PHYSICAL VERIFICATION REPORT

(Conducted by Dy. Director, Planning on 23-06-2011)

1. Name of Project: Water Supply Scheme for Anantnag town under UIDSSMT

2. Funding Agency: GoI & State Plan (H&UDD)

3. Executing Agency: PHE Division Bijbehara, Kashmir

4. Date of Sanction: 04-05-2010

5. Date of Start: Feb. 2011

6. Date of Completion: Feb. 2013

7. Need/ Importance of the Project:

The existing water supply system in Anantnag town which was setup way back in 1977 by way of constructing 2.0 MGD (million gallons per day) Water Treatment Plant, 1.5 MG Storage Reservoir and laying the pipe network in the town is under immense pressure as the filtration capacity of the plant has come down to half its original capacity, i.e. about 1 MGD, and is unable to cater even the present demand of about 2.80 MGD worked out for a population of 95,042 in 2011 @ 135 litres/soul/day + 15% system losses.

Over the years, apart from normal growth in population, there has been migration of people from rural areas to Anantnag town which has resulted in development of new colonies and expansion of town boundaries thereby raising the demand of water required in the town. With growth of our economy there has been improvement in living standard of the people; the consumption levels have risen and there is more emphasis for supply of hygienic water.

The population of Anantnag is projected to increase from 95,042 in 2011 to 1,33,544 in 2026 and then to 1,72,046 in 2041. As a result, the demand of water for Anantnag town is likely to go up from present level of 2.80 MGD to 4.50 MGD in 2026 and 6.0 MGD in 2041. Accordingly, the new project which proposes to develop a Water Treatment Plant of 4.5 MGD, Service Reservoir of 1.50 MG, and lay new pipe network designed to carry 6 MGD of water will be able to meet the water requirements of Anantnag town till the year 2026.

8. Financial Status of Work:

(Rs. in Lacs)

Estimated Cost of the Project	4546.00
Approved Cost	
a) Central Share	3320.31
b) State Share	368.92
Total	3689.23
Excess funds required under State Plan	906.77
Funds Released	
a) Central Share	1660.15
b) State Share	166.00
Total	1826.15
Expenditure incurred till June 2011	1186.46

9. Financial analysis of the Project:

Although the project was originally prepared with an estimated cost of Rs 45.46 crore, approval was given by GoI only for Rs 36.89 crore comprising 90% central share and 10% state share. Against the sanctioned cost, 50% of the funds have been provided and an expenditure of 32% stands incurred upto June 2011. If we take into account the estimated project cost of Rs 45.46 crore, only 40% funds have been provided and 26% expenditure has been incurred. However, the percentage of expenditure incurred against the releases is 65%.

The reason for shortfall in expenditure was attributed mainly to the start of work in February 2011 about a month and a half after the receipt of funds from GoI in December 2010. Moreover, the increase in flow of water in Lidder prevented execution of civil works at source and the decision to delay laying of pipeline on a particular stretch of Khanabal-Pahalgam road due to commencement of Amarnath Yatra also slowed down the pace of execution of works. The expenditure incurred under the project till June 2011 is mainly on purchase of DI pipes, their laying at different stretches along Khannabal-Pahalgam road and three streets of Anantnag town, payment for land compensation, payment to R&B for carrying out restoration works and some civil works at source on bank of Lidder nallah.

