



**PROJECT AUDIT REPORT
ON
CONSTRUCTION OF
KARACHI NORTHERN BYPASS**

**NATIONAL HIGHWAY AUTHORITY
MINISTRY OF COMMUNICATIONS
GOVERNMENT OF PAKISTAN**

AUDIT YEAR 2011-12

AUDITOR GENERAL OF PAKISTAN

PREFACE

The Auditor General of Pakistan conducts audit subject to Articles 169 and 170 of the Constitution of the Islamic Republic of Pakistan 1973, read with Sections 8 and 12 of the Auditor General's (Functions, Powers and Terms and Conditions of Service) Ordinance 2001. The audit of the Project "Construction of Karachi Northern Bypass (KNBP)" executed by National Highway Authority was carried out accordingly.

The report is based on audit of the accounts of KNBP for the period 2001-02 to 2011-12. The Director General Audit Works (Federal), Islamabad conducted audit of the Project during February and March, 2012 with a view to reporting significant findings to the stakeholders. The Project Audit Report covers both Performance Audit and Financial Audit with regard to the economy, efficiency and effectiveness of the Project. In addition, Audit also assessed, on test check basis, whether the management complied with applicable laws, rules and regulations in managing the Project. The Audit Report indicates specific actions that, if taken, will help the management realize the objectives of the project. The main body of the Audit Report includes only the systemic issues and audit findings carrying value of Rs 1 million or more. Relatively less significant issues are listed in the Annexure-1 of the Audit Report. The Audit observations listed in the Annexure-1 shall be pursued with the Principal Accounting Officer at the DAC level and in all cases where the PAO does not initiate appropriate action, the Audit observation will be brought to the notice of the Public Accounts Committee through the next year's Audit Report.

The Audit Report is submitted to the President of Pakistan in pursuance of Article 171 of the Constitution of the Islamic Republic of Pakistan 1973, for causing it to be laid before the both houses of Legislature (Parliament).

Sd/-

(Muhammad Akhtar Buland Rana)

Auditor-General of Pakistan

Dated: 04 March, 2013

TABLE OF CONTENTS

| | |
|---------------------------------------------------------------------|----------|
| EXECUTIVE SUMMARY | i |
| SECTIONS | |
| 1. INTRODUCTION | 1 |
| 2. AUDIT OBJECTIVES | 4 |
| 3. AUDIT SCOPE AND METHODOLOGY | 4 |
| 4. AUDIT FINDINGS AND RECOMMENDATIONS | 5 |
| 4.1 Organization and Management | 5 |
| 4.2 Financial Management | 6 |
| 4.3 Procurement and Contract Management | 12 |
| 4.4 Construction and Works | 15 |
| 4.5 Asset Management | 19 |
| 4.6 Monitoring and Evaluation (M&E) | 20 |
| 4.7 Environment | 24 |
| 4.8 Sustainability | 25 |
| 4.9 Overall Assessment | 26 |
| 5. CONCLUSION | 28 |
| ACKNOWLEDGEMENT | 30 |
| Annexure-1 Memorandum for Departmental Accounts Committee | 31 |
| Annexure-2 Categories of paras included in the Project Audit Report | 33 |
| Annexure-3 Detail of Paras already printed in Audit Reports | 35 |

Abbreviations and Acronyms

| | |
|--------|----------------------------------------------------------------------------------------------------------------|
| AASHTO | American Association of State Highway and Transportation Officials |
| BOQ | Bill of Quantities |
| Cum | Cubic Meter |
| ECI | Engineering Construction International |
| ECIL | Engineering Consultants International Ltd |
| ECNEC | Executive Committee of the National Economic Council |
| EPC | Escalation Payment Certificate |
| FIDIC | <i>Federation Internationale Des Ingenieurs-Conseils</i> (International Federation of Consulting Engineers) |
| GFR | General Financial Rules |
| HSD | High Speed Diesel |
| IPC | Interim Payment Certificate |
| JMF | Job Mix Formula |
| KNBP | Karachi Northern Bypass |
| MES | Military Engineering Service |
| MIHA | Muhammad Iqbal Haq & Associates |
| NHA | National Highway Authority |
| NLC | National Logistics Cell |
| PEC | Pakistan Engineering Council |
| PMIC | Prime Minister's Inquiry Commission |
| PWD | Public Works Department |
| RE | Resident Engineer |
| RM | Running Meter |
| Sqm | Square Meter |
| VO | Variation Order |

EXECUTIVE SUMMARY

The Director General Audit Works (Federal), Islamabad is mandated to conduct Regularity (Financial Attest Audit and Compliance with Authority Audit) and Performance/Project Audit of the Federal Government Departments/Autonomous Bodies engaged in development works.

The Director General Audit Works (Federal) conducted project audit of “Construction of Karachi Northern Bypass (KNBP)” during 2011-12. The report covers the period from the year 2001-02 to 2011-12.

The Project is executed by National Highway Authority (NHA). The NHA was established in 1991 through an Act of Parliament. The purpose and functions of the Authority are to plan, promote, organize and implement programs for construction, development, operation, repair, and maintenance of National Highways and strategic roads specially entrusted to it by the Federal Government or by a Provincial Government or other Authority. NHA is currently custodian of 11,485 kilometers of highways, motorways, expressways and strategic roads. The total length of federalized roads under the NHA stands at 8,780 km. NHA network comprises 4% of Pakistan’s total road network but takes country’s 80% commercial traffic.

The objectives of the project audit were to assess whether the resources had been utilized for the purposes for which they were provided, with due regard to economy, efficiency and effectiveness. The report is not only aimed at enhancing the accountability process, but also intends to analyze the management decisions by highlighting the weaknesses in project performance with recommendations for improvements.

Major issues highlighted in the report are:

- i. Irregular expenditure without approval of ECNEC - Rs 2,011.171 million

- ii. Collapse of bridge due to negligence and defective design and improper monitoring during execution by the Consultant and Employer
- iii. Due processes not being followed by the Authority leading to collapse of bridge and loss of human lives
- iv. No action taken against the consultant for negligence, i.e. blacklisting the consultant for all type of businesses in Pakistan. Amongst others the consultant is currently working with CAA where the Authority is facing severe difficulties in project execution
- v. FIDIC guidelines not implemented in letter and spirit rather being violated
- vi. Non-recovery of penalty from the consultant on preparing faulty design - Rs 33.312 million
- vii. Award of work without tender involving overpayment of Rs 376.423 million
- viii. Irregular expenditure more than budget allocation - Rs 618.177 million
- ix. Non-obtaining of insurance coverage for the work - Rs 56.244 million
- x. Overpayment due to non-deduction of roadway excavation in soft rock from embankment - Rs 7.930 million
- xi. Non-finalization of accounts and non-preparation of PC-IV at the time of completion of project

Recommendations

- i. Works may be awarded after adopting proper tendering process in a transparent manner at competitive rates.
- ii. Due process in terms of approvals, consultations should be followed at all levels of the organization.

