decrease due to change in law on taxes and duties cannot be predicted at this juncture and also quoted price is inclusive of Labour cess and GST, we	Clarified as:-  The rates quoted as above are inclusive of labour cess, GST applicable, all taxes and duties complete. Hence, reimbursement does not arise.

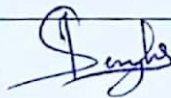
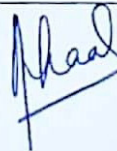
*Handwritten signature*

*Handwritten signature*

*Handwritten signature*

*Handwritten signature*

		<i>by the Contractor in performing the works, occurred will not be accepted by the Employer, in any case."</i>	request you to account and reimburse / benefit change in contract price due to change in law during course of entire project duration. Kindly confirm.	
23	Section No. Section IV Page No. 25 Para No/ Clause No. Appendix 6	<i>"Construction Rate for key activities" is mentioned in the table</i>	As Construction rate for key activities are confidential in nature, such details cannot be made public. Hence, kindly delete this column.	Clarified as:-  No change in NIT.
24	Section No. Section IV Page No. 474 Para No/ Clause No. Note 3	<i>"fine aggregate preferably from Kanhaighat/ Dhanshree Quarry"</i>	As the referred clause is limiting the contractor from purchase of fine aggregate, we request you to allow the contractor to choose the source of basic materials confirming to codal requirement based on the nearest location for competitive price.	Clarified as:-  Quality shall conform to IS 456:2000, IS 4326:1976, IS 13920:2016, IS 383 and has to be approved by the department as per standard procedure.
25	Section No. Section IV Page No. 474 Para No/ Clause No. Note 6	<i>"Design data &amp; drawings ( .dwg AutoCAD file) to be submitted in soft as well as hard copy( 4 copies each set)."</i>	We understand that the detailed design data & drawings mentioned in the referred clause shall be submitted after award of contract. Kindly confirm.	Clarified as:-Detailed design and drawings shall be submitted in soft as well as hard copies before the construction phase.


26	Section No. III Page No. 15 Para No/ Clause No. I.1.1	<p><i>"Performance Security</i></p> <p><i>The format of the Bank Guarantee(s) shall be got approved by the Contractor from the PHED, Manipur"</i></p>	Kindly provide the Bank guarantee format for Performance Security.	Clarified as:-  Does not arise at this stage of tender.
27	Section No. VI Page No. 488 Para No/ Clause No. 9 (c), (e) & (f)	<p><i>Contractor will be responsible for obtaining statutory approvals/permits related to E&amp;S aspects including labor aspects. PHED will support the Contractor, if required, for obtaining the necessary approvals.</i></p> <p><i>Requirement of tribal community land for implementing the works (permanent/temporary), including any land for construction camps and laydown areas during implementation, the Contractor will take prior</i></p>	<p>We would like to highlight the fact that acquiring permission &amp; clearances would be easier and timely if approached by a Government body. In this context, we request you to consider ROW for laying pipelines, permissions and clearances (including forest areas, tribal areas &amp; private properties) for crossings and pipeline laying in the scope of Employer and only liaising for permission shall be done by the Contractor. Kindly confirm.</p> <p>Also please confirm that encumbrance free land shall be provided after award of work</p>	Clarified as:-  Will be as per NITs clause 9(e),9(c) of Section No. VI  No change in NIT

*Smad*

*Singh*

*Phad*

*R.*

		<p><i>permission from the respective village development councils, to avoid any conflict</i></p> <p><i>The contractor shall be fully responsible and accountable to obtain all required permissions from the concerned departments / authorities and shall be fully responsible for abiding by all the laws, rules, bye laws and regulations (for the time being in force in India) relating to water, power, extracting of minerals, royalty, blasting, transportation, safety, traffic regulations related to the work</i></p>	<p>and in case any delay in providing land, suitable extension of time shall be granted.</p>	
28	<p>Section No. Section VI Page No. 491 Para No/ Clause</p>	<p>Alteration in Specifications and Design</p>	<p>We understand that any alterations, omissions, additions or substitutions or variations in quantities during execution</p>	<p>Clarified as:-Will be as per clause no. 14 of PWD Form-12 included in Section VI of NIT.</p>

*Sharma*

*Singh*

*Sharma*

*Sharma*

	No. 14		<p>proposed by the Engineer in charge or authority shall be paid at actuals.</p> <p>Also, apart from the reasons mentioned above, if the quantities mentioned in BOQ increases, the same shall be considered as variation in quantities and payment shall be made on actual quantity measured at quoted rates. Please confirm.</p>	<p>Only the quantities defined in Section-IV, Appendix-9, Schedule of Items shall be executed.</p>
29	<p>Section No. PWD Form – 12 Page No. 493 Para No/ Clause No. 21</p>	<p><i>"The Divisional Officer is to have full power to send workman upon the premises to execute fittings and other works not included in the contract for whose operations the contractor(s) is/are to afford every reasonable facility during ordinary working hours provided that such operations shall</i></p>	<p>We understand that extra workmen deployed by the Authority for other works during contract period shall be the responsibility of the authority and any delay attributable shall not fall under the contractor.</p>	<p>Clarified as:- In such case, the department will manage in such a way no disturbance has been made to the contractors work.</p>

*Amid*

*Singh*

*Phad*

*R...*

		<i>be carried on in such a manner as not to impede the progress of the work....."</i>		
30	Section No. Section VI Page No. 486 & 496 Para No/ Clause No. 6.1 & 27	<p><i>"The Employer shall cause the payment of the Contractor promptly after receive of the bill by the Employer on the basis of the measured works actually completed and verified by the Employer and the PM&amp;SC on quarterly basis as per availability of Check Drawal Authority/Money as per the rules and regulations under government of Manipur."</i></p> <p><i>"The contractor(s) shall be paid usually once a month commencing from the .....a sum of ..... percent of the total value of work done since the last</i></p>	<p>Referred clause states that payment shall be made on quarterly basis. While latter clause states that contractor shall be paid on monthly basis. Kindly clarify.</p> <p>Also, since O&amp;M is manpower intensive requiring monthly salary disbursal and is of longer duration, kindly accept payment of invoices on monthly basis.</p>	<p>Clarified as:-Payment to the contractor will be bound by Clause 6.1 of General Conditions of Contract included in Section-VI of NIT.</p> <p>No change in NIT.</p>

*Inside*

*Singh*

*Head*

*Dr.*



		<i>payment according to the certificate of the Divisional Officer."</i>		
31	Section No. Section VI Page No. 496 Para No/ Clause No. 27	<i>"When the work shall be completed, the contractor(s) is/are to be entitled to receive all moneys due payable to him/them under or by virtue of the contract, except sum of ..... percent of the total value of the work done which will be retained for six months after the date of completion of the work and refunded to the contractor(s) only if no defect, shrinkage or other faults appear in the works."</i>	From the clause, we understand that retention money is not applicable. Kindly confirm.  If retention money is applicable, kindly provide the percentage of retention and also, in order to facilitate better cash flow for the project, we request you to consider upfront Bank Guarantee in lieu of cash retention. Kindly confirm.	Clarified as:-  Performance guarantee bond(3% of contract amount) will be retained for whole duration of project plus 6 months and refunded to the contractor(s) only if no defect, shrinkage or other faults appear in the works as per NIT clause I.1 of Section-III.
32	Section No. PWD form 12 Page No. 506 Para No/ Clause No. 38	<i>"The Divisional Officer shall supply the materials as shown in the attached schedule but does not</i>	Since BOQ includes the scope of supply under contractor's scope, we understand that there is no free issue materials and referred	Clarified as:- Supply of material will be under Contractor's scope.

		<i>undertake to take back from the party tendering either before or after the completion of the work, or the termination of this agreement, surplus materials which were originally procured by the party tendering or were issued to him/them by Government"</i>	clause is not relevant for the subject tender. Kindly confirm.	
33	Section No. Page No. Para No/ Clause No.	Removal & Shifting of existing Utilities	We understand that during execution of work, cost involved in removal & shifting of utilities will be the responsibility of contractor and will be reimbursed at actuals by the department on account of prior intimation. Kindly confirm.	Clarified as:-Cost incurred in Removal & Shifting of existing Utilities will not be reimbursed but care should be taken not to disturb other utilities in close co-ordination with other line departments.
34	Section No. Section VI Page No. 486 Para No/ Clause No. 6.1	Payments to the contractor	We request you to provide the period of certification and payment of RA bills.	Clarified as:- Payment to the contractor will be bound by Clause 6.1 of General Conditions of Contract included in Section-VI of NIT.

*Inside*

*Sund*

*Had*

*72..*

35	Section No. Section VI Page No. 486 Para No/ Clause No. 6.1	<i>"The Employer shall cause the payment of the Contractor promptly after receive of the bill by the Employer on the basis of the measured works actually completed and verified by the Employer and the PM&amp;SC on quarterly basis as per availability of Check Drawal Authority/Money as per the rules and regulations under government of Manipur"</i>	We request you to delete this clause as it creates a situation of uncertainty. Further, since there is no price variation clause in the subject project with a completion duration of 36 months involving price volatile project components (GI, DI pipes, manpower etc.), such a clause of payment based on availability of funds, may lead to increased cost owing to speculation. Kindly confirm.	Clarified as:-  No change in NIT
36	Section No. Page No. Para No/ Clause No.	General – Delayed Payment	Delayed payment seriously affects the project cash flow besides hampering the timely completion of project, we request you to consider interest on delayed payments at annual rate of two percentage points above the prime lending rate being quoted by the Reserve Bank of India. Kindly consider and confirm.	Clarified as:- Timely payment will be done on quarterly basis as per Clause :6.1 of GCC.

37	Section No.	Payment breakup for structures	Please note that payment breakup schedule is not provided in the tender document. Kindly provide the payment breakup schedule.	Clarified as:-  Will be provided at the time of signing agreement with the successful bidder only.
	Page No.			
	Para No/ Clause No.			
38	Section No.	Insurance during O&M period	We request you to clarify the scope of insurance for assets during O&M period.	Clarified as:- Scope of insurance during O&M period shall be under contractor's scope
	Page No.			
	Para No/ Clause No.			
39	Section No.	Electricity during O&M period	We understand that electricity required for daily O&M of the facilities will be provided by client free of cost. Kindly confirm.	Clarified as:- All the consumables, Chemicals, electricity , manpower etc .for day to day O & M of W/S schemes for 5 years O&M period after construction shall be in the scope of Contractor.
	Page No.			
	Para No/ Clause No.			
40	Section No.	Sludge treatment	Please provide us the distance for disposal of settled sludge from the treatment plants.	Clarified as:- Within the treatment plan complex.
	Page No.			
	Para No/ Clause No.			
41	Section No.	Design Methodology	We presume that all the liquid retaining structures shall be designed as limit state method with limiting crack width of 0.2mm as per IS 3370:2009.	Clarified as:-  Liquid retaining structures should conform to IS 3370:2(2009),CPHEEO manual on Water supply and Treatment.
	Page No.			
	Para No/ Clause No.			