9. Physical Status of Work:

S.No	Name of Work	Physical Status
1	Construction of protection/ diversion bund at head site	13% work done (40 mtrs crate bund laid against target of 300 mtrs)
2	Construction of intake chamber at head site	15% work done
3	Construction of pre-settling tank near Seer head works	10% work done (only earth work completed)
4	Construction of intake channel at head-site/ cement concrete key	Raw water main 700 mm dia DI pipe laid on a stretch of 400 meters
5	Construction of spring protection works at Arigola	0% (tendering in progress)
6	Laying/ fixing of pipe network	L/F of DI pipes awarded for 6 sections. Work in progress in Section I – 25%, Section II – 20%
7	Providing/ laying of supporting pillers/ cement concrete blocks at places	0%
8	Providing safety procedures like barricading/ traffic diversions at required places, Road restoration charges, etc.	About 40% of dug roads/ lanes restored
9	Construction of sluice chambers at places	0%
10	Land compensation	About Rs 2.09 crore placed at the disposal of Collector Land Acquisition, Anantnag, final award issued by Revenue.
11	Construction of 4.5 MGD treatment plant	0%, Design submitted for approval and tenders floated.
12	Construction of 1.50 MG service reservoir	0%, Design submitted for approval and tenders floated.
13	Construction of catch water drain/ retaining wall	0%
14	Construction of chan-link fencing around water treatment plant and re-settling tank	5%, Work in progress
15	Construction of boundary pillars and R.D. blocks	0%
16	Providing & installation of DG Set 65 KVA	0%

The progress achieved in purchase and issuance of DI pipes under the project:-

Dia of Pipe	Length (in mtrs)	Available (in mtrs)	Purchased (in mtrs)	Issued (in mtrs)	Remarks (detail of issued pipe that has been laid)
800 mm	4278	-	1419	1419	Pipes placed at site but its laying is on hold due to Amarnath Yatra
700 mm	2322	-	1067	1067	
600 mm	5000	-	996	996	About 4000 mtrs of pipline laid and the remaining is yet to be laid.
500 mm	1545	-	1500	-	
450 mm	6055	666	1458	2124	
400 mm	300	-	255	-	
350 mm	800	-	-	-	
300 mm	4386	103	397	500	
250 mm	10038	1054	773	1827	
200 mm	9826	-	2973	1734	
150 mm	20250	-	9595	6121	

10. Field Observations:

a) The project has a design requirement of 13 cusecs of water most of which is to be drawn from Lidder nallah which has minimum discharge of 59 cusecs during lean season. Apart from Lidder nallah, a freshwater spring flowing in Arigohal village on left bank of River Lidder will also form a source of water for the project. The water of Lidder is reported to possess turbidity within the prescribed limits and turbidity of the Arigohal spring was reported to be zero. The water of the spring flowing in Arigohal was found to be very clear.

b) Raw water is to be diverted from left bank of Lidder nallah to an intake structure at village Arigohal for which protection/ divertion bunds have to be constructed. However, crate bund of only 40 mtrs has been erected at two locations against the target length of 300 mtrs. The mesh of crate containing boulders was found to be damaged at few spots. It was reported that the remaining work is yet to be done and had to be stopped due to increase in flow of water in Lidder nallah.

c) At source, civil work of intake structure was partially complete and this too had to be stopped due to increase in flow of water in the nallah. It was reported by Engineers of PHE that the work of fixing trash gate, flood gate and remaining civil works of the intake structure shall be completed after August when flow of water in the nallah subsides.

d) Water is to be taken from the intake structure along the bank of river Lidder to the Arigola spring via a cement concrete water channel. However, it was observed that Old DI pipes of 700 mm dia had been laid from

source to Arigohal spring on a stretch of about 400 meters. As per the version of Engineers of PHE Division Bijbihara the old pipes had been utilised in order to minimize cost of the project and was also in the notice of higher authorities.

e) The stretch of pipe at Arigohal spring was not laid because there was proposal to develop an 'Impounding Reservoir' at this location under another programme (Source Sustainability Programme) which is yet to be funded by GoI. The impounding reservoir is supposed to retain water brought from Lidder Nallah as well as Arigohal spring flowing in the place before it is sent to the pre-settling tank located at a distance of about 1.5 kms from this site.

f) The laying of pipeline from proposed site of the impounding reservoir to the site of the pre-settling tank located in paddy fields of Seer Hamdan village is pending as a grove of trees planted by locals on this stretch was the cause of obstruction and had to be cleared along a minimum required corridor. It was informed by Engineers concerned that the compensation amount for felling trees at the site of impounding reservoir and the way en route the pre-settlement tank was assessed to be about Rs 6 lacs. Permission is yet to be obtained for felling the trees.

