

## CHAPTER – II

# Department of Atomic Energy

### 2.1 Follow up of performance audit of procurement of stores and inventory management

Progress made by Department of Atomic Energy in executing its own stated action plan for complying with recommendations made in an earlier Performance Audit Report on Procurement of Stores and Inventory Management was largely inadequate. Full implementation was achieved in only six out of 32 recommendations made. Deficiencies in planning for procurements, adherence to time schedules and contract management persisted. Implementation of computerisation of materials management functions remained insignificant.

#### 2.1.1 Introduction

Directorate of Purchase and Stores, Mumbai (DPS) is a centralised purchase and stores organisation under Department of Atomic Energy (DAE) which is entrusted with the responsibility of materials management functions for various units of DAE. Procurement activities in DAE are governed by a Purchase Procedure (1972), which was revised in 2001. In order to bring in more professionalism and transparency, DAE brought out a comprehensive Purchase Manual (November 2009) enunciating the procedures for sourcing, procurements, storage and inventory control of materials within the purview of Government guidelines. The stores procedure of DAE was in existence since 1976. A revised and updated Stores procedure had been drafted (September 2014), which was pending approval by the competent authority as of February 2016.

##### 2.1.1.1 Follow up audit

A Performance Audit of 'Procurement of Stores and Inventory Management in DAE' was conducted in 2008-09. Audit findings featured in the Report of the Comptroller and Auditor General of India No. 13 of 2010-11 (Performance Audit) and 32 recommendations were made. DAE accepted the recommendations of Audit and submitted a detailed action plan with measurable timeframes to implement the audit recommendations. DPS also issued (March 2011) a circular carrying out modifications in the practices and procedures followed in DAE. The actions taken by DAE were reviewed periodically through Action Taken Notes submitted by DAE. As the level of compliance to DAE's own commitments was found to be wanting, a

follow up audit was undertaken to ascertain the extent to which DAE implemented the audit recommendations. The procurements handled by DPS and Regional Purchase Units (RPU) at Chennai, Hyderabad and Indore were selected for examination. Out of 79,688 purchase orders valuing ₹ 5,981.49 crore placed by these entities during the period 2009-14, 2,070 purchase cases valuing ₹ 2,399.80 crore (40 per cent by value) selected on stratified random sampling basis and related payment folders were examined in audit.

### 2.1.2 Audit findings

Audit scrutinised records to examine procurement planning and processes, management of supplies and inventories and computerisation of purchase and stores functions in DPS and the selected RPU. Audit recommendations made in the CAG's Report No. 13 of 2010-11, action proposed by DAE and audit findings on compliance thereof are discussed in the succeeding paragraphs.

#### 2.1.2.1 Planning for procurements

##### (1) Overview of audit recommendations and action proposed by DAE

In the Performance Audit Report No. 13 of 2010-11, Audit reported on deficiencies in planning for procurements, ensuring timeliness of procurements and delays in procurements beyond the prescribed timeframes which resulted in additional financial liability for DAE. Audit recommendations made in the report, action plan proposed by DAE and status thereof were as follows:

Audit Recommendations	Action proposed by DAE on recommendations	Status of implementation
Annual Procurement Plans may be prepared and communicated to the purchase units consolidating requirements in advance to avoid delays and repetitive procurements thereby maximising value for money.	DPS in consultation with DAE will approach all the project authorities in the various constituent units of DAE for furnishing the annual procurement requirements/plans. This shall enable DPS to consolidate requirements as well as initiate advance action for procurement arresting avoidable delays as well as derive best value for money.  Timeframe for proposed action - two months	Insignificant progress.
DAE may prescribe time schedules for single tender procurements below ₹ 50 lakh. DAE may also avoid delays in placement of orders.	Timeframes for various stages of procurements, stores and inventory activities will be defined and order will be issued suitably to all concerned.  Timeframe by which proposed to be achieved – three months.	Partial implementation.

Audit Recommendations	Action proposed by DAE on recommendations	Status of implementation
<p>The Purchase Orders (POs) should be placed in time to ensure supplies by the delivery schedules specified in the indents. Requirements raised on 'urgent', 'priority', 'immediate' basis etc., may be expressed in terms of specific timeframes for better procurement planning.</p>	<p>Indents raised with the expressions 'Urgent', 'on Priority', 'Immediate' etc., in respect of delivery requirements shall be largely discouraged and the indenters advised to necessarily indicate specific timeframes/dates within which the requirements are to be met. In this regard it is proposed to develop a standard indent template with mandatory fields without which it would not be possible to register the indents at DPS. This shall ensure compliance on the part of indenter to indicate firm delivery requirements by making the field mandatory. A circular is proposed to be issued to take care of this requirement.</p> <p>Timeframe for proposed action – one month</p>	<p>Insignificant progress.</p>
<p>DAE may streamline the system of procurement to ensure that POs are placed timely and supplies are ensured well within the time schedule of intended activities/projects.</p>	<p>A strong emphasis shall be made prevailing upon the project authorities of various units of DAE to plan the procurements in harmony with the time schedules of activities/projects.</p> <p>Timeframe for proposed action – two months</p>	<p>Partial implementation.</p>
<p>Timeframes for various stages of procurements, stores and inventory activities may be incorporated in the purchase and stores procedures.</p>	<p>Timeframes for various stages of procurements, stores and inventory activities will be defined and orders will be issued suitably to all concerned. Simultaneously a monitoring mechanism shall be established to ensure compliance for the timeframe notified. The above orders will be issued as a corollary to chapter 36 of Purchase manual which envisages Time Scheduling and Monitoring mechanism and the same will form part of the Purchase manual.</p> <p>Timeframe by which proposed to be achieved – three months.</p>	<p>Partial implementation.</p>
<p>DAE must put in place a proper oversight mechanism to ensure that timeframe prescribed for processing and finalisation of tenders is strictly adhered to by various procurement agencies of DAE.</p>	<p>In order to evolve a mechanism to ensure the adherence of timeframes, a task force comprising of members from various constituent units is proposed to be set up to study the issue in detail and recommend a strategy to address the point raised by Audit. A tentative composition of the proposed task force/committee shall be suggested to DAE by DPS. Necessary orders based on the recommendations of the committee and approval by competent authority will be issued as an enlargement of Clause 36.1.5 of Purchase Manual.</p> <p>Timeframe by which proposed to be achieved: a) Notification of task force/committee by DAE - two months; b) Final recommendations of the committee to be made within a period of six months after its constitution.</p>	<p>No progress.</p>