- iii. Consistency in terms of decision making within the hierarchy of the organization is needed.
- iv. Various specialist sections that form permanent workforce of the organization must be strengthened and utilized to their full potential.
- v. Detailed inquiry be conducted and action be taken against all the responsible parties for causing the catastrophe.
- vi. The estimates may be prepared with a lot more care to minimize the chances of variations/change orders.
- vii. The experts for vetting of design/drawings may be recruited in Authority to decrease the level of dependency on the consultants.
- viii. Securities/Guarantees and insurances as per contract clauses may be obtained to safeguard government interest.
- ix. Financial Management may be improved by strengthening Pre-Audit so that inadmissible and payments beyond contract provisions could be avoided.
- x. Firms having a poor track record should be black listed and banned from working with any government authority.
- xi. Coordination with Pakistan Engineering Council must be strengthened to ensure that poor performing firms/individuals are not granted licenses to do business in Pakistan.

1. INTRODUCTION

The Director General Audit Works (Federal), Islamabad conducted audit of the project “Construction of KNBP” during the year 2011-12.

Being the principal trading hub of the country, almost all upcountry commercial traffic is routed through Karachi. While travelling to and from the port area, this traffic passes through congested city streets causing severe strain on the urban traffic and street pavement structure, which are not designed for sustaining multiple axle loads. KNBP project has assumed tremendous importance in view of the facts that heavy vehicles entering and exiting from Karachi are a constant source of traffic and law and order problems. National Highway Authority (NHA) appointed Engineering Consultants International Ltd (ECIL) for the preparation of feasibility and detailed design of KNBP Project.

Following was the route description of the project:

| | | |
|------|--------------------------------------------------|-------------------------|
| i. | ICI bridge to Paracha Chowk | 6.000 km |
| ii. | Paracha Chowk to RCD Highway Flyover | 12.000 km |
| iii. | RCD Highway Flyover to Super Highway Interchange | <u>38.638 km</u> |
| | Total Length of alignment | <u>56.638 km</u> |

The original PC-I of the project was prepared in 2002 for Rs 2,928.021 million on the basis of NHA Composite Schedule of Rates (CSR), 2000 and partially on prevailing market rates. The project was divided in two packages (Package I & II). Package-I having length of 32 km was awarded to M/s National Logistics Cell (NLC) and Package-II to M/s Engineering Construction International (ECI) with the length of 24 km.

1.1 Project Details

The scheme provides for the construction of 56.36 km long bypass for Karachi. The cost of Rs 2,928.021 million of the Project was bifurcated in original PC-I as under:

(Rs in million)

| S. No. | Description | Amount |
|--------|-----------------------------------|------------------|
| i. | Construction Cost | 2,371.161 |
| ii. | Land Acquisition | 165.000 |
| iii. | NHA Accommodation | 23.712 |
| iv. | Land / property compensation | 100.000 |
| v. | Utilities (relocation) | 100.000 |
| vi. | Construction Supervision | 47.423 |
| vii. | Escalation for specified material | 120.725 |
| | Total | 2,928.021 |

On September 1, 2007, Shershah Bridge constructed under Package-I collapsed due to design fault and inefficient management processes at NHA. The PC-I of the project was proposed to be revised and submitted to ECNEC, (still awaiting approval). The revised cost was bifurcated as under:

(Rs in million)

| S. No. | Description | Amount |
|--------|-----------------------------------|------------------|
| i. | Construction Cost | 4,247.003 |
| ii. | Land Acquisition | 165.000 |
| iii. | NHA Accommodation | 42.467 |
| iv. | Land / property compensation | 100.000 |
| v. | Utilities (relocation) | 230.000 |
| vi. | Construction Supervision | 84.935 |
| vii. | Escalation for specified material | 297.271 |
| viii. | Reconstruction Shershah bridge | 680.411 |
| ix. | Rehabilitation Lyari bridge | 56.244 |
| | Total | 5,903.331 |

1.2 Financial Phasing

Financial phasing and year-wise expenditure is as under:

(Rs in million)

| Year | PSDP Allocation | Actual Expenditure |
|--------------|------------------|--------------------|
| 2001-2002 | 500.000 | 500.000 |
| 2002-2003 | 800.000 | 800.000 |
| 2003-2004 | 900.000 | 900.000 |
| 2004-2005 | 800.000 | 800.000 |
| 2005-2006 | 600.000 | 600.000 |
| 2006-2007 | 400.000 | 693.598 |
| 2007-2008 | 100.000 | 20.000 |
| 2008-2009 | 200.000 | 258.012 |
| 2009-2010 | 75.000 | 341.567 |
| 2010-2011 | 164.622 | 26.016 |
| 2011-2012 | 100.000 | - |
| Total | 4,639.622 | 4,939.193 |

1.3 Execution

The project was executed in two packages along with allied works.
The breakup is as under:

(Rs in million)

| S. No. | Contract Section | Contract Cost (Original/ Revised) | Contractor/ Consultant | Date of Start | Date of Completion (Original/ Revised) | Overall Physical Progress |
|---------------------|------------------------------------------------------|-----------------------------------|-----------------------------------|---------------|----------------------------------------|---------------------------|
| 1 | Package-I (Amended) (IPC) | 1,556.125 2,525.596 | M/s NLC M/s ECIL | 27.04.2002 | 26.04.2004(O) 10.05.2007(R) | 100% |
| 2 | Package-II (Original) (IPC) | 645.172 789.450 | M/s ECI M/s AA | 01.09.2002 | 01.03.2004(O) 01.03.2005(R) | 100% |
| Allied Works | | | | | | |
| 3 | Reconstruction of Shershah Bridge | 274.233 319.122 | M/s Usmani Associates M/s Loya | 12.02.2009 | 11.11.2009(O) 20.05.2010(R) | 100% |
| 4 | Rehabilitation of Lyari Bridge | 56.244 | M/s Barkat Ali Khaki | 25.01.2010 | 24.10.2010(O) Not Completed | 60% |
| 5 | Rehabilitation of Service Road under Shershah Bridge | 18.355 | M/s Buildway Cons. | 29.10.2010 | 28.04.2011(O) -- | 100% |
| | | 2,550.129 3,634.168 | | | | |

2. AUDIT OBJECTIVES

Audit objectives were to:

- Analyze the overall performance vis-à-vis envisaged targets, achievement of objectives, cost & time overruns and timely accrual of benefits/outcomes.
- Assess whether the resources had been utilized for the purpose for which they were provided with due regard to economy, efficiency and effectiveness.
- Review compliance with applicable rules, regulations and procedures.
- Report results of analysis, assessment and review of the project.

