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FORTY THIRD REPORT  
PUBLIC ACCOUNTS  
COMMITTEE  
(1992-93)

(TENTH LOK SABHA)

HEAVY WATER PLANT, TUTICORIN

DEPARTMENT OF ATOMIC ENERGY

[Action taken on 169th Report of Public  
Accounts Committee (8th Lok Sabha)]



*Presented in Lok Sabha on 4 March, 1993*  
*Laid in Rajya Sabha on 4 March, 1993*

LOK SABHA SECRETARIAT  
NEW DELHI

*February, 1993/Magha, 1914 (Saka)*

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THE HOUSE ON 4-3-1993.

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THE COMMITTEE ON PUBLIC ACCOUNTS  
(1992-93)

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Elected w.e.f. 23 July, 1992 vice Shrimati Krishna Sahi ceased to be a member of the Committee on her appointment as a Minister.

Ceased to be members of the Committee consequent upon their appointment as Ministers w.e.f. 18 January, 1993.

Ceased to be member of the Committee consequent upon his appointment as Minister w.e.f. 19 January, 1993.





## INTRODUCTION

I, the Chairman of the Public Accounts Committee as authorised by the Committee do present on their behalf this Forty-third Report on action taken by Government on the recommendations of the Public Accounts Committee contained in their 169th Report (8th Lok Sabha) on Heavy Water Plant, Tuticorin.

2. In their earlier Report the Committee had regretted the fact that the Department could not furnish calculations to indicate how their cost of production of Heavy Water at Tuticorin, worked out to Rs. 4120 per kg. The Committee had, therefore, considered it essential that for each year appropriate proforma account on commercial principles should be compiled. According to the Department since Heavy Water was produced for use by the Department's Nuclear Power Corporation and considering the strategic nature of the material the disclosure of the information relating to Heavy Water would not be in public interest. However, the Department of Atomic Energy agreed in July, 1992 to furnish to Audit the records relating to production capacity, actual production, cost of production etc. of the Heavy Water Plants for the period from 1985-86 onwards. Audit proposes to scrutinise these records during next audit. The Committee have urged the Department of Atomic Energy to initiate prompt action to up date the proforma Accounts in respect of the previous years for scrutiny by Audit and ensure preparation of the same in future to facilitate a realistic assessment of cost of production and control thereof as recommended by the Committee.

3. The Report was considered and adopted by the Public Accounts Committee at their sitting held on 28th January, 1993. Minutes of the sitting form Part II of the Report.

4. For facility of reference and convenience, the recommendations of the Committee have been printed in thick type in the body of the Report and have also been reproduced in a consolidated form in the Appendix to the Report.

5. The Committee place on record their appreciation of the assistance rendered to them in the matter by the Office of the Comptroller and Auditor General of India.

NEW DELHI;

4 February, 1993

12 Magha, 1914 (Saka)

ATAL BIHARI VAJPAYEE

Chairman,  
Public Accounts Committee

## CHAPTER I

### REPORT

1.1 This Report of the Committee deals with the action taken by Government on Committee's recommendations and observations contained in their 169th Report (8th Lok Sabha) on paragraph 2 of the Report of C & AG of India for the year ended 31 March, 1987, Union Government (Scientific Departments) relating to Heavy Water Plant, Tuticorin.

1.2 The 169th Report which was presented to Lok Sabha on 28 April, 1989 contained eighteen recommendations/observations. Action taken notes have been received in respect of all the recommendations and these have been broadly categorised as follows:—

(i) Recommendations and observations which have been accepted by Government:

Sl. Nos. 1, 2, 3, 4, 6, 7, 8, 9, 11 and 14

(ii) Recommendations and observations which the Committee do not desire to pursue in the light of the replies received from Government:

Sl. Nos. 5, 10, 12 and 13

(iii) Recommendations and observations replies to which have not been accepted by the Committee and which require reiteration:

Sl. Nos. 15, 16, 17 and 18

(iv) Recommendations and observations in respect of which Government have furnished interim replies:

—NIL—

1.3 The Committee will now deal with the action taken by Government on some of their recommendations.

*Cost of Production of Heavy Water*  
(Sl. Nos. 15 to 18, Paras 1.84 to 1.87)

1.4 Commenting upon the wide variation in figures of cost of production of Heavy Water as calculated by Audit and Department of Atomic Energy (DAE), and the inability of the DAE to substantiate their own figures of

per kg. cost of production, the Committee in Paragraph 1.84 of their 169th Report, had observed as follows:

“While according to the Department of Atomic Energy the cost of production of Heavy Water at Tuticorin worked out to Rs. 4120 per kg., Audit has stated that based on actual expenditure and production, it worked out to as high a figure as Rs. 13,800 per kg. as against the estimated cost of Rs. 1145 per kg. with reference to full capacity and Rs. 1,666 per kg. with reference to the derated capacity. The Committee regret to note that the Department could not furnish calculations to indicate how their figure of Rs. 4120 per kg. has been arrived. The Committee consider the inability of the DAE to substantiate their own figure of per kg. cost of production as another instance of lack of proper accounting procedure which in turn is due to their disregard of accountability on their part. The Committee strongly deprecate such attitude. The Committee expect to be furnished with appropriate details in this regard, duly vetted by Audit.

Since the average production cost is dependent on expenditure incurred vis-a-vis quantity produced, and the production rate is not uniform from year to year, the Committee feel that the cost of production per kg. would be varying from year to year. For a realistic assessment of cost of production and for control thereof, the Committee consider it essential that for each year appropriate proforma account on commercial principles should be compiled.”

1.5 In their action taken note the Department of Atomic Energy have stated as follows:

“Heavy Water being a strategic material, information relating to its production and cost is treated as sensitive and as such it is considered that disclosure of such information would not be in public interest. Thus the conclusion drawn by the Committee relating to disregard of accountability is not justifiable. Further, heavy water is the property of Government and the same is given on lease to Nuclear Power Corporation. It may be mentioned that there is no lack of accounting procedure and complete details of actual expenditure incurred is available. Any comparison of the cost of production with earlier estimated cost of production will also require the input costs being considered at the then prevalent prices.

The recommendations of the Committee are under examination of the Department.”

1.6 In their further note furnished on 3 September, 1991 the Department of Atomic Energy have stated as follows:

“The cost of production of Heavy Water during 1986-87 of Rs. 4120 per kg. has been arrived at on the basis of the actual cost

incurred on the various inputs such as Electricity, Naphta, Pottassium Metal, Demineralised water, Steam etc., fees paid to SPC, Labour, Spares and Maintenance of Plant and Equipment including maintenance cost on housing colony and administrative expenses. In addition, depreciation on Plant and Machinery based on the straight line method assuming the plant life to be 15 years is also charged in arriving at the cost of production. The total cost arrived at as above has been divided by the actual quantity of Heavy Water produced in the Tuticorin plant during 1986-87 in arriving at the per kg. cost of production. The basis on which audit had computed the cost figure of Rs. 13800 per kg. is not available to the Department. Heavy Water being strategic material, it is not advisable to divulge information relating to its production and cost to functionaries at all levels. However, the principles have been stated. Trust this will be adequate."

1.7 In their communication dated 28 April, 1992, the Department of Atomic Energy have stated that :

"It has been intimated (By Audit) that the matter has been referred to Ministry of Finance on 16-12-1991."

1.8 In their latest communication dated 15 September, 1992 the Department of Atomic Energy have stated that :

"As already mentioned in their letter of 21 January, 1992, they have requested the Chief Executive, HWB to furnish to audit the records relating to production capacity, actual production, cost of production etc. of the Heavy Water Plants from the period from 1985-86 onwards."

1.9 The Audit who were requested to offer their comments on the aforesaid have in their communication dated 3 November, 1992 stated that :

"It has been proposed to scrutinise these records during next audit."

1.10 Commenting upon the necessity for compilation of proforma accounts, the Committee in paragraphs 1.85 and 1.86 of their 169th Report had observed as follows :

"The Committee are in agreement with the contention of the Department that a pooled price for supply of Heavy Water has to be charged irrespective of the plant in which the heavy water is manufactured. However, for purposes of financial review of the performance of the respective plants, the Committee consider it necessary that as already recommended, proforma accounts will have to be compiled. Since the proforma account is intended to give only financial result of operation of the power system, the Committee do not understand how preparation thereof would result in release of any sensitive data. The Committee consider such claim

as a way of evading accountability by escaping scrutiny of audit and this Committee under the guise of sensitivity, public interest etc. The Committee recommend that the issue may be reviewed and in case the Department of Atomic Energy do not agree to the stand, the matter may be referred to Ministry of Finance for an examination of the issue and issue of appropriate instructions under intimation to the Committee.”

1.11 The action taken note furnished by the Department of Atomic Energy reads as follows:

“The recommendation of the Committee is under examination of the Department.”

1.12 In a note furnished subsequently to the Committee, the Department of Atomic Energy stated as follows:

“The methodology for calculation of pooled price for supply of Heavy Water has been worked out and the usual Government Accounts of the transactions are maintained. Since Heavy Water is produced for use by the Department’s Nuclear Power Corporation and considering the strategic nature of the material it is considered that disclosure of the information relating to Heavy Water would not be in public interest.”

1.13 In their communication dated 28 April, 1992, regarding Para 1.86, the Department of Atomic Energy have stated that:

“Audit has requested the Department to refer the issue of preparation of proforma accounts to Ministry of Finance, concerned section has already been requested to do the needful.”

1.14 In their latest communication dated 15 September, 1992 regarding Para 1.86 the Deptt. of Atomic Energy have stated that:

“The proforma accounts in respect of Heavy Water Pool was being maintained earlier. However, in between for some period (after the formation of NPCIL), the same has not been prepared. Action is being taken to prepare the proforma accounts for all the years and make it update.”

1.15 The audit who were requested to offer their comments on the aforesaid position have vide their communication dated 3 November, 1992 stated that :

“Proforma Accounts were not prepared from the year 1982-83 onwards whereas NPCIL was formed on 17-9-1987. DAE has not stated any probable period by which proforma accounts for past 9 to 10 years will be ready for audit.”

1.16 Dealing with the question of furnishing of relevant cost data, the

Committee in paragraph 1.87 of their 169th Report recommended as follows:

“As the Committee could not complete the scrutiny of cost of heavy water which in turn is an essential item in the cost of nuclear power the Committee are unable to complete this part of their report and accordingly this part remains an interim report to be finalised after the relevant cost data are made available to them.”

1.17 In their reply the Department of Atomic Energy have stated as follows:

“No remarks.”