Audit Recommendations	Action proposed by DAE on recommendations	Status of implementation
<p>In view of the significant variation between the estimated costs and the actual purchase price in large number of procurements, DAE may examine the feasibility of laying down acceptable ranges of variation to provide benchmarks for determining the reasonableness of the quoted prices in a transparent and objective manner. A comprehensive set of guidelines may be developed to help the indenters prepare more accurate cost estimates at the indenting stage.</p>	<p>Indenting Officers will be insisted on to plan the procurement of items after taking into account the schedule of the project, processing time for placement of order and delivery schedules for the time. They will be impressed upon to indicate realistic delivery schedules on the indent body after factoring in the above mentioned time factors.</p> <p>A circular in this regard will be issued - one month</p> <p>A circular will be issued advising all Indenting Officers to furnish detailed computation and the basis for arriving at the estimated cost while raising the indent. Suitable directions shall also be issued for adopting uniform method while computing the estimated cost.</p> <p>Timeframe for proposed action – one month</p>	<p>Insignificant progress.</p>
<p>DAE may review its material requirement on a regular basis to update the list of common stock items and their optimum inventory levels.</p>	<p>The list of common stock items will be regularly reviewed. For this purpose a feedback mechanism from the users shall be put in place and depending on the consumption pattern, the list modified as may be felt necessary.</p>	<p>Insignificant progress.</p>

**(2) Audit findings**

Audit findings based on further examination of records at DPS and selected RPU are discussed in the subsequent paragraphs.

**(i) Absence of Annual Procurement Plans**

Based on the recommendations of audit, DPS instructed (March 2011) all units of DAE to prepare Annual Procurement Plans and submit the same to DPS by March of each year. Based on the individual plans, DPS was to prepare the consolidated Annual Procurement Plan. Audit observed that Annual Procurement Plans were prepared only for processing of common stock items. Audit further observed that even though Annual Plans were made for processing of common stock items, the requirements were not consolidated and POs were released on piecemeal basis. A case study on piecemeal procurement of furnace oil is discussed in Box 1.

### **Box 1: Piecemeal procurement of Furnace Oil**

Clause 10.6.9 of the Purchase Manual of DAE stipulated that where the order is for large quantity, the benefit of economy of scale should be taken into account for estimation of the cost. DPS issued (November 2012) instructions for entering into common agreement with all the PSU oil companies for supply of furnace oil to achieve economy in price and consistency of rates.

Audit observed that DPS neither entered into annual rate contract nor negotiated with oil companies for supply of furnace oil. Instead, DPS and its RPU continued to purchase furnace oil on piecemeal basis. During the period from December 2012 to March 2014, Hyderabad Regional Purchase Unit (HRPU) and Madras Regional Purchase Unit (MRPU) placed seven and six POs respectively for procurement of 8,628 MT of furnace oil from three oil companies at total cost of ₹ 45.28 crore. Failure to consolidate requirements and enter into a common agreement with oil companies was in contravention of the provisions of Purchase Manual as well as instructions of DAE. Besides, the possibility of incurring higher costs due to non-negotiation of prices for bulk procurements cannot be ruled out.

DAE stated (July 2013) that the feasibility of processing of requirements annually could be assessed on successful implementation of work flow automation software. Audit observed that this software was implemented (July 2014) only in MRPU. However, despite implementation of software, Annual Procurement Plans were yet to be prepared in the unit (May 2015), as the software was stated to be under improvisation. Other units of DAE did not prepare Annual Procurement Plans as the work flow automation system was not operational.

DPS stated (August 2015) that Indenting Units would, according to their plans, consolidate requirements and forward indents to DPS. Hence, there was no separate Annual Procurement Plan for DPS.

The fact remained that DPS was to prepare the consolidated Annual Procurement Plan based on the individual procurement plans, which was not done.

#### **(ii) Delay in processing of indents**

Initially, timeframes were prescribed for processing limited and public tenders in June 2002. These were revised in October 2005. After the CAG's Report No. 13 of 2010-11, DAE further re-defined (March 2011) the time schedule for various activities for purchase, stores and accounts. Audit scrutinised 984 purchase cases processed after March 2011 and upto 2013-14 and observed that DPS and selected RPUs failed to adhere to the prescribed timelines in 204 cases (21 per cent). The details are given in Table 6.

**Table 6: Delay in processing of indents**

Nature of tender	Cases	Value in ₹ crore	Time schedule prescribed by DAE (days)	Delay range beyond prescribed period (months)
1) Single Tender	38	24.05	60	3 to 13
2) Limited Tender(single bid)	64	10.53	150	3 to 17
3) Public Tender (single bid)	35	73.86	180	3 to 18
4) (a) Two Part Tender (limited tender)	12	79.28	240	3 to 17
(b) Two Part Tender (public tender)	55	193.38	240	3 to 24
<b>Total</b>	<b>204</b>	<b>381.10</b>	<b>-</b>	<b>3 to 24</b>

Of these delayed cases, 10 cases in each of four categories were selected for detailed examination to analyse stage wise delay. The findings are detailed in Table 7.

**Table 7: Extent of delay in various stages of processing of purchase cases**

Nature of delay	Single Tender			Limited Tender			Public Tender			Two Part Public Tender		
	Cases with delay	Prescribed time (days)	Delay in days	Cases with delay	Prescribed time (days)	Delay in days	Cases with delay	Prescribed time (days)	Delay in days	Cases with delay	Prescribed time (days)	Delay in days
Delay in issuing enquiry after receipt of indent	5	6	6-121	2	25	56-470	2	25	36-46	4	25	7-178
Delay in time between tender due date and date of issuing enquiry	10	14	9-100	10	30	8-99	8	45	1-38	7	60	13-74
Delay in time taken for preparation of Comparative Statement/referring of the files to User Department after due date	9	3	1-35	3	24	8-277	2	24	1-5	10	12	75-322
Delay in time taken for evaluation of offers and submission of recommendation to DPS	5	15	1-135	5	30	9-194	8	45	24-144	2	90	31-53
Delay in time taken for commercial settlement, preparation and submission of purchase Order to Pre-Audit after receipt of final recommendation	10	14	12-150	10	25	4-207	10	25	46-151	8	30	49-393
Delay in time taken by pre-audit	6	5	9-29	3	9	7-135	5	9	1-13	5	14	1-12
Delay in release of Purchase Order	5	3	2-82	5	7	4-45	2	7	2-40	5	9	1-70

The table shows that most of the delays occurred during commercial settlement, preparation and submission of POs to pre-audit after receipt of final recommendation. Significant time overrun also occurred in the time taken between issue of tender enquiry and receipt of bids.

DPS stated (August 2015) that while processing the indents, DPS was required to follow laid down procedures, CVC guidelines, etc. in order to ensure transparency and competition. Further, it stated that lack of responses, procedural aspects, etc. at times delayed finalising cases on time.

The fact however, remained that the delays in internal processes occurred in spite of time frame and guidelines prescribed by DPS/DAE.

**(iii) Delays in placement of POs**

Audit observed delays in placing of purchase orders after finalisation of tenders, which not only delayed the process of procurement but also contributed to price escalations due to expiry of validity of offers. In three cases detailed in Table 8, DPS could not place the PO on the lowest bidders within the validity period of the tenders. Later, it had to place PO at higher rates which resulted in a loss of ₹ 68.70 lakh.