3. AUDIT SCOPE AND METHODOLOGY

3.1 Audit Scope

The audit scope included the examination of documents, record, accounts, etc. of the Project since 2002.

3.2 Audit Methodology

Audit methodology included data collection, determination of objectives and audit criteria, analysis/consultation of project record and accounts record, discussion with staff, issuance of questionnaires, surveys, site visits, interview with users and report writing, etc. The audit objectives were broadly categorized in the following areas and accordingly audit methodology was developed:

a) Eligibility of expenditure incurred:

The expenditure incurred was reviewed to check whether the expenditure incurred was in line with the provisions of

PC-I and Contract Agreement. It was checked that funds were expended for authorized purposes only.

- b) Assessment of procurement of civil works and consultancy services:

Audit reviewed the procedure adopted by the Project Management for procurement of civil works and consultancy services as per Public Procurement Rules/instructions.

- c) Assessment and verification of Primary Accounts:

Expenditure trail was reviewed and expenditure identified in cash book was verified with the help of supporting vouchers, Measurement Books, etc.

- d) Assessing effectiveness of monitoring and evaluation mechanism:

The effectiveness of monitoring and evaluation is the responsibility of project management. The system of monitoring and utilization reports was reviewed.

- e) Maintenance of books of accounts:

Audit determined the quality and completeness of books of accounts available/prepared at each level so that the expenditures trail could be verified.

4. AUDIT FINDINGS AND RECOMMENDATIONS

4.1 Organization and Management

The Project is being executed through certain contracts under the supervision of Project Director. The Member (Construction), NHA, Islamabad is also responsible for supervision, resolution of day-to-day issues, and financial as well as technical matters. The Authority hired two firms, M/s ECIL and M/s A.A. Associates, for designing, construction supervision and contract administration for Package-I & II respectively.

The Project Director, with the assistance of the Consultant is responsible for management of the project. Accountability and maintenance of information systems are crucial for effective management of the project. The record relating to the project, from its feasibility study, designing, approval, awarding, execution to completion and the finalization of the project has been maintained in various Wings of the Authority instead of establishing a central repository for the project. Audit observed that the project record was maintained in an improper manner without any indexing, numbering and maintaining it in a chronological order. This made the process of vetting the available evidence a cumbersome process not only for the auditors but also for the Authority as significant amount of cost and efforts were expended on trying to piece together the information.

Recommendations:

- **Supervision may be improved to achieve Plans and Targets and to finalize the work timely.**
- **Job descriptions of NHA staff were last revised in 1990, which needs updation.**
- **Maintenance of project record needs to be improved. It is advisable to have an integrated Enterprise Resource Planning system for the organization so that management can make decisions based on a complete set of information.**

4.2 Financial Management

As detailed in Para 1.2 (Financial Phasing), funds were released through the Public Sector Development Program to NHA. The project management utilized funds in excess of the allocations during three years, i.e. 2006-07, 2008-09 and 2009-10, as there was no project specific budgetary mechanism. The accounts of the project are still open even though construction work has completed. The project has also been

handed over to General Manager (Maintenance), NHA, Sindh Region, Karachi.

After execution of work, the contractor submits 'check requests' which are approved by the Resident Engineer (the Consultant). The quantum of work is subsequently recorded in the Measurement Book for making payment. Monthly Interim Payment Certificates (IPCs) of the contractor are submitted to the Resident Engineer who performs a 100% check and submits it to the Project Director for test check and onward transmission to Accounts Section of the NHA Headquarters for approval and payment. After approval of Member (Finance), payment is made to the contractor through a crossed cheque. No separate bank account of the project is being maintained. All financial transactions are made through centralized account No. 786 with United Bank Ltd, NHA Headquarters Branch, Islamabad. Bank reconciliation is carried out regularly.

There are six (6) cases involving financial mismanagement which already stand printed in the Audit Reports for the years 2003-04, 2004-05 and 2006-07 and Special Audit Report for the financial years 2005-08 (Detail is given at Annexure-3). However, the issues of financial mismanagement observed during the current audit have been included in this report as under:

4.2.1 Irregular expenditure without approval of ECNEC - Rs 2,011.171 million

The ECNEC approved the PC-I of the Karachi Northern Bypass Project amounting to Rs 2,928.021 million during 2002.

Para 97 of Chapter three of NHA Code describes that normally the design, specification, estimates and the bill of quantities shall be prepared on such a realistic basis and so accurately that necessity for issuance of variation/change order at a later stage does not arise. Variation/change orders shall as far as possible be avoided as a matter of policy. Para 98 of the Code *ibid* further provides that if however, it is felt that issuance of variation/change order is essential due to change in alignment, design or

specifications the same shall be issued with the approval of competent authority. The aggregate value of all variation orders issued against a contract shall not exceed 30% of the original contract cost.

The Project Director, KNBP incurred an expenditure of Rs 4,939.193 million which exceeded the original approval by Rs 2,011.171 million (4,939.193 – 2,928.021) against provision of PC-I without approval by the competent authority, i.e. ECNEC.

Audit further noted the following financial negligence during execution of the project:

- Variation Orders amounting to Rs 969.541 million for Package-I were got approved from General Manager (Construction) which constitutes 60.66% of the original contract cost of Rs 1,598.100 million. The aggregate value of Variation Orders exceeded the permissible limit of 30% in violation of NHA Code.
- Quantities of certain items were executed excessively and more than those allowed in the contract agreement/revised BOQ without approval of the competent authority valuing Rs 12.937 million. Further, Maintenance Charges of Rs 28.548 million were paid on account of Engineer's vehicles against the provision of Rs 19.145 million which resulted in excess charges of Rs 9.403 million.
- An amount of Rs 69.490 million has been shown in original BOQ in the bill wise progress report for the month of March 2007 against General Items whereas there was a provision of Rs 63.601 million in the BOQ for General Items under Bill No. 7.

The Authority replied that the revised PC-I is under process of approval with ECNEC. It was further replied that excess quantities had been incorporated in the VO-5 which was under process of approval and shall be provided to Audit after approval in due course.

No progress was reported in respect of revised PC-I and Variation Order till finalization of the report.

(Para 5, 6, 38, 46)

4.2.2 Excess/Irregular expenditure against budget allocation - Rs 618.177 million

Para 42 of Chapter two of NHA Code, 2005 (Volume-I) states that it is essential that the broad spirit of the system of control over expenditure be strictly observed by all officers entrusted with administration of funds for construction, development, repair and maintenance of National Highways. Once the expenditure budget is approved by the competent authority, every officer of the Authority entrusted with the administration of funds for any purpose shall ensure that the actual expenditure does not exceed the budgeted figures.

