Recommendations

In view of continuous losses, the State Government should:

- **make efforts to improve the performance of these loss making Companies by taking corrective measures such as improvement in operations, rationalisation of manpower, recovery of dues from various parties and diversification of business as per market demand;**
- **make concerted efforts for closure of non-working Companies by taking up the matter with the GOI, Ministry of Company Affairs to allow such Companies to apply for striking off their names from the register of Companies on the lines of the exit schemes announced by the GOI in the past under Section 560 of the Companies Act, 1956; and**
- **strengthen internal control mechanisms in these Companies by strengthening their administrative, operational and financial controls through proper supervision and monitoring of their various activities coupled with regular performance appraisal and internal audit.**

4.32 Information Technology Support System in Uttar Pradesh Bhumi Sudhar Nigam

Introduction

4.32.1 Uttar Pradesh Bhumi Sudhar Nigam (Company), incorporated as a Government Company in March 1978, was engaged in implementing World Bank funded UP Sodic Land Reclamation Project in 16 districts[*] (with 24 implementation units) of Uttar Pradesh which aim at poverty alleviation through sustainable sodic lands reclamation and prevention of further increase in sodicity[**]. The Company initiated computerisation of its major operations in 1997. Financial Accounting Software (FAS), Personnel Information Software (PIS), Management Information Software (MIS), Geographical Information Software (GIS) and Procurement and Information Management Software (PIMS) are in operation since 1999 for financial accounting, personnel management and monitoring and analysis requirements of the physical and financial activities of the project.

The Company maintains a comprehensive database management system using Relational Data Base Management System (RDBMS) Sybase (version 11.0.3.3) as back-end and Power Builder (version 6.0) as front-end in a client server architecture model at the headquarters in Lucknow. It was using SQL Anywhere (version 5.0), a multi-user PC based RDBMS in the districts. All the software packages were developed in-house. Computers were linked at the headquarters and in each Project Manager's units through local area network. The input data of headquarters and of field units were processed through the servers at headquarters where data of field units are uploaded monthly from a compact disc brought physically to the headquarters.

[*] Allahabad, Aligarh, Etah (3 units), Etawah, Auraiya, Pratapgarh, Fatehpur, Sultanpur (3 units), Mainpuri (2 units), Raibareilly (2 units), Kanpur (2 units), Jaunpur, Unnao, Sandila, Hardoi and Azamgarh.

[**] The soils pre-dominated by electro-chemical bonding of sodium and clays are called sodic.

The Company spent Rs.2.78 crore on creation of IT assets and Rs 85 lakh annually on a recurring basis for IT staff (Rs 70 lakh), annual maintenance and repairs (Rs 5 lakh) and other overheads (Rs 10 lakh).

Organisational Setup

4.32.2 The Management of the Company was vested in a Board of Directors, comprising of Chairman, a Managing Director, a Joint Managing Director and six other Directors.

Information Technology (IT) wing of the Company was headed by a Senior Manager (Systems), who was assisted by a Data Base Administrator/Deputy Manager (Systems), two Deputy Assistant Managers (Hardware and Software) and five other staff members. The district units were headed by Senior Project Managers. Each unit had one Deputy Manager (Systems) who was responsible for IT functions at unit level. There were 24 Deputy Managers (Systems) in the field.

Scope of Audit

4.32.3 The scope of Audit included an assessment of the controls inbuilt into Financial Accounting Software (FAS) and Personnel Information Software (PIS) used by the Company since April 1999. FAS package is meant to accommodate new schemes; budget heads and ledgers to generate the expenditure statements for claiming reimbursement, monitor financial progress by integrating physical achievements with it, timely preparation of financial statements and thereby enhance credibility of financial information. PIS package was used for maintaining personnel and payroll information of the headquarters and field staff of the Company.

Audit objectives

4.32.4 An information technology audit of the Company was conducted to assess whether:

- adequate documentation and controls exists for efficient and effective use of IT applications, and
- adequate controls in the computer applications exist to ensure that integrity of output data generated is maintained and information thus produced are reliable and complete.

Audit Methodology

4.32.5 The data relating to Financial Accounting System and Personnel Information System made available from April 1999 to February 2007 were analysed using computer assisted auditing tool *viz.* IDEA[*] for examining the completeness, availability and integrity of the data. Besides examining the above data, the existence and adequacy of general and application IT controls were also assessed.