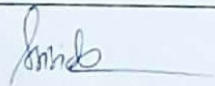
*Insid*

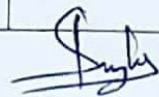
*Singh*

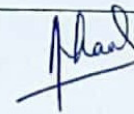
*Phad*

*...*

42	Section No.	Pile foundation	From the BOQ we understand that pile foundation is considered for Intake and ESR. We kindly request you to allow the bidder to design the type of foundation as per soil investigation report.	Clarified as:-  Suitable type of foundation can be provided with prior approval of the Department.
	Page No.			
	Para No/ Clause No.			
43	Section No.	Safe Bearing Capacity of soil	During bidding all the structures shall be designed considering the safe bearing capacity of 10T/m <sup>2</sup> at 2m depth for civil structures, as no SBC is specified in document. Hence we presume that, if there is any change in SBC during execution it shall be paid extra.	Clarified as:-  No cost escalation shall be entertained. The Price quoted should be firm during the validity of the contract period.
	Page No.			
	Para No/ Clause No.			
44	Section No.	Bathymetry survey	Kindly provide bathymetry survey at proposed intake locations if the same is available with the employer.	Clarified as:-  Sample river profile is enclosed as Annexure-III
	Page No.			
	Para No/ Clause No.			
45	Section No.	Contour survey	Kindly provide contour survey at proposed intake locations if the same is available with the employer.	Clarified as:-  Contractor shall access by their own source.
	Page No.			
	Para No/ Clause No.			

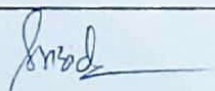


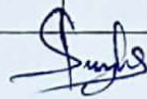






46	Section No.	Geotechnical investigation report	Kindly provide geotechnical investigation report at proposed intake/WTP/ESR locations if the same is available with the employer.	Clarified as:-  Sample soil investigation report is enclosed as Annexure-II
	Page No.			
	Para No/ Clause No.			
47	Section No.	Augmentation, Renovation/Rehabilitation of water supply scheme	Kindly provide detail scope of work to be considered in augmentation of water supply scheme along with items/structures to be considered in rehabilitation scope.	Clarified as:-  As per the Schedule of Items in NIT.
	Page No.			
	Para No/ Clause No.			
48	Section No.	Technical specifications of civil works	Kindly provide detailed technical specifications for civil works	Clarified as:-  As per the Schedule of Items in NIT.
	Page No.			
	Para No/ Clause No.			
49	Section No.	General arrangement drawing for step type intake	Kindly provide general arrangement drawing for step type intake since the enclosed drawing is not clear.	Clarified as:-  Reference drawing enclosed is to be read with the details provided for Step type Intake in the Schedule of Items in NIT.
	Page No.			
	Para No/ Clause No.			
50	Section No.	Pump house	We presume that area of pump	Clarified as:- Only the quantities
	Page No.			

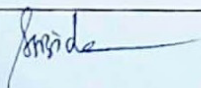


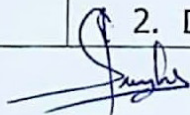


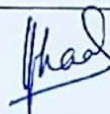





	Para No/ Clause No.		house is considered as per NIT during bidding stage and if the area is increased during execution it shall be paid as per actual. Kindly confirm.	defined in Section-IV, Appendix-9, Schedule of Items shall be executed.
51	Section No.BOO Page No. Para No/ Clause No. All Schemes	General	Kindly provide the bidders with the following for detailed designing of the schemes  <ul style="list-style-type: none"> <li>- List of Villages to be included in scope of work</li> <li>- Detailed Project Report</li> <li>- Population and Demand details (Base, Intermediate, Ultimate)</li> <li>- Topography details.</li> </ul>	Clarified as:-  Provided as Annexure-I
52	Section No.BOO Page No. Para No/ Clause No. All Schemes	General	For items, wherein quantities of pipe are provided in Description, we understand any variation in quantities shall be paid as per actuals.	Clarified as:-  Only the quantities defined in Section-IV, Appendix-9, Schedule of Items shall be executed.
53	Section No.BOO Page No. Para No/ Clause No. All Schemes	General	Kindly provide us with following details for tubewell schemes.  <ol style="list-style-type: none"> <li>1. Depth of Tubewell</li> <li>2. Diameter of Tubewell</li> </ol>	Clarified as:-  Only the quantities defined in Section-IV, Appendix-9, Schedule of









			3. GA drawing of Tubewell 4. Capacity of Tubewell	Items shall be executed.
54	Section No. BOQ Page No. Para No/ Clause No. All Schemes	General	In given BOQ, various type of intake arrangement is mentioned for different schemes. Hence, we request you to kindly provide us with GA drawing of intake arrangement for our better understanding.  Also, kindly provide the bidders with HFL and LWL at Intake location.	Clarified as:-  Reference drawing enclosed is to be read with the details provided for Step type Intake in the Schedule of Items in NIT already provided in NIT  Provided as Annexure-III
55	Section No. BOQ Page No. Para No/ Clause No. All Schemes	General	For all schemes, pump duty parameters are not mentioned in BOQ.  We request you to kindly provide us with pump Capacity, Head, Type of Pumps and Working standby Configuration to be considered for each scheme.	Clarified as:-  As per the Schedule of Items in NIT.
56	Section No. BOQ Page No. Para No/ Clause No. All Schemes	General	In the BOQ for few Schemes only ESR quantities are mentioned in items. Kindly	Clarified as:-  As per the Schedule of Items in NIT.

*Srinidhi*

*Srinidhi*

*phed*

*[Signature]*



			<p>clarify the mode of storage for the schemes where ESRs is not mentioned in the scheme.</p> <p>Further kindly provide us with battery limit for such schemes.</p>	
57	<p>Section No. BOQ</p> <p>Page No.</p> <p>Para No/ Clause No. All Schemes</p>	General	<p>From the BOQ, we understand that providing house service connection is not in scope of work of this project. Kindly confirm.</p> <p>If our understanding is correct kindly clarify the battery limit of distribution system.</p>	<p>Clarified as:- The details of the household service connections to be provided under the packages of RWS(VIII), RWS(IX), RWS(X) and RWS(XI) are enclosed as Annexure-V</p>
58	<p>Section No. BOQ</p> <p>Page No.</p> <p>Para No/ Clause No. All Schemes</p>	General	<p>Capacity of CWR, GLR, ESR will be considered as mentioned in BOQ description. Any change in capacities shall be payable as per actuals.</p>	<p>Clarified as:-</p> <p>As per the Schedule of Items in NIT.</p>
59	<p>Section No. BOQ</p> <p>Page No.</p> <p>Para No/ Clause No. All Schemes</p>	General	<p>In BOQ for GI Pipes, MOC of Valves is specified as GI. We request you to kindly allow bidder to consider MOC of valves as GI/DI.</p>	<p>Clarified as:-</p> <p>As per the Schedule of Items in NIT.</p>

*Singh*

*Singh*

*Shah*

*Shah*

			Kindly confirm.	
60	Section No.	<p><i>"Scope of the work:- The nature of work will include Design, Drawing, Construction, Commissioning, Testing and trial run (3.00 months before commission) complete for Intake Works, Pump House, Aerator, RCC Settling Tank, RCC Slow Sand Filter, RCC Service Reservoir, RCC Distribution Tank with CGI sheet roofing, RCC Overhead Tanks, Quarters, <b>Dedicated power feeder lines</b>"</i></p>	<p>From the above clause we presume that PHED (Client) will arrange Power supply to the proposed locations. Bidder Electrical Scope of work starts from receiving 33kV or 11kV,3Ph, 3W, 50Hz Incoming Power supply from Electricity Board Substation through dedicated Power Line and further distribution upto tail end.</p> <p>Kindly confirm.</p>	<p>Clarified as:-As per the Schedule of Items in NIT.</p>
	Page No.27			
	Para No/ Clause No. Appendix – 9  Schedule of items			
61	Section No.	Single Line Diagram (SLD)	<p>Kindly provide the Single Line Diagram (SLD) / Electrical Scheme drawing for better understanding of Electrical System, Battery limit &amp; Scope of work.</p>	<p>Clarified as:-</p> <ol style="list-style-type: none"> <li>1. In case of WTP-inlet power cables from the sub station upto the control panel of WTP and its subsequent connections to the various electrical/mechanical components fitted to the WTP i/c proper lighting system of the WTP.</li> <li>2. In case of Intakes- inlet power</li> </ol>
	Page No.			
	Para No/ Clause No.			

*Shende*

*Singh*

*Phad*

*R...*

				<p>cables from the sub station upto the control panel of intake and its subsequent connections to the pump/motor i/c lighting system.</p> <p>Scope of the work is as per the Schedule of Items in NIT</p>
62	<p>Section No.</p> <p>Page No.</p> <p>Para No/ Clause No.</p>	Electrical requirement	<p>The details of following items are required with respect to Electrical requirement of the project</p> <ol style="list-style-type: none"> <li>1. Substation /Switchgear Works.</li> <li>2. Transformer type (ONAN OR Dry Type) Number of Working &amp; Standby Details</li> <li>3. HT &amp; LT Power Cables and Control Cables and its accessories.</li> <li>4. Emergency DG Set.</li> <li>5. Earthing, Lighting and</li> </ol>	<p>Clarified as:-</p> <p>As per the Schedule of Items in NIT is for the complete installation.</p>

*Handwritten signature*

*Handwritten signature*

*Handwritten signature*

*Handwritten signature*

			Lightning equipment 6. Safety Items Kindly confirm the requirement of above items and amend the BOQ Accordingly.	
63	Section No. Page No. Para No/ Clause No.	Selection of LT Motor Starters	Selection of starter range has not been specified, we would like to provide the following starter types as per standard engineering practice,  <ol style="list-style-type: none"> <li>1. Motors up to 7.5kW - DOL starter</li> <li>2. Motors above 7.5kW and up to 75kW - Star-delta starters</li> <li>3. Motors above 75kW – Electronic soft starter</li> <li>4. Motors above 250kW- FCMA soft starter</li> <li>5. VFD Starter – As per Process requirement</li> </ol> Kindly confirm.	Clarified as:-  As per the Schedule of Items in NIT is for the complete installation.
64	Section No. Page No.	General	Kindly provide the following	Clarified as:- Sample drawings

*Shahid*

*Sybil*

*Phaal*

*S...*

	Para No/ Clause No.		existing details of augmentation works for the Water supply schemes, WTP's and Slow sand Filters.  1. GA drawings. 2. Design documents. 3. Raw water quality details. 4. Electromechanical details if any.	already enclosed in NIT.  Water testing reports enclosed for reference as Annexure- VI
65	Section No. Page No. Para No/ Clause No.	General	We understand that, designing of Slow sand filters and settling tanks is in bidder's scope and free to size the components as per requirement. Kindly confirm.	Clarified as:-  As per the Schedule of Items in NIT.
66	Section No. Page No. Para No/ Clause No.	General	Kindly provide the area of available land for the proposed new WTP/ treatment process structures.	Clarified as:-  Adequate areas are available in all the places where water supply schemes are to be constructed.
67	Section No. Page No. Para No/ Clause No.	General	Kindly clarify the disinfection requirement for the Water supply schemes and WTP's. If required, kindly provide the type of disinfection and number of	Clarified as:-  As per the Schedule of Items in NIT.

*Insid*

*Singh*

*phad*

*S...*

			locations to be considered.	
68	Section No.	General	Kindly confirm the operating hours to be considered for the proposed WTP and Water supply schemes.	Clarified as:- As per CPHEEO manual on Water Supply & Treatment.
	Page No.			
	Para No/ Clause No.			
69	Section No.	General	Kindly clarify whether the provided Augmentation of WTP capacities are the existing plant capacities or enhancing capacities.	Clarified as:- Capacities mentioned in Augmentation of WTPs in NITs are enhancing capacities of New Treatment Plants.
	Page No.			
	Para No/ Clause No.			