Para 4.3 of Guidelines for Project Management issued by Planning Commission, Government of Pakistan provides that re-appropriation of funds from one development project to another development project is not allowed. In exceptional cases, however, re-appropriation of such funds may be allowed, where necessary by Financial Advisor on the recommendation of Planning & Development Division.

The Project Director, KNBP, NHA incurred an expenditure of Rs 1,293.177 million during the year 2006-07, 2008-09 & 2009-10 against budget releases of Rs 675.00 million which translates into an excess of Rs 618.177 million. Excess expenditure against budget without approval resulted in irregular expenditure and lead to financial management and internal control process failures.

The Authority replied that NHA has got one line budget released through PSDP which can be re-appropriated according to the consumption/requirement of the projects. The projects with more progress are released more funds and the projects having slow progress the funds are released accordingly. The reply was not accepted because cogent reasons/sources of funds beyond releases were not detailed for incurrence of excessive expenditure.

The matter was discussed in the DAC meeting held on July 27, 2012, wherein the committee directed that relevant record pertaining to original and revised allocations/releases be provided to Audit for verification.

No compliance to DAC's directives was reported till finalization of the report

(Para 7)

4.2.3 Overpayment on account of Income Tax as additional overheads - Rs 2.332 million

Appendix-B of the contract provides 18.36% contractor's profit and overheads to M/s Engineering Construction International Ltd (ECI) for KNBP Package-II.

The Project Director, KNBP (Package-II) paid through Variation Order No. 6, profit and overheads @ 24.36% involving Rs 9.464 million with addition of 6% income tax amounting to Rs 2.332 million. Addition of income tax against admissible limit of 18.36% amounting to Rs 7.132 million resulted in overpayment of Rs 2.332 million.

The Authority replied that 24.36% overhead & profit was paid to the contractor on the provisional sum items after approval from the competent authority. The reply was not accepted because the Appendix-B of the contract clearly provides the ratio of profit and overhead as 18.36%. Hence recovery is stressed upon.

No DAC was convened on the para till finalization of the report.

(Para 22)

4.2.4 Non-finalization of accounts and non-preparation of PC-IV

Appendix-A of the consultancy agreement in respect of Scope of Services / terms of reference for construction supervision of KNBP Project (Package-I & II) made with M/s ECIL and M/s AA Associates describes

through clause B(Z-13) and clause B(Z-9) that the consultant's following staff will be allowed to continue their services six months after completion of the project to finalize the accounts and other outstanding issues, including settlement of the paras and preparation of Project Completion Report:

- Resident Engineer 01
- Material Engineer 01
- Quantity Surveyor 02

The accounts of KNBP Project NHA have not been finalized despite completion of Package-I on May 10, 2007 and Package-II on March 1, 2005. A period of more than seven and five years has elapsed since completion of the package I and II respectively. Certain issues are yet to be resolved, such as audit paras pertaining to the project and PC-IV of the project. Due to non-deployment of the requisite staff by the consultant at the project, accounts could not be finalized even after such a long time period has passed. Details of payments made to the consultants for extending their services for six months were not made available to Audit.

The Authority replied that the court matter has recently been finalized. Now M/s ECIL will be asked to revise the PC-I and prepare/check final bill of M/s NLC. As they were not attending any query due to matter pending in court of law. The reply was not accepted because it clearly shows that the matter for finalization of accounts was not pursued by the management before the audit observation.

No DAC was convened on the para till finalization of the report.
(Para 13)

Recommendations:

- **Approval of the competent forum to regularize excess expenditure may be obtained, besides appropriate action against responsible persons and steps be taken to ensure proper estimation of the project cost.**

- **The overpayments may be recovered at the earliest.**
- **Pre-audit system may be improved to avoid inadmissible payments.**
- **The accounts of project may be finalized.**
- **PC-IV of the project may be prepared in the light of guidelines issued by the Planning Division.**
- **Internal / financial controls may be strengthened.**
- **Responsibilities should be fixed for individuals involved in overpayments and disciplinary actions be taken against them for not following due processes.**

4.3 Procurement and Contract Management

Contract management relates to implementation of contract clauses and compliance with the procedures for the award and completion of works. Issues relating to non-observance of contractual obligations/rules and regulations are as under:

4.3.1 Non-obtaining of insurance coverage for the work – Rs 56.244 million

Clause 14.1 of the agreement denotes that the contractor will be required preferably to produce valid policies at the time of signing of the contract with NHA but positively before issue of letter for the commencement of the work.

The Project Director, KNBP did not obtain insurance coverage for the work “Rehabilitation of Bridge No. 1 over Lyari River on KNBP” amounting to Rs 56.244 million from the contractor M/s Barkat Ali Khaki & Co.

The Authority replied that the consultant/NHA has asked the contractor to submit the insurance coverage of the work but the contractor failed to do so. Due to poor performance and casual attitude of the

contractor, he did not execute/complete the work in time which forced the competent authority to terminate the said contract. However, the contractor lodged suit in the court of law regarding the payment, claims/compensation etc. As the matter is in the court of law and the verdict is still pending, the final outcome of the court case will be provided to Audit.

No DAC was convened on the para till finalization of the report.

(Para 43)

4.3.2 Award of work at higher rates due to poor estimation - Rs 7.764 million

The Appendix-I to Schedule-A of the agreement executed for the work “Rehabilitation of Lyari Bridge” was to be based on Composite Schedule of Rates (CSR), 2009 less 25% markup for profit and overheads. This schedule was to be filled up with the contractor’s own percentage with respect to amounts indicated in the schedule.

The Project Director, KNBP did not prepare BOQ in line with the above provision of standard bidding document and tenders were floated on the basis of CSR 2009 without subtracting 25%. The contractor quoted 28% above the engineer’s estimate. The Authority accepted the tender accordingly at 53% above. Non-adherence to standard bidding documents is likely to cause an extra burden of Rs 7.764 million on the public exchequer.

The Authority replied that the clause to deduct 25% markup for profit & overheads from the rates based on CSR 2009 at the time of bidding for the work of rehabilitation of Lyari Bridge No.01 was included by mistake by the committee but only 28% above the Engineer's Estimates bid of the contractor was recommended by the committee and accepted by the competent authority. No claim of the contractor has been paid by NHA so far. As the matter is in the court of law and decision is still pending the final outcome of the court decision will be provided to Audit. The reply was not tenable as estimates were not properly prepared and the contractor

took advantage of higher estimation which is indicative of weak financial and technical controls.

No DAC was convened on the para till finalization of the report.