1.18 According to the Department of Atomic Energy the cost of production of Heavy Water at Tuticorin worked out to Rs. 4120 per Kg. Audit has stated that based on actual expenditure and production, it worked to as high a figure as Rs. 13,800 per Kg. as against the estimated cost of Rs. 1145 per Kg. with reference to full capacity and Rs. 1,666 per Kg. with reference to the derated capacity. In their earlier Report the Committee had regretted the fact that the Deptt. could not furnish calculations to indicate how their figure of Rs. 4120 per Kg. had been arrived. The Committee had, therefore, considered it essential that for each year appropriate proforma account on commercial principles should be compiled. In their action taken note the Deptt. stated that the cost of production of Heavy Water during 1986-87 was Rs. 4120 per Kg. had been arrived at on the basis of the actual cost incurred on the various inputs and depreciation on plant and machinery and the basis on which audit had computed the cost figure of Rs. 13800 per Kg. was not available to the Department. Subsequently the audit have clarified to the Committee that the cost of production had been worked out on the basis of the presumption that the per Kg. cost of Rs. 4120 for 1986-87 furnished by the Department was on the basis of the achievable capacity of 49 tonnes. On the basis of the annual average production of 14.6 tonnes, the Audit computed the actual cost of heavy water at Rs. 13800 per Kg.

1.19 The Department had also stated that the methodology for calculation of pooled price for supply of Heavy Water had been worked out and the usual Government Accounts of the transactions are maintained. According to the Department since Heavy Water was produced for use by the Department's Nuclear Power Corporation and considering the strategic nature of the material it was considered that disclosure of the information relating to Heavy Water would not be in public interest. Commenting upon this plea of the Department the Committee in their earlier Report had considered this claim as a way of evading accountability escaping scrutiny of audit and this Committee under the guise of sensitivity, public interest, etc. Considering compilation of proforma accounts necessary for financial review, the Committee had recommended that the issue should be reviewed and in case the Department still did not agree to the stand, the matter

might be referred to the Ministry of Finance for examination of the issue and issue of appropriate instructions under intimation to them. The Department's initial action taken note was silent with regard to the Committee's recommendation for referring the matter to the Ministry of Finance for appropriate instructions. The Committee express their deep concern over this failure of the Department. However, the Department of Atomic Energy agreed in July, 1992 to furnish to Audit the records relating to production capacity, actual production, cost of production etc. of the Heavy Water Plants for the period from 1985-86 onwards. Audit proposes to scrutinise these records during next audit. About the preparation of proforma accounts, the Department in September, 1992 have stated that such accounts in respect of Heavy Water Pool were being maintained by them earlier but in between for some period after the formation of NPCIL the same had not been prepared. The Deptt. have now confirmed that action was being taken to prepare the proforma accounts for the past years and make them uptodate. But the approximate data by which the proforma accounts for the past 9 to 10 years would be ready for audit has not been indicated. However, according to Audit proforma accounts were not prepared from the year 1982-83 onwards, whereas NPCIL was formed on 17.9.1987.

1.20 The 169th report of the Public Accounts Committee was presented to Parliament on 28.4.1989. The Committee strongly deprecate the lackadiasical approach on the part of the Deptt. of Atomic Energy in processing the action required to be taken on the recommendations contained in their aforesaid Report. The Department of Atomic Energy may initiate prompt action to update the Proforma Account in respect of the previous years for scrutiny by Audit and ensure preparation of the same in future to facilitate a realistic assessment of cost of production and control thereof as recommended by the Committee.



## CHAPTER II

### OBSERVATIONS AND RECOMMENDATIONS WHICH HAVE BEEN ACCEPTED BY GOVERNMENT

#### Recommendation

In the context of attaining the targetted capacity of 10,000 MW by 2000 AD through atomic power plants, the Committee can hardly emphasise the importance of effective and realistic planning and timely execution of projects connected with development of atomic energy in the country. The Committee view with great concern the delay of 42½ months in completion of the project which was initially planned to take 44 months and strongly deprecate such enormous time-overruns. Such delays in similar other projects can completely throw out of gear the plan to reach a capacity of 10,000 MW by 2000 AD.

[Sl. No. 1 (Para 1.27) of Appx. II to 169th Report of PAC (8th Lok Sabha)]

#### Action taken

With a view to avoid cost and time overruns in the projects, effective monitoring is being done and the latest management tools available in this regard are being adopted. Despite this unanticipated delays by indigenous suppliers/fabricators and failure of foreign suppliers to execute orders can cause cost and time overruns.

[Deptt. of Atomic Energy, D.O. No. Pr. A.O./Control/2/1/(23) PAC/89/HWPC(T)/148 dated 25.7.1990]

#### Recommendation

The Committee are surprised to note that out of overall delay of 42½ months as much as 32 months were on account of civil and structural works which were expected to take no more than 10 months. From the several reasons given for the delays it is obvious that the schedule of 10 months was arrived at without taking note of various basic impediments. The Committee have come to the inescapable conclusion that there has been a most casual approach in the matter of preparation of project estimates and processing thereof. In the context of the experience in this case, the Committee recommend that for executing projects of this type an appropriate body (such as a Steering Committee) may be constituted to

ensure meticulous coordination with different authorities, advance planning combined with careful anticipation of the possible impediments.

[Sl. No. 2 (Para 1.28) of Appx. II to 169th Report of PAC (8th Lok Sabha)]

#### **Action taken**

While it may be mentioned that due care is given to all aspects while planning and executing projects, delay in civil and structural works referred to was on account of our attempt to use indigenous material instead of imported supplies considered while preparing the original time schedule. The recommendations made by the Committee for constituting an appropriate committee for monitoring and coordination of such projects has been noted. Due care will be continued towards advance planning and for anticipation of impediments which are likely to crop up in the execution stage.

[Deptt. of Atomic Energy, D.O. No. Pr. A.O./Control/2/1/(23) PAC/89/HWP(T)/148 dated 25.7.1990]

#### **Recommendation**

Among the important reasons advanced for delay in the completion of civil and structural works are delays in acquisition of land, difficulties in procurement of certain heavy structural necessitating revision of fabrication drawings, non-availability of required steel sections difficulty in transport of fabricated materials, inability of indigenous manufacturers to supply import substitutes, etc.