  
**Executive Engineer,**  
**Water Supply Maintenance Divn. No.-II**  
**P.H.E. Deptt., Manipur**

  
**Addl. Chief Engineer**  
**P.H.E. Deptt. Manipur**

  
**CHIEF ENGINEER, PHED**  
**GOVERNMENT OF MANIPUR**

## **ANNEXURE-I: LIST OF VILLAGES UNDER DIFFERENT PACKAGES UNDER MANIPUR WATER SUPPLY PROJECT**

Name of work:- Water Supply Project for Manipur State.(SH: Providing Drinking Water Supply to Rural Area of Manipur),  
works Package: RWS P-IX (W).

A. Imphal-East District		B. Ukhrul District		C. Kamjong District	
Sl. No.	Village	Sl. No.	Village	Sl. No.	Village
1	ANGTHA	1	CHALLOU	1	ALANG
2	ARAPTI	2	CHAMPHUNG	2	BUNGPUN
3	BAMON KAMPU	3	CHINGJAROI KHULLEN	3	CHADONG
4	BASHIKHONG	4	CHINGSOU	4	CHADONG KHULLEN
5	CHANAM SANDROK	5	HOMI	5	CHAHONG KHUNOU
6	CHANGAMDABI	6	HUTSHU	6	CHAKAMA
7	CHINGANGBAM LEIKAI	7	JESSAMI	7	CHAMU
8	CHINGKHU	8	KACHAI	8	CHATRIC
9	GANGAPAT	9	KHAMASOM	9	CHATRIC KHULLEN
10	HARAROU	10	KHAMUNOM	10	CHINGSOU
11	HEINGANG	11	KHANGKHUI KHULLEN	11	CHONGDAN
12	HEIROK	12	KHARASOM	12	CHUNGKAI
13	HUIKAP	13	KJINGAI	13	GRIHANG
14	KAINA	14	LAMBUJ	14	HANGKOU
15	KALIKA	15	LAMLAI CHINGPHEI	15	HONKHUIPHUNG
16	KAMENG	16	LONSHAK	16	K. ASHANG KHULLEN
17	KEIBI HEIKAK MAPAL	17	LUNGHAR	17	K.LEIHAORAM
18	KEIBI KUMUDA	18	MAICHON	18	KACHOUPHUNG (K)
19	KEIKHU HAO	19	MAPUM	19	KACHOUPHUNG (T)
20	KEIRAO BITRA	20	NEW TUSOM	20	KANGOI
21	KEIRAO LANGDUM	21	NUNGBI KACHUI	21	KANGPAT KHULLEN
22	KEIRAO MAKTING	22	NUNGBI KHULLEN	22	KANGPAT KHUNOU
23	KHABEISOI	23	NUNGOU	23	KASOM KHUNOU
24	KHAIDEM LEIKAI	24	NUNGSHANG CK	24	KHAMBI
25	KHANAROK	25	NUNGSHONG KHUNOU	25	KHAMLANG
26	KHEWA COMPANY	26	PHUNGTHAR	26	KHARAN KHULLEN
27	KHONGJIN KHONGHAI	27	RAZAI KHULLEN	27	KHAYANG
28	KHONGMAN	28	SHANGZING	28	KHOIKAI
29	KHUNDRAKPAM	29	SHIHAI KHUNOU	29	KHONGLO
30	KHURAI ANGOM LEIKAI	30	SHIROI CK	30	KHUNTHAK
31	KHURAI KHONGNANGKHONG	31	SIRARAKHONG	31	KONGKAN
32	KHURAI SAJOR LEIKAI	32	SOMDAL CHRISTIAN	32	KONGKAN THANA
33	KITNAPANUNG	33	TANRUI	33	KOSO
34	KONGBA NONGTHOMBAM LEIKAI	34	TOLLOI	34	KUMRAM
35	KONGKHAM LEIKAI	35	UKHRUL	35	LAKHAN
36	LAMBOIKHUL	36	WAHONG	36	LANCHAH
37	LAMLONGEI			37	LEISHI
38	LOUMANBI			38	LEITING
39	MAKENG CHONGLOU			39	LOUPHONG
40	PANGEI			40	LUNGPHU
41	TAKHOK AWANG			41	MANTHOURAM
42	YUMNAM KHUNOU			42	MAOKOT
				43	NAMBASHI KACHUMRAM
				44	NAMBASHI KHULLEN
				45	NAMBASHI KHUNOU
				46	NAMBASHI VALLEY
				47	NAMBISHA
				48	NINGTHI
				49	NONGMAN
				50	PHALUNG
				51	PHANGE
				52	PHUNGYAR
				53	REISHANGPHUNG
				54	SAHAMPHUNG
				55	SHINGKAP
				56	SHINGTA
				57	SHUNGRIPHAI
				58	SIKIPHUNG
				59	SORATHEN
				60	SORDE
				61	SOUTH TUSOM
				62	T. HUNDUNG KHUNOU
				63	TAMARAM
				64	TARONG
				65	WANGLEE
				66	YEASOM

**ANNEXURE-I: LIST OF VILLAGES UNDER DIFFERENT PACKAGES UNDER MANIPUR WATER SUPPLY PROJECT (CONTD.)**

Name of work:- Water Supply Project for Manipur State.(SH: Providing Drinking Water Supply to Rural Areas of Manipur), works Package: RWS P-X

A. Tamenglong District		B. Noney District		C. Bishnupur District		D. Imphal-West District	
Sl. No.	Village	Sl. No.	Village	Sl. No.	Village	Sl. No.	Village
1	ATANG KHUNOU	1	AWANGKHUL	1	KHOIJUMAN	1	AWANG JIRI
2	CHATON	2	KABUI KHULLEN	2	NACHOU	2	CHANGANGEI
3	DUNONG	3	KAJINGLONG	3	POTSANGBAM	3	SAMUSHANG SHANTIPUR
4	ILLENG	4	LUKHAMBI	4	ISHOK	4	IROM MEIARAO
5	KABLANRAM	5	MARANGJING	5	SAITON	5	KAMENG
6	KAIWALONG	6	NUNGTEK	6	NARANSEINA	6	KODOMPOKPI
7	KHUNDONG KHUNKHAIBA	7	TAOBAM	7	KHA THINUNGEI	7	LAMBAL
8	KONPHUNG	8	CHINGMEI KABUI	8	SANJENBAM	8	MALOM TULIHAL
9	KUILOG	9	KHOLUPUM	9	SUNUSIPHAI	9	KHUMBONG
10	LANGMEI	10	LEISHOK	10	PHUBALA	10	PATSOI
11	LASSAN	11	LUBANGLONG	11	NINGTHOUKHONG KHA KHUNOU	11	LOITANG LEIKINTHABI
12	LENGLONG	12	LUWANGLONG KHULLEN	12	CHARANGPAT	12	SAMUSHANG SHANTIPUR
13	MAKUIINONG	13	LUWANGLONG KHUNOU	13	POTSANGBAM	13	LAPHUPAT TERA
14	NALLONG	14	MOLPHEI	14	KASOM TAM PAK	14	POTSANGBAM KHOIRU
15	NEW KADI	15	NUNGADANG	15	PUKHRAMBAM	15	LANSHONBI
16	NURATHEL	16	NUNGBAI	16	NGANGKHALAWAI	16	KHAMARAL
17	OLD KADI	17	NUNGIANG	17	LEIMARAM	17	SAMUSHANG SHANTIPUR
18	OLD LEMTA	18	PUNGSAN	18	TRONGLAOBI	18	TINGRI
19	OLD TAKOU	19	RAGAILONG	19	KWAKTA KHUMAN	19	MEITRAM
20	PALLONG	20	SATU (GHETAO)	20	ITHAI	20	SEKMAI
21	PIULONG	21	TAMLOK	21	TANGJENG	21	TAKYEL MAPAL
22	AKHUI	22	TAOSANG	22	WANGOO KEIRAP	22	BIJOY GOVINDA
23	Ramlalong	23	CHAROI CHAGOTLONG II	23	THIYAM	23	NINGOMBAM
24	BHALOK	24	JOLDANGTEK	24	LEIMARAN	24	KOMLAKHONG
25	DUTGAILOG	25	LAMDANGMEI	25	IRENGBAM	25	PHUMLOU
26	KAHULONG	26	NONEY	26	NAMOIKHUL	26	AWANG KHUNOU
27	KEIHAO	27	NUNGSAI	27	THANGA PART I	27	MONGSANGEI
28	KHONGJARON KHUNKHA	28	THANGAL	28	ITHING	28	YUREMBAM
29	KHONGJARON KHUNTHAK	29	BALUNGDAI	29	MOIRANG KHUNOU	29	ASHONGSHANGBAM LEIKAI
30	SALUNGPANG	30	BIJANG	30	CHAIREL	30	HIYANGTHANG
31	SEMPANG	31	CHANGYAL	31	CHAIREL	31	TABUNGKHOK
32	SONPRAM	32	K. DIVIJANG	32	TANJENG	32	TINGRI
33	TABANGLONG	33	KAMBIRON	33	WANGOO KEIRAP	33	MONGSANGEI
34	THARON	34	KEKRU NAGA	34	KASOM TAM PAK	34	HEINOI KHONGNEMBI
35	WAIKANGBA	35	LEIHAOJANG	35	TANJENG	35	MAIBAM LEIKAI
36	ABEN	36	LEIKOT	36	TANJENG	36	SANGAIPROU MANING
37	ATENGBA	37	LENGLONG	37	SAITON	37	MALOM TULIYAIMA
38	CHINGKAO	38	LONGKAIPHUN	38	SAITON	38	LANGJING
39	CHINGKHONG LONG	39	LONGPHAILUM	39	KUMBI	39	TAIRENPOKPI
40	INEM	40	LONGPI	40	TORBUNG	40	KANGDABI
41	JELATJANG	41	MONGJONG KHULLEN			41	ATOM KHUNOU
42	JOUTE PABRAM	42	MONGJONG KHUNOU			42	MAHARABI
43	KAIMAI	43	MUKTI KHULLEN			43	SEKMAI
44	KANDIHANG	44	MUKTINA			44	KANGCHUP
45	KATANG	45	NUNGBA			45	KHARANG KOIRENG
46	KATANGNAM	46	OKOKLONG			46	PHAYENG
47	KATIANG	47	SEKJANG			47	NGARIYANBAM
48	KOLBUNG	48	SEMPAT GANGTE			48	AKHAM
49	LONGCHAI	49	SEMPAT NAGA			49	SANJENBAM
50	LONGJON	50	SEKJANG MOLBUNG			50	AWANG LAIRENKABI
51	MAGULONG	51	TOMOLBUNG			51	KHA LAIRENKABI
52	MANDU	52	THINGOU			52	TENDONGYAN
53	MAOKOT	53	TUTIPHAI			53	PHEIDINGA
54	MUKTOKHAL					54	KEINGAM
55	NAMTRAM					55	KANTO
56	NEW KAIPHUNDAI					56	KHURKHUL
57	NEW MAGULONG					57	KANGLATONGBI
58	NIINGNING					58	TOP KHABI
59	NDUNGKOK					59	AWANG JIRI
60	NUNGKAO					60	KADANGBAND
61	OINAMLONG					61	LAIRENSAIK
62	OLD KAIPHUNDAI					62	LAMLONGEI
63	PHAITOL					63	KOUTRUK
64	PHELLONG					64	TAKHELLAMBAM KONJIL
65	PHOKLONG					65	TAKHELLAMBAM KONJIL
66	RANGKET KILONG					66	OINAM LEIKAI
67	SARAMBA					67	THONGAM
68	SIBILONG					68	NARAL KONJIL
69	SIBILONG					69	LUKER
70	T. MOTBUNG						
71	TAGURAM						
72	TANINGJAM						
73	TATBUNG						
74	THINGCHAM PHAI						
75	THIULON						
76	TOLLEN						
77	TONGTAO						



## **ANNEXURE-I: LIST OF VILLAGES UNDER DIFFERENT PACKAGES UNDER MANIPUR WATER SUPPLY PROJECT (CONTD.)**

Name of work:- Water Supply Project for Manipur State.(SH: Providing Drinking Water Supply to Rural Area of Manipur), works Package: RWS P-XI (W).

A. Kakching District		B. Thoubal District		C. Senapati District		D. Kangpokpi District	
Sl. No.	Village	Sl. No.	Village	Sl. No.	Village	Sl. No.	Village
1	ELANGKHANGPOKPI	1	WANGKHEM	1	WILLONG KHUNOU	1	T. WAICHONG
2	THOUNAOJAM	2	CHARANGPAT MAKLANG	2	YANGKHULLEN	2	BONGMOUL
3	THONGJAO	3	LAMDING	3	YANGKHUNOU	3	DAILI
4	WAIKHONG NINGTHOUMANAI	4	SAPAM	4	ZENAMYI	4	N. GAMHOI
5	SEROU	5	PAPAL	5	EMEISHIPHRO	5	WASHANGPHUNG
6	KEIRAK	6	ATOUKHONG	6	KATHIKHO	6	TUMNOUPOKPI
7	HIYANGLAM I	7	LEISHANGTHEM	7	NGARI KHULLEN	7	LIYAI KONGPAO
8	ARONG NONGMAIKHONG	8	KANG SAMARAM	8	KHABUNG KARONG	8	MAYANGKHANG
9	THONGAM	9	SANGAIYU MPHAM I	9	KHAIKHO	9	GELBUNG
10	CHAIREN	10	CHERAPUR	10	OKLONG	10	GOPIBUNG NEPALI
11	NUNGOO	11	WANGBAL	11	MAKENG CHAINSINBA	11	KHARKHOLA
12	LAIMANAI	12	HAOREIBI	12	SADIM NAGA	12	UPPER KALAPAHAR
13	MAYENG LAMJAO	13	NEPRA	13	KATOMEI	13	LEISANG
14	KHARUNGPAT	14	KAIREMBIKHOK	14	KATOMEI CENTER	14	JANGNOM
15	WANGOO	15	LAMDING	15	KATOMEI MAKENG	15	SAIKOTJANG
16	PALLEL	16	UCHIWA	16	PURUL ATONGBA	16	SANTOLABARI
17	LOUSHIPAT	17	LEIPHARAKPAM	17	KAIBI	17	PAODEL BASTI
18	IRENGBAND	18	MAIBAM KONJIL	18	KHONGNEM	18	LAMCHOK
		19	LEIRONGTHEL	19	LAIROUCHING	19	MAHIKA
		20	YAITHIBI KHUNOU	20	MAKHEL	20	G. GELBUNG
		21	PECHI	21	EMEIFIITHU	21	THANGLONG MOTBUNG
		22	CHINGTHAM	22	KAMALUNG	22	KANGCHUP CHIRU
		23	NUNGEI	23	KANEM	23	TUIKHANG AIMOL
		24	MAIBAM KONJIL	24	MARAM KAVANAM	24	TINGKAI KHULLEN
		25	INGOUROK	25	PUNI PFOSEMAI	25	SAHEIJANG
		26	KHEKMAN	26	TABUMAI	26	LAIMATON THANGBUH
		27	MOIJING	27	TAPHOU NAGA	27	NATOK BOLJANG
		28	IRONG CHESSABA	28	CHINGMEI KHULLEN	28	KHORIPOK
		29	PHANJANGKHONG	29	CHINGMEI KHUNOU	29	NATOK KUKI
				30	KATAFIIMEI	30	PANGSANG
				31	NEW LAII	31	L.PHADJANG
				32	PAOMATA CENTRE	32	K. JOUTE
				33	PHUBA THAPHAM	33	BETHANY
				34	TUNGAM AFII	34	SADAR JOUTE
				35	TUNGAM KHULLEN	35	THANGJANG (THOMJANG)
				36	BENDRAMEI	36	W. BUNING
				37	CHAKHA	37	M. SONGPI
				38	CHAKUMAI	38	CH. EBENEZER
				39	CHOWAINU	39	CHAROIPANDONGBA KABUI
				40	KENELU	40	CHANINGPOKPI
				41	KHRIDZIPHEMAI	41	MAIBUNG KOM
				42	LOVAZINGHO	42	TUINOMJANG
				43	MAKHAN KHULLEN	43	KOMLACHING
				44	NEW MANGAMAI	44	LAIKOT KOM
				45	MAKHAN CENTRE	45	LAMKAJANG
				46	LAKHAMAI	46	SONGPHEL KHULLEN
				47	IKAILONGDI/VIEWLAND	47	NGAKHAPAT
				48	KAYINU	48	NJUNGKOT KOM
				49	TAPHOU ONAEME	49	A. GELJANG
				50	OKLONG KHUNOU	50	PURUM KHULLEN
				51	TUNGJOY	51	S. KANAN
				52	MAO KARONG (VAKHO)	52	HAPPY LAND
				53	NAMGAILONG RONGMEI	53	K. HENGJANG
				54	SARANAMEI	54	WUNGHON T
				55	TAKAMEI	55	KHAMENLOK
				56	SAJOUBA	56	KHARAM TANGKHUL
				57	CHOWAINAMEI KHULLEN	57	LAIROK KOM
				58	CHOWAINAMEI KHUNOU	58	PHOUWOIBI
				59	MAKHAN KHUMAN	59	SADU KOIRENG
				60	MAO PUNGONG	60	AIGEJANG
				61	MARAM BAZAR	61	KHAJANG
				62	MARAM CENTRE	62	MAPHAO CHIRSTIAN
				63	MARAM KHULLAKPA	63	NURATHEL
				64	MARAM MAKHA SAGEI	64	POIROU TANGKHUL
				65	MARAM MATHAK SAGEI	65	SONGJANG
				66	NEW MAKHAN	66	T WAKANPHAI
				67	NEW MARAM	67	KAMU KOIRENG
				68	NGARI LISHANG	68	BEWLALAND
				69	NGARI RAIDULOMAI	69	KALIKHOLA

**ANNEXURE-I: LIST OF VILLAGES UNDER DIFFERENT PACKAGES UNDER MANIPUR WATER SUPPLY PROJECT (CONTD.)**

Name of work:- Water Supply Project for Manipur State.(SH: Providing Drinking Water Supply to Rural Area of Manipur), works Package: RWS P-XI (W).

D. Kangpokpi District (contd.)					
70	HAIKEN	141	KWAROK MARING	212	C. KHOLEN
71	B. BOLJANG	142	BELEI	213	CHAMOL
72	KAILENJANG	143	NG. PHAINOM	214	CHIKKIM VENG
73	DONGSUM	144	NGARUNGPHUNG	215	H. YANGNOM
74	S. MOLNOM	145	NUNGKA	216	MOLJANG
75	SIMOL	146	RISHOPHUNG	217	SONGPEHJANG
76	NAKHUJANG	147	MAKOKCHING	218	L. SONGPHEL
77	WAROICHING	148	LAIPHAROK MARING	219	TUISEMPHA
78	N. HEIKON	149	SAILENT	220	KHAOCHANGBUNG
79	SINAM JONHOL	150	SADANGSEMBA MARING	221	LETHAOPOKPI
80	BUNGTGE KHULLEN	151	SINAM KOM	222	A. PHAINOM
81	T. JALEN	152	WAI THOU CHIRU	223	SIPDANG
82	YANGNOI	153	THANGAL SURUNG	224	PHUNAL MARING
83	MOLKON	154	PHAIKON	225	A. TUISOMJANG
84	SALAM PATONG	155	VAIPHEI PAKAI	226	OLD BOLJANG
85	T. THANGKAN	156	MAPAO THANGAL	227	C. MOLJOL
86	CHANGOUBUNG V	157	TUIPAJANG	228	CHINGDAI KHULLEN
87	TOKPA NEPALI	158	GHIMITHARI	229	DENGLIN
88	G. SONGBUPHAI	159	MARAMEI NAGA	230	GWALATABI KUKI
89	LAIKOT	160	P. PHAICHAM	231	HAOKHONGCHING
90	S. KEITHELMANBI	161	G. SONGLUNG	232	LUWANGSANGOL
91	LALOI	162	LHANGKHICHOI	233	MAOJANG
92	SONGTUN (J)	163	MAHA KABUJI	234	MAPHOU KUKI
93	M. WAKOTPHAI	164	P. GELJANG	235	NAPHAI
94	KEITHELMANBI	165	BETHELPHAI	236	P. PHAIMOL
95	MAOHING KUKI	166	S. MOLCHAM	237	L. CHAJANG
96	HOLJANG	167	MONGNELJANG	238	S. KHONOMPHAI
97	P. KHOTHAH	168	SONGPHUNG	239	SONGPHEL L
98	NAIBET	169	PHAINOM	240	THAYONG
99	SATIKHOLA	170	LEPLEN	241	TUSAM
100	KHARPANI	171	S. MONGBUNG	242	Y. LANGKHONG
101	CHUCHEKHOP	172	BAJAGARA	243	MAKENG NGAMNEH
102	SCHOOL PARGANDA	173	PURUM LIKLI	244	TAHAR BASTI
103	PHOIKON	174	AWANG LONGA KOIRENG	245	SONGJANG PAKANG
104	TAPON NAGA	175	T. KHULLEN	246	MAOKOT
105	HARUP KUKI	176	MAKUI NAGA	247	BELIJANG
106	SONGPEKJANG NEPALI	177	MAKUI NAGA	248	CHAWANKINING
107	KHOLPECHANG NEPALI	178	LUNGPHOU NEPALI	249	S. BOLEN
108	KHOLPECHANG KUKI	179	THONGLANG ATONGBA	250	LHANGJOL
109	KOTLEN	180	LYAI KALAPAHAR	251	TUIPAJANG
110	PARENGBA	181	NOON PANI	252	CHALBUNG
111	KANGCHUP MAKHOM	182	GOVAJANG	253	PHAILLENJANG
112	WAINEM	183	HAIJANG	254	S. BOUNGJANG
113	KONSAKHUL	184	CHALWA	255	S. JANGNOMPHAI
114	A. SONGPJANG	185	SELSI	256	SONGBEM
115	BOLKOT	186	THALDAHARA	257	TENKONPHAI
116	SADU CHIRU	187	JANGMOL	258	TUISOMJANG
117	KHOLEP	188	HASPUKHRI	259	WALPHABUNG
118	LEIKHAMPOKPI	189	CHINGLOUBUNG	260	TINGPIBUNG
119	L. PHAIKOT	190	LUNGPHOU		
120	SAITU	191	GORKHA HARUP		
121	PHAIJANG	192	KHOLEN		
122	NUJANG	193	KOLGARI		
123	KOUBRU LEIKHA	194	WEST SANTING		
124	NUNGSAL CHIRU	195	AVAIL		
125	BUNGTGE CHIRU	196	THANAMBA		
126	ANKHUNBUNG	197	DHORIGARI		
127	B. PHAINOM	198	MOTJANG		
128	N. BOLJANG	199	S. BOUNGPI		
129	E. MULAM	200	S. LHANDNOM		
130	EKPAN CHINGKHA	201	BETHEL		
131	SORALAND T	202	GOUNGAIPHAI		
132	NONGMEIPAL	203	L. SINGHOL		
133	S. BOLKOT	204	SONGJANG KHUNOU		
134	BONGBAL KHULLEN	205	SADU MONGSABA KUKI		
135	CHINGMANG	206	SAMUK		
136	LUNGTHER	207	CHINI INGHOL		
137	MOIRANGPAL	208	MOTBUNG NEPALI		
138	T. GOJANG	209	PANGMOL		
139	URAN CHIRU	210	KHENGJANG		
140	KHONGBAL KUKI	211	SAPERMEINA		

**ANNEXURE-I: LIST OF VILLAGES UNDER DIFFERENT PACKAGES UNDER MANIPUR WATER SUPPLY PROJECT (CONTD.)**

Name of work:- Water Supply Project for Manipur State.(SH: Providing Drinking Water Supply to Rural Area of Manipur), works Package: RWS P-XII (W).

A. Pherzawl District		B. Chandel District		C. Tengnoupal District		D. Churachandpur District		D. Jiribam District	
Sl. No.	Village	Sl. No.	Village	Sl. No.	Village	Sl. No.	Village	Sl. No.	Village
1	AIBULON	1	ANAL KHULLEN	1	AIGEJANG	1	ALLUSTINGTAM	1	AGLALPUR
2	B.MUNPI	2	ANAL KHUNOU	2	AIMOL CHANDONPOKPI	2	BIJANG	2	AHAMEDABAD
3	BUALTANG	3	BELEJANG	3	AIMOL CHINGNUNGHUT	3	BIJANG GANGTE	3	BAIBONI
4	BUKPI/ZOUPI	4	BERU KHUDAM	4	AIMOL KHULLEN	4	BIJANG TAMPAK	4	BAKHAL
5	BUNGZANG	5	BERU MOLLABUNG	5	AIMOL KHUNJAI	5	BISANMUJAL	5	BERABAK
6	GALKAPKOT	6	BOLCHANG TAMPAK	6	AIMOL NGAIRONG	6	BOLJOL	6	BHOMUKPARA
7	KAIHLAM	7	BOLLOK	7	AIMOL SATU	7	BONGBAL	7	BHUTANKHAL
8	KHUANGZANG	8	BOLINIDAM	8	AIMOL TAMPAK	8	BUNGMUAL	8	BOROIKHAL
9	L.PHUNCHONGJANG	9	BONGMOL TAMPAK	9	ANGBRASU	9	CCP HQ	9	CHAMPANAGAR MEITEI
10	LEIZANGPHAI	10	CHAKAP	10	B. BONGJANG	10	CHENGKONPANG	10	DIBONG
11	MILONGMUN	11	CHAKPI MOLBEM	11	BEAULAHRAM	11	CHINGLANGMEI	11	JAKURADHOR PT-I
12	MUALHOIJIANG	12	CHALLONG	12	BIYANG	12	COLLEGE VENG	12	JIRIMUKH
13	MUALKIJI	13	CHANDEL CHRISTIAN	13	BONGLI	13	D PHAILIAN	13	KAMARANGA
14	MUALNUJAM	14	CHANDEL KHUBUL	14	BONGMOL	14	DM VENG	14	LALPANI
15	PALKHUANG	15	CHANDEL KHULLEN	15	C. GAMNOM	15	DORCAS VENG	15	LAMBHUTANKHAL
16	PAMJAL	16	CHANDRAPOTTO	16	CH. TENGNOUNPAL	16	ELIM VENG	16	LATINGKHAL
17	PANGEN	17	CHANGPOL	17	CHAHMOL	17	GAISEMLONG	17	LEISHABITHOL
18	PHAIJANG	18	CHARANGCHING KHUNOU	18	CHATONG	18	GAMNOM	18	MAKHABOSTI
19	PHAIKHOLLUM J (MUNTHA)	19	CHOTHE KHUNOU	19	CHEHLEP	19	GANGPIMUAL	19	RASIDPUR
20	PHAIIPHENG	20	DANGKHU	20	CHIKIM	20	GELJANG	20	SABUGHAT
21	PHAITONG	21	D BETHANY	21	CHINGJAROI	21	GOUCHINKHUP VENG	21	SONAPUR
22	SAINOUJANG	22	DARCHEN	22	CHOKTONG	22	HEBRON VENG	22	TILKA COMPANY
23	SINJANG	23	GAMPHAJOL	23	DAMJOL	23	HIANGTAM LAMKA	23	UCHATHOL
24	SUANGSANG	24	GANGPJANG	24	GOMI	24	HILL TOWN		
25	THANLON	25	GUNJIL	25	GOVAJANG	25	HMAR VENG		
26	THIAKBUNG	26	HAIKHA (H)	26	H. KOTLENPHAI	26	HMUJA VENG		
27	THUNG TAM	27	HAIKHA (L)	27	H. MONGJANG	27	JANGLENPHAI		
28	SAVAIPATH	28	HEIBUNGLOK	28	H. WAJANG	28	JOULEIN		
29	TUJKUMUALLUM	29	HENGSHI	29	HAIKOT	29	K JANGNOMPHAI		
30	UMTAL	30	HL.BEMUNG	30	HEIKAKPOKPI	30	K.MUNPI/ CHOTHE MUNPI		
31	DAMDEI	31	HNALERAL	31	HEINOUKHONG	31	K.SALBUNG		
32	LEISEN	32	HOLLENGJANG	32	HENGJANG	32	K. KHOMUNNOM		
33	LOIBUAL	33	HONGBIBAN	33	ISLAND	33	K. MONGJANG		
34	PARBUNG	34	HRINGPHE	34	K. MOULSANG	34	KAPRANG		
35	PARVACHOM	35	JANGDUNG	35	KAMBAANG KHULLEN	35	KAPRANG (LOWER)		

## ANNEXURE-I: LIST OF VILLAGES UNDER DIFFERENT PACKAGES UNDER MANIPUR WATER SUPPLY PROJECT

Name of work:- Water Supply Project for Manipur State.(SH: Providing Drinking Water Supply to Rural Area of Manipur), works Package: RWS P-XII (W).

A. Pherzawl District	B. Chandel District	C. Tengnoupal District	D. Churachandpur District	D. Jiribam District
36	36 JOUMOL	36 KAMBANG KHUNOU	36 KAWNPUJ	
37	37 JOUPI	37 KANANKHUREN	37 KHENGJANG	
38	38 JULBANGCHING	38 KANGOI KHULLEN	38 KHOIRENTAK KHUMAN	
39	39 K.BETHEL	39 KANGOI KHUNOU	39 KHOLMUJ	
40	40 K.MOLNOM	40 KEIPHAM	40 KHOMOI	
41	41 K.PHAILIEN	41 KHANGSIM	41 KHOPUIBUNG	
42	42 KANA KANGBUNG	42 KHAOSAT	42 KINGKIN	
43	43 KANAN	43 KHAROU KHUNOU	43 KOMKEIRAP	
44	44 KAZIPHUNG	44 KHOKARTHIL	44 KUMBI PUKHRI (KOITTE)	
45	45 KEITHEL MANBI	45 KHONGKHANG	45 L SIMOL	
46	46 KHAMBATHEL	46 KHUDEI KHUNOU	46 L. KHAUKUAL	
47	47 KHANGTUNG	47 KHUDEI LOIKONG	47 LAILAM VENG	
48	48 KHENGJANG	48 KHULSAIBUNG	48 LAJANGPHAI	
49	49 KHONGKANG SAVUMPA	49 KHUNBI TUJNEM	49 LAMJANG	
50	50 KHONGNANG PHEISABI	50 KOIJAM	50 LAMLAI	
51	51 KHONGYON	51 KONAITONG	51 LANVA	
52	52 KHOIJIANG	52 KULYANG	52 LEIJANGKHOPI	
53	53 KHUMBUNG KHULLEN	53 KURAOPOKPI	53 LEISANG	
54	54 KHUMBUNGPHE	54 L. PHAIJIANG	54 L.HANGJANG	
55	55 KHUMKOT	55 L. PHUNCHONG	55 LINGSIPHAI	
56	56 KHUMUNNOM	56 L. SHIJANG	56 M RAMTHER	
57	57 KHUNINGLUNG	57 LAICHING KHULLEN	57 M SONGGEL	
58	58 KHURINGMUL	58 LAMJANG TOMBI	58 MAKHAO BUNGMOL	
59	59 KHUSI TAMPAK	59 LAMLONG CHRISTIAN	59 MATA	
60	60 KURKAM	60 LAMLONG KHULLEN	60 MOIRANG MANTAK	
61	61 KURNOCHING	61 LAMLONG KHUNOU	61 MOLNOM	
62	62 L.CHENGVOL	62 LANGKHONGCHING	62 MONGLIENPHAI	
63	63 L.THINGKANGPHAI	63 LANGOL KHUNOU	63 MUNPI	
64	64 LAMKANG COLONY	64 LEISAN TENGNOUNPAL	64 N. BOLJANG	
65	65 LAMKANG KHUNTHAK	65 LEITHAO	65 NAJANG	
66	66 LAMPHOU CHARU	66 M. RINGPAM	66 NEW BIJANG	
67	67 LANGCHING	67 MACHI	67 NEW ZOUVENG	
68	68 LARONG KHULLEN	68 MAIPAO	68 NEW-HENGLEP	
69	69 LEITGANGCHING	69 MAOJANG	69 NGALOIMOL	
70	70 LEISHOKCHING	70 MAOLHANG	70 NGATHAL	
71	71 LH.JANGNOMPHEI	71 MARINGPHAI	71 PANGZAWL	

## ANNEXURE-I: LIST OF VILLAGES UNDER DIFFERENT PACKAGES UNDER MANIPUR WATER SUPPLY

Name of work:- Water Supply Project for Manipur State.(SH: Providing Drinking Water Supply to Rural Area of Manipur), works Package: RWS P-XII (W).

