

IN THE HIGH COURT OF KERALA AT ERNAKULAM

PRESENT:

THE HONOURABLE MR. JUSTICE P.N. RAVINDRAN
&
THE HONOURABLE MR. JUSTICE ANIL K. NARENDRAN

FRIDAY, THE 5TH DAY OF JUNE 2015/15TH JYAISHTA, 1937

SSCR.No. 4 of 2013 ()

SUO-MOTO PROCEEDINGS

PARTIES:

- (1) TRAVANCORE DEVASWOM BOARD,
REPRESENTED BY ITS SECRETARY, TDB,
THIRUVANANTHAPURAM.

BY SRI V. KRISHNA MENON, SC, TDB.

- (2) STATE OF KERALA, REP. BY ITS CHIEF SECRETARY,
GOVT. SECRETARIAT, THIRUVANANTHAPURAM.

BY SR. GOVERNMENT PLEADER SRI A. RENJITH

THIS SABARIMALA SPECIAL COMMISSIONER REPORT HAVING BEEN FINALLY
HEARD ON 05-06-2015, ALONG WITH WPC.14806/2014, THE COURT ON THE SAME
DAY PASSED THE FOLLOWING:

P.N.RAVINDRAN & ANIL K.NARENDRAN, JJ.

S.S.C.R.No.4 of 2013
&
W.P.(C)No.14806 of 2014

Dated this the 5th day of June, 2015

ORDER

Anil K.Narendran, J.

S.S.C.R.No.4 of 2013 arises out of S.M.No.19 of 2013 filed by the Special Commissioner appointed by this Court for Sabarimala regarding leakage in the check dam at Nilakkal constructed as part of the implementation of Sabarimala Master Plan. W.P.(C)No.14806 of 2014 is filed by one Madhusoodanan Nair, who was the contractor for the construction of the aforesaid check dam at Nilakkal, seeking a writ of mandamus commanding the Travancore Devaswom Board to pay the balance amount due to him in terms of Ext.P3 agreement within a time frame that may be fixed by this Court.

2. The Special Commissioner for Sabarimala who visited the check dam at Nilakkal on 22.5.2013 has filed a report stating that he noticed leakage just above the bottom level of the foundation at the down stream side of the check dam. The Special Commissioner

further noticed that the protection side walls on both left and right side of the check dam are getting bulged and that the plastering on the top of the dry rubble packing on the side walls of the check dam was also found damaged.

3. The Assistant Engineer, PWD Special Building Section, Pathanamthitta, who had accompanied the Special Commissioner has reported as follows:

- "1. Leakage may be directly through concrete and then to the rubble work. Leakage in concrete takes place due to substandard concrete mix and insufficient compaction.
2. Seepage of water may occur through the foundation portion and then to the superstructure. The leakage through random rubble masonry structure may be due to the weak bonding in the rubble structure.
3. The bulging of the side wall and the damage on the plastering above the DR packing is due to substandard way in construction."

4. A reading of the report submitted by the Special Commissioner would show that administrative sanction for the construction of the check dam was accorded by the High Power Committee on 8.5.2012. The Chief Engineer, Travancore Devaswom Board in his letter dated 10.5.2012 accorded technical sanction to

the above work approving the estimate amount of ₹38,50,000/-. The tender for the work by Sri R.K.Madhusoodanan Nair, who is the petitioner in W.P.(C)No.14806 of 2014, was accepted and the contract was awarded to him at 25% excess over the sanctioned estimate rate, which works out to a contract PAC of ₹46,96,419/-.

5. The Special Commissioner has in his report pointed out the necessity for assessment of the nature and quality of the construction work of the check dam by an independent expert agency in view of the allegation regarding sub-standard execution of the work. The Special Commissioner has also expressed the view that an independent assessment of the nature and quality of all the works undertaken as part of the implementation of Sabarimala Master Plan is required. The Special Commissioner has therefore requested that appropriate direction may be issued to assess the nature and quality of the construction work of the check dam at Nilakkal by an independent expert agency.

6. The report filed by the Special Commissioner was taken on file and numbered as S.S.C.R.No.4 of 2013. By order dated 19.6.2013, this Court directed that the inspection team of the Kerala

Dam Safety Authority will inspect the check dam at Nilakkal and submit a comprehensive report before this Court in respect of all matters including the report submitted by the Special Commissioner and any other related and relevant aspects. This Court made it clear that the inspection team will be free to verify all aspects regarding the construction, design, etc. This Court further directed that the necessary records relating to the award of contract, design, etc. will be furnished to the Inspection Team by the Maramath Wing of the Travancore Devaswom Board and that after completion of inspection, a report will be submitted before this Court within two weeks, through the Registrar General of this Court.