**Table 8: Cases of delays in placement of POs**

Indenting Unit	Item	Lowest offer (₹)	Validity of offer	Issue of PO	PO Price (in ₹)	Difference (in ₹ lakh)
Heavy Water Plant, Manuguru	Caustic Soda lye	2.23 crore	November 2011	February 2012	2.67 crore	43.89
Bhabha Atomic Research Centre	Stainless Steel components	49.74 lakh	January 2008 extended to March 2008	July 2009	65.62 lakh	15.88
Bhabha Atomic Research Centre	Beryllium Copper Alloy Plates	4,675 per kg	June 2009	July 2010	5,000 per kg	8.93 (for 2,749 kg)
<b>TOTAL</b>						<b>68.70</b>

Audit also observed instances in which the POs were placed after the delivery dates specified by the indenters. On review of 2,039 indents, it was observed that against 304 indents (15 per cent of cases) valued at ₹ 279.13 crore, POs were placed after periods upto 26 months from the delivery dates specified.

Thus, DPS and selected purchase units were unable to ensure timely placement of POs.

**(iv) Lack of clarity in delivery schedules of procurements**

DAE advised (March 2011) indenters to plan their procurements after taking into account various factors and indicate delivery schedules accordingly. Indenters were requested to avoid phrases such as 'urgent', 'immediate' etc.

Audit observed that the practice of using these vague delivery terminologies continued in indents. Out of 1,701 indents examined in audit, in 946<sup>4</sup> indents (56 per cent) valued at ₹ 907.13 crore, indenters had not specified delivery schedules and used terms such as “Immediate”, “Urgent”, “at the earliest” etc. This indicates that the instructions of DAE for assessing delivery schedules were not complied with.

Audit further observed that in spite of “Immediate”, “Urgent”, “at the earliest” delivery schedules mentioned in the indents, DPS and selected RPU failed to adhere to the maximum prescribed timelines to place the order in 288 cases valued at ₹ 493.58 crore. The delay ranged from one to 115 months beyond the maximum prescribed time limit of 240 days. Though the requirement had been termed as urgent, the cases were processed by DPS in a routine manner.

**(v) Lack of oversight mechanism**

In its remedial action against the audit recommendation for establishing an oversight mechanism, DAE proposed to set up a task force to study the issue of adherence of timeframes. However, there were no records to indicate that such task force/committee was constituted. Audit observed that DPS prescribed (March 2011) a procedure only for reporting of failure to adhere to time frame. During test check of procurement cases, Audit found no instances of cases of delay in following time schedules being reported to the designated authority and/or corrective action taken.

From the above, it is evident that an oversight mechanism to check cases of delay in processing of procurements was not established.

**(vi) Provision for time schedules for purchase and stores activities in Manuals**

The updated Purchase Manual of DAE stipulated that officials may adhere to time schedules for each procurement activity prescribed by DPS. DAE had proposed to prescribe definite time schedules which would form part of the manual. DPS redefined (March 2011) time schedules for various activities for purchase, stores and accounts. These time schedules were, however, not incorporated in the Purchase Manual. Similarly, as no oversight mechanism to monitor compliance to prescribed time schedules was established, provisions relating to monitoring of procurement activities also remained omitted from the manual.

**(vii) Variations between estimated and actual costs of procurement**

Clause 10.6 of the Purchase Manual of DAE prescribes the methodology in arriving at estimates of cost of procurements. DPS also instructed (March 2011) indenting officers to follow the guidelines given in the Purchase manual and to provide a backup paper to show how estimated costs were arrived at. During test check of

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<sup>4</sup> In DPS, HRP and IRPU.



purchase cases, it was seen that no backup papers were attached with indents to justify or demonstrate the basis of cost estimates. In the absence of the same, it could not be ascertained as to whether the cost estimations were being done in accordance with guidelines given in the Purchase Manual.

### 2.1.2.2 Procurement process

#### (1) Overview of audit recommendations and action proposed by DAE

In the CAG's Audit Report No. 13 of 2010-11, Audit reported observations on large proportion of procurements being made after restrictive mode of tendering (single/limited tenders) by citing grounds of urgency. This not only restricted competition, but in many cases such tendering without ensuring timely installation/commissioning of equipment defeated the purpose of adopting restrictive mode of tendering. Audit also reported on weaknesses in contract management in DPS. Audit recommendations made in the report, action plan proposed by DAE and status thereof were as follows:

Audit Recommendations	Action proposed by DAE on recommendations	Status of implementation
Proposals seeking dispensation of normal mode of tendering on grounds of urgency could be backed by a certificate of readiness of site or commitment for readiness of site by a specified date and other requirements to ensure justification of such an action.	Efforts shall be made to impress upon the indenting officer to desist from suggesting the deviation only on the reasons of urgency. The matter is already discussed in the DPS council meeting held in December 2009 and the same will be taken up in the next Stores and Equipment Committee, BARC meeting for bringing this to the notice of all the Purchase Approving Authorities.  A circular in this regard will be issued within one month.	Full implementation.
Intention to split the quantity, wherever necessary, should be clearly brought out at tendering stage and uniformity of prices may be maintained while awarding contract to more than one supplier. The provisions of GFR in distribution of quantities and determination of ordering price to various suppliers must be strictly followed.	As suggested, any intention for splitting the order shall be included in the tender enquiry document to maintain clarity amongst the bidders before submission of offers. As the purpose of splitting is to pre-empt over-dependence on a single supplier, such cases shall be monitored more stringently with the view of attaining the objectives for which splitting is carried out.  Timeframe by which proposed to be achieved – one month.	Full implementation.

Audit Recommendations	Action proposed by DAE on recommendations	Status of implementation
<p>While placing orders, strict compliance with purchase procedure and CVC guidelines may be ensured to maximise competition, minimize delays, reduce procurements and ensure adherence to delegated powers.</p>	<p>The Project Authorities/Indenting Officers shall be suitably advised on the need for complying with the Purchase Procedure as well as the extant CVC Guidelines in the procurement process right from the time of raising of indents upto order placement. This shall, inter alia, aim at minimising deviation from the prescribed tendering modes and generation of sufficient competition, thereby, arresting adverse financial implications.</p> <p>Timeframe by which proposed to be achieved – one month</p>	<p>Insignificant progress.</p>
<p>DAE may discontinue the practice of granting interest free advances to suppliers in compliance to CVC guidelines and adopt a uniform policy across its various procurement units with regard to rate of interest to be charged on such advances. Long outstanding advances against the suppliers may be reviewed and a time bound plan of action may be drawn up to settle them.</p>	<p>The action to assess and recover unadjusted amount of advances will be taken up in a phased manner to resolve the cases at the rate of 10 <i>per cent</i> in a quarter. A uniform policy for charging of interest on advances will be adopted.</p>	<p>Insignificant progress.</p>
<p>Extensions in delivery schedules may be granted only in exceptional circumstances instead of allowing extensions as a matter of routine. DAE may also review its general conditions of contract regarding liquidated damages to ensure that liquidated damages are charged as deterrent to avoid delays. Levy of Liquidated Damages (LD) should not be linked to incurring of financial loss, which may be difficult to quantify for R&amp;D organisations.</p>	<p>A circular will be issued to Indenting Officers/ Project Authorities emphasising the need for extensive follow-up with the suppliers to ensure delivery of the item as per the schedules defined in the purchase order. In this context it would be expedient on the part of the Indenting Officers to scrupulously comply with the ordered terms in respect of aspects such as approval of drawings, carrying out of pre-dispatch inspection when called for etc., within a reasonable timeframe. Wherever delays are attributable to the contractor, a mechanism for levy of token LD could be put in place. This being a major departure from the laid down procedure shall require approval of DAE for which separate proposal would be put up within three months.</p> <p>Timeframe by which proposed to be achieved – three months after DAE approval.</p>	<p>Full implementation.</p>