(Para 20)

4.3.3 Non-recovery of liquidated damages due to non-completion of work - Rs 5.624 million

Special Stipulations of the agreement executed between M/s Barkat Ali Khaki & Co. and NHA for “Rehabilitation of Lyari Bridge” denotes the amount of liquidated damages as Rs 0.1% of contract price for each day of delay and not more than 10% of total contract price.

The Project Director, KNBP did not recover liquidated damages amounting to Rs 5.624 million (equal to 10% of the agreement amount Rs 56.244 million) from the contractor on account of non-completion of the work within stipulated completion period of 270 days i.e. April 24, 2011. Instead of completing work, the contractor lodged a suit in Court of Law against NHA for compensation. Non-adherence to the agreement resulted in non-recovery of liquidated damage charges amounting to Rs 5.624 million.

The Authority replied that case for imposing liquidated damages and blacklisting of the contractor had been sent to NHA Headquarters, but the contractor lodged suit in court of law and the decision is still pending. No progress of the court case was reported.

No DAC was convened on the para till finalization of the report.

(Para 11)

Recommendations:

- **Contracts should be awarded after adopting proper tendering process in a transparent manner at competitive rates.**
- **Cost estimates may be prepared in accordance with set criteria to avoid overestimation and advantage to bidder.**

- **Insurance as per contract clauses should be obtained to safeguard public interest.**
- **Court cases be pursued actively.**
- **Recoveries of overpaid amounts be made.**

4.4 Construction and Works

Proper planning, estimation, approval and execution are the benchmarks to ensure economical and sustainable execution of works. Audit, however, noticed the following irregularities involving Rs 96.614 million:

4.4.1 Unauthenticated execution of items valuing Rs 87.454 million and non-production of basic record

GFR-10(i) states that every public servant is expected to exercise the same vigilance in respect of expenditure from public money, as a person of ordinary prudence would exercise in respect of expenditure of his own money.

In terms of Section 14 (2) of Auditor General's Ordinance, 2001, non-production of record amounts to hindrance in the auditorial functions of the Auditor-General of Pakistan. Section 14(2) states 'the officer in-charge of any office or department shall afford all facilitates and provide record for audit inspection and comply with requests for information in complete form as possible and with all reasonable expedition'.

(A) The Project Director, KNBP (Package-II) executed certain works such as External Development, Air Conditioning Systems, Landscaping and provision of lifts and made payment of Rs 48.313 million on lump sum basis without bifurcating the quantities as well as Rate Analysis for the individual items through Variation Order No. 6. Authenticity of the actual quantities could not be verified. It is pertinent to mention here that all rates for the items were based on current market rates. Non-availability

of detail/basis of quantities and rates resulted in unauthenticated execution of items.

(B) It was further noted that civil works based on the market rates involving Rs 39.141 million for construction of NHA Complex at Drigh Road, Karachi was executed without adopting the specified Schedule of Rates of NHA, PWD or MES. Rate Analysis of civil items based on market rates was not available to verify the authenticity of the payment. Non-adherence to canons of financial propriety resulted in irregular execution of work.

(C) Moreover, a construction cost of Rs 4,515.342 million was provided in Revised PC-I of the Project consisted upon two packages (i.e. Package-I Rs 3,032.432 million and Package-II Rs 1,172.522 million) but the basis of quantities and rates were not available to ascertain the authenticity of the provisions made in the revised PC-I.

It was also pertinent to mention here that during execution of audit the following record was not produced for audit:

- Complete tender process
- Admin approvals
- Notice Inviting Tenders
- TS Estimate
- Bid Evaluation Reports
- Comparative Statements
- Rejected Bids, of Package-I & II

The Authority replied that the rate analysis were prepared and submitted by the contractor to the consultants. The record of KNBP Package- II was destroyed due to the heavy rainfall/flood, as intimated by the consultants vide their letter No. RE-988-711/KNBP-II/05 dated September 13, 2005. It was further replied that the record pointed out relates to NHA Headquarters, which had been approached to provide the same. As and when the record is provided by NHA HQ, it will be sent to Audit positively.

The replies were not accepted because non-availability of requisite record requires to be inquired. Audit is not in position to authenticate the said expenditure without verification of basic record.

No DAC was convened on the paras till finalization of the report.
(Para 14, 33, 34, 37)

4.4.2 Overpayment due to non-deduction of roadway and Structural Excavation from embankment - Rs 7.930 million

Item 108.4.1(i) of NHA General Specifications denotes that the measurement shall be as under:

$$\begin{array}{lcl} \text{Formation from Borrow} & = & \begin{array}{l} \text{Total embankment Quantity (minus)} \\ \text{Roadway Excavation Quantity} \\ \text{(minus) Structural Excavation} \\ \text{Quantity} \end{array} \end{array}$$

Paras 208-209 of CPWA Code provides that payments for all work done and for all supplies are made on the basis of measurements recorded in Measurement Book (Form-23) in accordance with the rules in Para 209. The Measurement Book should, therefore be considered very important account record. As all payments for work or supplies are based on the quantities recorded in the Measurement Book. It is incumbent upon the person taking the measurements to record the quantities clearly and accurately.

It was observed from Variation Order (VO) No. 10 that a quantity of 81,835.037 Cum Roadway excavation was declared unsuitable. Resultantly equivalent quantity was brought from borrow excavation and paid to the contractor. IPC-23 indicated that quantity of 81,835.037 Cum was again measured as formation of embankment from roadway excavation and paid to the contractor which was previously declared as unsuitable. This resulted in overpayment of Rs 7.930 million (81,835.037 Cum x Rs 102 per Cum less rebate 5%) excluding escalation.

The Authority replied that the quantity of road way excavation in soft rock (as pointed out in the para) was deducted in IPC No. 18 because decision regarding nature of the excavated material (i.e. unsuitable/suitable) was awaited. Subsequently the material was decided as unsuitable and approved under VO No. 10 the pointed quantity was paid in IPC No. 23.

Since the quantity of 81,835.037 Cum was declared unsuitable in the VO, therefore, this should not have been paid under item Formation of embankment from Roadway excavation. Work done recorded in Measurement Book under formation of embankment from roadway excavation is indicative of the fact that the suitable material from road way excavation was available and utilized. Reversing the decision regarding suitability of the material resulted in overpayment of Rs 7.930 million which may be recovered along with escalation.

No DAC was convened on the para till finalization of the report.

(Para 19)

4.4.3 Overpayment due to excess rate of labour included in rate analysis - Rs 1.230 million

Rate Analysis for extra items provides the rates for labour as under:

| Item No. | Description | Rate allowed (Rs per hour) |
|-----------------|------------------------|-----------------------------------|
| 1/1 | Sand filling | 25.00 |
| 2/1 | Asphalt base course | 22.76 |
| 3/1 | Asphalt wearing course | 22.75 |

The Project Director, KNBP (Package-I) allowed a rate of Rs 82.03 per hour for labour in other extra item No. 6/1a and 6/1b instead of Rs 25 per hour. By including excessive labour the unit cost of Rs 775.31 was worked out for item “Pre-cast concrete Kerb Stone” against admissible rate of Rs 667.51. Inclusion of higher labour rate resulted in overpayment of Rs 1.230 million.