[*] Interactive Data Extraction and Analysis.

Audit findings

4.32.6 Audit findings, arising from the review on information technology support systems in Uttar Pradesh Bhumi Sudhar Nigam, were issued to the Management/Government in May 2007. The replies received were discussed (August 2007) in the Audit Review Committee for State Public Enterprises (ARCPSE). The views expressed by the Management/Government in reply and during the meeting have been taken into consideration while communicating the findings.

IT strategy and Change Control Procedures

4.32.7 The system development process needs a systematic and planned approach defining, *inter alia*, the required standards, documentation needs; controls that should be built in and the testing required for ensuring that the system does what it is required to do. Similarly, the Company should devise a formal change control procedures to ensure that the modifications in the programme were authorised, approved and documented. It was noticed in audit that the Company did not document any formal IT strategy setting up the required standards, documentation needs, controls and testing for both the long term (like integrating the whole business activities in a phased manner) and short term business needs.

The Government stated (August 2007) that the Company was planning to develop an appropriate IT strategy as suggested.

Deficiencies in various software

Financial Accounting Software

4.32.8 The Company did not assign code numbers for each item of expenditure/income or asset/liability beyond a level. Codification was only up to two levels and for finer details, the field offices had the option to select these codes according to their convenience. For uniform booking of transactions by each of the units/headquarters, it was necessary to have a unique code fixed for each district, each major, sub-major, minor and sub-minor heads of account to view and correctly bring out the accounting details. This kind of pre-fixed coding also had the added advantage of avoiding unnecessary details to be filled as only a code would be debited and another corresponding code would be credited. These could be decoded at the time of report building.

In annexure 4.1 of the Financial Management Manual, the structure of codification has been given but the IT structure does not bring out details as stipulated. Paragraph 4.1.7.1 (2) of the Manual further provides that yearly Project Appraisal Document (PAD) targets and annual budget data would be entered so that budget analysis and comparison with PAD would be possible for the quarter, year to date and cumulative to date. It was found that the present accounting package did not integrate to bring out data to this stipulated need.

4.32.9 The voucher details file, having 806442 records, is the primary table for posting of Bank, Cash, Journal and Special vouchers. The transactions from this file are merged to a standing master data file called “debit credit” file that has 4307303 records in it. It was noticed that except for a minus

figure of 8555 for the year 2001-02, all other debits and credits were tallying in voucher detail file. When the debit and credit entries posted in voucher detail files tally, the same in the master databank (debit credit file) should also tally. When the figures of debit credit were, however, summarised in the master data file, debit was found more than credits from 1999 to 2006 and credit was found more than debit in 2007. This was indicative of unreliable and unauthentic processing of inputs. The details are given below:

Year	No. of records	Debit (Rs.)	Credit (Rs.)	Difference (Rs.)
1999	379107	25780171806	23831094396	1949077410
2000	513072	55402520879	51535485338	3867035542
2001	543451	67720113873	59989836707	7730277166
2002	552032	50596055488	46034219711	4561835777
2003	555964	73169398840	66993978908	6175419933
2004	559621	54739927158	50344554611	4395372547
2005	544612	52389593713	47104852770	5284740944
2006	528041	36967331996	33529783709	3437548286
2007	131085	2844694027	3106914338	-262220310

The Company was unable to provide any reasons for this non reconciliation of figures at the final processing level whilst the balances were by and large matching at the level of voucher detail file. The Government stated (August 2007) that process controls were provided in the application software through front end tool in the power builder for ensuring complete and accurate process to generate report. The reply is not acceptable as when the debit credit in the source file did not show any discrepancy (except for a discrepancy of Rs.*minus* 8555 in 2001-02), the master data file of debit credit, merging the transactions of the source file, should not have shown such differences. The Management agreed during Audit Review Committee discussions to look into the linkages created in the program that gave the inconsistent output. This was a high risk area as the Company was depending on the FAS package for generation of the financial statements and there being such huge inconsistencies of data in the standing master file data, it was apparent that the system (FAS) was not producing reliable accounting data.

The year-wise debit and credit summarised figures of debit-credit file were also found to be far too excessive compared to the actual project expenditure as sanctioned by the world bank. No reasons were furnished by the Company to explain the position to audit. Further during discussions in Audit Review Committee, no logical explanation could be provided by the management to clear the anomaly.