7. Pursuant to the order dated 19.6.2013, the check dam was inspected on 8.7.2013. The inspection report which was placed before the 30th meeting of the Kerala Dam Safety Authority on 2.8.2013 and passed for submission before this Court was forwarded to this Court by the Member Secretary of that authority, through the Registrar General. The conclusions in the said report of the Kerala Dam Safety Authority are as follows:

- "1. The check dam at Nilakkal is unsafe from the design point of view.
2. The said check dam will not serve the desired purpose.
3. The seepage and the wetting now seen will develop to a leakage and the storage will be depleted quickly making the reservoir dry very easily and thereby defeating the very purpose of the dam.
4. The improper selection of the specification for a water retaining structure violates the Indian Standard Code provisions and tends to considerably increase the permeability of the structure.
5. No permeability test has been made as per relevant IS Code to ascertain the permeability of the dam body and to apply necessitated corrections as per the IS Code.
6. The parameters based on IS:13216- 1991, IS: 5477 and other relevant IS codes were not adhered to during the planning, design and execution of the check dam.
7. Effective quality control mechanism was neither resorted to by TDB nor was advised by the TC or the Consultant.
8. The primary agency responsible for the failure in the planning, design and execution of the check dam is the Consultant.
9. The Technical Committee by way of advising for improper selection of the Consultant and not advising the TDB properly amounts to gross negligence and dereliction of duties.
10. The High Power Committee, the Technical Committee and the Travancore Devaswom Board are equally responsible in selecting a Consultant who is incompetent for the planning, design and execution of the check dam.

11. As the check dam at Nilakkal is unsafe; there are two options left to proceed further.
12. The first proposal is decommission the check dam before the occurrence of any mishap.
13. The second proposal is to utilise the services of an experienced competent agency to evaluate and formulate the retrofitting procedures.
14. As considerable amount of money has been spent for the construction, suitable retrofitting is advisable with the added advantage of enhancing the capacity of the reservoir.
15. We hereby advise to reassess the storage requirements and to investigate properly for the possibility of an earth dam of 9-10 mm height utilising available materials near the site conforming to the relevant IS codes."

8. On 6.11.2013, the learned Standing Counsel for the Travancore Devaswom Board submitted that an inspection team from the College of Engineering, Thiruvananthapuram has already inspected the check dam at Nilakkal and the High Power Committee is awaiting the report. On 13.1.2014, the inspection report submitted by the Hydraulics and Water Resources Division, Department of Civil Engineering, College of Engineering, Thiruvananthapuram was produced before this Court as Annexure A along with a statement filed on behalf of the Travancore Devaswom Board. The conclusions in Annexure A report submitted by the

College of Engineering, Thiruvananthapuram are as follows:

1. "The check dam is constructed as a non-overflow cross section with a small chute spillway opening. The cross section of the dam provided is structurally unsafe. The foundation provided is also not sufficient. The dam is constructed using rubble masonry with cement mortar 1:6, which is not sufficient for water retaining structures. The overflow section (spillway) provided is not sufficient to let out the free flow of water to the downstream during heavy storms. Moreover a lean mix is used for the spillway face which may cause removal of material and failure of structure. The provision for silt exclusion from the reservoir provided is also not sufficient. On the basis of the above facts it is preferable to demolish the existing check dam and construct a new one after proper investigations and design.
2. If the existing structure is to be retained, suitable retrofitting works have to be carried out to make the structure safe. This includes (i) modify the cross section so that the structure is structurally safe, (ii) the modified cross section shall be extended sufficiently into the banks on either side to prevent the seepage presently seen below the wing walls (iii) redesign the overflow portion (spillway) and provide sufficient capacity after working out the design runoff (iv) provision of additional spillway through one of the banks can also be considered (v) apron of sufficient thickness with cutoffs on the upstream and downstream to be provided (vi) provide necessary energy dissipation on the downstream side of spillway.

3. Proper soil investigation by taking representative bore holes at the site (stream bed upstream and downstream of the structure, banks, etc.) has to be carried out before making any alterations.
4. Proper storm management practices to be followed so as to prevent the entry or silt into the storage reservoir."

9. A reading of the statement dated 9.1.2014 filed on behalf of the Travancore Devaswom Board would show that the High Power committee for implementation of Sabraimala Master Plan, which met on 19.12.2013, considered Annexure A report. After detailed discussion, it was decided that as water retaining structures are essential to collect water required for distribution to pilgrims, the proposal for retrofitting the dam can be accepted and that a detailed design can be called for from the College of Engineering, Thiruvananthapuram itself.