The Authority replied that the rate of Extra item “Precast Concrete Kerb Stone” is approved by the competent authority. The reply is not tenable because excessive rate for labour was paid to the same contractor for same site and same work. Recovery may be effected.

No DAC was convened on the para till finalization of the report.

(Para 23)

Recommendations:

- **Rate analysis of items may be prepared properly for authenticity of rates paid.**
- **Overpaid amounts may be recovered and responsibility may be fixed against the person(s) at fault.**
- **Adopt a Quality Management approach towards construction by insisting on capacity building technology transfer, using FIDIC guidelines.**
- **Action be initiated against the RE for not following laid down procedures of checking the work done which later resulted in financial loss to the exchequer.**

4.5 Asset Management

4.5.1 Improper utilization of Project’s assets - Rs 2.873 million

Sixteen (16) different types of vehicles were procured for Rs 18.479 million for use at Package-I of KNBP. Two vehicles, Honda Civic VTI bearing Registration No. GA-8579 and GA-8581 valuing Rs 2.873 million had been sent to NHA HQ, Islamabad since the purchase of vehicles i.e. August 16, 2001. Transfer of vehicles to NHA Headquarters indicates that these vehicles were beyond the requirement of the project which resulted in unauthorized utilization.

Recommendations:

- **Proper measures should be adopted for safeguard of public assets.**
- **Inquiry should be initiated for purchase of vehicles beyond genuine requirement, their transfer to NHA Islamabad, fixation of responsibility, recovery of vehicles etc.**

4.6 Monitoring and Evaluation (M&E)

Internal checks, such as inspection, monitoring, supervision, mechanized testing/laboratory test reports of executed works are vital to ensure proper execution of works.

The Consultant is responsible for exercising qualitative and quantitative checks, including laboratory tests, to ensure proper execution of the Project. Overall supervision of Contractor's work rests with the Project Director but on ground he had no technical supporting staff for monitoring of the work. NHA is completely dependent upon the Consultant for construction supervision. Although NHA has its own Inspection Wing for inspecting projects in order to ensure the quality checks but as per record no periodical inspection notes by the Wing were available, indicating that no such inspections were carried out.

4.6.1 Loss of precious lives and financial loss of Rs 422.160 million due to collapse of bridge, faulty design and poor monitoring

FIDIC Code of Ethics regarding competence of the consulting engineer requires to:

- Maintain knowledge and skills at levels consistent with development in technology, legislation and management, and apply due skill, care and diligence in the services rendered to client.
- Perform services only when competent to perform them.

Further FIDIC Policy Statement describes that during the course of construction, the consulting engineering firm is charged with the responsibility of exercising discretion in accepting materials, expressing satisfaction or approval, determining quantities and giving opinion, consent or decision. The proper and impartial exercise of that responsibility in the client's best interests is at the core of the consulting firm's role and is the essence of the FIDIC System.

The consultant M/s ECIL prepared the design of KNBP Project which was revised/changed several times, mainly due to land acquisition and incapability and inability of the consultants (M/s ECIL) to accurately estimate, design and plan the structures especially bridges, which resulted frequent changes due to faulty design. This incapability is evident from various internal correspondences. The Shershah Bridge was one of the bridges constructed under KNBP. During the execution NHA was fully aware of the design fault because the General Manager (Design) repeatedly pointed out about the fault (as evident from the Inquiry Report submitted to Prime Minister's Inquiry Commission). It is pertinent to point out that the original drawings were not provided to Audit during this special assignment. It is also interesting to note that when NHA asked for original drawings of the bridge they were told by the consultants M/s ECIL that the original drawings have been lost due to flooding of their premises. In respect of detailed design of Shershah Bridge, the letter No. 2(26)/(Design-II)/NHA/06/281 dated December 5, 2006 of General Manager (Design) provides that the consultant submitted the design for approval at the beginning, which was not approved by the design cell. From there onward no submission was made by the consultant for Shershah Bridge. It is construed that the work was started without approval/vetting of consultant's design by the competent authority (NHA). On March 6, 2006 the span-2 of the Box Girder of Shershah Bridge started tilting outwards and uplifting from both of its inner bearing pads. The General Manager (Design) again pointed out and endorsed the recommendations of M/s Muhammad Iqbal Haq & Associates (MIHA) (the in-house consultants) to dismantle the span-2 but the NHA executives and M/s ECIL ignored the recommendations of General Manager (Design)

and the in-house consultants. The Chairman NHA at that time ordered the consultant to proceed with the construction without following due internal processes. The decision was taken in a presentation to the Chairman NHA whereas the General Manager Construction had already given 30 days for vetting of the design to the consultants just prior to this meeting. This indicates that due process was interrupted by the Chairman NHA without consulting his own team. This ultimately resulted in the collapse of the ill-fated bridge on September 1, 2007, causing loss of six precious human lives, vehicles and other property.

Audit is of the view that due to faulty structural design of the bridge, M/s ECIL is primarily responsible for the physical collapse of the bridge. Notwithstanding the physical collapse due to faulty structural design, the negligence on the part of NHA in discharging its duties shall, however, remain the root cause of collapse as NHA ignominiously failed to ensure implementation of the project. Haphazard decision-making, arresting of due process and misuse of authority are the root causes of the disaster.

The Authority did not hold internal inquiry on this grave incident to find out the factual position and fixing responsibility. Further, no action has been taken as recommended by the Inquiry Report of PMIC. No action has been taken against the consultant also who continues to work throughout Pakistan on other major projects like Up-gradation of Multan Airport.

Besides collapse of bridge, following irregularities in respect of recoveries were committed by NHA:

- recovery of Rs 294.934 million was not made from the contractor M/s NLC because Shershah Bridge collapsed during defect liability period for which the contractor was responsible for the care thereof from any cause whatsoever. The contractor could claim the loss under insurance policies according to the contract clauses. This resulted in non-recovery of Rs 294.934 million.
- recovery of Rs 33.312 million (twice of the total remuneration of consultants M/s ECIL of Rs 16.656 million) under Clause 3.4 of

the agreement was not made due to lack of supervision and faulty/defective design of the bridge.

- contract of Rs 274.233 million was awarded to another contractor (M/s Usmani Associates) for Reconstruction of collapsed bridge, against which an expenditure of Rs 422.160 million was made against the approved cost.

The Authority replied as under:

- the inquiry was conducted by PMIC, collapse of bridge occurred due to design fault. The Authority forwarded the matter to the Pakistan Engineering Council (PEC) for taking necessary action as per governing rules.
- the recovery would be made from final IPC of contractor M/s NLC. The matter has already been discussed in PAC held on December 7, 2010 wherein the PAC directed that Ex-Chairman NHA, DG NLC, MD ECIL and Chairman PEC should be called in forthcoming PAC meeting.
- matter of recovery from the consultants has been referred to Pakistan Engineering Council for penalizing and fixing the penalty on the consultant.

The replies of the Authority were not accepted. Responsibility may be fixed due to faulty design prepared by the consultants as well as the Employer who vetted the design. Internal Inquiry was also not initiated by NHA to probe the facts. Collapse of bridge caused heavy loss to the exchequer, which has to be recovered from the consultant and contractor as pointed out in para.

The para was discussed in the DAC meeting held on August 9, 2012, wherein the committee directed that General Manager concerned would provide the revised reply duly substantiated by relevant documents to show that:

1. Whether any inquiry was conducted by MoC or NHA and responsibility was fixed regarding negligence of the project

management to monitor the performance of the project to safeguard the interest of the department by ensuring adequate guarantees/bonds

2. Whether any action was taken against the consultants M/s ECIL by the Authority like prosecution, damages claim, black listing etc.

No compliance to DAC's directives was reported till finalization of the report.

(Para 1,2,3,8)

Recommendations:

- **Identify individuals having specific expertise to vet design and should ensure compulsory vetting of all submitted designs whether structural, geometric or of any other nature.**
- **Develop a system to strengthen the capacity of related consultants and contractors and in order to make the system sustainable.**
- **Internal controls, especially internal audit, need to be strengthened.**
- **Blacklist the consultants barring from participating in bids for future work not only with NHA but also other government authorities. This should be done with the coordination of the Pakistan Engineering Council.**

4.7 Environment

In order to minimize the air pollution on the KNBP the following measures were defined in PC-I:

- Regular fitness checks of vehicles plying on the bypass for exhaust emission.
- Tree plantation along the KNBP which could serve many useful purposes such as reducing noise levels, air pollution control, soil

stabilization, enhancing the aesthetic appeal and comfort of driving on the KNBP etc.

Evidence in support of such activities was not found in record.

Recommendations:

- **Proper mitigation measures for protection of environment as provided in the PC-I should be adopted.**
- **Inquiry to be conducted for fixation of responsibility for improper execution and monitoring of the project.**

4.8 Sustainability

Sustainability is an integral part of Operational Performance. Sustainability of the project depends mainly upon the sufficient flow of financial resources both during implementation and operation. The position of funds depicted that full funds were provided in accordance with planned phasing.

4.8.1 Annual Recurring Cost

NHA is responsible for maintenance of the project and the recurring cost will be born from its own resources. The planned vs actual recurring cost is narrated below:

(Rs in million)

| As per Original PC-I | As per Revised PC-I | Actual (during 2010-11) | Percentage above than revised PC-I |
|---------------------------------|--------------------------------|------------------------------------|---------------------------------------------------|
| 5.00 | 8.50 | 25.172 | 196% |

Recommendations:

- **Steps needs to be taken to ensure smooth funding for operation/maintenance of the project.**
- **The recurring cost should be minimized as projected in PC-I.**
- **FIDIC recommendations should be adhered.**

4.9 Overall Assessment

Audit noticed serious issues of Contract Management from planning to execution, including change in approval of Design before award of work. This reflected ineffective internal controls towards implementation of Contract clauses. Three E's i.e. Efficiency, Economy and Effectiveness were not adhered strictly.

Cost overrun

An analysis of Cost/Time Overruns is given below which clearly indicates that considerable time and cost overruns are involved:

| (Rs in million) | | |
|--------------------|-----------|---------------------------------|
| Description | Amount | Remarks |
| Original PC-I cost | 2,928.021 | Approved |
| Revised PC-I cost | 5,903.331 | Un-approved |
| % increase | 101.78% | Revised PC-I over original PC-I |
| Actual Expenditure | 4,939.193 | Upto Dec, 2011 |
| Cost Overrun | 68.68% | over original PC-I |

Time overrun

Package-I

| | |
|----------------------------|------------|
| Date of commencement | 27.04.2002 |
| Planned Date of completion | 26.04.2004 |
| Completion date | 10.05.2007 |
| Time overrun | 36 months |

Package-II

| | |
|----------------------------|------------|
| Date of commencement | 01.09.2002 |
| Planned Date of completion | 01.03.2004 |
| Completion date | 01.03.2005 |
| Time overrun | 12 months |

Reconstruction Shershah Bridge

| | |
|----------------------------|------------|
| Date of commencement | 12.02.2009 |
| Planned Date of completion | 11.11.2009 |
| Completion date | 20.05.2010 |
| Time overrun | 06 months |

Rehabilitation of Lyari Bridge

| | |
|----------------------------|--------------------------|
| Date of commencement | 25.01.2010 |
| Planned Date of completion | 24.10.2010 |
| Completion date | Contractor left the work |
| Time overrun | 17 months |

Rehabilitation of Service Road under Shershah Bridge

| | |
|----------------------------|------------|
| Date of commencement | 29.10.2010 |
| Planned Date of completion | 28.04.2011 |
| Completion date | 28.04.2011 |
| Time overrun | - |

Recommendations:

- **Focus should be laid on completing the future projects without delay in order to avoid Cost Overrun due to fluctuations in market rates.**
- **Responsibilities should be fixed and appropriate actions be taken both within and outside the organization on individuals and consultants/ contractor who have not followed due processes so as to avoid recurrence of such grave human and financial losses.**

5. CONCLUSION

Key issues for the future.

5.1 Lessons identified

Audit observed that most of the irregularities were either due to improper consultancy services, estimates, non availability of shop drawings, weak internal controls and lack of proper monitoring system from the Employer. The management needs to strengthen internal controls in the light of following recommendations:

- i. Identify individuals having specific expertise to vet design and should ensure compulsory vetting of all submitted designs whether structural, geometric or of any other nature.
- ii. Develop a system to strengthen the capacity of related consultants and contractors in order to make the system sustainable.
- iii. Contracts should be awarded after adopting proper tendering process in a transparent manner at competitive rates.
- iv. FIDIC recommendations / procedures should be followed in letter and spirit.
- v. Works should be awarded after completion of land acquisition formalities to avoid delay in completion of the works and undue claims by the contractors.
- vi. Securities/Guarantees and insurances as per contract clauses should be obtained to safeguard government interest.
- vii. Financial Management should be improved by strengthening pre-audit system so that inadmissible payments and payments beyond contract provisions may be avoided.