[Sl. No. 3 (Para 1.29) of Appx. II to 169th Report of PAC (8th Lok Sabha)]

#### **Action taken**

No comments.

[Deptt. of Atomic Energy, D.O. No. Pr. A.O./Control/2/1/(23) PAC/89/HWP(T)/148 dated 25.7.1990]

#### **Recommendation**

As regards acquisition of land, the committee have been informed that the land requirement for the plant was initially assessed at 100M × 100M and later it was raised by nearly 7 times to measure 200M × 240M. The explanations such as initial intention to share facilities with SPIC, lack of clear idea on space requirements for auxiliary facilities, etc., are indicative of absence of detailed planning and lack of essential information. At this stage the Committee can only express their anguish on the failure of the Department to assess the requirement of land due to conceptual failure to envisage the total project design.

[Sl.No. 4. (Para 1.30) of Appx. II to 169th Report of PAC (8th Lok Sabha)]

### **Action Taken**

Since no prior experience in setting up plants of similar nature was available and since additional facilities had to be catered for, than was originally conceptualised, additional land became necessary. With the experience already gained in setting up similar projects, this problem is not expected to arise in future.

[Deptt. of Atomic Energy, D.O. No. Pr.AO/Control/2/1/ (23)/PAC/89/HWP (T)/148 dated 25.7.1990]

### **Recommendation**

As regards transportation of fabricated materials, the Committee are shocked to note that two Government Organisations involved in the matter viz. the Railways and the Department of Atomic Energy, failed to tackle the issue by holding dialogue at an appropriate level and plan the despatch and receipt according to an agreed programme resulting in avoidable delay in execution of a vital project.

[Sl.No.6 (Para 1.32) of Appx. II to 169th Report of PAC (8th Lok Sabha)]

### **Action Taken**

Effective coordination is being maintained at the appropriate level with Indian Railways to plan the transportation of project materials. Problems faced were despite efforts put in, in this regard.

[Deptt. of Atomic Energy, D.O. No. Pr.AO/Control/2/1/ (23)/PAC/89/HWP (T)/148 dated 25.7.1990]

### **Recommendation**

As regards inability of indigenous manufacturers to supply 14 items, the Committee are not convinced by the reasons advanced for import of 14 finished items or the delay in arrangement of import. The Committee strongly feel that an exercise should have been undertaken to identify the problems likely to be faced in the manufacture of the various items and timely solution thereof devised at the planning stage itself. The Committee would therefore urge that planning is done in utmost detail after carefully considering and taking into account all possible impediments.

[Sl. No. 7(Para 1.33) of Appx.II to 169th Report of PAC (8th Lok Sabha)]

### **Action Taken**

It was the endeavour of the project to try to procure as many equipment as possible out of the identified ones from indigenous sources. For this purpose, shop survey was conducted before floating tenders. However, on scrutiny of tenders received, it was found that the indigenous fabricators were not able to meet the delivery schedule and quality requirements in

respect of certain equipment and hence such equipment were reverted to foreign supplier. Nevertheless the recommendation has been noted.

[Deptt. of Atomic Energy D.O.No. Pr.Ao/Control/2/1/(23)/PAC/89/HWP(T)/148 dated 25.7.1990]

### Recommendation

The Committee are greatly concerned at the disquieting picture that has emerged in regard to financial estimation of cost of THW Project. While the estimate initially framed in 1971 was for Rs.21.32 crores the expenditure on the project swelled to Rs.38.48 crores (gross) by the time project was commissioned in July 1978 and sanction for revision was obtained in June 1979, nearly one year after the project was commissioned. Expenditure was incurred over and above the sanctioned cost for several years without sanction of the competent authority. The Committee strongly deprecate such unauthorised expenditure of such magnitude which was moreover incurred over several years without any concern whatsoever for observing the barest of regularity and discipline. The Committee would, therefore urge the Government to ensure observance of strict financial discipline by insisting on preparation of realistic estimates of project costs, control of expenditure within the estimated cost and timely revision wherever necessary.

[Sl.No.8 (Para 1.51) of Appx.II to 169th Report of PAC (8th Lok Sabha)]

### Action Taken

Every effort is made to prepare realistic estimates of the Project. The cost has exceeded the original estimates due to unforeseen reasons. The recommendation of the Committee relating to control of expenditure within the estimated cost and initiation of action for timely revision thereof, whenever necessary, has been noted. However, it may be stated that proper procedures for entering into commitments and incurring expenditure have been followed.

[Deptt. of Atomic Energy D.O.No. Pr.Ao/Control/12/1/(23)/PAC/89/HWP(T)/148 dated 25.7.1990]

### Recommendation

The Committee take strong exception to the fact that even in respect of FE component, the Department incurred substantial expenditure to the extent of over Rs.12 crores without getting the advance sanction of the competent authority. The FE component, originally sanctioned was for Rs.7 crores whereas the amount actually spent was Rs.19.36 crores which was regularised by the *post facto* sanction of expenditure to the extent of Rs.20.57 crores in foreign exchange accorded in June 1979. As this irregularity occurred a decade back, the committee can, at this stage, only record their displeasure and at the same time recommend that the

Government should issue instructions to the effect that revision of estimates wherever necessary should be made and sanction of the competent authority obtained well in time.

[Sl.No.9 (Para 1.52) of Appx.II to 169th Report of PAC (8th Lok Sabha)]

#### **Action Taken**

Observations have been noted for strict compliance in future.