g) At village Seer Hamdan only earthwork of the pre-settling tank was complete and the civil work is yet to be started. It was informed that there is difficulty in transporting raw material at this site as the paddy crop had been sown and the work could be carried out only after the crop is harvested. The land acquired for construction of pre-settling tank at Seer Hamdan was private and belonged to Sh. Gulam Hasan who was also present at site. The Engineers of PHE informed that the land owner gave his land but is resisting from taking compensation and instead demanding for appointing his son in the PHE Department.

h) From site of pre-settling tank at Seer Hamadan to the site of filteration plant at Bumzoo on Khanabal-Pahalgam road, pipeline of 600 mm dia was reported to have been laid on a stretch of about 400 meters against the total distance of 3 kms. However, the pipeline that was laid was not evident as it had been covered by mud and paddy crop sown over it.

i) For development of Water Treatment Plant and Service Reservoir at Bumzoo Hutmura private land measuring 25 kanals and 4 marlas has been acquired adjacent to the old water treatment plant. The compensation amount of about Rs 209 lacs for the land had been deposited with the Collector, Land Acquisition, Anantnag but a structure where the owners family was residing even today still exists on the acquired land. It was reported that the assessment of the compensation to be paid for the structure had been made by the Collector, Land Acquisition but is yet to be paid so that he evacuates the

site. Foundation work of boundary wall for the site was in progress and the quality of work was good. The development work of Water Treatment Plant and Service Reservoir will commence only after technical approval of design is given. However, the tendering process is in progress.

j) Along the Pahalgam-Khanabal road, from Bumzoo to Khanabal Bridge, pipeline of different dimensions, viz. 600 mm, 400 mm and 200 mm dia had been laid for about 3 to 4 kms between Sarnal to Khannabal bridge. However, the remaining stretch of about 6 kms between Sarnal to Bumzoo had pipes lying along the road side which are yet to be laid. This work was stopped at Sarnal, Paibagh, Mattan Pranbhawan and Bumzoo so as to avoid inconvenience to the Amarnath Yatris who would be using the road for a period of about two months.

k) Work of Black topping on the edges of the road which had been dug to lay the pipeline is in progress. A stretch of about 2.5kms of the edge of road has been black topped by R&B Department. An amount of Rs 96 lacs has been provided to R&B by PHE for the said restoration work.

l) It was reported by the Engineers that an amount of about Rs. 8.00 lacs has also been provided to BSNL authorities for replacing the telephone cables which got damaged while laying the pipeline. It was also informed by the Engineers concerned that BSNL is demanding more funds for complete replacement of internet (broadband) cables that are vulnerable, to which the PHE has refused.

m) Apart from the gravity mains laid along the state highway, pipelines of lesser dimension have also been laid in three lanes of the town, viz., 150 mm dia pipeline laid on a stretch 1.5 km in Anchidora, 150 mm dia pipeline laid on a stretch of 1.5 km in Danthar and 200 mm dia pipeline laid on a stretch of 66 meters at Mattan Adda.

n) Wherever the pipes had been laid, it was found that the joints were properly fixed but there was no sand cushion provided to avoid breakage of pipeline. On enquiring, the concerned Engineers informed that the soil beneath the pipeline was already soft and had very few boulders and so sand cushion was not necessary. Moreover, it was also informed that the pipes had been laid deep enough and these could easily bear the load of vehicles plying over them or any other load. But the justification does not seem satisfactory since there were stretches where sand cushion was required.

o) The Engineers of PHE Division, Bijbihara informed that GoI has approved pipes having dia 150 mm and above, whereas the requirement of pipes with dia less than 150 mm for laying lateral and the distribution network up to the door steps of the homes in Anantnag town, which works out

to about a length of 50 kms, has not been approved under the project. The engineers were of the view that technically it is not appreciable to puncher the 150 mm dia or 200 mm dia pipes running along lanes at a number of locations to connect laterals or provide household connections.

p) The DI pipes had ISI marks over them. The name of Jindal Saw Ltd was found on 600 mm dia DI pipes and Balaji Industries Ltd on 200 mm dia pipes.

q) The Old WSS at Bumzoo was also inspected and it was found that the water was a bit turbid. The Engineers reported that the water was turbid on that particular day as the rainfall on the previous night had turned the water of Lidder muddy/ brown. The efficiency of this plant was reported to have reduced to half, i.e., it filtered only 1MGD of water against its original capacity of 2 MGD. A water testing laboratory was under development adjacent to the old treatment plant.