Audit Recommendations	Action proposed by DAE on recommendations	Status of implementation
DAE may like to revisit its provisions for re-fixing of delivery schedules as the new manual now gives legal sanction to re-fixing of delivery schedules due to purely departmental reasons. This will have a cascading effect not only on project schedules but also on financial implications of projects.	A direction in this regard shall be given to all concerned within a period of three months as part of Purchase Manual as an extension of Chapter 29.7.  Timeframe by which proposed to be achieved – three months.	Full implementation.
A monitoring committee comprising of DPS and the indenting agencies may be set up for formal periodical monitoring of high value POs. An online monitoring system may be established, linking the various procurement agencies for effective contract management.	The issue of constituting Monitoring Committees comprising of indenting officers/ project authorities and DPS will be discussed with the heads of the units who in turn will be requested to constitute such committees. A communication in this regard will be issued.  Timeframe by which proposed to be achieved – one month.	No progress.
DAE procurement procedure may be reviewed and suitably amended/ modified to address deficiencies and make it consistent with the provisions of the new General Financial Rules, 2005.	The purchase procedure shall be subjected to a thorough review to identify inconsistencies and thereafter necessary action shall be initiated towards harmonising the procedure with the provision of General Financial Rules (GFR). Powers to deviate from some of the provisions of GFR stand delegated to Director, P&S by DAE. Further, wherever needed, necessary approvals shall be sought and obtained from the competent authority for any other deviations from the provisions of GFR.  Timeframe by which proposed to be achieved – six months.	Full implementation.

## **(2) Audit findings**

Audit findings based on further examination of records at DPS and selected RPU are discussed in the subsequent paragraphs.

### **(i) Compliance with Audit recommendations**

On the following issues, Audit recommendations on procurement processes were complied with by DAE.

- a) DAE agreed (March 2012) that proposals for dispensation of normal mode of tendering on grounds of urgency alone would be discouraged. During test check of purchase orders no case was found where normal mode of tendering was dispensed with on grounds of urgency.

- b) DAE instructed (March 2011) that intention to split quantity of orders should be clearly brought out at the tendering stage and uniformity of prices maintained while awarding the contract to more than one supplier. During test check of purchase orders, no cases of splitting of tenders in contravention of above orders were noticed.
- c) Regarding re-fixing of delivery schedules, DAE stated (March 2012) that it was decided to use this provision sparingly only when it is fully justified. During test check, no case of re-fixation of delivery schedule in contravention of above orders was noticed.
- d) In accordance with its proposed follow up action to the audit recommendation regarding updating of Purchase manual, DAE brought out (November 2009) a comprehensive Purchase Manual enunciating the procedures for sourcing, procurements, storage and inventory control of materials.

**(ii) Violation of purchase procedure**

DAE instructed (March 2011) indenting officers to follow guidelines on evaluation of tenders and purchase recommendations provided in the Purchase Manual. Audit observed that in three cases, as detailed in Table 9, POs were placed without obtaining requisite approval of DAE.

**Table 9: POs placed without approval of DAE**

*(Amount in ₹ crore)*

Indenting Unit	Purchasing unit	Item	Nature of tender	Financial powers of the indenting unit	Estimated cost of item	Value of PO
Nuclear Fuel Complex, Hyderabad	HRPU	Double strand 2 HPTR tube reducing mill	Public Tender	8.00	9.00	9.62
Rare Material Plant, Mysore	DPS	Part No. 20-MA-06 and 20-OR-06	Single Tender	2.00	5.10	5.62
Board of Radiation and Isotope Technology, Mumbai	DPS	Sodium Molybdate	Limited Tender	3.00	3.19	3.39

HRPU, which carried out the purchase in respect of Nuclear Fuel Complex above, stated (February 2015) that the criteria for determining competent authority was the basic cost of the material to be procured only, exclusive of the statutory levies and other charges. The reply is not acceptable, as total value of purchase was to be taken as the basis for applying the delegation of financial powers of sanction. This was

clarified by DAE (June 2014) that the authority competent to approve purchase is to be determined based on the “total value of purchase” which would include all elements of expenditure including taxes.

**(iii) Non-adjustment of advances paid to suppliers**

As per Rule 159 of GFRs; incorporated in Clause 19.3.33.4 of the Purchase Manual of DAE, in case of advance payments, adequate safeguards in the form of bank guarantee etc. should be obtained from the firm to whom the advance payment is made. In CAG’s Audit Report No. 13 of 2010-11, it was reported that 703 cases of advance payments amounting to ₹ 214.43 crore made by DPS and selected RPU were lying unadjusted. Although DAE, in response to Audit recommendation, proposed to take action in this regard, Audit observed that substantial amounts of advances remained unadjusted for several years.

Test check of cases revealed that 169 cases of advance payments amounting to ₹ 54.43 crore made by DPS and its RPU were still unadjusted for periods ranging from one to 33 years, as shown in Table 10.

**Table 10: Details of unadjusted advances**

(Amount in ₹)

Period of pendency of advance payments (years)	DPS		MRPU		HRPU		IRPU		Total	
	Cases	Amount	Cases	Amount	Cases	Amount	Cases	Amount	Cases	Amount
1 to 5	29	17,39,87,473	6	21,94,77,700	28	12,81,46,890	2	7,55,184	65	52,23,67,247
6 to 10	6	51,56,033	0	0	3	35,40,600	4	77,90,094	13	1,64,86,727
11 to 15	1	44,769	0	0	0	0	4	4,59,190	5	5,03,959
16 to 20	0	0	0	0	12	10,93,103	3	5,50,234	15	16,43,337
21 to 25	0	0	0	0	21	11,54,693	0	0	21	11,54,693
26 to 30	0	0	0	0	24	9,68,581	0	0	24	9,68,581
31 to 33	0	0	0	0	26	12,12,368	0	0	26	12,12,368
<b>TOTAL</b>	<b>36</b>	<b>17,91,88,275</b>	<b>6</b>	<b>21,94,77,700</b>	<b>114</b>	<b>13,61,16,235</b>	<b>13</b>	<b>95,54,702</b>	<b>169</b>	<b>54,43,36,912</b>

In HRPU, amount of ₹ 44.29 lakh of advances paid to suppliers was pending for periods up to 16 to 33 years. DAE did not provide information on the number of cases in which advance payments were released but supplies were yet to be received as of March 2015 and the position with regard to obtaining of bank guarantees against the advance payments and validity thereof as of March 2015.