- viii. Assets Management should be improved and proper accountal/disposal of assets on the completion of a project must be ensured.
- ix. NHA has to introduce such trainings / departmental exams / programs for their staff which help in the capacity building and competency.
- x. The designs and estimates above a certain threshold (e.g. more than Rs 1.5 billion) should be submitted to Pakistan Engineering Council for review.
- xi. PEC may develop a mechanism to segregate the approved consulting firms, according to their capacity, area of experience and financial limits to ascertain the consultant's expertise, as in the case of contractors, who are bifurcated in respective categories.
- xii. Due to the highly technical nature of work, PEC may issue licenses for bridge designers after thorough investigation and keeping in view the capability of the firms.
- xiii. The list of valid consulting firms placed at the website of PEC needs revision because 487 firms are available in the list but only 2% of the firms are active.

ACKNOWLEDGEMENT

We wish to express our appreciation to the Management and staff of NHA for the assistance and cooperation extended to the auditors during this assignment.

Annexure-1

Memorandum for Departmental Accounts Committee

(Rs in million)

| S. No | Para No | Title of the Para | Amount | Nature of the Audit observation |
|-------|---------|---------------------------------------------------------------------------------------|---------|---------------------------------|
| 1 | 09 | Non-recovery of advances | 127.312 | Recoverable |
| 2 | 10 | Loss due to auction of steel below reserve price and excessive ratio of wastage | 2.033 | Weak Internal Control |
| 3 | 12 | Double payment of escalation | 3.940 | Overpayment |
| 4 | 15 | Overpayment due to inclusion of inadmissible item in rate analysis | 34.244 | Overpayment |
| 5 | 18 | Excess payment due to extra cement for concrete Class-a-3 | 3.237 | Weak Internal Control |
| 6 | 21 | Excess payment due to execution of work without agreement/specification | 4.194 | Violation of rules |
| 7 | 24 | Overpayment due to application of incorrect current rate of diesel | 0.778 | Overpayment |
| 8 | 25 | Excess payment due to excessive use of steel in culverts against bar binding schedule | 0.725 | Violation of rules |
| 9 | 26 | Non-recovery of income tax from auctioneer | 0.492 | Recoverable |
| 10 | 27 | Overpayment due to incorrect calculation | 0.390 | Overpayment |
| 11 | 28 | Non-recovery of markup on mobilization advance | 0.275 | Recoverable |
| 12 | 29 | Overpayment due to incorrect rate | 0.270 | Overpayment |

| S. No | Para No | Title of the Para | Amount | Nature of the Audit observation |
|--------------|----------------|--------------------------------------------------------------------------------|---------------|----------------------------------------|
| 13 | 30 | Overpayment of escalation due to incorrect base rate | 0.137 | Overpayment |
| 14 | 31 | Overpayment due to incorrect rate of extra item | 0.137 | Overpayment |
| 15 | 32 | Non-accountal of trees | 1.014 | Misappropriation |
| 16 | 35 | Doubtful execution of item by taking abnormal width of shoulders of link road | 1.225 | Weak Internal Control |
| 17 | 36 | Unjustified escalation by adding value of un-specified material in work done | 27.896 | Weak Internal Control |
| 18 | 39 | Overpayment due to excess thickness of granular sub-base | 0.882 | Overpayment |
| 19 | 40 | Unjustified execution of piling works | - | Weak Internal Control |
| 20 | 41 | Overpayment due to 15% profit on extra items of toll plaza | 6.918 | Overpayment |
| 21 | 42 | Below standard execution of works | 0.627 | Weak Internal Control |
| 22 | 44 | Non-withholding 5% of contract value | 1.238 | Weak Internal Control |
| 23 | 45 | Incorrect rate analysis for extra item of sand filling resulted in overpayment | 3.101 | Overpayment |
| 24 | 47 | Overpayment due to double measurement by overlapping | 2.783 | Overpayment |

Annexure-2

Categories of paras included in the Project Audit Report

(Rs in million)

| Particulars | No. of Paras | Amount |
|-----------------------------------------------------------|--------------|------------------|
| Overpayments/weak financial management | 5 | 24.880 |
| Violation of rules and regulations/weak internal controls | 7 | 3,198.079 |
| Total | 12 | 3,222.959 |

1 Overpayments/weak financial management

(Rs in million)

| S. No. | Subject of Para | Amount |
|--------------|---------------------------------------------------------------------------------------|---------------|
| 1 | Overpayment due to non deduction of roadway and structural excavation from embankment | 7.930 |
| 2 | Overpayment due to poor estimation | 7.764 |
| 3 | Non-recovery of liquidated damages due to non-completion of work | 5.624 |
| 4 | Overpayment on account of Income Tax | 2.332 |
| 5 | Overpayment due to excess rate of labour included in rate analysis | 1.230 |
| Total | | 24.880 |

2 Violation of rules and regulations/weak internal controls

(Rs in million)

| S. No. | Subject of Para | Amount |
|--------|-----------------------------------------------------------|-----------|
| 1 | Irregular expenditure without approval of ECNEC | 2,011.171 |
| 2 | Excess/irregular expenditure against budget allocation | 618.177 |
| 3 | Non-insurance coverage for the work | 56.244 |
| 4 | Unauthentic execution of items | 87.454 |
| 5 | Non-finalization of accounts and non preparation of PC-IV | - |
| 6 | Improper utilization of Project's assets | 2.873 |

| S. No. | Subject of Para | Amount |
|-------------------|--------------------------------------------------------------------------------------------------------------------|------------------|
| 7 | Collapse of bridge due to defective design and improper monitoring during execution by the Consultant and employer | 422.160 |
| Total | | 3,198.079 |

Annexure-3

Detail of Paras already printed in Audit Reports

| S. No. | Para No | Audit Report | Subject of the Para |
|---------------|----------------|---------------------|---------------------------------------------------------------------------------------------------------------------|
| 1. | 6.47 | 2003-04 | Overpayment due to appropriation of incorrect sources of materials - Rs 591,000 |
| 2. | 3.2 | 2004-05 | Excess expenditure/ Award of work at higher rates – Rs 398.798 million |
| 3. | 3.20 | 2006-07 | Overpayment due to unjustified revision of rates – Rs 25.00 million |
| 4. | 1.9.1 | SAR 2005-08 | Overpayment due to separate payment of inbuilt items/works – Rs 12.109 million |
| 5. | 1.14 | SAR 2005-08 | Non-recovery of loss due to collapse of Karachi Northern Bypass during defect liability period - Rs 294.934 million |
| 6. | 2.1.8 | SAR 2005-08 | Overpayment due to excessive measurement of tack coat – Rs 4.369 million |

SAR=Special Audit Report