10. In that statement, the Board has stated that the contract for construction of check dam at Nilakkal, after administrative sanction, was awarded to Sri R.K.Madhusoodanan Nair for an amount of ₹38,50,000/- at 25% excess above the sanctioned estimate rate. The work commenced on 15.8.2012 and was completed in all respects on 20.3.2013 as per the plan and design

made available to the contractor. A part payment of ₹44,00,000/- was made on 30.1.2013. However, owing to the ongoing investigation, no further payments have been effected. The final bill for the work for ₹61,14,026.73 including tender excess and cost of certain extra/excess works executed during the progress for proper completion is under scrutiny in the office of the High Power Committee. The contractor has requested for payment of the final bills as the work has been completed. The High Power committee considered the request of the contractor and observed that the reports do not mention about any faults of the contractor in the construction activities of the structure and the report has only pointed out fault in the design. As payment has to be made for the works executed as per the designs supplied, the High Power Committee has decided to effect payment after submitting the report of College of Engineering, Thiruvananthapuram and conveying the above mentioned decisions of the High Power Committee before this Court. The Travancore Devaswom Board has in that statement prayed that this Court may be pleased to permit the Board to effect payment to Sri R.T.Madhsoodanan Nair for the work executed by

him.

11. Along with a memo dated 7.4.2014, the Travancore Devaswom Board has produced a report dated 25.2.2014 submitted by the Engineer-in-Charge of Sabarimala Master Plan to the Chief Engineer (General) of the Travancore Devaswom Board and also the minutes of the meeting of the High Power Committee for implementation of Sabarimala Master Plan held on 26.2.2014. As per the report submitted by the Engineer-in-Charge, the purpose of construction of the check dam at Nilakkal was to store the runoff water to overcome the shortage of water during Mandala Makaravilakku festival. It is stated that the R.R. masonry water retaining structure has been constructed above a bed of concrete 1:3:6 with two intermediate RCC belt and a top RCC belt and the height of water retaining structure varies from 4 Meter at the centre to 3.5 Meter at the end and further reduces to 2 Meter at the abutment ends. RCC line of 12 centimeter thickness has been provided on the water retaining side of the main structure. The Engineer-in-Charge has also reported that, in the report of the Kerala Dam Safety Authority, no profuse leakage was seen on the

down stream phase of the dam body. But the authority has pointed out that seepage and wetting now seen will develop to a leakage and the storage will be depleted quickly making the reservoir dry. The Authority has also suggested that the alternative to decommissioning the dam will be to adopt retrofitting procedures by utilising the services of a well experienced agency. The report of the Authority concludes that the improper selection of specification for a water retaining structure violates the I.S.Code provisions and tends to considerably increase the permeability of the structure and that the parameters based on I.S.Code provisions were not adhered to during the planning, design and execution of the work. The Engineer-in Charge of Sabarimala Master Plan has stated that the Hydraulic and Water Resources Division of the College of Engineering, Thiruvananthapuram has after evaluation of the check dam at Nilakkal reported that cross section of the dam is structurally unsafe and the foundation provided is not sufficient. The R.R. Masonry on C.M.1:6 is not sufficient for water retaining structure and there are flaws in the design of the structure. Therefore, suitable retrofitting works have to be carried out to make the

structure safe.

12. After referring to the report of the Kerala Dam Safety Authority and also that of the Hydraulic and Water Resources Division of the College of Engineering, Thiruvananthapuram, the Engineer-in-Charge of Sabarimala Master Plan has in his report to the Chief Engineer (General) of the Travancore Devaswom Board stated that both the above reports comment that, the flaws in design and selection of the dam site without soil exploration test has led to this contingency and that the leakage is not due to any fault during execution of the work. The Engineer-in-Charge has also stated that an open seepage well has been constructed as per the directions of the Technical Committee during their inspection conducted on 16.2.2013 on the upstream right side of the water retaining structure so as to pump water uninterruptedly. The constructed open well is separated by around 6 Meters from the banks of the water reservoir and acts as a filtration media. The water from the open well is pumped by a 30 HP pump set to the water tank having a capacity of 10 lakhs litres after making necessary arrangements for filtration and chlorination. The

Engineer-in-Charge has reported that if enough water tankers are used, the reservoir can act as the main source of water at Nilakkal as the quantity of water in the reservoir is much more than the need. It is therefore suggested that if the reservoir is treated with necessary retrofitting works to make the structure safe, it will be a suitable solution to the water problem at Nilakkal to a certain extent.