**(iv) Release of interest free advances to suppliers**

As per CVC guidelines (2006) incorporated as Clauses 19.3.33.4 and 34.3.21.1 of the Purchase Manual of DAE, advance payments released to suppliers should generally be interest bearing so that the contractor does not derive undue benefit. Though DAE proposed in 2010 that uniform policy for charging of interest on advances will be adopted, DPS issued instructions only in November 2012 to charge interest at the

rate of 12 per cent per annum on all advance payments in which authorised delivery periods were delayed. DPS further instructed that all contracts which authorise advance payment may carry clause for levying interest on advance for delayed period.

Audit observed three cases pertaining to period after issue of instructions by DAE, in which advance payments amounting to ₹ 1.26 crore were released to suppliers, however, no clause for levying interest on advance payments was inserted in the POs. The details are given in Table 11.

**Table 11: Details of release of interest free advances to suppliers**

Date of issue of PO	Name of supplier	Order value (₹)	Amount of advance (₹)	Date of release of advance	Percentage of advance	Delay in supply (months)	Amount of interest (₹)
1. May 2013	L&T Ltd.	3,47,97,684	34,79,768	July 2014	10	3	1,04,393
2. May 2013	Hind High Vacuum Company Ltd.	3,67,12,500	36,71,250	July 2013	10	19	6,97,538
3. June 2013	Symec Engineers (India) Pvt. Ltd.	2,75,00,000	27,50,000	August 2013	10	10	2,75,000
			27,50,000	January 2014	10	10	2,75,000
<b>TOTAL</b>							<b>13,51,931</b>

Although deliveries were delayed by three to 19 months in these cases, DAE could not levy interest on the advance payments released to the vendors in the absence of such enabling clause in the POs. Non-levy of interest on advances released to the firm resulted in loss of interest to the tune of ₹ 13.52 lakh and extending of undue benefits to the suppliers.

**(v) Non-implementation of system of monitoring of high value procurements**

DPS instructed (March 2011) project authorities to constitute monitoring committees for proper contract management of high value procurements. During the period 2009-14, DPS and selected RPU processed 825 high value POs i.e. POs valuing more than ₹ one crore. However, no monitoring committees were constituted in any of the selected units. DAE stated (March 2012) that online monitoring system for high value POs would come into vogue when computerisation was completed. The fact remained that system for monitoring of high value procurements was not established even as an interim measure pending computerisation.

### 2.1.2.3 Management of supplies and inventories

#### (1) Overview of audit recommendations and action proposed by DAE

In the CAG's Audit Report No. 13 of 2010-11, Audit reported on deficiencies in post-contract management relating to the installation and commissioning of equipment. Audit also reported on serious deficiencies in inventory management. Audit recommendations made in the report, action plan proposed by DAE and status thereof were as follows:

Audit Recommendations	Action proposed by DAE on recommendations	Status of implementation
Time schedules may be prescribed in the Stores Procedure for inspection of materials, replacement of defective/damaged items, rectification of defects etc. All the cases relating to delay/non-clearance of Stores Receiving Vouchers (SRVs) may be reviewed.	All cases related to delay/ non-clearance of SRVs will be reviewed.  Time schedule for activities will be prescribed as recommended - one month.	Partial implementation.
Given the fact that installation /commissioning of a large number of machinery/equipment get delayed due to reasons like non-readiness of site etc., DAE may direct its indenting officers to lay down specific timeframes for installation/ commissioning of machinery/ equipment.	A circular will be issued in this regard emphasising the need for defining the time schedules for installation and commissioning of machineries/equipment right from the indenting stage.  Timeframe by which proposed to be achieved – one month.	Insignificant progress.
Proper mechanism may be devised to monitor and ensure that the time schedules so prescribed are followed scrupulously by the different executing agencies.	Committees comprising of indenting officers/project authorities and DPS proposed to be set up for monitoring of execution of POs would be mandated with the additional responsibility of monitoring adherence to time schedules of various Stores activities.  Timeframe by which proposed to be achieved – one month.	Insignificant progress.
Provisions may also be incorporated in the purchase orders/ contracts by making the suppliers responsible for defective/ short supplies etc., in order to safeguard the Government interests.	Suitable provision will be incorporated as recommended in the Performance Audit for making the suppliers responsible for defective/short supplies etc., in order to safeguard DAE's interest after taking approval from the Competent Authority.  Timeframe by which proposed to be achieved – six months.	Partial implementation.

Audit Recommendations	Action proposed by DAE on recommendations	Status of implementation
Adequate safeguards against deficient performance by the suppliers may be provided in the procurement procedures.	Prevailing payment terms in the procedure will be subjected to detailed study and suitable modifications shall be contemplated to install adequate safeguards where firms are found wanting in performance.  Timeframe by which proposed to be achieved – three months.	Partial implementation.
A mechanism may be put in place so that procurements are made only on the basis of assessed actual requirement.	The indenting officers/ project authorities will be advised to install a mechanism for realistic assessment of their annual requirements and raise indents accordingly.  Timeframe by which proposed to be achieved –two months.	Partial implementation.
Annual review of all the stores units may be conducted to determine surplus items.  Specific time schedules for recommending / declaring the items as surplus may be prescribed.	A provision for annual review of stores units will be incorporated in the Stores Procedure which will help in identifying the excess/overstocked items and also help in identifying unserviceable/ obsolete items. Time schedule for recommending / declaring the items as surplus will also be part of the annual review.  Timeframe by which proposed to be achieved –six months.	Insignificant progress.
Proper coordination between stores and divisions may be ensured to facilitate an efficient stores management system.	The issue of coordination will be discussed with the Project Authorities and suitable action plan will be evolved for efficient stores management.  Timeframe by which proposed to be achieved – six months.	Insignificant progress.

**(2) Audit findings**

Audit findings based on further examination of records at DPS and selected RPU are discussed in the subsequent paragraphs.

**(i) Compliance with Audit recommendation**

Provisions such as liquidated damages, bank guarantees, security deposits, warranty, interest on advance payments for delay in supplies, performance bond, commitment of resources by contractors, etc. were incorporated under relevant chapters in the Purchase Manual of DAE.