It was further intimated by the Company that the existence of garbage data in the standing master data tables was on account of test data still lying in the

production environment. This also meant that the data in production environment was unreliable.

4.32.10 The system accepted 297 entries for the future periods 2008-25. In one case, the year taken was 1999-2100 and in yet another case, the year taken was 2P02-2003. The Government stated (August 2007) that the points had been noted and would be rectified.

4.32.11 Out of 29277 bank vouchers, cheque numbers were not mentioned in 9815 cases involving a debit amount of Rs.183801854.60. Similarly, cheque date was not given in 8073 records (debit value: Rs.1384720115.63). In 773 cases of cheque date column, year mentioned was 1900. The Government stated (August 2007) that the problem would be rectified.

Personnel Information Software

4.32.12 The Company did not develop appropriate master database of employees inducted in service on regular basis, on deputation or on contract basis. When the same person was transferred to some other project or from project to the headquarters, basic entries were further made for the same employee. This causes duplication of basic entries in respect of the same employee that were also sometimes incorrectly filled in. This led to duplicity of the same employee in the server's database and led to repetition of all the details of the same employee more than once. The employees should have been allotted unique employee ID with all the details filled in once in order to avoid generation of unnecessary duplicate records.

4.32.13 Due to the deficient controls, the following cases of mismatch were noticed:

- Out of 4186 records, name of father/husband indicated was X, Sri, S, m *etc.* in 684 records. Home district was blank in 560 cases.
- In 5 cases, employee name was "AA0003, AA003, AA0070, AG0001, AG0001" having AA0004, AA0020, AA0114, AG0001, and AG0002 as employee no.
- Out of 64,409 records, it was found that in 1143 records, basic pay was zero but in 485 cases out of these, ADA was filled in from Rs.8 to Rs.196; and in 447 cases HRA was shown from Rs.90 to Rs.1200. The instances of zero basic pay were impractical. The other components of the salary like ADA, HRA, *etc.* were calculated on the basis of Basic Pay. It was not clear as to how definite values of HRA and ADA *etc.* were being computed by the system when the basic pay was shown as zero.

The Government stated (August 2007) that the discrepancies in the PIS system were noted for compliance and company would allot unique employee identification for each employee in future. It was also apparent in the case of PIS as well that the application failed to achieve any objectives as data was unreliable and in the absence of unique identification of employees, no reliable MIS reporting was possible.

The Government accepted (August 2007) the above recommendations to be implemented in subsequent software development process.

Conclusion

Despite expenditure to the tune of Rs 2.78 crore on creation of IT assets and incurring recurring expenditure of Rs 85 lakh on an annual basis, there were deficiencies that were observed in the two applications audited namely FAS and PIS. The data generated by all the two applications was found unreliable. The Company did not adopt a formal system development approach and the applications were developed in an adhoc manner without documentation, testing and users participation. The investment on IT assets and annual recurring expenditure thereon was not gainfully utilised to harness the potential of IT and to meet the objectives of monitoring physical and financial progress of its activities and utilising the information for management decisions.

Recommendations

- **The Company should review the functioning of critical and essential IT systems and the data flow to assess the reliability of processing of information by such systems especially the FAS and PIS.**
- **Company should adopt a formal system development methodology for developing IT applications in future and ensure participation of users and other stakeholders in development of applications.**
- **For all applications, the Company should undertake a comprehensive acceptance testing of IT applications before moving these to the production environment.**
- **The application controls should be inbuilt in all IT applications to ensure data integrity and reliability of financial reporting.**
- **Company should go for sanitisation of all data being maintained by different applications in a time bound program to enhance the reliability of data and MIS reporting**.

Follow up action on Audit Reports

4.33 Audit Reports of the Comptroller and Auditor General of India represent the culmination of the process of scrutiny starting with initial inspection of accounts and records maintained in various offices and departments of the Government. It is, therefore, necessary that they elicit appropriate and timely response from the Executive.

Audit Reports for the year 2001-02, 2002-03, 2003-04, 2004-05 and 2005-06 were placed in the State Legislature in September 2003, July 2004, July 2005, March 2006 and May 2007 respectively. 179 paras/reviews involving PSUs under 25 Departments featured in the Audit Reports (Commercial) for the years from 2001-02 to 2005-06. No replies in respect of 103 paras/reviews have been received from the Government by 30 September 2007 as indicated below: