

**Oil and Natural Gas Corporation Limited**

***Payroll application in Mumbai Region***

***Highlights***

The payroll application was completely input-dependent for the accuracy of outputs. There was very little validation control embedded in the application to automatically detect input errors.

***(Para 5.2.4)***

There is a provision in the payroll application to store and process data relating to advances to employees and monitor its recovery with interest but due to incomplete data entry such opportunity was not used which led to creation of incomplete and unreliable database.

***(Para 5.2.9)***

In 44 cases, the basic pay was drawn more than maximum of the pay scale, which indicated that basic pay was not linked with scale of the pay. Management subsequently recovered Rs.35,832 from an employee. The slab-wise professional tax deductions incorporated in the payroll program were different from rates prescribed which resulted in short recovery of Rs.4.26 lakh.

***(Para 5.2.10)***

Over payments and short recoveries of various allowances and advances illustrated weakness in payroll system. This resulted in an excess and irregular payment/ short recovery totalling to Rs.4 crore out of which an amount of Rs.12.18 lakh has been recovered subsequently by the Management after having pointed out in Audit.

***(Para 5.2.11)***

***5.2.1 Introduction***

Oil and Natural Gas Corporation (ONGC) is one of India's largest companies having an experience of 40 years in the exploration and production of oil and gas. It has, over the years, developed comprehensive IT infrastructure both for technical and administrative functions. The payroll function in respect of employees in its Mumbai Region was computerised in 1975. The Payroll application program was modified to meet the new requirements of the Company. The program was recast in 1999 to make it Y2K\* compliant and reinstalled at the EDP\* facility at the Mumbai Regional Head Quarters at Vasudhara Bhavan, Bandra. The Personal Claims Sections (PCS) of 14 different units of the Region send the input data through floppies to EDP section for batch processing every month to generate the payroll for around 6,800 employees of the region.

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\* Year 2000

\* Electronic Data Processing

### **5.2.2 System description**

The hardware used in the EDP section at Mumbai Regional Head Quarters is VAX 4200 with VMS 6.0 as operating system. While the main application in the EDP section was developed in VAX COBOL\*, data input was done at different locations on personal computers using a variety of application software like Fox BASE, Dbase etc.

### **5.2.3 Input Management by Personal Claim Sections**

The payroll application is based on the principle of “Posting by Exception” whereby the PCS enter into the database, on a monthly basis, only the changes to the employee’s entitlement in pre-designed input formats, namely the card codes numbering one to nine. These cards contain recurring (for regular payments/recoveries) and non-recurring (for arrear payment/recovery of excess paid) codes for data input. The card codes, after being filled in, are then copied in floppies and forwarded to the EDP section. While Card Code 1 form contains static data about an employee and is to be entered only at the beginning of an employee’s account, card codes 2 to 9 contain such data, which could change an employee’s remuneration for that particular month. In case no changes are required and the employee’s remuneration remains the same as in the previous month, no card code data is transmitted to the EDP section.

Entitlements of an employee would comprise both recurring and non-recurring elements, each one designated by a specific data code. Only the data received from the units under the recurring codes of the pay elements are validated and screened by the EDP section. The data received against the non-recurring codes such as operational allowance and Conveyance Maintenance Reimbursement Expenditure are, however, taken into the final output without subjecting it to validations except numeric and list checks in the EDP section because it is backed up by a specific office order duly validated by respective PCS.

### **5.2.4 Processing in EDP Section**

The Payroll application in the EDP section has two batch processing modules namely ‘Payval’ and ‘Paycal’. The ‘Payval’ is run to validate the data for data type errors and perform some basic checks in regard to the name, uniqueness of Employee Identification Number (namely Contributory Provident Fund Number) etc. After completion of this process in the EDP section, the error list is sent to the PCS again for rectification. The representative of PCS manually verifies the errors, rectifies the same and gets the approval of the competent authority. The ‘Payval’ module in the EDP section again validates the rectified data. These procedures are expected to go on till all the errors are completely rectified.

The second module namely ‘Paycal’ is run to compute the pay and allowances of an employee for the month. This process generates two main output files viz. Pay file that contains the dues and recovery details for the month for all the employees and the Output

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\* *Propriety Software of Vax Server*

Master file\* that contains the recurring pay and recovery data of an employee besides the special codes and personal details. The hard copy of the pay bill report generated through the Payroll system is sent to respective locations for verification manually and approval of the Drawing and Disbursing Officers. This is followed by generation of main reports like pay slip and Last Pay Certificate and other reports like bank schedules, journal vouchers, acquittance roll and so on.

The EDP section also simultaneously sends the data in floppies to the concerned banks relating to the net amount payable to the employees. This is followed by the bank schedule. The locations receive the Cash/Bank Bill (which serves as acquittance roll) from the EDP section, based on which they draw a cheque in favour of each bank for the total amount of the salaries payable for the month by different banks. Based on the data received from the EDP section by the banks, employee's accounts are credited with designated amounts.

Audit observed that the Payroll application was completely input-dependent for the accuracy of outputs. There was very little validation control embedded in the application *per se* to automatically detect input errors. A foolproof input management system, therefore, is absolutely essential for ensuring reliability and integrity of the system.

#### **5.2.5 Scope of Audit**

Audit of Payroll application was conducted for Mumbai Region covering the Regional Head Office and its 14 units located around Mumbai. Audit covered the year 2001-02 which was extended to earlier periods wherever required.

#### **5.2.6 Audit Objectives**

The basic objective of audit was to ascertain the reliability and integrity of the Payroll Application.

#### **5.2.7 Audit Methodology**

The Payroll data (Pay data files, transaction and master files) for the period 2001-02 was received from EDP section in the fixed length flat file format. In addition to the examination of system procedures, substantive tests were also carried out to check the reliability of payroll data using the interrogation software IDEA\*. The necessary evidence to support audit observations was collected from the manual master data like registers for long-term advances and short-term advances as well as source documents like claims, authorisations and other payroll documents.

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\* *The Output Master File of the current month will be used as Input Master File of the succeeding month.*

\* *Interactive Data Extraction and Analysis software.*

### 5.2.8 Audit Findings

The following deficiencies were noticed in payroll application:

#### 5.2.9 Deficiencies of input management procedures and their Impact on data integrity and completeness

It was observed in audit that there was no unique reference number on the input forms used by PCS that could be used for cross-referencing the source document and to establish an audit trail. It was also observed that no input control register was maintained at any PCS to keep track of the total number of input documents received during a period. Thus, there was no way to ascertain that all the inputs required to be generated by the PCS had indeed been generated on the basis of authentications/office orders received from the Personnel and Administration section, the competent authority in such cases.

The Management in its reply stated that (i) the unique reference was always the Contributory Provident Fund (CPF) number of the employee, (ii) PCS officers were keeping all the source documents in a separate file, which could be verified by linking with the CPF number and (iii) though the system might not be perfect the source document could be located for audit purpose from the relevant files. The Management's view is not tenable as the CPF number could only trace an employee's claim in the system and not the source document which is an authentic record duly approved by the competent authority. Further, the problem highlighted in audit concerns the internal control system within the organisation and not the availability of documents for the purpose of Audit. In its latest reply (December 2004) the Management stated that the deficiencies pointed out by audit had been taken care of in the new system.

Although there is a provision in the payroll application to store and process data relating to total amount of interest bearing loans sanctioned and disbursed to each employee, the PCS had not been furnishing complete data on this score to the EDP section. If this had been done it would have facilitated monitoring of loan instalment recovery against the sanctioned loan.

An extraction from the EDP pay file of February 2002 (YTD\* columns) with regard to all interest bearing advances viz. House Building Advance (HBA), Car and Scooter advances revealed the following discrepancies:

Type of advance	Particulars of Discrepancies	Number of cases	Range of delay
HBA	Cases where recovery of principal was completed but interest recovery was not commenced	101	1 to 12 months
HBA	Cases where the recovery was yet to be started but disbursement of maximum amount of advance of Rs.7.50 lakh had already been made.	7	
Car	Cases where recovery of interest on advance was not commenced though principal amount of advance was completely recovered.	24	
Scooter	Cases where recovery of interest on advance was not commenced though principal amount of advance was completely recovered.	98	

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\* Year to date

From the above table it is evident that the delay in input extends upto 12 months.

All these facts show that though the application provides the opportunity to monitor the recovery of advances and interest once it is manually fed, due to incomplete data entry, such opportunity was not being used in the cases tabulated above.

The Management stated that in cases where the details of original amount of loan and date of drawal was not available in old cases, dummy amount such as '999999' was reflected in payslip. Also the recovery of interest was calculated and entered into the system, manually. The Management did not clarify why the details of original amounts of loan etc. were not available, nor did it indicate the basis for treating these cases as old, or the reasons due to which the data got eroded, or the authenticity of these manual calculations. This led to creation of incomplete and unreliable database relating to the recoverable advances. The Management in its reply (December 2004) stated that in the new system under SAP\*, advances would be paid after checking all the rules such as entitlements, eligibility, limits, seniority etc. These checks were built into the Payroll module of the new system to ensure that the recoveries were made in the relevant month.

#### ***5.2.10 Programming error***

##### ***Basic pay exceeding the maximum of the scale of pay***

Audit review revealed that in 44 cases basic pay drawn was more than the maximum of the scale of pay indicating that in the application the basic pay was not being linked with the scale of pay. The Management confirmed the audit observation in its reply and attributed the discrepancy to non-updation of designation code and stated that the code had since been corrected. It also stated that the lapse had no financial implication. However, verification of the reply revealed that in respect of CPF number 45,166, the Management subsequently recovered an amount of Rs.35,832 being excess pay drawn on account of above discrepancy. This clearly demonstrates that non-updation of designation code could have financial implications. Moreover, it is also evident that the relevant data lacked reliability.