[Deptt. of Atomic Energy, D.O.No. Pr.Ao/Control/2/1/(23)/PAC/89/HWP(T)/148 dated 25.7.1990]

#### **Recommendation**

The Committee note with dismay that the commission payable to the foreign consultants went up from Rs. 70 lakhs as provided in the original estimates to Rs. 360.47 lakhs due to extension in commissioning period from the original 44 months to more than 86 months. The Committee are convinced that this excessive payment of commission could have been substantially reduced, if not avoided but for the highly unrealistic time schedule drawn for commissioning the project having regard to the then prevailing power situation. The Committee strongly recommend that in respect of projects involving foreign collaboration, meticulous care must be taken in drawing the time schedule after taking into account the local conditions in proper perspective.

[Sl. No. 11 (Para 1.54) of Appx. II to 169th Report of PAC (8th Lok Sabha)]

#### **Action Taken**

Payment made to consultants was in accordance with the agreements entered into with consultants, duly approved by competent authority. These were not "commission" payments but related to payment that arose out of prolonged stay of consultant's personnel due to unforeseen circumstances explained in detail in response to various queries from Audit. Due consideration to nature of the project and the various constraints actually found during execution will require to be given. The project was commissioned in July 1975 against the scheduled completion date of Jan. 75. Detailed reasons for this unforeseen delays had been furnished to Audit and it had also been explained that these delays could not be anticipated neither predicted in advance. The time schedule for execution drawn out at the initial stages could not have anticipated such unforeseen delays. However, based on this experience, extra care will be taken in drawing the time schedule for such projects taking into account local conditions in proper perspective as recommended by the Committee.

[Deptt. of Atomic Energy D.O. No. Pr. AO/Control/2/1/(23)/PAC/89/HWP (T)/148 dated 25.7.1990]

### **Recommendation**

The Committee are disappointed to note persistent failures by THWP and SPIC in achieving the revised lower capacity of 49 MT per annum production targets with the result that even the derated capacity is still to be achieved. Against the possible "onstream days" of operation for 300 days in a year, the actuals were less than 200 days upto 1983-84, as low as 107 days in 1982-83; though substantial improvements were achieved later, it had gone down from 296 onstream days 1986-87 to 274 onstream days in 1987-88. Since the plant has to operate continuously for 7-8 days to achieve even 70% concentration of nuclear grade heavy water, the Committee note that frequent shut-downs for one reason or other, irrespective of whether they were due to THWP or SPIC, are responsible for reduction in on-stream days. The Committee are concerned to note in this regard that both SPIC and HWP are responsible in shortfall in onstream days. The Committee trust that both SPIC and THWP will work in coordination to ensure that shut-downs are minimal and production is maximised.

[Sl. No 14 (Para 1.75) of Appx. II to 169th Report of PAC (8th Lok Sabha)]

### **Action Taken**

All planned shut downs are taken in close coordination between HWP and SPIC. But unforeseen failure of equipment do lead to unplanned shut downs the duration of which are, however, kept to the minimum.

The Committee's advice in this regard is noted.

[Deptt. of Atomic Energy D.O. No. Pr. AO/Control/2/1/(23)/PAC/89/  
HWP (T)/148 dated 25.7.1990]

### CHAPTER III

## OBSERVATIONS AND RECOMMENDATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN THE LIGHT OF THE REPLIES RECEIVED FROM GOVERNMENT

### Recommendation

As regards steel, the Committee cannot but express their unhappiness that project of national importance like HWP was delayed due to non-availability of matching steel. The committee recommend that there should be a standing direction to treat such projects as core projects in the matter of allocation of steel and other scarce materials.

[Sl. No. 5 (Para 1.31) of Appx. II to to 169th Report of PAC (8th Lok Sabha)]

### Action taken

The Recommendation of the Committee to treat such projects as core projects in the matter of allocation of steel and other scarce material will help in overcoming the constraints likely to crop up in future projects. The recommendation of the Committee is being taken up with Department of Steel and Mines for necessary action.

[Deptt. of Atomic Energy D.O. No. Pr. AO/Control/2/1/(23)/PAC/89/HWP (T)/148 dated 25.7.1990]

### Final Action taken

The matter has since been taken up with the Secretary, Department of Steel, New Delhi and, he has intimated that the matter was raised in a meeting of the Steel Pricing Committee at Calcutta on 30.9.1990 and that the DAE is already in Status 'A' priority list and that they see no specific reason for inadequate steel supplies.

[Deptt. of Atomic Energy D.O. No. Pr. AO/Control/2/1/(23)/PAC/89/HWP (T)/376 dated 3.9.1991.]

### Recommendation

The Committee also note that out of the net increase in FE component to the extent Rs. 12.36 crores over the initial sanction (Rs. 19.36 crores—Rs. 7 crores) the Department has been able to give details to the Committee in regard to excess to the extent of Rs. 8.81 crores only, comprising of increase in (i) exchange rate Rs. 2.66 crores, (ii) ocean

freight Rs. 0.45 crore, (iii) foreign purchase Rs. 2.82 crores and (iv) commission Rs. 2.90 crores. The Committee records its strong displeasure at the cavalier attitude of the DAE towards maintenance of proper accounts and its accountability to Parliament.

[Sl. No. 10 (Para 1.53) of Appx. II to 169th Report of PAC (8th Lok Sabha)]

#### **Action Taken**

The net increase in foreign exchange is to the extent of Rs. 7.94 crores (Rs. 19.36 crores—Rs. 11.42 crores) and not Rs. 12.36 crores as referred to by Audit. The detailed reasons for the increase in foreign exchange has been furnished in replies to Audit. It is not correct to conclude that proper accounts are not being maintained. Further, it may be mentioned that fees paid to M/s Gelpra were for actual services rendered by their personnel in terms of the Agreement.

[Deptt. of Atomic Energy D.O. No. Pr. AO/Control/2/1/(23)/PAC/89/HWP(T)/148 dated 25.7.1990]

#### **Recommendation**

The Committee are surprised to note that the initial estimate did not include any provision for spares, through uncertainties in supply due to export embargo restrictions are identifiable factors to be taken into consideration in planning any project. The Committee deprecate such casual assessment of costs at the initial planning stage and subsequent upward revision on consideration that were very much valid when the project was cleared.

[Sl. No. 12 (Para 1.55) of Appx. II to 169th Report of PAC (8th Lok Sabha)]

#### **Action Taken**

As had been clearly explained to Audit, 2 years spares worth FF 16.4 lakhs had been included in the original project cost and was supplied by Gelpra as part of their contract. At the time of entering into the contract in 1971, there were no discernable export embargo restrictions. It was only after 1974 this became apparent and it was thought necessary and prudent to obtain additional spares especially tailor made ones and other unit replacement items, for ensuring continued operation of the plant. Thus the circumstances prevalent at the time of framing of original estimates were different and no embargo restrictions were envisaged.

Embargo restrictions cannot be foreseen as these are dictated by changes in international policies of Governments of countries of a particular point of time.

[Deptt of Atomic Energy D.O. No. Pr. AO/Control/2/1/(23)/PAC/89/HWP (T)/148 dated 25.7.1990]



### **Recommendation**

The Committee have been informed that the failure to reach the rated capacity of 71.3 MT of heavy water per annum was mainly due to content of deuterium in the feed synthesis gas being not upto the required capacity (105 ppm against design expectation of 125 ppm) apart from shut-down. The Committee have also been informed that neither SPIC nor atomic energy people had understood initially that absence of similarity in fertilizer processing adopted in India and in France had the effect on the quality of the feed synthesis gas. At the same time, the Committee note that for ensuring improvements in performance of SPIC, special financial assistance was rendered to it. In the circumstances, the Committee, fail to understand how the foreign collaborator also did not point out this main factor at the initial stage and why quality of gas was not tested before assumption on contents of deuterium were made for determining the capacity. The Committee have also been informed that when the design for THWP was finalised, the SPIC had not yet finalised the technology for production of ammonia, type of machinery, etc., and that the lower concentration of deuterium became apparent only after commissioning SPIC's ammonia plant. The Committee are concerned to note that Government proceeded with a project of such magnitude on assumed levels of performance without proper scientific analysis. The Committee urge the Government to draw adequate lessons from their experience in this case and ensure that the planning of such costly projects is not done in such slipshod fashion which makes for failure and constitutes big drainage of public money.

[Sl. No. 13 (Para 1.74) of Appx. II to 169th Report of PAC(8th Lok Sabha)]

### **Action Taken**

It must be mentioned that the financial assistance given to SPIC was towards the incremental cost for increasing the capacity of their ammonia plant from 1000 Te to 1100 Te per day to enable availability of adequate quantity of feed synthesis gas for THWP. This objective has been realised. The financial assistance was in no way related to the quality of feed gas expected to be available from SPIC. Considering the strategic nature of Heavy Water, the technological know-how being not available, severe restrictions on its import except under safeguards, it became imperative for the country to establish production facilities as early as possible. Setting up of the project has to be viewed in this perspective. However, the lessons learnt from the execution of this project will be kept in view for future.

Since THWP was based on Gelpira's experience with heavy water plant attached to a naphtha based plant, the design parameters were frozen based on their experience. At the time of design of the THWP, the SPIC ammonia plant was also under construction and as such the quality of gas that would be available from SPIC could not be verified and as such design

had to be based on available operating experience. Also, at the expected levels of condensate recycling, it was envisaged that 125 ppm deuterium content in synthesis gas would become available. However, due to process limitations in the fertilizer plant, the condensate recycle to the expected levels has not been possible.

[Deptt. of Atomic Energy D.O. No. Pr. AO/Control/2/1/(23)/PAC/  
89/HWP(T) 148 dated 25.7.1990]

## CHAPTER IV

### OBSERVATIONS AND RECOMMENDATIONS REPLIES TO WHICH HAVE NOT BEEN ACCEPTED BY THE COMMITTEE AND WHICH REQUIRE REITERATION

#### Recommendation

While according to the Department of Atomic Energy the cost of production of Heavy Water at Tuticorin worked out to Rs. 4120 per kg., Audit has stated that based on actual expenditure and production, it worked out to as high a figure as Rs. 13,800 per kg. as against the estimated cost of Rs. 1145/-per kg. with reference to full capacity and Rs. 1,666 per kg. with reference to the derated capacity. The Committee regret to note that the Department could not furnish calculations to indicate how their figure of Rs. 4120 per kg. has been arrived. The Committee consider the inability of the DAE to substantiate their own figure of per kg. cost of production as another instance of lack of proper accounting procedure which in turn is due to their disregard of accountability on their part. The Committee strongly deprecate such attitude. The Committee expect to be furnished with appropriate details in this regard, duly vetted by Audit.

Since the average production cost is dependent on expenditure incurred *vis-a-vis* quantity produced, and the production rate is not uniform from year to year, the Committee feel that the cost of production per kg. would be varying from year to year. For a realistic assessment of cost of production and for control thereof, the Committee consider it essential that for each year appropriate proforma account on commercial principles should be compiled.

[Sl. No. 15 (Para 1.84) of Appx-II to 169th Report of PAC (8th Lok Sabha)]

#### Action Taken

Heavy Water being a strategic material, information relating to its production and cost is treated as sensitive and as such it is considered that disclosure of such information would not be in public interest. Thus the conclusion drawn by the Committee relating to disregard of accountability is not justifiable. Further, heavy water is the property of Government and the same is given on lease to Nuclear Power Corporation. It may be mentioned that there is no lack of accounting procedure and complete

details of actual expenditure incurred is available. Any comparison of the cost of production with earlier estimated cost of Production will also require the input costs being considered at the then prevalent prices.

The recommendations of the Committee are under examination of the Department.

[Deptt. of Atomic Energy D.O. No. Pr. AO/Control/2/1/(23)/PAC/89/HWP(T)/148 dated 25.7.1990]

#### **Final Action Taken**

The cost of production of Heavy Water during 1986-87 of Rs. 4120/-per Kg. has been arrived at on the basis of the actual cost incurred on the various inputs such as Electricity, Naphta, Pottassium Metal, Deminaralised water, Steam etc., fees paid to SPC, Labour, Spares and Maintenance of Plant and Equipment including maintenance cost on housing colony and administrative expenses. In addition, depreciation on Plant and Machinery based on the straight line method assuming the plant life to be 15 years is also charged in arriving at the cost of production. The total cost arrived at as above has been divided by the actual quantity of Heavy Water produced in the Tuticorin Plan during 1986-87 in arriving at the per Kg. cost of production. The basis on which audit had computed the cost figure of Rs. 13800/- per Kg. is not available to the Department. Heavy Water being strategic material, it is not advisable to divulge information relating to its production and cost to functionaries at all levels. However, the principles have been stated. Trust this will be adequate.

[Deptt. of Atomic Energy Pr AO/Control/2/1/(23)/PAC/89/HWP (T)/316/dated 3.9.1991]

#### **Recommendation**

The Committee are in agreement with the contention of the Department that a pooled price for supply of Heavy Water has to be charged, irrespective of the Plant in which the heavy water is manufactured. However, for purposes of financial review of the performance of the respective plants, the Committee consider it necessary that as already recommended, proforma accounts will have to be compiled.

[Sl. No. 16 (Para 1.85) of Appx. II to 169th Report of PAC (8th Lok Sabha)]

#### **Action Taken**

The recommendations of the Committee is under examination of the Department.

[Deptt. of Atomic Energy D.O. No. Pr AO/Control/2/1/(23)/PAC/89/HWP (T)/148 dated 25.7.1990]

### **Final Action Taken**

The methodology for calculation of pooled price for supply of Heavy Water has been worked out and the usual Government Accounts of the transactions are maintained. Since Heavy Water is produced for use by the Department's Nuclear Power Corporation and considering the strategic nature of the material it is considered that disclosure of the information relating to Heavy Water would not be in public interest.

[Deptt. of Atomic Energy D.O. No. Pr AO/Control/2/1/(23)/PAC/89/  
HWP (T)/316/dated 3.9.1991]

### **Recommendation**

Since the proforma account is intended to give only financial results of operation of the power system, the Committee do not understand how preparation thereof would result in release of any sensitive data. The Committee consider such claim as a way of evading accountability by escaping scrutiny of audit and this Committee under the guise of sensitivity, public interest etc. The Committee recommend that the issue may be reviewed and in case the Department of Atomic Energy do not agree to the stand, the matter may be referred to Ministry of Finance for an examination of the issue and issue of appropriate instructions under intimation to the Committee.

[Sl. No. 17 (para 1.86) of Appx. II to 169th Report of PAC (8th Lok Sabha)]

### **Action Taken**

The issue is under examination by the Department.

[Deptt. of Atomic Energy D.O. No. Pr AO/control/2/(23)/PAC/89  
HWP (T)/148 dated 25.7.1990]

### **Final Action Taken**

The methodology for calculation of pooled price for supply of Heavy Water has been worked out and the usual Government Accounts of the transactions are maintained. Since Heavy Water is produced for use by the Department's Nuclear Power Corporation and considering the strategic nature of the material it is considered the disclosure of the information relating to heavy water would not be in public interest.

[Deptt. of Atomic Energy D.O. No. Pr AO/control/2/1/(23)/PAC/89/  
HWP (T)/316 dated 3.9.1991]

### **Recommendation**

As the Committee could not complete the scrutiny of cost of heavy water which in turn is an essential item in the cost of nuclear power the Committee are unable to complete this part of their report and accordingly

this part remains an interim report to be finalised after the relevant cost data are made available to them.

[Sl. No. 18 (para 1.87) of Appx. II to 169th Report of PAC (8th Lok Sabha)]

**Action Taken**

No remarks.