A. Pherzawl District		B. Chandel District		C. Tengnoupal District		D. Churachandpur District		D. Jiribam District	
	72	LHONGCHIN	72	MARYLAND		72	PHAIHEL		
	73	LIBUNG	73	MOIRANGTHEL		73	PHIRAN		
	74	LIMKHURIN	74	MOLNOI		74	RENGKAI		
	75	LIWA CHANGNING	75	MOLPHEI		75	S BOLJANG		
	76	LIWA KHULLEN	76	N.CHAMPHAI		76	S HALJANG		
	77	LIWA MARING	77	NEW LEIKOT		77	S KANAN VENG		
	78	LONGPI KHONOU	78	NEW MONGJANG		78	S MOLCHAM		
	79	M.MUMPI	79	NEW SHIJANG		79	S MOLHOI		
	80	M.MUNHOI	80	NUNGOUROK		80	S. BELPUAN		
	81	MAHAOTERA	81	P.S KANANJAO		81	S. KOTLIEN		
	82	MANTRI PANTHA	82	PARENGTONG		82	S. MONGLIENJANG		
	83	MARIBUNG	83	PELYANG		83	S. MUOLDUNG		
	84	MENKANG	84	PHAIMANCHAM		84	SAIKOT		
	85	MOLCHAM	85	PHALBUNG		85	SAIPUM		
	86	MOLDENNOM	86	PHOTLENGCHING		86	SALEM VENG		
	87	MOLKON	87	PHUNAL SAMBAM		87	SIALNAH		
	88	MOLLEN	88	PHUNCHONG		88	SIELMAT		
	89	MOLPHEI	89	S. KHUDENGTHABI		89	SIJANG		
	90	MOLPIBUNG	90	S. MOLJOL		90	SILEN		
	91	MOLTUK	91	SAIREL ATOU		91	SIM VENG		
	92	MOMBI	92	SAIREL SAISEM		92	SIMBUK		
	93	NABIL	93	SALEMPHAI		93	SINGMUN (D.KHOJIM)		
	94	NAKONG	94	SENAM		94	SINGGAT		
	95	NEW CHANGPOL	95	SM L'HANGJOL		95	SONGPI KHOLLUI		
	96	NEW CHAYANG	96	T. BONGMOL		96	SJONGSIBOK		
	97	NEW SAMTAL	97	T. KHONOMJANG		97	T BOLJANG		
	98	NEW SONGJANG	98	T. MAIPI		98	T CHAMPHAI		
	99	NEW WAJANG	99	T. YANGNOM		99	T. KHONGKHAI		
	100	NEW WANGPARAL	100	TENGNOUNPAL		100	TANGMUAL		
	101	NGAMKHU	101	TERAPHAI		101	TANGNUAM		
	102	NUNGKANGCHING	102	THALEM		102	TEIJANG		
	103	NUNGPHURA	103	THAMLAJ		103	THINGKANGPHAI		
	104	OKLU	104	THEIMONGKUNG		104	THINGPUT		
	105	OLD CHANGPOL	105	THINGKANGBUNG		105	TOKPA KABUT		
	106	OLD WANGPARAL	106	TINNU MUNJANG		106	TOLLEN		
	107	P.RAIRINGKHU	107	TOLLEN		107	TONGLON (K)		

## **ANNEXURE-I: LIST OF VILLAGES UNDER DIFFERENT PACKAGES UNDER MANIPUR WATER SUPPLY PROJECT (CONTD.)**

Name of work:- Water Supply Project for Manipur State.(SH: Providing Drinking Water Supply to Rural Area of Manipur), works Package: RWS P-XII (W).

A. Pherzawl District		B. Chandel District		C. Tengnoupal District		D. Churachandpur District		D. Jiribam District	
108	P.THUMPHAJOL	108	TUISIMI	108	TONGLON (T)	108	TONGLON (T)		
109	PALDAI	109	TUISOMJANG	109	TUALNUAM	109	TUALNUAM		
110	PAPAAIM	110	WABACHING	110	TUIBONG	110	TUIBONG		
111	PAPAOLON	111	WAKSU	111	TUIKIJUMJALLUM	111	TUIKIJUMJALLUM		
112	PEACE ISLAND	112	YANGGUBUNG	112	TUIRING PHAISEN	112	TUIRING PHAISEN		
113	PHAINOM	113	YANGGOUPOKPI	113	TUISOMJANG	113	TUISOMJANG		
114	PHIRAN MACHET	114	YANGGOUTUBI	114	VAISON	114	VAISON		
115	PHIRANT KHULLEN	115	YONGKHUL	115	VAJING	115	VAJING		
116	PHIRANT LEIHAI	116	ZION	116	VENGLUAM	116	VENGLUAM		
117	PHOILLEN			117	VUNGBUK	117	VUNGBUK		
118	PURUM CHUMBANG			118	YANGNOMPHAI	118	YANGNOMPHAI		
119	PURUM KHULLEN			119	ZALENKOT	119	ZALENKOT		
120	PURUM LAININGKHU			120	ZENHANG LAMKA	120	ZENHANG LAMKA		
121	PURUM PANTHA			121	ZIKPTI TAMPK	121	ZIKPTI TAMPK		
122	ROYAL CHAKPI BAZAR			122	ZOLZAM	122	ZOLZAM		
123	RUWNGCHANG			123	ZOMI COLONY	123	ZOMI COLONY		
124	S.LHANGNOM			124	ZOU BETHEL	124	ZOU BETHEL		
125	S.SIJANG			125	ZOUMUNNUAM	125	ZOUMUNNUAM		
126	S.THINGKANGPHAI								
127	SAHUMPHAI								
128	SAJIK TAMPK								
129	SALLUK								
130	SARONPHAI								
131	SEHAO								
132	SEHLON								
133	SELKUT								
134	SEMOL								
135	SL.CHANGPOL								
136	SOKOM								
137	SONGDUP								
138	SUGNU LAMHANG								
139	SUGNU TRIBAL								
140	SUGNU ZOUVENG								
141	SUGUNU LOKHIJANG								
142	T BOLLON								
143	T.NAMPAPAO								

**ANNEXURE-I: LIST OF VILLAGES UNDER DIFFERENT PACKAGES UNDER MANIPUR WATER SUPPLY PROJECT (CONTD.)**

Name of work:- Water Supply Project for Manipur State.-(SH: Providing Drinking Water Supply to Rural Area of Manipur), works Package: RWS P-XII (W).

A. Pherzawi District		B. Chandel District		C. Tengnoupal District		D. Churachandpur District		D. Jiribam District	
	144	TAMPI							
	145	TARAO LAIMANAI							
	146	THAMLAKHUREN							
	147	THINGPHAI							
	148	THORCHAM							
	149	THUNGCHENG							
	150	TOITUNG							
	151	TOKPAKCHING							
	152	TOLBUNG							
	153	TOUPOKPI							
	154	TS LAIJANG							
	155	TUJINOU							
	156	TUJSAMPHAI							
	157	TUYANG							
	158	TWIDAM							
	159	TWILELON							
	160	U.THINGKANGPHAI							
	161	UCHA TAMPAP							
	162	UNOPAT							
	163	UTANGPOKPI							
	164	V.HAIPIJANG							
	165	VOMKU							
	166	Y.KHUTHA							
	167	Y.THINGKANGPHAI							
	168	ZIONTLANG							





## ANNEXURE-II: SAMPLE SOIL INVESTIGATION DETAILS FOR MANIPUR VALLEY-II

Method of boring = Wash boring

GWL = 0.40m below boring level

Elevation-R.L. in m	Depth in m from ref.level	Depth of sampling in m	Type of sampling	SPT,per 30 blows N-value				Corrected-N Value	Graphical representation of N-value	Stratification
				Observed N-Value						
				SIT cm	15 cm	15 cm	N			
1	2	3	4	5				6	7	8
	0.00								0      25      50	0.00m - 0.50m
	0.50									Very soft, dark gray silty clay layer
	1.00									0.50m - 3.00m
	1.50	1.50	D	1	2	2	4	4		Soft to Medium stiff dark gray yellowish tinge clay layer, trace of silt
	2.00									
	2.50									
	3.00	3.00	D	1	3	2	5	5		3.00m - 6.00m
	3.50									Medium stiff, dark gray clay layer, trace of silt
	4.00									
	4.50	4.50	D	1	2	2	4	4		
	5.00									
	5.50									
	6.00	6.00	D	1	1	1	2	2		6.00m - 7.50m
	6.50									Soft blackish Organic clay layer
	7.00									
	7.50	7.50	D	1	2	2	4	4		7.50m - 8.50m
	8.00									Medium stiff gray clay layer, trace of silt
	8.50									8.50m - 9.70m
	9.00	9.00	D	2	3	3	6	6		Medium stiff blackish gray clay layer, trace of silt
	9.50									
	10.00									9.70m - 15.00m
	10.50	10.50	D	2	2	2	4	4		Medium stiff dark gray clay layer, trace of silt
	11.00									
	11.50									
	12.00	12.00	D	1	2	2	4	4		
	12.50									
	13.00									
	13.50	13.50	D	2	2	2	4	4		
	14.00									
	14.50									
	15.00	15.00	D	1	2	2	4	4		

## ANNEXURE-II: SAMPLE SOIL INVESTIGATION DETAILS FOR MANIPUR HILLS

Method of boring = Wash boring

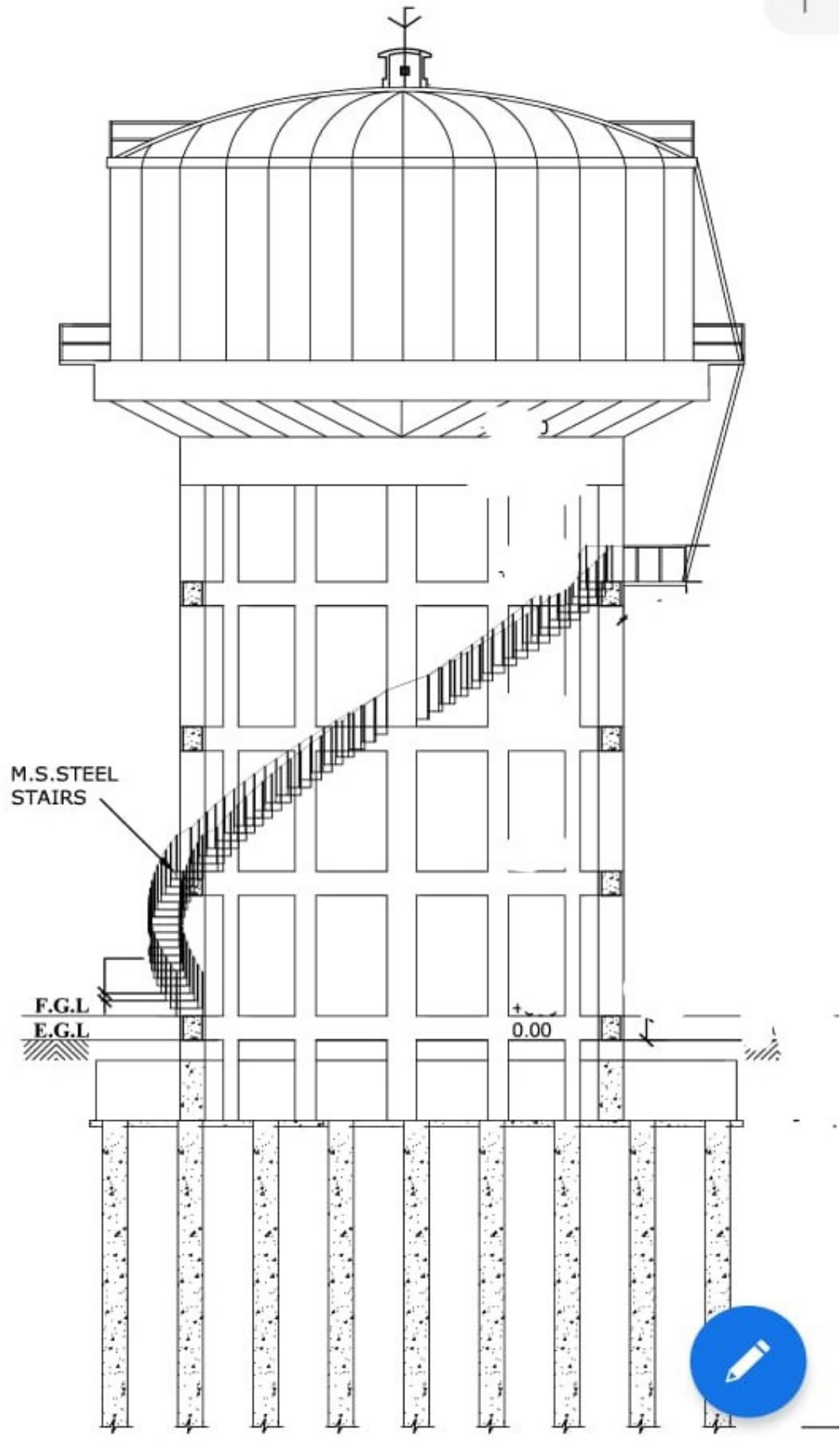
GWL = 0.50m below boring level

Elevation-R.L. in m	Depth in m from ref.level	Depth of sampling in m	Type of sampling	SPT, per 30 blows N-value				Corrected-N Value	Graphical representation of N-value	Stratification
				Observed N-Value						
				SIT cm	15 cm	15 cm	N			
1	2	3	4	5				6	7	8
	0.00								0      25      50	0.00m - 1.50m
	0.50									Very soft, dark gray silty clay layer, with gravel
	1.00									
	1.50	1.50	D	1	0	1	1	1		1.50m - 3.50m
	2.00									Very Soft, gray silty clay layer
	2.50									
	3.00	3.00	D	1	0	0	0	0		3.50m - 6.50m
	3.50									Soft, dark gray silty clay layer
	4.00									
	4.50	4.50	D	1	1	2	3	3		
	5.00									
	5.50									
	6.00									
	6.50	6.50	D	1	1	1	2	2		6.50m - 7.50m
	7.00									Soft blackish Organic clay layer,
	7.50	7.50	D	1	2	2	4	4		7.50m - 10.00m
	8.00									Medium stiff dark gray clay layer, trace of silt
	8.50									
	9.00	9.00	D	2	2	2	4	4		
	9.50									
	10.00									9.00m - 12.00m
	10.50	10.50	D	2	2	3	5	5		Medium stiff blackish clay layer, trace of silt
	11.00									
	11.50									
	12.00	12.00	D	1	2	2	4	4		12.00m - 15.00m
	12.50									Medium stiff dark gray clay layer, trace of silt
	13.00									
	13.50	13.50	D	2	2	2	4	4		
	14.00									
	14.50									
	15.00	15.00	D	1	2	3	5	5		

**ANNEXURE-III: DETAILS OF RIVER PROFILE OF SOME MAJOR RIVERS IN MANIPUR**

<b>Name of Rivers</b>	<b>High Flood Level (in meter)</b>	<b>River Bed Level (in meter)</b>	<b>Normal water level (in meter)</b>
Imphal River	786.44	777.00	778.25
Iril River	790.40	777.40	778.60
Confluence point of Imphal&Iril Rivers	783.70	770.67	771.92

**ANNEXURE-IV : TYPICAL DRAWING OF OVERHEAD TANK**



**ANNEXURE-V: DETAIL OF HOUSE SERVICE CONNECTIONS(HSC)**


**Name of work:- Water Supply Project for Manipur State.(SH: Providing Drinking Water Supply to Rural Area of Manipur)**

<b>Sl.No</b>	<b>Package</b>	<b>Name of District</b>	<b>Total House connection (nos.)</b>
1	RWS P-IX(W)	Imphal East District	49084
2		Kamjong District	6927
3		Ukhrul District	18014
		<b>Total P-IX=</b>	<b>74025</b>
1	RWS P-X(W)	Bisnupur District	18528
2		Imphal West District	23337
3		Noney District	7295
4		Tamenglong District	8482
		<b>Total P-X=</b>	<b>57642</b>
1	RWS P-XI(W)	Kakching District	8599
2		Kangpokpi District	21750
3		Senapati District	31133
4		Thoubal District	16726
		<b>Total P-XI=</b>	<b>78208</b>
1	RWS P-XII(W)	Chandel District	11483
2		Churachandpur District	20145
3		Jiribam District	4870
4		Pherzawl District	5173
5		Tengnoupal District	8892
		<b>Total P-XII=</b>	<b>50563</b>
		<b>Grand Total=</b>	<b>260438</b>

**ANNEXURE-VI**  
**WATER TEST REPORT FOR IMPHAL RIVER AT KHUMANLAMPK (RAW WATER)**

**STATE LABORATORY, PHED, GOVT. OF MANIPUR**

FF-13
SL/PHED, Manipur
Page No. 1/1

Lamphelpat - 795004 Email: slabphedmani@gmail.com Name & Address of Customer: <b>Executive Engineer</b> <b>W/ S Maintenance Division- I</b> <b>PHED, Manipur</b>	TEST REPORT		 Certificate No. TC-7688
	Report No: SL/PHED/TC768819000000544P		
	Date of Report:- 19-09-2019		
	Sample ID :25 /9		
	Date of Receipt of Sample:- 19-09-2019		
	Date of Performance:- 19-09-2019		
	Ref. No. Nil		
Date :- 19-09-2019			
1	Description of Sample (As declared by customer)	Water	
2	Sample Mark (if any, given by the customer)	NA	
3	Date of Sampling by the Customer	19-09-2019	
4	Source & Place of Sampling	Imphal River at Khumanlampak ( Raw Water)	
5	Environmental conditions during sampling	NA	
6	Sampling Plan & Procedures used	NA	
7	Quantity of Water	1 Litre.	

We hereby certify that the following sample submitted to the laboratory has been analyzed with the following results

**Analysis Results (As per IS 10500:2012)**

**1. Chemical Testing**

Sl No	Characteristic	Acceptable Limit	Permissible Limit	Method of Test	Results			
					1	2	3	4
1	Turbidity in NTU	1	5	APHA 23rd Edition 2130 B	85.00			
2	pH value at 25°C	6.5-8.5	No Relaxation	APHA 23rd Edition 4500-H* B	6.90			
3	Total Alkalinity in mg/l as CaCO <sub>3</sub>	200	600	APHA 23rd Edition 2320 B	42.00			
4	Total Hardness in mg/l as CaCO <sub>3</sub>	200	600	APHA 23rd Edition 2340 C	74.00			
5	Iron (as Fe) in mg/l	1.0	No Relaxation	APHA 23rd Edition 3500-Fe B	0.66			
6	Chloride (as Cl) in mg/l	250	1000	APHA 23rd Edition 4500-Cl* B	20.00			
7	Total Dissolved Solids in mg/l	500	2000	APHA 23rd Edition 2540 C	66.00			
8	Sulphate (as SO <sub>4</sub> ) in mg/l	200	400	APHA 23rd Edition 4500-SO <sub>4</sub> <sup>2-</sup> E	0.00			
9	Calcium (as Ca) in mg/l	75	200	APHA 23rd Edition 3500 - Ca B	13.60			
10	Magnesium (as Mg) in mg/l	30	100	APHA 23rd Edition 3500 Mg B	9.72			
11	Electrical Conductivity in µmho/l			APHA 23rd Edition 2510 B	102.00			
12	Fluoride in mg/l as F	1.0	1.5	APHA 23rd Edition 4500-F* D	0.50			

**2. Biological Testing**

1	*Total Coliform	0	0	APHA 23rd Edition 9222-A	---			
2	*E- Coli	0	0	APHA 23rd Edition 9222-A	---			

\*These parameters are not in the scopes of NABL accreditation.

The results relate only to the item(s) tested.

This Test Report shall not be reproduced except in full, without the permission of State Laboratory, PHED, Manipur. The reserved part of sample(s) shall be retained for 30 days from the date of Completion of Test.

Prepared by:- Th. Joychandra Singh

Signature  
 Designation  
 Biologist



*Alfala*  
 20/9/2019


Authorized signatory:  
 Name:- S. Debenkanta Singh  
 Designation:- Chief Chemist  
 State Laboratory Lamphelpat, PHED Manipur



## WATER TEST REPORT FOR SINGDA DAM (RAW WATER)

**STATE LABORATORY, PHED, GOVT. OF MANIPUR**

FF-13
SL/PHED, Manipur
Page No. 1/1

Lamphelpat – 795004 Email: slabphedmani@gmail.com Name & Address of Customer: <b>Executive Engineer</b> <b>Project Construction Division</b> <b>PHED, Manipur</b>	<b>TEST REPORT</b> Report No. SL/PHED/TC76881900000543P Date of Report:- 19-09-2019 Sample ID :24/9 Date of Receipt of Sample:- 19-09-2019 Date of Performance:- 19-09-2019 Ref. No. A.E-1/WSPCD/Lab-test/2018-19/2 Date :- 19-09-2019	 Certificate No. TC-7688
	1 Description of Sample (As declared by customer) Water 2 Sample Mark (if any, given by the customer) NA 3 Date of Sampling by the Customer 19-09-2019 4 Source & Place of Sampling Singda Dam ( Raw Water) 5 Environmental conditions during sampling NA 6 Sampling Plan & Procedures used NA 7 Quantity of Water 1 Litre.	
We hereby certify that the following sample submitted to the laboratory has been analyzed with the following results		

### Analysis Results (As per IS 10500:2012)

#### 1. Chemical Testing

Sl No.	Characteristic	Acceptable Limit	Permissible Limit	Method of Test	Results			
					1	2	3	4
1	Turbidity in N.T.U	1	5	APHA 23rd Edition 2130 B	15.00			
2	pH value at 25°C	6.5-8.5	No Relaxation	APHA 23rd Edition 4500-H <sup>+</sup> B	6.70			
3	Total Alkalinity in mg/l as CaCO <sub>3</sub>	200	600	APHA 23rd Edition 2320 B	40.00			
4	Total Hardness in mg/l as CaCO <sub>3</sub>	200	600	APHA 23rd Edition 2340 C	44.00			
5	Iron (as Fe) in mg/l	1.0	No Relaxation	APHA 23rd Edition 3500-Fe B	0.21			
6	Chloride (as Cl) in mg/l	250	1000	APHA 23rd Edition 4500-Cl <sup>-</sup> B	20.00			
7	Total Dissolved Solids in mg/l	500	2000	APHA 23rd Edition 2540 C	49.00			
8	Sulphate (as SO <sub>4</sub> ) in mg/l	200	400	APHA 23rd Edition 4500-SO <sub>4</sub> <sup>2-</sup> E	0.00			
9	Calcium (as Ca) in mg/l	75	200	APHA 23rd Edition 3500 - Ca B	8.00			
10	Magnesium (as Mg) in mg/l	30	100	APHA 23rd Edition 3500 Mg B	5.83			
11	Electrical Conductivity in µmho/l			APHA 23rd Edition 2510 B	75.00			
12	Fluoride in mg/l as F	1.0	1.5	APHA 23rd Edition 4500-F <sup>-</sup> D	0.50			

#### 2. Biological Testing

1	*Total Coliform	0	0	APHA 23rd Edition 9222-A	---			
2	*E- Coli	0	0	APHA 23rd Edition 9222-A	---			

\* These parameters are not in the scopes of NABL accreditation.