##### ***Short recovery of professional tax***

As per the amended provisions of the Maharashtra State Tax on Professions, Trades, Callings and Employments Act, 1975, different rates of professional tax to be deducted from the salaries of different classes of employees (with effect from 1 April 2000) were prescribed. An examination of pay bill data for the year 2001-02 and payroll program relating to deduction of professional tax revealed that the slab-wise professional tax deductions incorporated in the payroll program were different from the rates prescribed in the above mentioned Act. It was noticed that more than 95 per cent of the employees came under the slab of salary more than Rs.10,000 per month and therefore invited a recovery of Rs.200 per month (Rs.300 in the last month of the financial year). However, the program previously designed to recover only Rs.175 per month, the then prescribed rate of professional tax, was not updated to ensure deduction of Rs.200 per month as per

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\* *Systems Applications and Products in data processing.*

revised rates effective from April 2000. This resulted in short recovery of Rs.4.26 lakh in the case of 4236 employees during the year 2001-02.

The Management stated that the short recoveries were on account of non-availability of professional tax circulars and that necessary corrections were carried out in the program. In its reply (December 2004), the Management stated that the recoveries had been made and a proper mechanism to update the rates in the new system had also been established.

### 5.2.11 Overpayments due to weaknesses in the system

An analysis of the data for the year 2001-02 revealed innumerable cases of overpayments and short recoveries that illustrated the weaknesses in the payroll system.

Allowance	Over - payment/ Under - recovery	Reasons	Recovery	Management's reply
Furniture Advance	Rs.2.65 lakh	Recovery was discontinued in 104 cases without any recorded reasons.	--	In the new system proposed to be implemented under SAP advances will be paid after checking all rules.
Conveyance Maintenance Reimbursement Expenditure (CMRE)	Rs.0.66 lakh	The reimbursement of CMRE was not properly regulated during the authorised absence of employees. Employees who were on leave for more than 30 or 60 days were being paid full amount contrary to the rules.	Rs.0.66 lakh	The proposed new system takes care of the errors pointed out by Audit.
Conveyance Maintenance Reimbursement Expenditure	Rs.4.83 crore	3338 employees who had drawn reimbursement charges (Rs.1.65 crore) for bus/season ticket/ group bus charges etc. had also been paid CMRE during the year 2001-02 in contravention of rules.	Rs.1.71 lakh	The new system proposed to be implemented takes care of the errors pointed out by Audit.
Operational Allowance	Rs.2.21 crore	Allowance paid to employees who did not belong to the specified categories of	---	Management has refuted the audit contention on the basis of circulars and

		officials engaged in operational activities in onshore areas indicating that the payroll application had no control over the eligibility criteria as specified by ONGC in allowing the operational allowance to its employees		office orders claiming that the payment was admissible to those employees. However, these circulars do not bear the approval of Board of Directors, which is the competent authority.
Drill Site Compensatory Allowance	Rs.5.46 lakh	Allowance was not excluded by the payroll system while determining total salary payable to 117 employees of Mumbai Regional Business Centre who were on extraordinary leave for various periods.	Rs.5.46 lakh	The new system takes care of the errors pointed out by Audit.
Productivity Allowance	Rs.0.36 lakh	43 officials were paid this allowance during the period they were on extraordinary leave, though not admissible.	Rs.0.09 lakh	The new system takes care of the errors pointed out by Audit.

### 5.2.12 Conclusion

The Payroll Program used at ONGC (Mumbai Region) is not an online application package. It is an old batch processing system having lots of limitations. The performance of the system is highly dependent on manual checking and verification during all stages of data processing i.e. from preparation of source documents till final verification of pay bills generated by the system. It is completely input dependent and therefore, all the manual checks envisaged to maintain the system have to be strictly adhered to. ONGC (MRBC) has been relying on this system and has been treating it on par with a real time online system without realising its limitations. This resulted in an excess and irregular payment/short recovery of Rs.4 crore from employees under various pay heads during the year 2001-02, out of which an amount of Rs.12.18 lakh has been recovered by the Management after having been pointed out by audit.

ONGC should make a concerted effort to streamline the existing system immediately well before the implementation of SHRAMIK\*, in order to avoid problems during switchover from the existing system. The amounts programmed to be paid under various pay heads by the legacy Payroll system would have to be validated systematically and

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\* New payroll system under System Applications and products in data processing environment.

adequate physical verification procedures have to be adopted and enforced by the supervising officers to prevent recurrence of such irregularities.

The Management has recovered to some extent the excess payments made based on audit comment. However, it did not undertake any exercise to check whether such payments had been made in other regions outside audit scope.

The new SHRAMIK system under SAP/R3 planned to be implemented in the Mumbai Region after January 2005 appears to take care of the design control deficiencies pointed out by Audit. As to how the system actually performs can be commented on only after its implementation.

The review was issued to the Ministry in January 2005; its reply was awaited (March 2005).