[Deptt. of Atomic Energy D.O. No. Pr AO/control/2/1/(23)/PAC/89/  
HWP (T)/148 dated 25.7.1990]

**CHAPTER V**  
**OBSERVATIONS AND RECOMMENDATIONS IN RESPECT OF**  
**WHICH GOVERNMENT HAVE FURNISHED INTERIM REPLIES**

—NIL—

NEW DELHI;  
4 February, 1993  

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12 Magha, 1914 (Saka)

ATAL BIHARI VAJPAYEE.  
*Chairman,*  
*Public Accounts Committee.*

## APPENDIX

### *Observations and Recommendations*

Sl. No.	Para No.	Ministry/ Deptt. concerned	Observation/Recommendation
1	2	3	4
1	1.18	Finance/ Atomic Energy	According to the Department of Atomic Energy the cost of production of Heavy Water at Tuticorin worked out to Rs. 4120 per kg. Audit has stated that based on actual expenditure and production, it worked out to as high a figure as Rs. 13,800 per kg. as against the estimated cost of Rs. 1145 per kg. with reference to full capacity and Rs. 1,666 per kg. with reference to the derated capacity. In their earlier Report the Committee had regretted the fact that the Deptt. could not furnish calculations to indicate how their figure of Rs. 4120 per kg. had been arrived. The Committee had, therefore, considered it essential that for each year appropriate proforma account on commercial principles should be compiled. In their action taken note the Deptt. stated that the cost of production of Heavy Water during 1986-87 was Rs. 4120 per kg. had been arrived at on the basis of the actual cost incurred on the various inputs and depreciation on plant and machinery and the basis on which audit had computed the cost figure of Rs. 13,800 per kg. was not available to the Department. Subsequently the audit have clarified to the Committee that the cost of production had been worked out on the basis of the presumption that the per kg. cost of Rs. 4120 for 1986-87



1	2	3	4
			furnished by the Department was on the basis of the achievable capacity of 49 tonnes. On the basis of the annual average production of 14.6 tonnes, the Audit computed the actual cost of heavy water at Rs. 13,800 per kg.
2	1.19	Finance/ Atomic Energy	<p>The Department had also stated that the methodology for calculation of pooled price for supply of Heavy Water had been worked out and the usual Government Accounts of the transactions are maintained. According to the Department since Heavy Water was produced for use by the Department's Nuclear Power Corporation and considering the strategic nature of the material it was considered that disclosure of the information relating to Heavy Water would not be in public interest. Commenting upon this plea of the Department the Committee in their earlier Report had considered this claim as a way of evading accountability by escaping scrutiny of audit and this Committee under the guise of sensitivity, public interest, etc. Considering compilation of proforma accounts necessary for financial review, the Committee had recommended that the issue should be reviewed and in case the Department still did not agree to the stand, the matter might be referred to the Ministry of Finance for examination of the issue and issue of appropriate instructions under intimation to them. The Department's initial action taken not was silent with regard to the Committee's recommendation for referring the matter to the Ministry of Finance for appropriate instructions. The Committee express their deep concern over this failure of the Department. However, the Department of Atomic Energy agreed in July, 1992 to furnish to Audit the records relating to production capacity, actual production, cost of production etc. of the Heavy Water Plants for the period from 1985-86 onwards. Audit proposes to scrutinise these records during next audit. About the preparation of proforma accounts, the Department in September, 1992</p>

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2

3

4

have stated that such accounts in respect of Heavy Water Pool were being maintained by them earlier but in between for some period after the formation of NPCIL the same had not been prepared. The Deptt. have now confirmed that action was being taken to prepare the proforma accounts for the past years and make them upto date. But the approximate data by which the proforma accounts for the past 9 to 10 years would be ready for audit has not been indicated. However, according to Audit proforma accounts were not prepared from the year. 1982-83 onwards, whereas NPCIL was formed on 17.9.1987.

3

1.20

Finance/  
Atomic  
Energy

The 169th Report of the Public Accounts Committee was presented to Parliament on 28.4.1989. The Committee strongly deprecate the lack of a dispassionate approach on the part of the Deptt. of Atomic Energy in processing the action required to be taken on the recommendations contained in their aforesaid Report. The Department of Atomic Energy may initiate prompt action to update the Proforma Account in respect of the previous years for scrutiny by Audit and ensure preparation of the same in future to facilitate a realistic assessment of cost of production and control thereof as recommended by the Committee.

**PART II**  
**MINUTES OF THE 20TH SITTING OF THE PUBLIC ACCOUNTS**  
**COMMITTEE HELD ON 28 JANUARY, 1993**

The Committee sat from 1100 hrs. to 1200 hrs. on 28 January, 1993.

**PRESENT**

**CHAIRMAN**

Shri Atal Bihari Vajpayee

**MEMBERS**

*Lok Sabha*

2. Shri Girdhari Lal Bhargava
3. Shri Pratap Singh

*Rajya Sabha*

4. Shri R.K. Dhawan
5. Shri J.P. Javali
6. Shri Viren J. Shah
7. Shri Ish Dutt Yadav

**SECRETARIAT**

1. Shr. G.L. Batra — *Additional Secretary*
2. Smt. Ganga Murthy — *Deputy Secretary*
3. Shri K.C. Shekhar — *Under Secretary*

**REPRESENTATIVES OF AUDIT**

1. P.K. Bandopadhyay — Pr. Director (Indirect Taxes)
2. Shri A.K. Banerjee — Pr. Director (Reports)
3. Shri T.N. Thakur — Pr. Director
4. Shri Kulvinder Singh — Director (DT)
5. Shri Aditya Prasad — Director (Indirect Taxes)

2. The Committee considered the following draft Action Taken Reports:

- (i)                   \*\*\*                   \*\*\*                   \*\*\*
- (ii)                   \*\*\*                   \*\*\*                   \*\*\*

(iii) Heavy Water Plant, Tuticorin

[Action taken on 169th Report of the PAC.(8th Lok Sabha)]

3. The Committee adopted the draft Report at Serial No. (iii) above without any amendment.
4. The Committee authorised the Chairman to finalise the draft Action Taken Reports in the light of the verbal and consequential changes arising out of factual verification by Audit and present the same to Parliament.
5.                   \*\*\*                   \*\*\*                   \*\*\*

*The Committee then adjourned.*