**(ii) Delay in clearance of received supplies**

As per DAE/DPS prescribed time schedules (March 2011) for various stores activities, Stores Receiving Vouchers (SRVs) were to be cleared by the concerned units within a period of 28 days after receipt of supplies. During the period 2009-14, 85,284 SRVs were cleared in the selected stores units, out of which 20,516 SRVs i.e. 24 *per cent* were cleared with delays ranging from one to more than 36 months. This indicates that the time schedules prescribed for clearance of stores were not complied with.

Further, there were 483 cases in which supplies were received but SRVs were not cleared for periods ranging from one month to more than three years. Of the 483 cases, 134 SRVs were selected for detailed examination on random stratified sampling basis. Out of 134 cases, Audit observed that non-clearance of 67 SRVs (50 *per cent* cases) was due to non-installation/non-commissioning of equipment. Of the 67 cases, equipment in 18 cases were not installed as of September 2015/installed after prolonged delays due to defective/short supplies, which resulted in blocking of funds.

Similarly, in eight instances, non-readiness of site was the major reason for non-installation/ delay in installation of the equipment. DAE had instructed (March 2011) the Stores and Equipment committees/Special Purchases committees to verify the readiness of site before supply of machinery/equipment from indenting officers. Audit observed that no such verification of status of site preparation was on record.

Other reasons for non-installation of equipment included non-completion of certain functional tests, delay by suppliers, etc.

**(iii) Lack of monitoring mechanism**

In order to monitor and ensure adherences to time schedules of various stores activities, DAE, in response to Audit recommendation, proposed that committees constituted for monitoring of execution of POs would be mandated with additional responsibility of monitoring of stores activities. Audit observed that only IRPU had constituted (2009) a Planning and Coordination Cell for monitoring time schedules prescribed in purchase orders. There was no record to indicate that such committees were constituted. In the absence of oversight mechanism, there was no assurance that time schedules were monitored.

**(iv) Assessment of requirements of stores items**

DAE instructed (March 2011) project authorities to have a mechanism for realistic assessment of their actual requirement and raise indent accordingly. Analysis of stock cards on parameters of turn-over rate, utilisation and frequency of replenishment revealed that there were 212<sup>5</sup> stock cards valuing ₹ 10.33 crore, in

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<sup>5</sup> In BARC, IRPU and HRPU.

which listed inventories were idle for periods of two years to 20 years or even more. This was an area of improvement, as in CAG's Audit Report No. 13 of 2010-11, 278 cards valuing ₹ 32.22 crore were reported as idle.

However, when these cards were further categorised in terms of their utilisation percentage, Audit observed that in 201 stock cards, valued at ₹ 9.43 crore, utilisation was below 50 per cent of their stocks. Audit further observed that in respect of items worth ₹ 3.65 crore pertaining to 59 cases, in spite of availability of sufficient stock and only meagre utilisation, DAE engaged in additional procurements, resulting in overstocking of inventory. Idling of inventory for prolonged periods, incomplete utilisation and additional procurements of slow moving inventories resulted in piling up of inventories and blocking of funds.

**(v) Annual review of stores**

As per Clause 7.3.1.1 of DAE Stores Procedure, the stores unit shall conduct annual review of store items group-wise to determine surpluses and obsolete items and suitable action for their further utilisation or disposal may be taken. DAE instructed (September 2011) stores offices to prepare a list of slow-moving items and put up to the authorities concerned for recommending/declaring them surplus. However, it was observed that time schedules for recommending/ declaring the items as surplus were yet to be finalised as of June 2015. Of the nine stores units<sup>6</sup> examined in audit, it was observed that annual review of all stores under only Modular Lab Zonal Stores, BARC, was being done. As a result, surplus/obsolete stores could be identified only in respect of the stores for which annual review was conducted. As all groups were not covered for annual review, the possibility of appearance of additional surpluses could not be ruled out.

Audit further noticed that out of 45,083 items identified as surplus, there were 723 items in which decisions were pending with plant authorities or users concerned for declaring these items as surplus. Delay in declaration of items as surplus causes delays in subsequent actions for further utilisation of such items within their useful life.

Further, as per Clause 8.2.1 of DAE Stores Procedure, stock verification of Capital items and Furniture and Fixtures was to be conducted once in three years and discrepancies observed reconciled by the division concerned. Audit observed that out of 11,787 cases of discrepancies detected in physical verification during July 2012 to March 2014, 10,934 cases remained to be reconciled. These discrepancies

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<sup>6</sup> Advanced Fuel Fabrication Facility (A3F), Power Reactor Fuel Reprocessing Plant (PREFRE), Waste Management Zonal stores, BARC, Mumbai (WMZ-B), Waste Management Zonal stores Tarapur(WMZ-T), Reactor Engineering Zonal stores (RED), Fuel Reprocessing Zonal stores (FRZ), Modular Lab Zonal Stores (MLZ), Reactor Control Division (RCND) and Madras Regional Purchase Unit (MRPU) stores.

remained unsettled for a period ranging from one to three years. Non-settlement of discrepancies delays further course of action in respect of these items.

#### 2.1.2.4 Computerisation of Purchase and Stores functions

##### (1) Overview of audit recommendations and action proposed by DAE

DAE granted (October 1998) approval to DPS for implementing a computerised system of material management. In the CAG's Audit Report No. 13 of 2010-11, Audit highlighted deficiencies in implementation of the computerisation of purchase and stores functions. Audit recommendations made in the report, action plan proposed by DAE and status thereof were as follows:

Audit Recommendations	Action proposed by DAE on recommendations	Status of implementation
In view of magnitude of procurement activities involved in DAE, clear guidelines and instructions pertaining to computerisation may be formulated.	Action has been initiated for implementation of e-tendering system. It is planned to implement this in the beginning at MRPU and then in sequence at IRPU, HRPU, DPS followed by all other units of DPS. A contract has already been awarded for this purpose and sample files are under process by e-tendering solution. Regular processing of non-sensitive indents by using e-tendering solution will commence from June, 2010 at MRPU. The services of e-procurement solution will be extended in phased manner to other units with a gap of three months.	Insignificant progress.
On-line connectivity may be provided across all DAE units to maintain uniformity among all purchase and stores units. All purchase and stores unit need to be integrated to achieve better control between purchase and stores activities.		No progress.
Dedicated task force for computerisation along with technical support at unit levels may be created for ensuring updating, troubleshooting and security of data.	Actions have also been initiated to implement the workflow automation system at IGCAR and BARC in which Stores Management Information System will also cover the Stores and Purchase activities. An order has already been awarded for this work at IGCAR and is expected to be made available to users in a period of six months.	Insignificant progress.
Inbuilt online checks and controls may be introduced to ensure accuracy and security of database.	Similarly, a tender has been floated for implementing this system at BARC. The workflow automation system will be implemented at other units of DAE in a progressive manner.	Insignificant progress.
Manual intervention in transmission of an indent from the concerned indenting division to DPS may be eliminated to ensure accuracy and timeliness of processing of requirements.	Centralisation of computerisation across DAE units needs an elaborate study by a team of experts considering the aspects of sensitivity and security of data. This aspect will be discussed at DAE level to evolve strategy for moving ahead in this direction.	Insignificant progress.
A centralised database of various common items, their specifications, prevailing costs, sources of supply should be maintained and be available online to all users for accurate	A centralised database of various common user items as recommended in the Performance Audit will be created. For this purpose, a massive codification exercise has already been undertaken by DPS whereby assistance of an outside	Insignificant progress.