13. The minutes of the meeting of the High Power Committee held on 26.2.2014 produced along with the memo dated 7.4.2014 filed by the Travancore Devaswom Board would show that the report of the Engineer-in-Charge dated 25.2.2014 on the construction of the check dam at Nilakkal was verified and approved for submission before this Court with a remark that as the contractor has executed the work as per the details made available to him and as per the directions of the Engineers-in-Charge and the contractor is not at fault, payment for the work has to be made. The relevant portion of the minutes of the meeting of the High Power Committee held on 26.2.2014 reads thus:

“ Report received from Engineer in charge, SMP (Executive Engineer, Pamba, TDB) regarding construction was verified

and approved for submission at the Hon'ble High Court of Kerala with remarks that as contractor had executed works as per the details made available to him and as per the direction of Engineer's in charge and the contractor is not at fault, payment for the work has to be made."

14. By order dated 13.8.2014, this Court referred the matter for consideration of the learned Ombudsman who has filed T.D.B.Report No.69 of 2015 in W.P(C)No.14806 of 2014 and S.S.C.R.No.4 of 2013. Paragraphs 8 to 13 of the report filed by the Honourable Ombudsman read thus:

- "8. In the report of the Special Commissioner, who visited the site on 23.5.2013, he has referred to the report by the Assistant Engineer, PWD Special Building Section, who had accompanied him at the time of inspection. Though the Assistant Engineer had referred to the leakage due to the substandard concrete mix and insufficient compaction, weak bonding in the rubble structure as well as bulging of the side wall and the damage on the plastering above the DR packing due to the substandard way in construction, such observations are not there in the reports of the Dam Safety Authority or in the report of the Engineering College.
9. In the report of the Dam Safety Authority, there is no mention about the defective execution of the work; but the entire blame is made for improper selection of the consultant who is incompetent for the planning, design

and execution of the check dam. It is also seen from the report of the Dam Safety Authority that though the consultant had given two proposals for reinforced cement concrete dam of a maximum height of 15.1 metre and 10 metre respectively, the construction was done on the basis of another proposal for masonry check dam of maximum height of 4 metres on the basis of email communication received from the Devaswom Board. It is also reported that it was not based on professional engineering guidelines and the consultant, instead of appraising the High Power Committee, regarding the pros and cons of the said proposal, furnished detailed drawings based on the proposal received from the Devaswom Board and the specifications do not conform to the relevant Indian Standard Code for construction of masonry in dams.

10. In the report filed by the College of Engineering, Thiruvananthapuram, it is observed that the Check Dam was built in a small stream which is not perennial so as to store the natural stream flow during the monsoon season and later use it for water supply. No soil exploration test report was available for the check dam site. The depth of foundation is not sufficient and the seepage of water may take place below the foundation and uplift pressure will be exerted by the seeping water. It is concluded in the report of the Engineering College that the foundation provided is insufficient and the dam is constructed using rubble masonry with cement mortar 1:6, which is not sufficient for water retaining structures. The provision for

silt exclusion from the reservoir provided is also not sufficient.

11. On the basis of the above facts, it is stated that it is preferable to demolish the existing Check Dam and construct a new one after proper investigation and design. Alternatively, it is also suggested that suitable retrofitting works have to be carried out if the existing structure is to be retained. Such a suggestion is made by the Dam Safety Authority also.
12. Thus, both the Dam Safety Authority as well as the College of Engineering have found fault with the design of the Check Dam and there is no finding that the execution of the work was not consistent with the design or that there was failure on the part of the contractor to execute the work as per the design. These aspects reinforced the contention on the part of the writ petitioner and the admissions on the part of the Devaswom Board and the High Power Committee that the contractor has executed the work as per the design and he is entitled for payment of the balance amount as per the final bill.
13. It is seen from the writ petition that the writ petitioner had, on the basis of the direction of the Chief Engineer, executed additional works worth ₹11,26,229/- details of which are available in Ext.P6. For this also, there is no dispute raised by the High Power Committee or the Devaswom Board. During the discussion in my Office, it was also disclosed that the Check Dam constructed was of great help for storing water during the two previous seasons and water scarcity at Nilakkal could be, to a great

extent, averted on account of the water pumped from this Check Dam.

It is suggested that appropriate orders may be passed by the Honourable High Court on the claim made by the writ petitioner in the writ petition."