11. Problem Areas/ Suggestions:

SNo	Problem Areas	Suggestions
1	The quality of civil work at the source was satisfactory and that of the crate bund not very good.	The Engineers of PHE Division need to ensure that quality of civil works as well as laying crates is improved once the work is re-started after the flow of water in Lidder Nallah subsides.
2	Delay in paying compensation to Sh Gulam Hasan against acquisition of his land at Seer Hamdan due to his resistance to accept compensation and instead demand for appointing his son in PHE department.	DC Anantnag need to ensure that land compensation is paid to the owner. Chief Engineer, PHE, Kashmir may look into the demand of Sh. Gulam Hasan. Whenever there is need of engaging contractual workers in PHE, his son could be given priority over others.
3	Delay in paying compensation for the structure existing on the land acquired at Bumzoo for development of Treatment Plant and Service Reservoir. The owner is presently residing in the place and needs to be evacuated.	DC Anantnag needs to ensure that compensation for the structure is also paid to be land owner and he is evacuated from the site so that development work is not obstructed later on.
4	Non payment of compensation for felling trees at proposed site of impounding reservoir and the corridor required through the grove of trees in the stretch	Necessary permission may be obtained by PHE for felling minimum possible number of trees and compensation be paid to the concerned so that the development

SNo	Problem Areas	Suggestions
	between proposed impounding reservoir and pre-settling tank.	works does not suffer due to this reason.
5	Delay in taking up the work of Water Treatment Plant and Service Reservoir.	The tendering process may be completed and development work of Water Treatment Plant and Service Reservoir taken up without further delay.
6	Stoppage of work of laying pipeline along the state highway at Anantnag town between Sarnal and Bumzoo due to Amarnath Yatra.	The work may be commenced as soon as the yatra is over. Meanwhile, the remaining pipe network may be laid.
7	It was observed that sand cushion had not been provided to the pipeline that was being laid.	Chief Engineer, PHE Kashmir may examine the matter and take a decision whether sand cushion is to be provided if not along the entire stretch but may be at vulnerable stretches of the pipeline so that damage is not caused to the infrastructure developed under the project.
8	Excess expenditure on shifting of utilities (BSNL), restoration of road (R&B), land/ structure/ tree compensation, etc.	Any excess expenditure likely to be incurred on this account over and above the sanctioned cost may be met out of state share or contingencies approved under the project.
9	Pipes of dia less than 150 mm required for connecting laterals and household connections not approved by GoI under the project.	Chief Engineer, PHE, Kashmir needs to examine the requirement of pipes with dia less than 150 mm that were demanded by the Engineers of PHE Division, Bijbehara and accordingly work out the financial implications and project it to the PHE/ H&UD Department for examination and possibilities of separate funding may be explored out of other sources/ schemes available under state plan.
10	Laying of old pipeline on the initial stretch of 400 meters instead of developing water channel.	Chief Engineer, PHE, Kashmir needs to examine whether this change in work design is permitted in the execution of the project and also the impact it would have on functioning of the water supply scheme.

12. Conclusion:-

The project for augmenting supply of water to Anantnag town is progressing at a slow pace. The PHE Department needs to gear up its machinery and also overcome the obstructions hindering the pace of work so as to ensure that the project is completed within the stipulated timeframe and approved cost.

Physical Verification Conducted by:	Madan Gopal Sharma, Deputy Director Planning, Monitoring Cell, Chief Minister's Secretariat.
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