Audit Recommendations	Action proposed by DAE on recommendations	Status of implementation
projection of requirements and realistic estimation of cost.	professional agency is being contemplated to be taken for cataloguing items numbering in the range of 75,000 to 1,00,000 in BARC alone. Once the codification exercise has been completed successfully, harmonisation efforts shall be initiated for allotting the common item code numbers for the same/similar items being procured by units other than BARC.  Timeframe by which proposed to be achieved – one to two years	
Regular updating and posting of information on surplus items may be done in a way that the indenters are able to view them before raising the requirements.	Information Technology shall be leveraged to achieve the objective of regular updating and posting of information of surplus items.  Timeframe by which proposed to be achieved – six months.	Full implementation.

**(2) Audit findings**

Audit findings based on further examination of records at DPS and selected RPU are discussed in the subsequent paragraphs.

**(i) Absence of clear guidelines for computerisation**

Audit observed that though DAE initiated (March 2012) a new e-tendering system and work flow automation system, documentation for requirements of these systems was not on record/incomplete and iterative in nature. In the absence of system specification documents, Audit could not obtain an assurance on the methodology adopted by DAE to finalise its requirements and expectations from the proposed materials management applications. A case study on inadequate detailing of requirements in BARC is discussed in Box 2.

**Box 2: Delay in delivery of Integrated Information System and Material Management System**

BARC raised (November 2009) an indent on urgent requirement basis for development, testing and deployment of Accounts and Administration Integrated Information System and Material Management System for working of Administrations, Accounts, Purchase and Stores activities at an estimated cost of ₹ 3.6 crore. After evaluation of bids, DPS placed (February 2011) a PO on CMC limited at a total cost of ₹ 4.04 crore with scheduled date of delivery in January 2012. The Systems Requirements Specifications (SRS) document was finalised in December 2011. However, even after its finalisation, gaps due to insufficient detailing of requirements and frequent changes in the functionality remained. Due to this, delivery period was extended till 30 June 2015. However, this integrated system was not delivered as of August 2015 i.e. even after lapse of more than five years from the date of placing of indent. Payment of ₹ 2.25 crore was released to the firm between May 2012 and May 2013.

DPS stated (August 2015) that delay was due to incorporating procedural aspects, rules and regulations, etc. in the system. In addition, running trials and further modification based on inputs from users were incorporated. The fact remained that BARC could not determine its requirements even though the SRS document was approved as far back as December 2011. As a result, the Accounts and Administration Integrated Information System and Material Management System for working of Administrations, Accounts, Purchase and Stores activities was badly delayed.

**(ii) Non-implementation of work flow automation system**

In its Action Taken Note to the Performance Audit Report, DAE stated (March 2012) that a self-contained computerisation of materials management activities was planned initially in two units viz. MRPU and IRPU to be extended subsequently to the other units. As of May 2015, e-tendering process was implemented in all the units. However, work flow automation was not completed at any of the units. In the absence of work flow automation, several controls in purchase and stores functions could not be established, as discussed in the following paragraphs.

**a) Non-consolidation of procurement requirements**

As mentioned in paras 2.1.2.1 (1) and (2)(i), DAE proposed that all project units would be approached for preparation of Annual Procurement Plans, to enable consolidation of procurement requirements. However, Annual Procurement Plans could not be prepared at any unit of DAE due to non-implementation of work flow automation software. As a result, procurement requirements could not be consolidated and planned in advance.

**b) Absence of centralised database of common items**

In response to Audit recommendation on creation of a centralised database for common items, DAE stated (2009) that a codification exercise to catalogue various items had been undertaken. Codification of items was to be incorporated in the software for work flow automation process. DPS placed (November 2012) a work order on a firm for development, testing and installation of codification of inventories at the total cost of ₹ 37.13 lakh, with the objective of creating a unique code for items having same specifications, make and model in all the existing stores of DPS by December 2013. It was however observed that the system was only partially installed. Payment of ₹ 18.42 lakh was released to the vendor as of June 2015.

However, as of August 2015, the software for work flow automation process, which was expected to cover the codification module, was still under development at DPS and its units. Thus, an online centralised database of various common items, their specification, prevailing costs, sources of supply etc. remained to be prepared.

**c) Non evolution of system for coordination between stores and user divisions for utilisation of surplus items**

Information on surplus items was being posted on the internal website of BARC. The work flow automation system was expected to address the issue of proper coordination between stores and plant authorities for mobilisation and utilisation of surplus items. However, work flow automation system was still not completed as of August 2015, in the absence of which extent of coordination envisaged between stores and plant authorities and actual achievement thereof could not be ascertained.

**(iii) Non-integration of materials management functions**

The different purchase units of DAE initiated various actions for computerisation of purchase and stores. However, the status of integration of procurement and inventory management functions was as described in Table 12.

**Table 12: Status of computerisation of purchase and stores functions**

Name of unit	Status of computerisation
DPS	E-tendering was implemented in July 2014. DPS initiated (May 2015) development of a comprehensive e-procurement solution, however, DAE's approval for the same was still awaited. Work flow automation system was not implemented.
MRPU	E-tendering was implemented in July 2014. As of January 2015, both purchase and stores activities were computerised. However, fully automated materials management system from indenting to destruction of records was not achieved. Purchase management system was computerised in client server mode with Oracle database. Stores management system was in web based mode using a different database, due to which their integration could not be achieved. As of January 2015, efforts were on to replace the purchase management system with web based system to enable its integration with the stores system. Work flow automation system was not implemented.
HRPU	E-tendering was implemented in July 2014. Computerisation of purchase and stores functions was developed in a phased manner. As of February 2015, stores and purchase functions were computerised upto payment stage. Complete computerisation upto record destruction stage was not achieved. Work flow automation system was not implemented.
IRPU	E-tendering was introduced in July 2014 and implemented by May 2015. Purchase and Stores functions were also computerised and integrated. Work flow automation system was not implemented.

Thus, complete integration of database among the Purchase, Stores and Account functions with the existing levels of computerisation was not in place in any of the units, except in IRPU. It was also observed that integration of databases among Purchase, Stores and Accounts functions in DAE was still at discussion stages as of April 2015. DAE was unable to define a date for achieving the integration.

Thus, as of August 2015, DAE could not achieve an integrated system of materials management by bringing about on line connectivity between purchase and stores functions within a unit and among various materials management units.