15. We heard the arguments of the learned Standing Counsel for the Travancore Devaswom Board, the learned counsel for the petitioner in W.P.(C)No.14806 of 2004 and also the learned Amicus Curiae appearing for the Honourable Ombudsman.

16. In the report filed by the Special Commissioner for Sabarimala, which has been taken on file and numbered as S.S.C.R.No.4 of 2013, the Special Commissioner has stated that on inspection he noticed leakage in the check dam constructed at Nilakkal. The Assistant Engineer, PWD Special Division Section, Pathanamthitta who had accompanied the Special Commissioner has reported that the leakage is due to substandard concrete mix, insufficient compaction, weak bonding in the rubble structure, etc. Pursuant to the order passed by this Court on 19.6.2013, the Inspection Team of the Kerala Dam Safety Authority inspected the check dam on 8.7.2013 and submitted a report. Later, the

Hydraulics and Water Resources Division in the College of Engineering, Thiruvananthapuram inspected the check dam on 13.1.2014 and submitted another report, which was placed on record as Annexure A along with the statement filed on behalf of the Travancore Devaswom Board. The conclusions in these two reports, which we have already extracted earlier, make it abundantly clear that there were serious flaws in the design of the check dam as well as in the selection of dam site. The reports further show that there was improper selection of the specifications as well.

17. The report dated 25.2.2014 submitted by the Chief Engineer-in-Charge of Sabarimala Master Plan, on the reports of the Kerala Dam Safety Authority and the Inspection Team of the College of Engineering, Thiruvananthapuram was placed before the meeting of the High Power Committee held on 26.2.2014. A copy of the aforesaid report of the Officer-in-Charge and the minutes of the meeting of the High Power Committee are produced along with the memo dated 7.4.2014 filed by the Travancore Devaswom Board. The High Power Committee had at the meeting held on 26.2.2014 verified and approved the report of the Engineer-in-Charge of

Sabarimala Master Plan regarding the construction of check dam at Nilakkal. The High Power Committee has also recommended that as the contractor has executed the work as per the details made available to him and as per the direction of the Engineers-in-Charge, the contractor is not at fault and payment for the work has to be made.

18. Pursuant to order passed by this Court on 13.8.2014, the Honourable Ombudsman has filed T.D.B.Report No.69 of 2015. A reading of paragraphs 9, 10 and 12 of the aforesaid report would make it abundantly clear that, the Kerala Dam Safety Authoprity as well as the Inspection Team of the College of Engineering, Thiruvananthapuram have found fault with the design of the check dam. There is no finding in those reports that the execution of the work was not consistent with the design or that there was failure on the part of the contractor to execute the work as per the design.

19. The materials on record make it abundantly clear that neither the Travancore Devaswom Board, nor the High Power Committee has a case that the contractor, who is the petitioner in W.P.(C)No.14806 of 2014, failed to execute the work as per the

design. When the contractor has executed the work as per the design, he is entitled for payment of the balance amount as per the final bill. As can be seen from the report of the Honourable Ombudsman, the contractor had executed additional works worth ₹11,26,229/- as directed by the Chief Engineer, the details of which are furnished in Ext.P6 in W.P.(C)No.14806 of 2014.

20. In such circumstances, taking into consideration the report submitted by the Kerala Dam Safety Authority and the Honourable Ombudsman, sanction is accorded to the Travancore Devaswom Board to disburse the admissible amount payable to Sri R.K.Madhusoodanan Nair, the petitioner in W.P.(C)No.14806 of 2014, for the construction of the check dam at Nilakkal in terms of the decision taken at the meeting of the High Power Committee for Implementation Sabarimala Master Plan held on 26.2.2014. The Travancore Devaswom Board shall take necessary steps in that regard within a period of three months from the date of receipt of a copy of this order.

21. As we have already noticed, the High Power Committee for implementation of Sabarimala Master Plan, which met on

19.12.2013 considered Annexure A report submitted by the Hydraulic and Water Resources Division, College of Engineering, Thiruvananthapuram. After a detailed discussion, the Committee decided that water retaining structures are essential to collect water, required for distribution to pilgrims and therefore the proposal for retrofitting the check dam can be accepted and a detailed design can be called for from the College of Engineering, Thiruvananthapuram. Therefore, the Travancore Devaswom Board is directed to take necessary steps to implement the aforesaid decision taken by the High Power Committee, forthwith.

S.S.C.R.No.4 of 2013 and W.P.(C)No.14806 of 2014 are disposed of with the above directions.

Sd/-

P.N.RAVINDRAN, JUDGE

Sd/-

ANIL K.NARENDRAN, JUDGE

dsn