The results relate only to the item(s) tested.

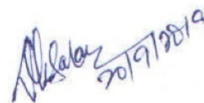
This Test Report shall not be reproduced except in full, without the permission of State Laboratory, PHED, Manipur. The reserved part of sample(s) shall be retained for 30 days from the date of Completion of Test.

Prepared by - Th. Joychandra Singh

Signature:  
Designation  
Biologist





Authorized signatory:  
Name:- S. Debenkanta Singh  
Designation:- Chief Chemist  
State Laboratory Lamphelpat, PHED Manipur



# WATER TEST REPORT FOR IRIL RIVER (RAW WATER)

**STATE LABORATORY, PHED, GOVT. OF MANIPUR**

FF-13
SL/PHED, Manipur
Page No. 1/1

Lamphelpat – 795004 Email: slabphedmani@gmail.com Name & Address of Customer: <b>Executive Engineer</b> <b>Project Construction Division</b> <b>PHED, Manipur</b>	<b>TEST REPORT</b> Report No. SL/PHED/TC76881900000543P Date of Report: - 19-09-2019 Sample ID :20/9, 21/9, 22/9 & 23/9 Date of Receipt of Sample - 19-09-2019 Date of Performance: -19-09-2019 Ref. No. A.E-1/WSPCD/Lab-test/2018-19/2 Date :- 19-09-2019	 Certificate No. TC-7688																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1</td> <td style="width: 55%;">Description of Sample (As declared by customer)</td> <td style="width: 40%;">Water</td> </tr> <tr> <td>2</td> <td>Sample Mark (if any, given by the customer)</td> <td>NA</td> </tr> <tr> <td>3</td> <td>Date of Sampling by the Customer</td> <td>19-09-2019</td> </tr> <tr> <td>4</td> <td>Source &amp; Place of Sampling</td> <td>1. Iril River at Porompat , 2. Iril River at Iribung , 3. Imphal River at Koirengel &amp; 4. Imphal River at Chinga</td> </tr> <tr> <td>5</td> <td>Environmental conditions during sampling</td> <td>NA</td> </tr> <tr> <td>6</td> <td>Sampling Plan &amp; Procedures used</td> <td>NA</td> </tr> <tr> <td>7</td> <td>Quantity of Water</td> <td>1 Litre.</td> </tr> </table>			1	Description of Sample (As declared by customer)	Water	2	Sample Mark (if any, given by the customer)	NA	3	Date of Sampling by the Customer	19-09-2019	4	Source & Place of Sampling	1. Iril River at Porompat , 2. Iril River at Iribung , 3. Imphal River at Koirengel & 4. Imphal River at Chinga	5	Environmental conditions during sampling	NA	6	Sampling Plan & Procedures used	NA	7	Quantity of Water	1 Litre.
1	Description of Sample (As declared by customer)	Water																					
2	Sample Mark (if any, given by the customer)	NA																					
3	Date of Sampling by the Customer	19-09-2019																					
4	Source & Place of Sampling	1. Iril River at Porompat , 2. Iril River at Iribung , 3. Imphal River at Koirengel & 4. Imphal River at Chinga																					
5	Environmental conditions during sampling	NA																					
6	Sampling Plan & Procedures used	NA																					
7	Quantity of Water	1 Litre.																					
We hereby certify that the following sample submitted to the laboratory has been analyzed with the following results																							

### Analysis Results (As per IS 10500:2012)

#### 1. Chemical Testing

S. No	Characteristic	Acceptable Limit	Permissible Limit	Method of Test	Results			
					1	2	3	4
1	Turbidity in N.T.U	1	5	APHA 23rd Edition 2130 B	60.00	71.00	63.60	68.60
2	pH value at 25°C	6.5-8.5	No Relaxation	APHA 23rd Edition 4500-H B	6.96	6.92	6.89	6.81
3	Total Alkalinity in mg/l as CaCO <sub>3</sub>	200	600	APHA 23rd Edition 2320 B	80.00	80.00	84.00	60.00
4	Total Hardness in mg/l as CaCO <sub>3</sub>	200	600	APHA 23rd Edition 2340 C	96.00	110.00	54.00	56.00
5	Iron (as Fe) in mg/l	1.0	No Relaxation	APHA 23rd Edition 3500-Fe B	1.01	0.62	0.68	0.80
6	Chloride (as Cl) in mg/l	250	1000	APHA 23rd Edition 4500-Cl B	23.00	20.00	24.00	19.00
7	Total Dissolved Solids in mg/l	500	2000	APHA 23rd Edition 2540 C	143.00	136.00	68.00	72.00
8	Sulphate (as SO <sub>4</sub> ) in mg/l	200	400	APHA 23rd Edition 4500-SO <sub>4</sub> <sup>2-</sup> E	0.00	0.00	0.00	0.00
9	Calcium (as Ca) in mg/l	75	200	APHA 23rd Edition 3500-Ca B	20.00	21.60	11.20	11.20
10	Magnesium (as Mg) in mg/l	30	100	APHA 23rd Edition 3500-Mg B	11.18	13.61	6.32	6.80
11	Electrical Conductivity in µmho/l			APHA 23rd Edition 2510 B	220.00	210.00	105.00	110.00
12	Fluoride in mg/l as F	1.0	1.5	APHA 23rd Edition 4500-F D	0.50	0.50	0.50	0.50

#### 2. Biological Testing

S. No	Characteristic	Acceptable Limit	Permissible Limit	Method of Test	1	2	3	4
1	*Total Coliform	0	0	APHA 23rd Edition 9222-A	---	---	---	---
2	*E- Coli	0	0	APHA 23rd Edition 9222-A	---	---	---	---

\*These parameters are not in the scopes of NABL accreditation.  
The results relate only to the item(s) tested.

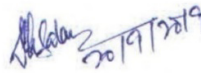
This Test Report shall not be reproduced except in full, without the permission of State Laboratory, PHED, Manipur. The reserved part of sample(s) shall be retained for 30 days from the date of Completion of Test.

Prepared by:- Th. Joychandra Singh

Signature:  
Designation  
Biologist



Authorized signatory:  
Name:- S. Debenkanta Singh  
Designation:- Chief Chemist  
State Laboratory Lamphelpat, PHED Manipur







## WATER TEST REPORT FOR IMPHAL RIVER AT MAHABALLI

**STATE LABORATORY, PHED, GOVT. OF MANIPUR**

FF-13
SL/PHED, Manipur
Page No. 1/1

Lamphelpat – 795004 Email: slabphedmani@gmail.com Name & Address of Customer: <b>AE-III W/S                  PROJECT CONSTRUCTION                  DIVISION                  P.H.E.D., Manipur.</b>	<b>TEST REPORT</b> Report No. SL/PHED/TC768819000000284P Date of Report:- 17-01-2019 Sample ID 13/01 & 14/01. Date of Receipt of Sample:- 14-01-2019 Date of Performance:- 16-01-2019  Ref. No. AE-III/WSPCD/PHE/LAB-TEST/2018-19/12 Date :- 14-01-2019	 Certificate No. TC-7688																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">1</td> <td style="width: 50%;">Description of Sample (As declared by customer)</td> <td style="width: 45%;">Water</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Sample Mark (if any, given by the customer)</td> <td>NA</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Date of Sampling by the Customer</td> <td>14-01-2019</td> </tr> <tr> <td style="text-align: center;">4</td> <td>Source &amp; Place of Sampling</td> <td>1. Moirangkhom (Near Mahaballi) Raw Water &amp; 2. Treated Water</td> </tr> <tr> <td style="text-align: center;">5</td> <td>Environmental conditions during sampling</td> <td>NA</td> </tr> <tr> <td style="text-align: center;">6</td> <td>Sampling Plan &amp; Procedures used</td> <td>NA</td> </tr> <tr> <td style="text-align: center;">7</td> <td>Quantity of Water</td> <td>1 Liter each.</td> </tr> </table>			1	Description of Sample (As declared by customer)	Water	2	Sample Mark (if any, given by the customer)	NA	3	Date of Sampling by the Customer	14-01-2019	4	Source & Place of Sampling	1. Moirangkhom (Near Mahaballi) Raw Water & 2. Treated Water	5	Environmental conditions during sampling	NA	6	Sampling Plan & Procedures used	NA	7	Quantity of Water	1 Liter each.
1	Description of Sample (As declared by customer)	Water																					
2	Sample Mark (if any, given by the customer)	NA																					
3	Date of Sampling by the Customer	14-01-2019																					
4	Source & Place of Sampling	1. Moirangkhom (Near Mahaballi) Raw Water & 2. Treated Water																					
5	Environmental conditions during sampling	NA																					
6	Sampling Plan & Procedures used	NA																					
7	Quantity of Water	1 Liter each.																					
We hereby certify that the following sample submitted to the laboratory has been analyzed with the following results																							

**Analysis Results (As per IS 10500:2012)**  
**Physico-Chemical Analysis**

Sl. No.	Characteristic	Acceptable Limit	Permissible Limit	Method of Test	Results	
					1	2
1	Turbidity in N.T.U	1	5	APHA 23rd Edition 2130 B	40.00	1.00
2	pH value at 25°C	6.5-8.5	No Relaxation	APHA 23rd Edition 4500-H <sup>+</sup> B	5.10	7.28
3	Total Alkalinity in mg/l as CaCO <sub>3</sub>	200	600	APHA 23rd Edition 2320 B	50.00	46.00
4	Total Hardness in mg/l as CaCO <sub>3</sub>	200	600	APHA 23rd Edition 2340 C	96.00	75.00
5	Iron (as Fe) in mg/l	0.3	1.0	APHA 23rd Edition 3500-Fe B	0.30	0.05
6	Chloride (as Cl) in mg/l	250	1000	APHA 23rd Edition 4500-Cl B	10.00	8.00
7	Total Dissolved Solids in mg/l	500	2000	APHA 23rd Edition 2540 C	100.00	107.00
8	Sulphate (as SO <sub>4</sub> ) in mg/l	200	400	APHA 23rd Edition 4500-SO <sub>4</sub> <sup>2-</sup> E	20.00	40.00
9	Calcium (as Ca) in mg/l	75	200	APHA 23rd Edition 3500-Ca B	19.20	18.00
10	Magnesium (as Mg) in mg/l	30	100	APHA 23rd Edition 3500 Mg B	11.66	7.29
11	Electrical Conductivity in µmho/l	-	-	APHA 23rd Edition 2510 B	155.00	165.00
12	Fluoride in mg/l as F	1.0	1.5	APHA 23rd Edition 4500-F D	0.70	0.70

The results relate only to the item(s) tested.

This Test Report shall not be reproduced except in full, without the permission of State Laboratory, PHED, Manipur. The reserved part of sample(s) shall be retained for 30 days from the date of Completion of Test.

Prepared by:- Th. Joychandra Singh

Signature:  
 Designation  
 Biologist




*S. Debenkanta Singh*  
 17/01/2019

Authorized signatory:  
 Name:- S. Debenkanta Singh  
 Designation:- Chief Chemist  
 State Laboratory Lamphelpat, PHED Manipur.