**(iv) Incomplete utilisation of e-tendering system**

During the period 2009-14, DPS and selected RPU's finalised and issued 1,34,038 tenders, out of which 27,734 tenders were issued on line (e-tendering) mode, which was 21 per cent of the total tenders finalised. Thus, even after existence of e-tendering system in the purchase units, level of utilisation of the same was only 21 per cent.

DPS stated (October 2015) that the reason for low utilisation of e-tender was due to its requirements being strategic in nature, existing e-tender solutions not being mature enough to handle two-part tender system, import procurement not being processed efficiently for poor response from foreign bidders and enrolment on e-portal being mandatory for participating in e-tender by the bidder. The fact remained that e-tendering system could not be utilised in accordance with the requirements of DAE.

**2.1.3 Summary of compliance to DAE's proposed action plan on Audit recommendations**

Audit's examination of the extent of compliance to DAE's proposed action plan on the Audit recommendations revealed that of the 32 recommendations made-

- a) There was full implementation of action plan for six Audit recommendations;
- b) Partial implementation was made in action plan proposed for seven Audit recommendations;
- c) Progress was insignificant in action taken by DAE on 16 Audit recommendations; and
- d) No progress was made in respect of three Audit recommendations.

**2.1.4 Conclusion**

The follow up audit showed that full implementation of action proposed was made only in six out of 32 recommendations. While partial implementation was seen in action proposed for seven recommendations, the progress was insignificant against 16 recommendations. No progress was made against actions stated for three recommendations.

Audit noted that planning for procurements remained inefficient. Annual Procurement Plans were not prepared in any of the units. Indenters continued to raise indents without assessing realistic delivery schedules. The purchase units failed to adhere to time schedules prescribed for various activities. No effective oversight mechanism was established to ensure timeliness in procurements and check delays.



Audit further noted cases of violation of purchase procedures. Contract management was deficient, as substantial amounts of advances were paid to suppliers that were lying unadjusted. There were instances of non-clearance/delayed clearance of Stores Receiving Vouchers due to delays in installation of equipment.

Progress in respect of computerisation of materials management functions remained insignificant. Work flow automation system was not implemented and there was no integration of stores, purchase and accounts functions within a unit or among different Purchase units of DAE. Thus, on the whole, action taken by DAE against its own stated plan was largely inadequate.

The matter was referred to DAE in January 2016; its reply was awaited as of February 2016.

## 2.2 Non-installation of Steam Turbine Generator

**Due to inefficient contract management by Heavy Water Board and Directorate of Purchase and Stores, Mumbai, a Steam Turbine Generator could not be installed even after lapse of more than 10 years. This resulted in blocking of ₹ 2.06 crore incurred in its procurement besides loss of opportunity to generate electricity estimated at ₹ 40 crore.**

Heavy Water Board, Mumbai (HWB) raised (April 2003) an indent for design, manufacture and commissioning of a Steam Turbine Generator set at Heavy Water Plant, Kota<sup>7</sup> (HWP) at an estimated cost of ₹ 4.45 crore. The procurement was initiated under the project 'Incorporation of Steam Turbine Generator at HWP for generation of two Megawatt (MW) of electricity from available steam'. The project was conceived as an energy saving scheme to generate electricity worth ₹ four to five crore per year. The project was sanctioned (August 2004) by the Department of Atomic Energy (DAE) at cost of ₹ 4.45 crore, to be completed by December 2005.

After tendering process, Directorate of Purchase and Stores, Mumbai<sup>8</sup> (DPS) placed (February 2005) a purchase order on Kessels Engineering Works at a cost of ₹ 3.99 crore with a stipulated delivery period of October 2005. Payment was to be made in instalments<sup>9</sup> in accordance with the progress of work. As per the purchase order, if the contractor was unable to deliver goods within the delivery schedule stipulated, the contractor would have to obtain extension of delivery schedule, failing which

<sup>7</sup> A plant under HWB

<sup>8</sup> The centralised procurement agency of DAE.

<sup>9</sup> 10 per cent on acceptance of purchase order; 10 per cent on finalisation and approval of fabrication drawings; five per cent on finalisation and approval of General Arrangement drawings; 60 per cent on pro rata basis in maximum of eight instalments; 15 per cent along with taxes within 30 days after satisfactory erection and commissioning of equipment and its final acceptance.



DPS would not receive the goods supplied and would return the supplier's bills without any obligation on its part.

The supplier took considerable time to complete the engineering works and thereafter delivered the major equipment in piece meal manner starting from December 2006. While shifting (September 2008) the turbine for erection, it fell down due to failure of the crane carrying the turbine and suffered damage in the process. The supplier did not accept responsibility for the damage but agreed to repair the turbine. Accordingly, the supplier took back (April 2009) the turbine and returned (June 2010) the same to HWP after repair.

However, even after repair of the turbine, the supplier failed to complete the erection and commissioning and left (April 2012) the work incomplete leaving behind the work of supply of piping and valves, piping for steam, condensate, lubrication system, erection of moisture separating vessel, cabling and interconnection of the panels. Ultimately, HWB submitted (April 2014) detailed specifications and cost estimates to DPS for floating a public tender for completion of balance jobs and requested it to proceed with cancellation of purchase order and initiate risk purchase action to the extent of work not completed by the supplier. HWB further communicated (March 2015) to DPS to close the contract formally to facilitate the initiation of risk purchase action. DPS sought (October 2015) legal advice from DAE on cancellation of order at the risk and cost of the supplier. As of December 2015 the case was pending with DAE and steam turbine was not commissioned.

In line with progress of work, an amount of ₹ 2.88 crore was paid to the supplier between September 2005 and August 2008. Due to abandonment of work by supplier, DPS encashed bank guarantee worth ₹ 82 lakh obtained from the supplier. Thus, net amount paid to the supplier was ₹ 2.06 crore.

Audit observed that there was no clause for levy of liquidated damages in the purchase order in the event of delay in supply of equipment. Consequently, though the supplier delayed in supply of equipment and erection work, DPS could not levy liquidated damages. Instead, DPS extended the delivery period six times from September 2006 to August 2010. Further, DPS took two years to initiate the process of risk purchase after the supplier abandoned the work. Even after this, DAE, DPS and HWB continued to correspond with each other for more than one year, for seeking consent and advice for cancelling the purchase order and for taking alternative action for completing the project. As a result, even after more than three years of abandonment of work by supplier, the purchase order was yet to be cancelled and the steam turbine remained uninstalled. Considering the expected saving of ₹ four to five crore per year from the project, HWB also lost the opportunity to generate electricity estimated to be worth ₹ 40 crore (at the rate of ₹ four crore for 10 years).

Thus, due to inefficient contract management by HWB/DPS, the steam turbine expected to be installed by October 2005 for generation of electricity at Heavy Water Plant, Kota was not installed even after lapse of more than 10 years. This resulted in blocking of Government funds to the tune of ₹ 2.06 crore, besides non-completion of the project for generation of electricity from steam.

The matter was referred to DAE in January 2016; its reply was awaited as of February 2016.